Air Force Civil Engineer
Vol. 21
No. 1
2013

CE Civilians

Air Force **Civil Engineer**
Vol. 21
No. 1
2013

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On the Cover

Ivan Cutler, a civilian in the 796th Civil Engineer Squadron at Eglin AFB, Fla., inspects a hose in one of the base's F-35 Lightning II hangars. Cutler is a member of the multi-facility team, or MFT, assigned to maintain the hangar and other facilities. (U.S. Air Force photo/Eddie Green)

Air Force Civil Engineer is published quarterly by the Public Affairs staff at the Air Force Civil Engineer Center, Tyndall AFB, Fla. This publication serves the Office of The Civil Engineer, HQ U.S. Air Force, Washington, D.C. Readers may submit articles, photographs, and artwork. Suggestions and criticisms are welcomed. All photos are U.S. Air Force, unless otherwise noted. Contents of *Air Force Civil Engineer* are not necessarily the official views of, or endorsed by, the U.S. government, the Department of Defense, or the Department of the Air Force. Editorial office: *Air Force Civil Engineer*, AFCEC/PA, 139 Barnes Drive, Suite 1, Tyndall AFB FL, 32403-5319, Telephone (850) 283-6242, DSN 523-6242, FAX (850) 283-6499, and e-mail: cemag@tyndall.af.mil. All submissions will be edited to conform to standards set forth in Air Force Instruction 35-101, The Associated Press Stylebook, and the magazine's internal style. *Air Force Civil Engineer* is accessible on the Internet from AFCEC's home page: http://www.afcec.af.mil. Individual subscriptions available via GPO (http://bookstore.gpo.gov).

Civilian Development

Civil engineers continue to focus on the three strategic areas that drive everything we do: Build Ready Engineers, Build Great Leaders and Build Sustainable Installations. The first two focus on preparing our Airmen for future expeditionary challenges and developing CE military and civilian Airmen to be strong leaders within the Air Force.

The third goal, Build Sustainable Installations, is the bread and butter of our business. Our installations are the Air Force's 3-D weapon system and the power-projection platforms that enable air, space and cyber superiority. This CE goal is critically important to the nation. Without installations our Air Force cannot execute its mission.

However, we cannot hope to build sustainable installations without a well-developed military and civilian workforce. Making up nearly half of the CE total force, civilians form the backbone of our installation workforce and are a critical part of our CE community. As we work through our current transformation within the realities of today's fiscally constrained operating environment, civilian force development has never been more important.

In early 2011, we resurrected the CE Functional Advisory Council. The FAC develops CE civilian personnel policies to support force development and force structure management. The FAC is made up of senior representatives from the bases and major commands, as well as from our field operating agency and Air Force headquarters. The FAC also includes a senior Federal Wage System representative. One early key initiative of the FAC was the establishment of career development plans for CE civilians. I am happy to report the FAC is well on its way to achieving this goal.

The creation of a standing Wage Grade Development Panel on the FAC led to the completion of a WG career progression model, providing WG employees a roadmap for career development. The CPM outlines the dispersion of grades, and relative experience levels encompassing apprentice, journeyman, craftsman and supervisory positions. The model identifies career milestones key to progression, through increased training, management and technical responsibilities.

Mentoring is another important tool for civilian career development. Mentors can help identify the different kinds of experience and training a civilian may need, as well as how to obtain it. Serving as a sounding board, mentors can help reassess or adjust goals as one's career evolves. I encourage you all to cultivate mentoring relationships. They are a valuable asset to your development.

Each and every one of you is a member of our CE team. Whether you are at base level or in a headquarters, you have an important role to play. By leveraging and capitalizing on our team's skills, we can efficiently and effectively maintain our installations to ensure mission success. Through civilian development we will continue to Build to Last and Lead the Change!

Timothy A. Byers
Major General, USAF
The Civil Engineer

FAC Reinvigorates Civilian Force DEVELOPMENT

Michael Briggs
AFCEC PA

A little more than a year ago when Maj. Gen. Timothy Byers, The Civil Engineer, released the 2011 Air Force CE Strategic Plan, he listed three goals: Build Ready Engineers, Build Great Leaders and Build Sustainable Installations.

"Now more than ever, civil engineers must be ready to respond and lead whenever and wherever needed, to meet current and emerging Air Force and combatant commander requirements," the general commented in a related CE Magazine article *(see Vol. 19, No. 3)*. "To do this, we have to ensure we develop, train, equip, and retain a highly capable Total Force of civil engineers."

To develop and retain a capable civilian CE team, a Functional Advisory Council — established in 2011 under the direction of the Deputy Civil Engineer, Mark Correll — launched operations to plan and execute force development activities. An early key initiative, creating career development plans for CE civilians, helped set the stage for other activities for accomplishment by FAC panels (*see sidebar)*.

In November 2011, in response to Air Force compliance with a Department of Defense mandate to trim the budget, Byers announced CE Transformation…Accelerated. CET-A identified several spiral initiatives the CE community would accomplish as its part of the overall Air Force budget reduction effort. CET-A took center stage and received the focus of CE professionals everywhere as teams developed and launched plans to create efficiencies across the enterprise.

This slowed the initial operations of the FAC and its panels, but as many CET-A initiatives came to fruition this fall, a reinvigorated FAC program was launched to move the civilian force development program forward.

"This is a critical time for the CE community. As we advance through the CE transformation spirals, the recruiting, training and retention of a highly capable civilian force is more important than ever," Correll said. "We will need our best and brightest — a capable and agile team — prepared to lead CE operations into the future."

According to Correll, the CE community will be smaller, but expectations will remain as high as they have always been. CEs will continue to maintain combat-capable Air Force installations.

The FAC has several responsibilities designed to maintain CE mission-support readiness and give CE civilians the opportunity to grow and advance in their profession:

- Provide overall policy and human capital strategies for the CE career field
- Enhance opportunities to develop the whole civilian, by shaping skills, competencies and character
- Improve recruitment and retention of talent in the CE career field and be flexible to changes in the marketplace
- Develop action plans to resolve issues raised by the CE workforce
- Participate on the Civilian Intermediate Development Team
- Direct the scope and operations for CE Career Field Team in compliance with Air Force career manning directives
- Enable the career field team to implement policy in a timely manner
- Develop and apply measurements that drive behaviors in the CE career field consistent with the vision and purpose of the FAC
- Systematically report measurements and provide feedback on the effect of career field policy in the civilian workforce

PANELS & Responsibilities of the FUNCTIONAL ADVISORY COUNCIL

FAC efforts now focus on the work of each of the six panels listed above: Requirements, Human Capital, Career Development, Training and Competencies, Strategic Communications, and Wage Grade.

"We will keep the civilian workforce informed about panel activities through emails and future articles in CE Magzine," Correll said. "We also want your input and support. If you want to make a comment, suggestion or volunteer to join a panel, contact the appropriate panel lead."

More information on panels and their leads is available under the force development link on the CE Portal.

Building Great Leaders
through CE Wage-Grade Force Development

James Martin
HQ AFMC/A7RP

One of Civil Engineering's strategic goals is Build Great Leaders. According to Maj. Gen. Timothy Byers, The Civil Engineer, CE's ability to provide global combat support and efficient sustainable installations "depends on a diverse, well-trained and motivated workforce."

Nowhere is this more apparent than in CE's wage grade workforce, especially given today's austere environment and diverse contingency operations. Today, the wage-grade workforce, which makes up 35 percent of the entire CE civilian workforce, has been handed the responsibility to retain the institutional knowledge and abilities required to sustain our installations. We have thrust them into critical positions of training and leading our military and civilian workforce.

Approximately one-third of the 4,500-strong wage grade workforce is retirement eligible. Eventually these folks will take their much-earned retirement, which could be a devastating blow to our ability to retain the institutional knowledge and abilities needed to sustain our installations.

This has forced us to look much harder and take more of a deliberate approach in how we develop their careers and career fields to prepare for these sustaining roles and responsibilities. This is where the wage grade force development initiative and the Functional Advisory Council's wage grade panel is key. This FAC panel is specifically designed to improve our wage grade force development and retention, both needed to Build Ready Engineers, Build Great Leaders and Build Sustainable Installations!

Wage Grade Career Development Panel

While our general schedule, or GS, workforce has enjoyed senior level oversight for career development for a long time, unfortunately our federal wage system, or WG, employees historically have not. Now, largely through efforts by the Deputy Civil Engineer, Mark Correll, wage grade career development is getting the emphasis it deserves and desperately needs.

Correll chairs the FAC, which oversees all CE civilian workforce development. It is generally composed of the ranking civilian from each major command, senior civilians from the field operating agency and senior functional managers. Although the FAC has always had panels that work civilian force development, none focused solely on wage grade development until Correll established one.

In July 2011, Darryl Parks, the deputy chief of operations at Joint Base Elmendorf-Richardson, Alaska, and Vicki Preacher, the deputy base civil engineer at Eglin AFB, Fla., were named the co-presiding officers for the wage grade panel. Their team has identified numerous wage grade career development gaps and potential improvements needed to ensure building future operations leaders.

In the past, there has been no standardized or comprehensive approach on how we identify, train and track the development of our wage grade employees. In most cases, training management and development is executed at the local level. However, a comprehensive approach is critical to growing our force and providing the opportunities to acquire the right leadership and management skills needed to become future leaders within the CE community. Below are some of the macro-level initiatives the wage grade panel is working.

Comprehensive Training Plans and Program

Currently, there is a large focus on upgrade training and career progression on the military side and the panel felt there needed to be the same focus on the wage grade side. For most wage grade employees, if they have a training plan it was developed locally and does not always provide the standardization needed to make employees more competitive for positions at other bases. Comprehensive training plans will serve as the master training documents to annotate any and all training received and outline the career progression model. CTPs will also contain all special training requirements for the apprentice, journeyman and craftsman levels and will include base-specific task listing. This will enable supervisors to gauge an employee's skill

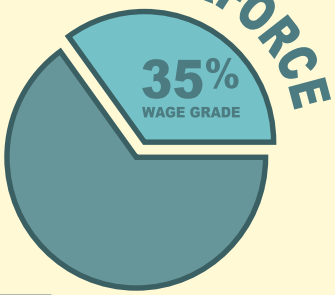
Steve Taylor, 55 CES, Offutt AFB, Neb., operates a high-speed broom to sweep snow from an aircraft ramp at the base, after a storm left 8 inches of accumulated snow. (U.S. Air Photo/Delanie Stafford)

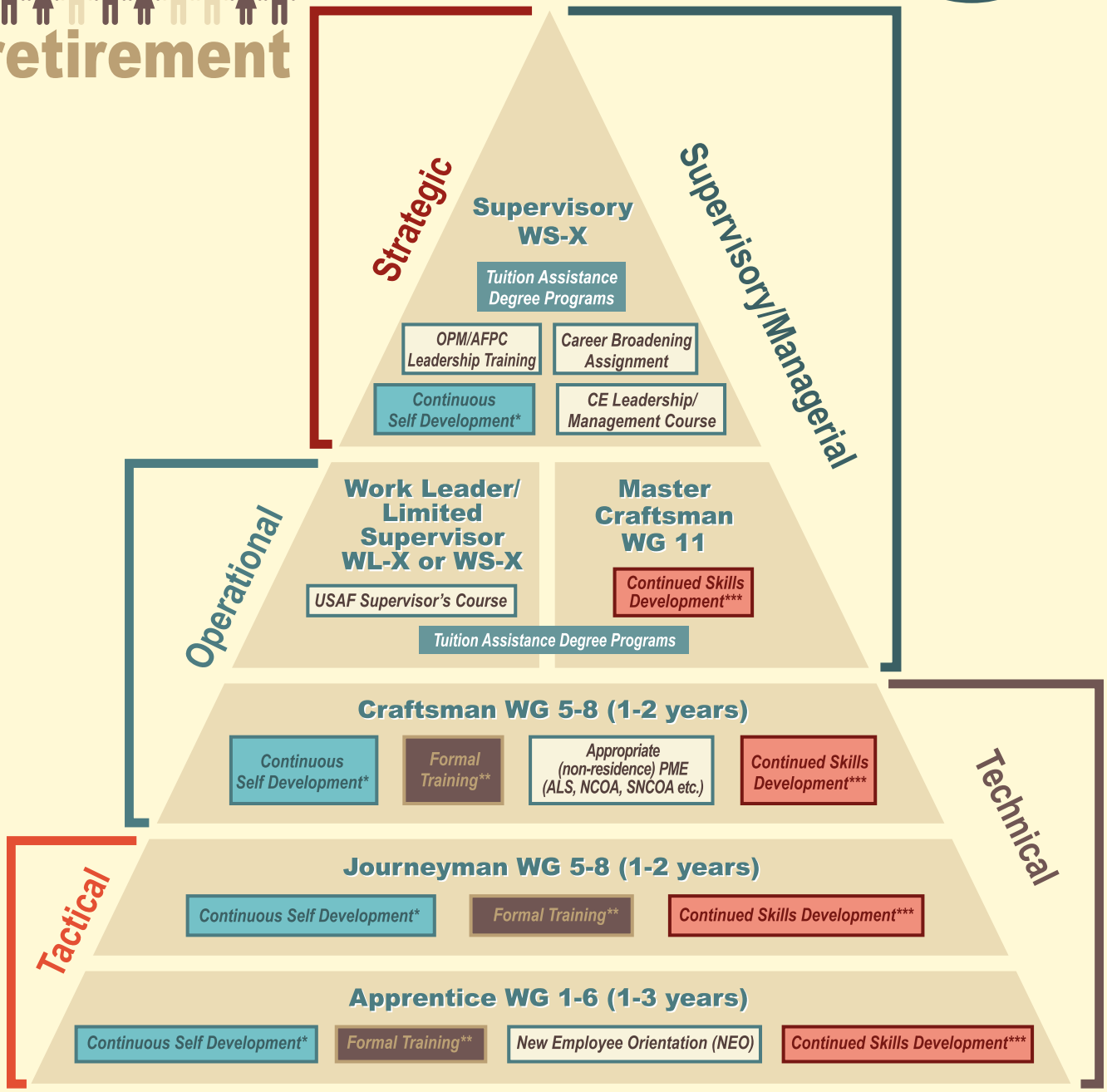
The State of the CE Wage Grade Force

1/3 eligible for

retirement

ENTIRE CE WORKFORCE





* Continuous Self Development (e.g. Supervisor's Resource Center, Skillsoft.com, Degree Programs)

** Formal Training (AFIT, Vendor Training, Vo-Tech) *** Continued Skills Development (CE Civilian Training Plan)

level and develop a CTP to attain the highest proficiency. It will maximize an employee's qualifications and posture them for promotions or opportunities. Contract costs might also be reduced as capabilites of the in-house workforces improve.

A master training template for wage grade employees is already built. It is being modified to cover 14 occupational families (e.g., 2800 family for electrical work, etc.), before being expanded to cover the 25 occupational series used most frequently in the CE career field. To date, training plans have been developed that cover 22 percent of the CE civilian wage grade workforce. The goal is to finalize the training plans now under development, field them in the next few months and have plans ready for the remaining occupational series by the end of the calendar year.

Leadership and Management Training

Right now, the answer to "What qualifies a WG-10 to be a WS-10?" appears to be technical skills only. But where is the leadership and management skill set and how is it attained? Are we doing right by these leaders if we don't equip them with the right personal and professional competencies needed to be effective leaders?

The same level of effort to ensure the right training and qualifications should be made for wage grade leaders as it is for the military and other civilians. For example, in terms of leading people, many of the wage grade supervisory positions are equivalent to non-commissioned and senior NCO ranks, and we mandate that military complete all required professional military education before assuming their duties. A few programs are already in place, although many may be unaware of them. Enlisted PME is one such program. Another is the Supervisory Resource Center, the Air Force's community for practical knowledge and tools to support supervisors and leadership development. Available on the Air Force Portal to all military and civilian personnel, the site is packed with discussion forums, continuous learning, tools and resources geared toward developing leadership competencies. While we capitalize on existing programs, we are making efforts to create others.

AFIT Civilian Leadership/Management Course

One of our early successes was the development of a new course at the Air Force Institute of Technology at Wright-Patterson AFB, Ohio. A pilot Civilian Supervisor Course (MGT 571) launched on Sept.12, 2011. Based on the highly successful CE Superintendents Course, MGT 571 covers areas such as training processes, project management, resources, asset optimization and manpower. The course is geared towards WS 9-12 supervisors, to better prepare them to be civilian leaders serving as shop supervisors, flight superintendents, deputy flight chiefs, flight chiefs and civilian squadron leaders.

The course met four times in fiscal year 2012 and according to former instructor, Chief Master Sgt. Dirk McDowell, "The overall relevance and effectiveness ratings of the course were much higher than any of the courses I've directed for the past two years."

Many attendees recommend the five-day course become a requirement for all CE supervisors because of the valuable CE-specific information it provides to wage grade supervisors. More information is available at http://www.afit.edu/cess/Course_Desc.cfm?p=WMGT%20571.

Wage Grade Career Progression Model

The panel has created a Wage Grade Career Progression Model (see page 7) to serve as a guide for career progression and development. This career progression model has been sent to all base civil engineers and deputy BCEs for fielding and is accessible on the CE Portal (click "Force Development" button, then "Civilian Documents and Links" tab, then "Wage Grade Brochure" link).

The model illustrates the dispersion of grades and relative technical, supervisory and management capabilities needed at all levels (apprentice, journeyman and craftsman). Included throughout this model are the numerous training tools and venues engineers can employ to help attain these skills and competencies. Wage grade CE civilians can and should use this model as a way to roadmap and track milestones in their progression through various levels of training, leadership, and management as well as a myriad of technical roles and responsibilities. Enlisting a mentor to help with goals and progress is also highly encouraged.

Jason Tharp (left) and Robert Case, 796 CES, Eglin AFB, Fla., work to convert an outdoor light fixture from low-pressure sodium to LED. The two are part of CE's Multi-Facility Team 3, which has responsibility for infrastructure at Duke Field on Eglin. (U.S. Air Force photo/Eddie Green)

A Class Worth Its Weight in Gold!

Mr. Brian F. Taylor
796 CES/ECOHO

When I was asked by my flight superintendent one afternoon if I wanted to go to the new civilian supervisor course at the Air Force Institute of Technology, I accepted without hesitation.

I had to act quickly though, to take advantage of a last-minute cancellation. I will admit that thoughts of "I'll catch this class another time better suited for me" and "I've been a supervisor for a while and it's probably another PME class" did cross my mind for a few seconds. But, as it turned out the Civilian Supervisor Course — WMGT 571 — was truly a rewarding experience in personal growth and career development.

The class offered me and 19 other wage grade civilian supervisors from around the Air Force an invaluable opportunity to draw from personal knowledge and experience.

Brian Taylor, Multi-facility Team Chief for the 796 CES, pauses at a work site at Eglin AFB, Fla., while 796 CES members Glenn Downs and James Turo, (background, left to right), do maintenance on outdoor lights. (U.S. Air Force photo/Eddie Green)

Throughout the week we leaned on each other and forged lasting professional relationships.

The five-day class was not your typical "read and learn" course. It was packed with a cadre of subject matter experts providing an in-depth level of knowledge and technical training for each learning block. Several guest speakers, including senior CE leaders, gave their perspectives on current and future Air Force paths and initiatives.

The positive feedback of my graduated class —12C — is an indication of success for this pilot Civilian Supervisor Course. Many thanks to the AFIT Staff for the development of this outstanding course and a special thanks to our assigned instructor and mentor, Chief Master Sgt. Dirk McDowell.

Position Description and Series Standardization

Standardizing the civilian chief of operations position is another key project of the wage grade development initiative. Currently, these positions are assigned to numerous position descriptions in numerous occupational series. CE leadership directed development and use of a standard core personnel document for the GS-1640 series (facility operations services) to place all civilian chief, operations flight positions into this series. This move discourages disenfranchising the wage grade workforce by providing more opportunities for advancement, including moving into a GS position.

The civilian operations flight chief position is just one of many SCPDs the wage grade panel is working to develop in the next 24 months. They will start with the series which have the largest populations and work their way down. This effort aligns with the Air Force's initiative to make the use of SCPDs mandatory. Having SCPDs for the majority of the operations series creates standardization across the CE enterprise and will result in quicker processing times — generally, by 29 days — from the Air Force Personnel Center.

Summary

The CE community is continuing to work the issues surrounding wage grade force development. This is a massive undertaking, but one greatly needed and unquestionably worth the effort. There is a great deal of momentum at the headquarters level towards wage grade force development, so we'll keep working diligently to meet the challenges ahead in Building Great Leaders to Build Sustainable Installations.

Mr. Martin, a retired Air Force chief master sergeant, serves as an Asset Management Program Analyst, Air Force Materiel Command, Wright-Patterson AFB, Ohio, and is a member of the Wage Grade Panel.

Competency Initiative *Enhances* CIVILIAN WORKFORCE DEVELOPMENT

Michael Briggs
AFCEC PA

An effort that's been underway for nearly two years is paving the way for a more capable civilian work force in the Air Force civil engineering community.

As part of the Functional Advisory Council charter to improve civilian force development, the Competencies and Training Panel has been conducting workshops since early 2012 to identify, develop and standardize competencies for CE occupational series.

The work stems from U.S. Title 10 law passed in 2011 that directed the Department of Defense to "assess the critical skills and competencies that will be needed in the future within the civilian employee workforce" to support national security requirements, said Gene Mesick, chief of the Facilities Engineering Center of Excellence Technical Services Division at the Air Force Civil Engineer Center, who chairs the panel.

"The competency development initiative is also part of CE transformation," Mesick said. "To date, we've completed competencies for eight occupational series."

The process includes developing, validating and aligning competencies to training, Mesick said. Over the next few months an additional effort will begin to identify applications for the competencies. Using the Civil Engineering 0810 series competencies as an example, the range of applications will include the following:

1. Competency Self Assessment: This tool will enable employees (and their managers) to assess the employee's proficiency level within 0810 competencies.

2. Competency-Based Behavioral Interview Questions: Using a catalogue of interview questions and expected answers, this application will allow managers to determine interview candidates' competency and proficiency levels.

3. Competency-Based Succession Planning: This tracking tool will help CE managers use competencies to plan for vacancies and facilitate knowledge transfer to prevent critical skills gaps.

4. Competency-based 0810 Career Development/Certification Program: This application will provide a framework to improve a person's ability to set informed career goals leading to a logical career progression.

So, just what is a competency? A competency is defined as an observable, measurable pattern of skills, knowledge and abilities. Competencies include the application of knowledge and measurable performance of skills as well as behaviors and other characteristics that a person needs to perform work functions successfully. In simple terms, competencies show how well someone can do their job.

According to Mesick, the first step in developing competencies is to identify and define them for an occupational series. To do this, he brings together experts in the field for the series being developed.

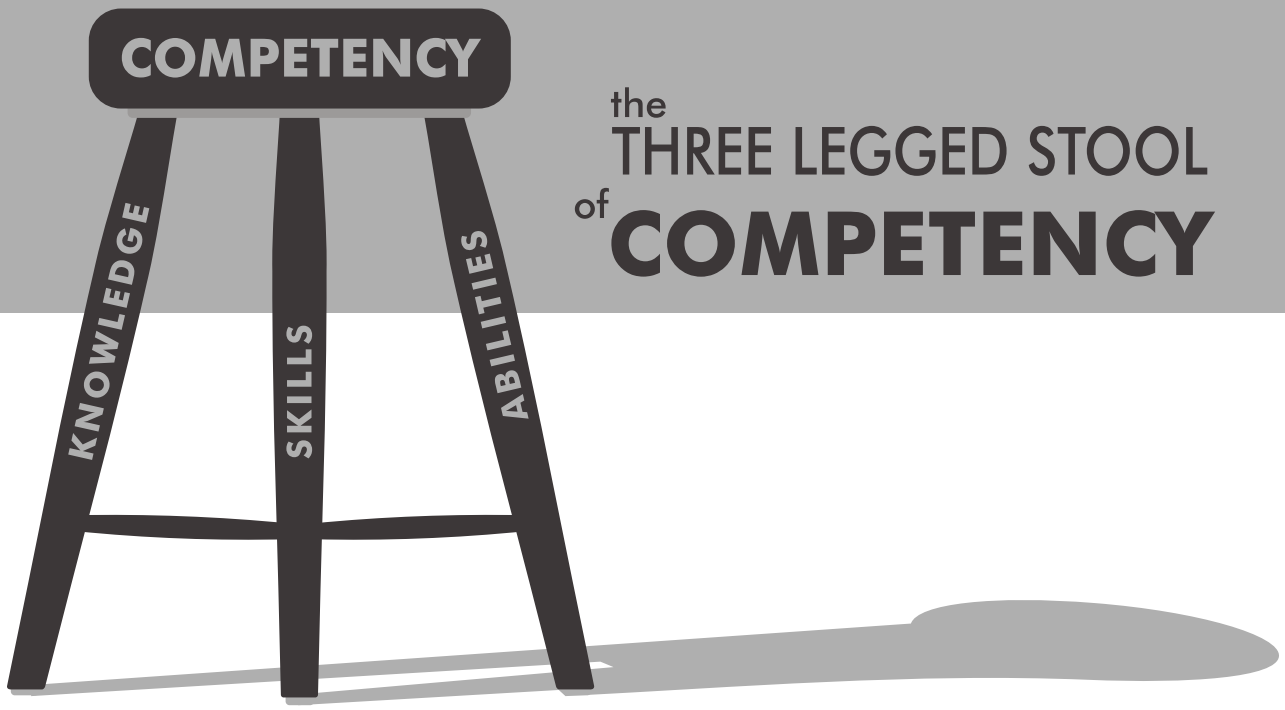
The second step is to develop proficiency statements for each competency.

"Over the lifecycle of a person's career, from entry level to subject matter expert, proficiencies indicate the level of measurable abilities a person possesses for a given occupational series task," Mesick said.

For example, in the 0810 series, the construction management proficiency statement contains knowledge and performance levels for the application of concepts, principles, theories and methods related to the management of construction, contracts and contractors. Five levels of proficiency, beginning at 1 for entry level and moving up to 5 for subject matter expert, have corresponding proficiency statements that define where an employee ranks based on the demonstration of their competency of construction management.

Beyond mapping competencies to specific training, the panel still needs to determine how the competencies will be applied within the CE career field. The test applications for the 0810 series should help with this, Mesick said.

Mark Sanchez, a member of the AFCEC Planning and Integration Directorate, who served as an expert on the



the THREE LEGGED STOOL of COMPETENCY

January community planning competencies panel, said the process involved "how to distill statements of Air Force planners' skills and aptitudes for dealing with installation development for current and future missions into succinct, coherent nuggets.

"In addition to the few cross-cutting competencies applicable to all Air Force civil engineering professionals, we formulated two unique community planner competencies to address comprehensive planning processes and tools," he said.

The process was the same for the other panels meeting to formulate their series' competencies. They determine the core CE competencies relevant to each series and also flesh out the series-specific competencies and associated levels of proficiency.

The competencies form the framework for career development and training requirements, and also provide a tool for recruitment, appointment and promotion of Air Force CE professionals, Sanchez said.

Eight CE-related job series have completed competencies.

Series	Title
0020	Community Planning
0808	Architecture
0810	Civil Engineering
0819	Environmental Engineering
0830	Mechanical Engineering
0850	Electrical Engineering
1170	Realty
1173	Housing Management

RAF Mildenhall's DELIBERATE APPROACH to Civilian Airman Development

Robert Rushing
100 MSG/CD

The "Bloody Hundredth," the 100th Air Refueling Wing at RAF Mildenhall in England, has a history and reputation for innovation, whether it's improving air-to-air refueling efficiency, recycling waste aviation fuel, or integrating business principles into installation operations. Mildenhall's Civilian Leadership Council arose from the collective desire by U.S. civilians to learn about career development and by wing leadership to maximize the potential of its civilian Airmen.

As the deputy director of the 100th Mission Support Group, and the wing's senior civilian, I felt the CLC would be an effective way to deliberately develop our civilian Airmen. The CLC initiative shares a name with a similar effort at Aviano AB, Italy, where the 31 MSG deputy director brought together senior civilians to discuss civilian centric issues. However, the Mildenhall CLC's primary purpose is the deliberate, engaged development of all its civilian Airmen. Secondary efforts include discussing issues related to leadership and sharing ideas to enhance workplace efficiency.

Initially the CLC was an MSG-only initiative and the first session was Dec. 5, 2011. It was so popular that the CLC immediately grew beyond the capacity of the wing's conference room and the next one had to be split into two sessions to accommodate the numbers. Each session had roughly 50 participants, which is significant given that RAF Mildenhall only has about125 U.S. civilians.

At about the same time, I briefed the CLC to wing leadership during a strategy meeting. They immediately embraced the idea and authorized our CLC sessions as official functions. They also asked that the sessions be opened to all wing and partner units. The CLC became an integral part of the 100 ARW's "Develop Airmen" goal, which codified the program within the wing's strategy.

To begin executing the CLC, we started locating source materials to support the various sessions. Because I had worked at the Air Force Personnel Center as part of the CE Career Field Management Team, I had a lot of materials on hand and these were used to craft the first presentations. We created a companion SharePoint site for the session presentations and support materials. Initial sessions were scheduled around major events, but as everyone knows, to be credible you need a consistent schedule. So, CLCs were scheduled monthly at a set time.

Some CLC initiatives include two documents to address needs of both wing leadership and CLC participants. The first provides a one-stop guide to the different methods of civilian recognition for military supervisors new to the GS system. The second document is a guide to résumé and interview skills, developed for Mildenhall's civilians negatively impacted by Resource Management Directive 703 actions.

An early initiative of the CLC was a unique civilian development team process that allowed all civilians to take part. Participants filled out their career plans in a locally developed career development planner and submitted them to the CLC DT (the installation's two most senior civilians) for review.

Initial CLC sessions focused on helping civilian Airmen find mentors by matching each civilian desiring a mentor with a senior civilian on the Headquarters U.S. Air Forces in Europe staff. The focus of the CLC sessions then changed to reviewing professional credentials (e.g., formal educa-

The author, Robert Rushing, leads a CLC initiative event at RAF Mildenhall, United Kingdom. (U.S. Air Force photo/Master Sgt. Carol Cannady)

tion, professional military education, professional registration and certification, diversity of experience, etc.) on a deeper level. These items were covered in extensive detail and validated with testimonials from local leadership and guest speakers. Using knowledge gained from working at AFPC, I spoke on the request for personal action process and explained how to identify any critical junctures. A live demo of the AFPC Secure and USA JOBS webpages were followed with a review of appropriate résumé formats and content.

Mildenhall's CLC has evolved over time to incorporate workplace efficiency topics, such as task management, public speaking, keys to successful staff work and white papers. Another evolution of the CLC was the addition of special sessions addressing actions that could impact civilian Airmen, with topics such as the hiring freeze, fiscal cliff, sequestration, and furloughs.

The CLC has motivated a number of Mildenhall's civilian Airmen to improve their development. For example, one 100th Force Support Squadron employee is now enrolled in three college classes, pursuing her bachelor's degree while working full time. One Operations Support Squadron employee reached out to his career field management team and to learn which professional certification he should pursue. Two CES personnel competed for and received promotions. Both gave credit to the CLC, saying the interview process used in the guide was helped them prepare for their interviews. Many have had their résumés reviewed and approximately a dozen civilians have benefitted from one-on-one counseling sessions. Two of Mildenhall's civilian Airmen have completed their PME, one from Squadron Officer's School and another from Air Command and Staff College via correspondence.

Overall, the greatest benefits of RAF Mildenhall's CLC are a civilian workforce more aware of the need to continually develop and a boost in morale. The CLC initiative has shown our civilians that their leadership is engaged and does care.

Mr. Rushing is the Deputy Director for Installation Support, 100 Mission Support Group, RAF Mildenhall, England.

Building A Bridge

An Air Force exchange program benefits U.S. and Canadian CEs

After World War II, the United States' first chief of staff, Gen. Carl A. Spaatz, and Great Britain's Air Chief Marshal Arthur Tedder initiated an officer exchange program to continue the close alliances that developed during the war. Canada established a program with the U.S. Army Air Corps in 1946.

Today, the Air Force's military personnel exchange program has three independent offices covering the Canadian-Latin American, European-African-Middle Eastern and Pacific areas. There are 161 MPEP positions in 25 countries. The exchange with Canada has 26 positions representing 18 specialties, one of which is civil engineering. Tour lengths are generally three years.

The existing CE exchange agreement was initiated by the Canadian Forces in the late 1970s with a request to Headquarters Air Force Engineering and Services Center at Tyndall AFB, Fla. A memorandum of agreement between the U.S. Air Force and the Canadian Forces, signed Aug. 4, 1980, is still in effect. The agreement states the advantage to the Canadian Forces is the expertise gained in Air Force readiness planning and training. The primary advantage to the U.S. Air Force is improvement of NATO capability to meet wartime requirements by familiarizing a NATO ally with engineering contingency roles and methodologies. The first Canadian officer was assigned to HQ AFESC in the summer of 1981, and as of this writing, 13 Canadian Forces officers have held the position at Tyndall.

The program operates on a one-for-one reciprocal exchange between the nations, placing substantially equivalent, qualified personnel into similar positions so both nations benefit. The chief of staff owns the Air Force MPEP and the deputy undersecretary of the Air Force for international affairs manages it at a strategic level, directing policy and funding. The Commander MPEP Americas, based in Ottawa, manages the program for both the Canadian and Latin American regions.

The MPEP has four main goals:

1. Promote mutual understanding and trust
2. Enhance interoperability through mutual understanding of doctrine, tactics, techniques, and procedures
3. Strengthen air force-to-air force ties
4. Develop long-term professional and personal relationships

Currently, Maj. Linda Schmidt is the U.S. Air Force officer exchanged to Canadian Forces, Royal Canadian Air Force, 1 Canadian Air Division in Winnipeg, Manitoba. Maj. David Jane is the Canadian Forces member exchanged to the Air Force Civil Engineer Center, Tyndall AFB, Fla.

(above) *Capt. Clifford Boyechko, the 19th Wing, Construction Engineering Flight Commander; Maj. David Jane, chief of contingency training at the Air Force Civil Engineer Center; and Capt. James Boone observe a training session at the Silver Flag exercise site at Tyndall AFB, Fla.*
(top right) A Royal Canadian Air Force (RCAF) construction engineer and a U.S. Air Force (USAF) civil engineer discuss a current training exercise as a Silver Flag instructor from Det. 1, 823rd RHS looks on.
(right) RCAF Corporal James Sewell moves to assist during construction of a small shelter during an exercise at Silver Flag.
(below) USAF civil engineer, Tech. Sgt. Christopher Wellman, and RCAF construction engineer, Cpl. Donald Wray, set up a water pump that will feed a reverse osmosis water purification unit during training at Silver Flag *(U.S. Air Force photos/Mr. Eddie Green)*

At the 1 Canadian Air Division headquarters building, U.S. Air Force Maj. Linda Schmidt, poses with her Canadian engineer colleagues (left to right) Capt. Michael Hocquard, Chief Warrant Officer Geoff Grant, Master Warrant Officer J-P Cyr, Master Warrant Officer Sheldon Provo, Maj. Steve Button, Master Warrant Officer Luc Gauthier, Capt. James Boone and Maj. Rick Dunning (Courtesy photo)

I'm the CE readiness doctrine and training chief at 1 Canadian Air Division Headquarters, in Winnipeg, where I arrived in 2012. I supervise a staff of three in the development and review of construction engineering operational doctrine, training and equipment specifically related to expeditionary capability. We review and staff RCAF and joint doctrine, international agreements, memoranda of understanding and other standardization documents. We manage the collective expeditionary training program for troops on their road to high readiness (pre-deployment training).

One objective we're currently working on is the transition from traditional airfield damage repair and a heavy repair capability to a lighter, more expedient one. In the place of ADR, the concepts of ASAR — airfield surface assessment and reconnaissance — and ALR — airfield light repair — are being developed. Canada is the custodian of NATO Standard Agreement 2929 (ADR Capabilities), and I recently chaired my first NATO meeting with five other NATO nations including the United States.

We're also updating the CE Aide Memoire (quick guide to beddown planning), which hasn't been updated since 2001 and we're also creating a RCAF CE supplement to the joint Canadian Forces Aerospace Sustain Doctrine.

Comparisons & Contrasts

There's a matter of scale involved. The RCAF and U.S. Air Force have a lot of the same or similar functions, capabilities and issues, but the scale is much different. Being a smaller force, the RCAF is much more flexible and agile. As a small example, last month some paperwork I forwarded for an approval signature from the 1 Canadian Air Division commander made it all the way through the chain and back in four hours. That would be some kind of miracle in the U.S. Air Force!

A bigger example of flexibility is how integrated the RCAF is with their service branch counterparts. For CE tradesmen, shifting between RCAF, Canadian Army and Royal Canadian Navy assignments is commonplace. The RCAF and CA CE tradesmen (there are no RCN tradesmen) attend the same school, the same classes, and use the same terminology, methods and procedures. This type of integration creates a synergy that the U.S. Air Force doesn't have with its sister services.

With the war in Southwest Asia coming to a close, the focus has shifted back to training and realigning the force structure with new missions of the future. Unlike what I've seen the United States, the Canadian Forces — Army, Navy and Air Force — train regularly in a joint setting. As a smaller entity they are very prepared to come together as one joint force when needed — they practice it all the time. As the doctrine and training chief, I represent 1 Canadian Air Division CE in training exercises — my time at Kunsan AB, Korea, would be the only assignment comparable. The Canadian Forces also regularly participate in combined training exercises with its allies, further developing their expeditionary readiness and agility.

Adjustments

Because many U.S. Air Force engineering contracts are written using both the English and metric systems, it was not a difficult transition to use the metric system more exclusively. I did find it more challenging to speak in terms of Celsius vs. Fahrenheit in everyday life, though. And, when I first arrived, I was very aware that I was wearing a different uniform. But, at the headquarters there are several other U.S. military members, making it less of a surprise to see me.

The Experience

I will bring home different ideas of how to do business. The RCAF and U.S. Air Force are similar in a lot of ways when it comes to expeditionary engineering. The requirements of the mission — plan, beddown, sustain, reconstitute — may be very similar for the two nations, but how each executes the details can be different. The more we can learn from the other, the stronger our bonds and our capabilities. Combined, the two nations make a formidable force!

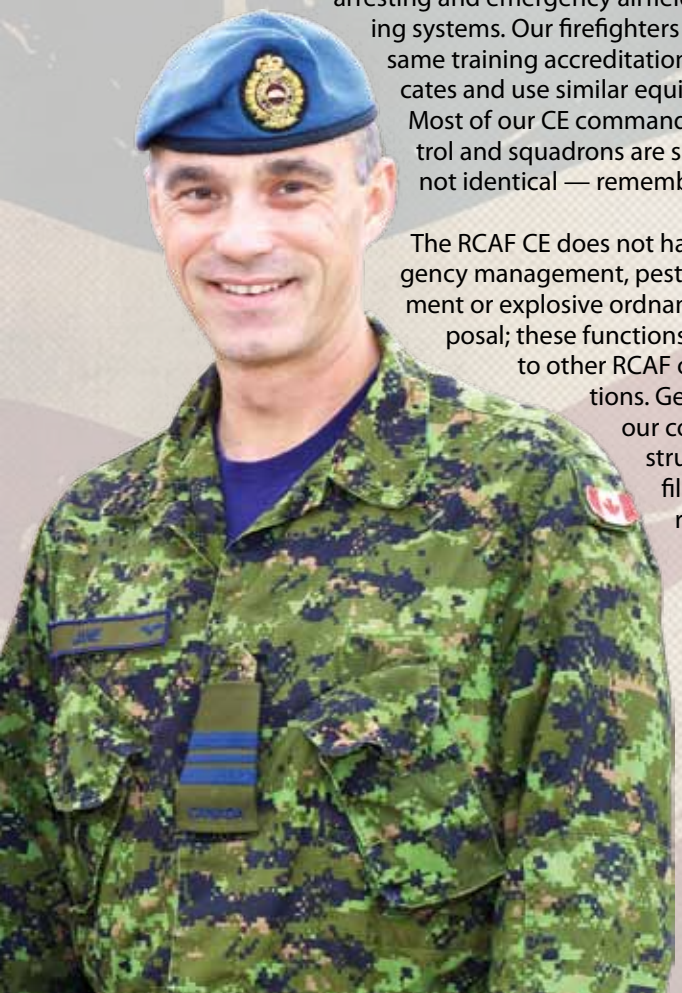
I arrived at AFCEC at Tyndall AFB, Fla., in July 2011, and am halfway through my 3-year assignment as the chief of contingency training in the Readiness Support Directorate. (The Canadian exchange officer reporting to Tyndall has always filled a role revolving around training.) I am responsible for managing the curriculum, standardization and development for CE contingency training, including Silver Flag exercise, mission essential equipment, combat skills and home station training. I oversee a team of four personnel, one military, one civilian and two contractors.

Comparisons & Contrasts

The RCAF and U.S. Air Force are primarily the same — they both fly combat aircraft supported across the spectrum by CE personnel. One of the most important differences is in the size of the force, by a more than 30:1 ratio. The RCAF consists of 17,100 military (14,500 active duty and 2,600 Reserve Force) and 2,500 civilians — a total of about 20,000 personnel. The U.S. Air Force has 510,954 military (332,854 active duty, 71,400 Reserve and 106,700 Guard) and 185,522 civilians — more than 696,000 personnel.

The Canadian Forces are a combined force, so all aircraft, whether flying from the back of a Navy warship or flying combat missions with the Canadian Army, are flown and supported by RCAF personnel, including CEs. For example, firefighters on Navy ships are RCAF CEs.

Much of the Canadian and U.S. CE equipment, tactics and procedures are the same. We use the same mobile aircraft arresting and emergency airfield lighting systems. Our firefighters share the same training accreditation certificates and use similar equipment. Most of our CE command and control and squadrons are similar, but not identical — remember 30:1.



The RCAF CE does not have emergency management, pest management or explosive ordnance disposal; these functions belong to other RCAF organizations. Generally our command structure is filled by one rank lower.

Canadian Maj. David Jane (second from right), AFCEC's Chief of Contingency Training, stands by the display dedicated to past and present RCAF engineer liaison officers with other members of his Air Force team, (left to right), Master Sgt. Samuel Schmitz, Rodger Brown, Scott Eddy and Mike Thomas. (U.S. Air Force photo/Eddie Green)

The 30:1 scale is certainly beneficial in providing a massive number and diverse field of combat capabilities. However, it comes with a larger bureaucracy, perhaps the most challenging element for me. Understanding the sometimes complicated and time consuming process of getting coordination from the MAJCOMs to make a small change in a procedure or publication took some getting used to.

Adaptations

Growing up just across the U.S. border in Saskatchewan, I was exposed to the imperial system as well as the metric system. I can easily switch back and forth for most measurements, although temperature does throw me off a bit. The acronym alphabet is an entirely different story. You would think that our many partnerships and common border would lead us to a common acronym list. I can't imagine what it must have been like before Google!

The Experience

There is a long list of things I have learned. From a warfighting perspective, generally Canada does not prepare to fight large scale conflicts on its own, but on operating with coalitions. I now know the makeup of the Air Force CE community and how they are postured trained and deployed, important for planning any future joint deployments.

From a personal view, as a staff officer involved in part of the "big 30:1 machine," I have learned many valuable lessons. Focus on your area of expertise, provide the answer to your piece of the question and always include those who may have more or better input. Having many experts in narrow lanes of specialty is effective in a large organization. In the smaller RCAF, we just use wider lanes of specialty, perhaps better called generalists.

The three years of this exchange will leave me with a lifetime of memories, friendships and experiences. As we Canadian military engineers say, "Chimo."

JB Andrews' Charter School is First in Class

DeAnne Edlund
AFDW A4/7II

Thomas L. Woosley
AFCEC/CFHE

Imagine Andrews students greet guests following the ribbon cutting on Jan. 14 to officially open their school. (U.S. Air Force photo/Airman 1st Class Erin O'Shea)

A ribbon cutting ceremony for a school at Joint Base Andrews on Jan. 14, 2013, marked a historic event for U.S. military installations. Imagine Andrews, a public charter school, is the first of its kind built entirely with private capital on a military installation, and the first to be solely financed by a privatized military housing developer.

Speakers and attendees for the ceremony included representatives from the organizations who partnered to take the school from a dream to a reality: JBA leadership, Clark Realty Capital, and the Air Force Civil Engineer Center, as well as Headquarters Air Force District of Washington, 11th Wing, Imagine Schools, and Prince George County, Md.

The Andrews school is run by Imagine Schools, a full-service operator of public charter schools. Bringing a charter school to JBA, or any base, supports one of the Air Force's long-standing goals.

"Our goal was to create thriving communities on our installations, and the key thing to creating a thriving community is the right kind of school, whether it's on- or off- base," stated Gen. Norman Schwartz, the former Air Force Chief of Staff, in 2012. "The people who run the privatized housing projects recognize the wisdom of having good schools that serve the communities that they are trying to populate at 100 percent. This is a win-win."

Air Mobility Command East Communities, a joint housing privatization venture between Clark Realty Capital and the Air Force, understood this philosophy and the need for a base school at JBA. For years base residents asked for a school to be built on the installation, and the base worked diligently to bring this dream to fruition. AMC East Communities partnered with base leadership, HQ AFDW and AFCEC to work with the Andrews community and both public and charter school officials to overcome the obstacles in what would be described as a complicated endeavor by anyone who has ever tried to open a school on a military installation. Part of the process was securing all the requisite legislative approvals and private loans.

Language in the Maryland legislation governing public charter school student allocations that required 100 percent of the students to come from the local community was amended to support the JBA privatized housing com-

munity. The Imagine Andrews' student body comprises children from military families assigned to JBA (65 percent) and from the surrounding community (35 percent).

The school initially opened in August 2011 in a 15,000-square-foot temporary facility while a larger permanent school was designed and built on land that was part of the housing privatization project established in 2007. AMC East Communities provided the temporary facility accommodating 240 students at no cost to the school.

A unique capital financing structure, innovative parcel swap and accelerated construction timetable all proved to be critically important in contributing to the overall project success.

"The incredible vision, focus and innovation of our project owner, Clark Realty, paved the way to complete this milestone achievement for the Air Force housing privatization program to support Air Force members and their families," said Col. Thomas Laffey, the AFCEC Director of Housing Privatization. "This fast-track acquisition and capital-financing structure allowed the design-build process to be completed in an astonishingly short 11-month period."

Once conceptualized by AMC East Communities and the Air Force, as a private endeavor the financing, design and construction of the new facility proceeded outside of the standard military construction process at a relatively rapid pace. Under the MILCON process, it would typically take five years to program requirements and design and build a facility of similar size and cost. The entire process, from initial conception through construction took three and a half years.

AMC East Communities also structured an innovative parcel swap, sub-ground lease and loan guaranty structure that facilitated financing and development of the 38,000-square-foot, $6-million permanent facility.

"The entire Clark team is incredibly proud to have played a critical role in this groundbreaking effort," said Sean Callahan, a director with Clark Realty Capital. "This project is an example of how the government can achieve more with less in an era of constrained public funding by leveraging the creative power and financial resources of the private sector through innovative public-private partnerships."

Commanders from other joint bases as well as the General Accounting Office have contacted the 11th Wing and AFCEC seeking information and help with launching successful charter schools on other bases.

"The completion of this modern, spacious and innovative school facility was due to the exceptional collaboration with all stakeholders involved, whose vision and dedication made this new, modern school a reality," said Laffey.

The school is progressive because it blends specialized learning techniques with the traditional educational curriculum while incorporating military culture for both the military and local community families. Since its 2011 opening, the school has become an outstanding member of the Imagine Schools organization, earning a number of prestigious accolades.

This new school is comparable to other public school buildings and provides significant room to grow. Over the next five years, the school will expand by adding a grade each year. The planned end state is a kindergarten to 8th grade school serving about 500 students.

"Imagine Andrews will be essential in making JBA a base of choice for American service members and deepen the already strong ties between this base and Prince George's County," said Col William Knight, the 11th Wing Commander.

Ms. Edlund is the chief of the Installations Management Branch, Air Force District of Washington, Joint Base Andrews, Md. Mr. Woosley is the Housing Privatization Project Manager, Air Force Civil Engineer Center, Joint Base San Antonio-Lackland, Texas.

Front entrance of the Imagine Andrews public charter school located on Joint Base Andrews-Naval Facility Washington, Md. *(U.S. Air Force photo/DeAnne Edund)*

Expeditionary Rubber Removal: Robots in Disguise!

Capt. Kate Miles
Capt. Jeff Klein
AFCENT/A7

Each time an aircraft lands, its tires are super-heated by the friction between the tires and pavement, causing thin deposits of rubber to adhere to the surface of the runway. Over time, the rubber builds up enough to create a hazard for aircraft, especially in wet conditions.

Home station civil engineer squadrons typically contract rubber removal. However, austere locations in Southwest Asia often do not have a local contract capability for rubber removal. As a result, contracts are often very expensive because expertise has to be brought in from companies outside the region.

The Air Force Civil Engineer Center, in conjunction with the Air Force Research Laboratory, both at Tyndall AFB, Fla., recently introduced an expeditionary runway rubber removal equipment kit for use at remote airfields. The kit was shipped to Air Force Central Command Civil Engineering for fielding with the 1st Expeditionary Civil Engineer Group. It contains two systems: detergent and ultra-high pressure water, or UHPW.

Equipment

The detergent system consists of two Bobcat Toolcats with sprayer bar and sweeper attachments, as well as a water bladder on a small trailer. The CE team uses the Toolcats to spray the detergent on a field of rubber before using the sweepers to agitate the chemical. They then pump water from the trailer to the runway to rinse the detergent and dissolved rubber off the pavement. The detergent is non-hazardous and the resulting detergent/rubber mix presents no environmental concerns when rinsed off the airfield. In six hours, the detergent system can remove approximately 6,000 square meters of rubber from a runway without negatively affecting airfield paint or joint sealant.

While the detergent system will be the primary means of rubber removal at most airfields, the UHPW has the advantage of being a more flexible system for airfield managers with busy runways. The detergent process requires a six-hour suspension of runway operations but some aircraft are able to take off on the shortened runway during this process. However, during the suspension of operations engineers have the ability to perform quick rinse procedures for emergency landings.

UHPW, on the other hand, can be used between take-offs and landings without a significant decrease in runway operations and still effectively remove rubber. The system uses a retrofitted Mercedes-Benz Unimog platform combined with a TrackJet attachment and is the first rubber removal device designed to be transported by a C-130.

"This machine is one of a kind. To make it air transportable, the manufacturers had to give it the ability to transform to a smaller version of itself," said Scott Smith, an airfield damage repair modernization analyst at AFCEC. "The cab of the Unimog folds down and the windshield drops to make the overall height short enough to fit into a C-130."

(previous page) Members of the 1st Expeditionary Civil Engineer Group look on as the ultra-high-pressure-water-system and specially modified Unimog removes rubber from a runway centerline during recent training in southwest Asia. (U.S. Air Force photo/Capt. Kate Miles)
(above) To remove rubber with a detergent system, a Bobcat with a sprayer attachment *(above left)* coats a runway with a chemical detergent, before a Bobcat with a sweeper attachment *(above right)* is used to agitate the chemical. (U.S. Air Force photos)

Because of its Transformer®-like qualities, AFCENT/A7 engineers affectionately refer to the Unimog as "Optimus Prime."

The TrackJet attachment is capable of producing about 36,000 psi from the cleaning head, which consists of 48 sapphire or diamond nozzles inside of a titanium assembly. Remarkably, like the detergent system, the UHPW can remove rubber without removing the paint beneath it or damaging joint seals. This is a significant benefit in instances where the underlying paint is still in such a condition that repainting the runway is no longer needed, making rubber removal the only maintenance action needed.

After the rubber is taken off of the runway, the UHPW system removes all debris and water left behind using a vacuum system. The water used to blast the rubber comes from one bladder on the back of the Unimog and as it empties, another bladder fills with the used gray water. On the back of the Unimog, two large filters collect the rubber solids and need periodic cleaning during operations.

Although the UHPW system does provide flexibility, it is not designed to be a complete replacement for using detergent to remove the rubber. In the time it takes the detergent system to remove 6,000 square meters of rubber, the UHPW system would only remove 1,200 square meters, making it a supplement to detergent system.

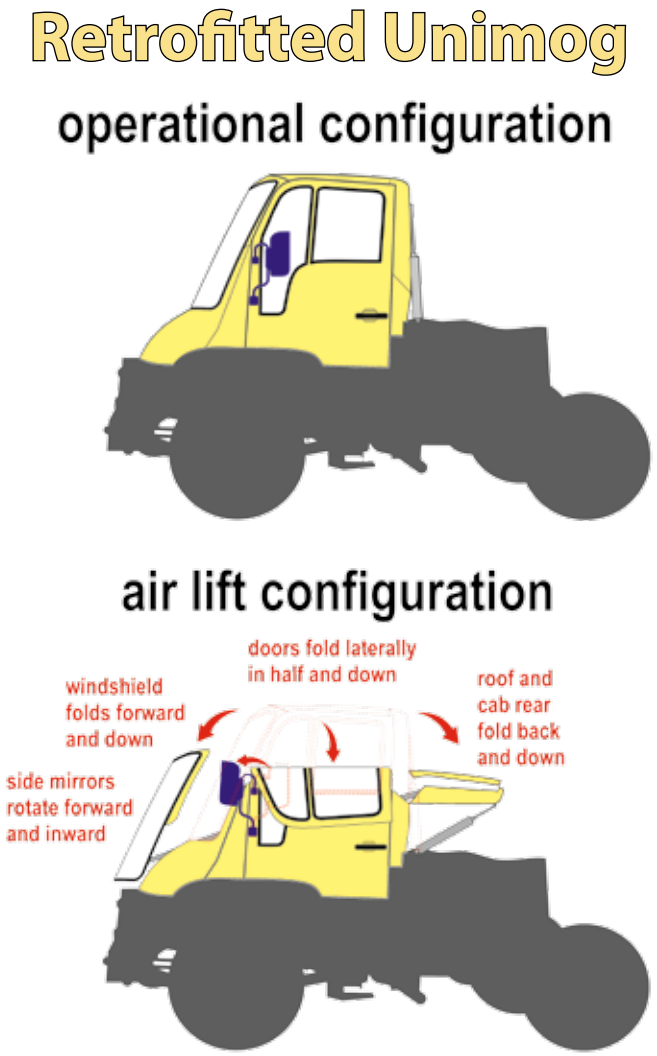
Training

The operations division of AFCENT/A7 worked with AFCEC to develop a 10-day training class for members of the 1 ECEG. The training was conducted in January 2013 at an undisclosed location in Southwest Asia. Trainees spent eight days learning the ins and outs of both systems and even worked through a significant breakdown of the UHPW system.

Since the detergent process is relatively simple, the majority of the course focused on the UHPW system. The team must be well-versed in converting the Unimog from its transportation to operational configuration, operating the TrackJet and Unimog, running nozzle tests and making on-the-fly adjustments during rubber removal. Success with the UHPW requires a skilled hand.

At the conclusion of the class, the trained members of the 577th Expeditionary Prime Beef Squadron and 557th Expeditionary RED HORSE Squadron spent several hours with the UHPW system removing a thick coating of rubber from the center line of an operational runway.

(above) During training on the ultra-high pressure water/Unimog system, CEs from the 1 ECEG adjust the spray head to observe the effects of various pressure settings. (U.S. Air Force photo/Capt. Kate Miles)
(right) Results of using the detergent rubber removal on a runway in Southwest Asia show the post-cleaning side on the right versus the yet-to-be cleaned left side. (U.S. Air Force photo)



"The troubleshooting was the most valuable part of the training for me," said Tech. Sgt. Michael Dinlocker, a heavy equipment operator from the 557 ERHS. "In the future, if I'm at an austere location with the rubber removal team and the Unimog breaks, I'll know the troubleshooting steps inside and out."

The rubber removal team can now forward deploy to airfields in Afghanistan and accomplish rubber removal operations using both capabilities — detergent and UHPW. Lt. Col. Michael Miller, 1 ECEG's operations officer, is confident in the group's ability to make this capability work across the U.S. Central Command theater.

"Standing this capability up within AFCENT's Engineer Group is the right call fiscally and logistically," Miller said. "It buys down flight safety risks for our pilots, their crews and the personnel they bring to the fight with a centralized, blue-suit solution that is flexible, rapidly mobile and responsive to wing commanders' emerging requirements."

Capt. Miles is the Chief of Operations Support and Capt. Klein is the Chief of the Airfield Pavement Evaluation Team for Air Forces Central Command in Southwest Asia.

OPERATION DESERT FINALE

BLAST FROM THE PAST

Dr. Ronald B. Hartzer
AFCEC/DSM

One of the lesser-known aspects of the Gulf War was a joint RED HORSE/Explosive Ordnance Disposal base denial mission known as Operation Desert Finale.

Operation Desert Storm was a tremendous coalition victory over the Iraqi forces, achieving the goal of liberating Kuwait. The air war began on Jan. 16, 1991 and the 100-hour ground war on Feb. 24, 1991. Although the Iraqi military was severely damaged, coalition authorities wanted to ensure that Iraq would not be able to threaten their neighbors to the south in the near future. To achieve this, Lt. Gen. Charles A. Horner, U.S. Central Command Air Forces' commander, decided to take an unusual step. On Feb. 26, 1991, just two days before the formal ceasefire went into effect, Horner tasked RED HORSE to deny three air bases in southeastern Iraq —Tallil AB, Jalibah AB, and Shaibah AB — to prevent their future use by returning Iraqi forces.

The deployed RED HORSE capability operated out of Eskan Village in Riyadh, Saudi Arabia, and was a combined team of personnel and equipment from the 823rd RHS from Hurlburt Field, Fla.; the 820 RHS from Nellis AFB, Nev.; and the 7319 RED HORSE Civil Engineering Flight at Aviano AB, Italy. The unit was led by Col. Thomas Wilson, the 823rd's commander.

"We didn't expect this to come, but when it came we quickly put something in motion," said Wilson. "I went to my two majors. . . . Probably a great amount of the success we had you could attribute to their fine performance….They had a plan together in a matter of hours."

Working under tight time constraints, Maj. Chuck Smiley and Maj. Alec Earle broke the planning effort into two distinct parts. They worked all aspects of the support, including airlift, communications, combat control teams, intelligence and of course, EOD capabilities (EOD was not part of CE until late 1991). Capt. James Schnoebelen, Capt. Frank Myers and Capt. Chris Bagnati conducted the second phase that included planning demolition shots and requirements for personnel and logistics. They were also the officers-in-charge of their respective teams — Alpha, Bravo and Charlie.

The coordination was extensive. For example, the planners had to contact the Army to arrange CH-47 helicopter support to and from the sites and to ensure friendly ground forces in the area were aware of the Air Force presence. They had to coordinate with Special Forces units to arrange for emergency evacuation if necessary and with the Air Force logistics folks to acquire the necessary munitions for the mission.

Members of 820th and 823rd RED HORSE teams at Al Kharj waiting for airlift to the Iraqi bases. *(U.S. Air Force photo)*

One of the planners later summarized their strategy: "…first send in EOD teams via CH-47 helicopter to clear safe landing zones for C-130 traffic at three separate bases. C-130s would then bring in the RED HORSE demolition teams to start base denial. All but a 4,500-foot minimum operation strip would be destroyed, then C-130s would return to bring out all but a small team who would stay behind to complete the mission. Finally, a CH-47 would arrive to pick up the remaining team."

As the teams gathered intel, photos and equipment, the number of sites were reduced to two because Shaibah AB was still held by Iraqi ground forces. Charlie team's EOD personnel would go to Tallil and the team's RED HORSE to Jalibah.

Once the plan was approved, the teams began assembling on March 2. The teams staged in Saudi Arabia: EOD at King Khalid Military City and demolition at Al Kharj AB awaiting C-130 airlift. Two days later, the Alpha and Bravo EOD teams arrived at Jalibah at 1230 local. An advance Bravo team flew on to Tallil and the remainder of the team went overland escorted by combat control teams. EOD had Jalibah's runway cleared for traffic by 1800 on March 4, and a minimum operating strip at Tallil by 1200 on March 5. Delayed by poor weather, the C-130 flights arrived on March 6 at both locations and the next day demolition at both sites began in earnest.

Tallil AB

The 32-person combined Alpha/Charlie Team, led by Schnoebelen from the 820th, included 16 other RED HORSE members — 10 demolition, three airfields, one power production, one vehicle mechanic, and one doctor. The team also included 14 EOD technicians and a communications specialist. The vehicles and equipment included a backhoe, bobcat, six-pax truck, forklift, Humvee with trailer, generator and communication gear.

The team's mission was to destroy the base's aircraft landing and takeoff capabilities. Tallil had seven potential operating surfaces constructed of reinforced concrete 10 to 12-inches thick. The original plan of cutting the surfaces at 1,500-foot intervals changed when the team learned the Army was leaving the area earlier than expected. Because of the unsettled environment, the Air Force team decided to leave the same day as the Army, which meant that they had less than half the time to complete the mission. Schnoebelen decided to cut the runways and taxiways approximately every 2,000 feet. The team also destroyed secondary targets such as communication towers, aircraft and an EOD technical training facility.

At Tallil, the 32-person crew used about 80,000 pounds of explosives (66 MK-82 bombs, 170 40-pound shape charges, 600 1.25-pound C-4 blocks and forty 40-pound cratering charges.) Using three shape charges and a backhoe, the team created large, deep holes for placement of the 500-pound MK-82 bombs, then backfilled them. At dark, after intelligence-gathering aircraft were gone, the team set off the charges. On March 8, most of the personnel and equipment were airlifted out. The remaining members used 12 leftover MK-82s to create craters on the taxiway in the last remaining sections. A CH-47 Chinook airlifted the last of the team and equipment out on March 9.

Jalibah AB

Weather affected the team's work at Jalibah, allowing only one aircraft to land on the first day. The remaining C-130s landed over the next two days. Once on site, Myers, Bagnati and the other 31 team members began working with the equipment and supplies available, performing various test shots to evaluate their effectiveness. The team's work was delayed because Army personnel continued being airlifted from the site until the afternoon of March 7.

In addition to Air Force munitions, the team used 1,000-pound Iraqi bombs placed on a taxiway. These surface blasts were not as effective as using the 40-pound shape charges for an initial blast, digging out the holes and placing the MK-82 bombs, filling in the holes and detonating the MK-82s. This process produced craters ranging from

(above) Blocks of C-4 are taped and rigged for use in destroying secondary targets. *(U.S. Air Force photo)*

(below) Shaped charges were used to blow the initial holes in the runway which would then be expanded using other munitions. *(U.S. Air Force photo)*

12-foot wide and 5-foot deep to 40-foot wide and 12-foot deep. By 2100 on March 9, the last of the runway/taxiway blasts had been completed. Using slightly fewer munitions than at Tallil, the team made 27 cuts (72 craters) in the pavements, effectively denying 35,000 feet of landing surface.

EOD had been destroying shelters on base with land mines while RED HORSE was working on the runways. The following day, March 10, RED HORSE and EOD personnel used pallets of land mines brought to the site by the Army to destroy the last five hardened aircraft shelters, several personnel bunkers and two aircraft arresting barriers. The team concluded that it would cost less to build a new base than to clean up and repair Jalibah.

Safety was a concern at both sites. On the first day at Jalibah, the EOD Humvee hit an anti-personnel mine flattening three tires and puncturing the fuel tank. At Tallil, the forklift had hit a mine blowing the two rear tires. Fortunately, no one was hurt.

Return to Tallil

When Air Force personnel lifted off from the two sites in early March 1991, little did they know that American military forces would be back, living and operating from the same sites in just 12 years. Shortly after the beginning of Operation Iraqi Freedom, members of an Airborne RED HORSE team arrived at Tallil to begin preparation for further Air Force buildup of personnel, equipment and aircraft, treading the same ground that their fellow HORSEmen had walked back in 1991.

(above) Members standing next to a crater produced by shape charges. Mk-82 munitions are placed in the holes and will be detonated to do additional damage to the pavement. *(U.S. Air Force photo)*
(below) A smoke ring formed above the southeast end of Jalibah's runway as it was being destroyed. *(courtesy photo by Dan Jessup)*

3E2X1
Pavements and Heavy Equipment

by Caitlin Lowrey, AFCEC/PA

Airmen in the 3E2X1 CE career field are responsible for more than 154 million square yards of pavement, constructing and maintaining concrete and asphalt runways, parking aprons, and taxiways as well as streets, curbs, parking lots and other improved areas. They operate and maintain heavy construction equipment such as loaders, graders, dozers, backhoes, dump trucks, and snow and ice removal equipment and transport construction equipment and materials using tractor-trailer combinations.

Known as "Dirt Boyz," CEs in the Pavements and Heavy Equipment field must be knowledgeable in soil types and characteristics to ensure proper stabilization, drainage and erosion control. They drill wells, perform quarry demolition and rock crushing operations, and run concrete and asphalt batch plants.

In the war fight, Dirt Boyz are some of the first boots on the ground, performing expedient airfield damage repair; grading, leveling, and compacting roads, foundations, and airfields for bare base operations; and creating unimproved forward landing strips out of desert sand.

After basic training, 3E2X1 Airmen attend technical school for 17 weeks at Ft. Leonard Wood, Mo.

A1C Adrien Shumake

Heavy Equipment Operator
819 RHS, Malmstrom AFB, Mont.

Shumake joined the Air Force in Nov. of 2011 with hopes of being a pavements and heavy equipment operator.

"I enlisted with this job in mind," said Shumake. "It seemed interesting and fun to operate heavy equipment. It's like playing with Tonka toys."

Shumake is working his way through his career development courses and getting ready for an eventual deployment.

According to Shumake, he will be able to reach his career goals within the Air Force with his determination and commitment.

"You may not always be good at something, so you have to have the drive to not give up," said Shumake. "You have to show up and be ready to work every day. With that in mind, the plan is to make the Air Force a career, but I would also like to get my bachelor's degree."

A little over a year into the Air Force, Shumake has made it a point to learn from his superiors and peers alike.

3-level Apprentice

"I use everyone as mentors and examples to learn from, whether they are higher ranking or share the same rank as I do," said Shumake.

Shumake has to be certified to work with many different pieces of equipment, but he does have a favorite.

"I really enjoy the dozers," said Shumake.
(U.S. Air Force photo/Senior Airman Cortney Paxton)

A1C Christopher Sanderson

5-level Journeyman

Pavements and Equipment Operator
647 CES, JB Pearl Harbor-Hickam, Hawaii

Before joining the Air Force in Nov. of 2010, Sanderson worked in pavements and equipment on the outside. Even with his experience, Sanderson still trains.

"There is a lot of training, pretty much training on an every-day basis," said Sanderson.

According to Sanderson, the job is very enjoyable and different every day.

"My favorite thing is that we get to do it all," said Sanderson. "I like the fact that it's never the same thing every day. I get a chance to operate some days and then I get a chance to go out and form up a concrete pad for a sidewalk or for the airfield."

The civil engineering career field is very rewarding for Sanderson and is where he intends to stay.

"I really like the day-to-day work we do," said Sanderson. I feel like it has a real impact on the base. We can drive around and see exactly what we've done to help out the base. Our work is what makes it keep running."

"I'd like to be able to get to Senior Chief, but I know it's a tough thing to do," said Sanderson. I am a really hard wor-ing person with a lot of vision to reach my goals."
(U.S. Air Force photo/David Underwood)

MSgt Wesley McCord

7-level Craftsman

Section Chief of Heavy Repair
823rd RHS, Tyndall AFB, Fla.

McCord has been in the Air Force and the Pavements and Heavy Equipment career field since 2001.

"I was a farmer in Indiana and heavy equipment is about the closest thing to farming there was," said McCord.

McCord is responsible for teaching pavement and heavy equipment and structures Airmen at the Silver Flag Exer-cise Site.

"The coolest part is that we are going to be here for three years and will probably meet about 75 percent of the career field," said McCord. "So when I get stationed at a regular CE base, I'm probably going to know half of the people in that shop."

McCord has finished his formal training for the career field.

"But, I still learn stuff from the students that come here," said McCord.

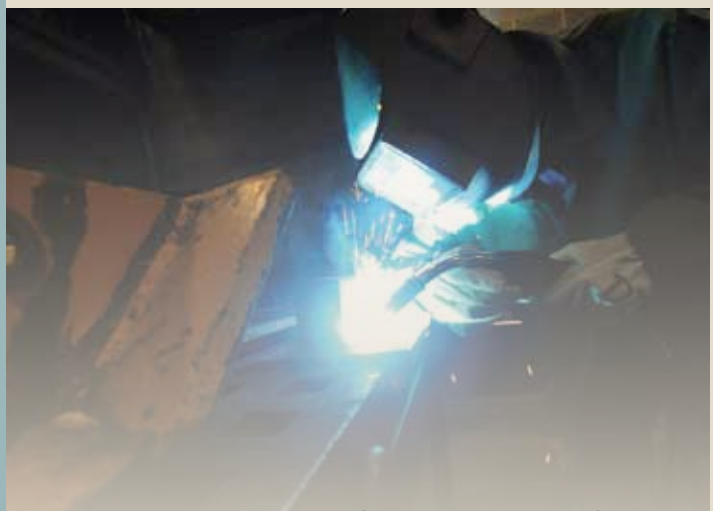
McCord has deployed four times to five different locations and had the opportunity to work on the Village of Hope

project while deployed in Hawr Rajab, Iraq. These experi-ences have equipped McCord to teach.

"The deployment gives you credibility in the classroom," said McCord. "My goals are to finish my bachelor's degree in organizational management before I retire and to make chief. Once I get started on something, it's hard for me to leave it alone until it's done."
(U.S. Air Force photo/Eddie Green)

3E3X1
Structural

by Caitlin Lowrey, AFCEC/PA



CEs in the Structural career field build structures from the foundation up through the roof and from the outside covering in through the interior wall finish. They construct, repair, modify and manage structural systems and wooden, masonry, metal and concrete buildings for the Air Force, which has 634 million square feet of buildings at home station installations. 3E3X1 Airmen also have responsibility for repairing or fabricating components of utility systems, real property, and buildings, including all types of doors, gates, roofs, gutters, windows, steps, siding, walls and ductwork. They are the Air Force's locksmiths for doors, safes and other security devices.

Structural CEs work in metal as well as wood, brick, mortar and concrete. They forge, cut, weld, build, install and repair different types of metal building components, including trusses and structural steel. They erect and work from scaffolding, ladders and mobile platforms.

In wartime operations, 3E3X1 Airmen build shelters of all sizes and materials for aircraft, personnel and other support equipment at contingency locations worldwide. They are responsible for important aspects of installation security, including facility hardening, bunker construction, and revetment or barrier system placement. They can also make welding repairs on vehicles, trailers, accessories towed by vehicles and heavy equipment.

After the initial basic training, structural airmen attend technical school for 17 weeks at their schoolhouse in Gulfport, Miss.

A1C Seth Freese

3-level Apprentice

Structures
20 CES, Shaw AFB, S.C.

Freese joined the Air Force in January of 2012.

"Joining was the best decision of my life," said Freese. "I joined the Air Force to be independent and I came in wanting to do open mechanical. I didn't even know they had this job, but I knew I wanted to do something with my hands.

"There are four civilians and around twenty military in my shop," said Freese. "I find it beneficial to work with the civilians because they have a lot of job experience."

He also volunteers for the Honor Guard.

"I thought it would be a really nice experience to provide closure to families and to have that opportunity," said Freese. "I've been doing it for a couple of weeks now and I really enjoy it."

Freese particularly likes the carpentry work he does in the structures career field.

"Getting all the measurements right and lining up the pieces is like a puzzle, you have to pay attention to the small details or it won't turn out the way you would like it to," said Freese.
(U.S. Air Force photo/Senior Airman Tabitha Zarrella)

A1C Dimitri Tsika

Structures
4 CES, Seymour Johnson AFB, N.C.

Tsika joined the Air Force in July of 2011 as open mechanical but was placed into the structures career field.

"Structures was on my list, but I wasn't sure what it really consisted of," said Tsika. "They picked it for me and I'm very glad they did. I love it; I love everything about the job."

Among the many things Tsika does within the structures career field, he has found a favorite.

"My favorite part would definitely be working in the wood shop," said Tsika. "I like building walls and door frames, anything that has to deal with construction work."

Tsika has yet to deploy, but the likelihood of that is high.

"I would want to deploy if given the chance, and chances are really strong that I will," said Tsika. "It would be a good overall military experience."

Tsika has begun college classes while working towards becoming a staff sergeant and moving on to his 7-level.

5-level Journeyman

"Work ethic overall is my best asset, not that I'm the best at anything or better than anyone else, I'm just willing to work harder than anybody else," said Tsika. "Whatever I do, I'm going to put everything I have into it. I'm going to work hard no matter what they are telling me to do."
(U.S. Air Force photo/Airman 1st Class John Nieves Camacho)

SSgt Jarod Singer

Structures Supervisor
823rd RHS, Hurlburt Field, Fla.

Since joining the Air Force in October of 2001, Singer has worked in two career fields – civil engineering and recruiting.

"I signed up for open mechanical and when I got to basic training, structures was my number two job choice," said Singer. "I had to take a fear of heights test and I've learned as a recruiter that when you have to take additional training in the Air Force and you pass, you automatically get that job."

Working as a recruiter has given Singer a different perspective on what he does in CE.

"Recruiting is more individual based, your success is measured by how many people you put in the Air Force," said Singer. "Whereas, with CE and with RED HORSE especially, it takes not one person, but a whole team to put a building up; it takes all the different crafts working together. A lot more team effort is involved."

Since returning to his original career field in CE, Singer gets to do what he loves.

7-level Craftsman

"I prefer the carpentry side, as opposed to metal working," said Singer. "The cool thing about the Air Force rather than other services, such as Seabees, is that they specialize in one specific area while we get training in all the areas and have all-around craftsmanship."

According to Singer, his RED HORSE unit is tasked with the pilot unit training for constructing K-spans for the whole Air Force – active duty, Guard, Reserve. So, he gets to do a lot of teaching, an aspect of his career he enjoys as well.
(U.S. Air Force photo/Sr. Airman Krystal Garrett)

2012 Air Force Civil Engineer awards

Outstanding Civil Engineer Unit
and the
Society of American Military Engineers Maj Gen Robert H. Curtin Award

Large Unit
49 CES, Holloman AFB, N.M.
673 CEG, JB Elmendorf-Richardson, Alaska

Small Unit
27 SOCES, Cannon AFB, N.M.
8 CES, Kunsan AB, Republic of Korea

Air Reserve Component
145 CES, Charlotte ANGB, N.C.
439 CES, Westover ARB, Mass.

Brig Gen Michael A. McAuliffe Award
(Housing Excellence)
30 CES, Vandenberg AFB, Calif.
673 CES, JB Elmendorf-Richardson, Alaska

Maj Gen Robert C. Thompson Award
(Resources Flight)
61 CELS, Los Angeles AFB, Calif.
436 CES, Dover AFB, Del.

Brig Gen Archie S. Mayes Award
(Programs Flight)
51 CES, Osan AB, Republic of Korea
802 CES, JBSA-Lackland, Texas

Maj Gen Clifton D. Wright Award
(Operations Flight)
4 CES, Seymour Johnson AFB, N.C.
796 CES, Eglin AFB, Fla.

Maj Gen Del R. Eulberg Award
(Asset Management Flight)
11 CES, JB Andrews, Md.
72 ABW/CE, Tinker AFB, Okla.

SMSgt Gerald J. Stryzak Award
(Explosive Ordnance Disposal Flight)
354 CES, Eielson AFB, Alaska
96 CES, Eglin AFB, Fla.

Col Frederick J. Riemer Award
(Readiness & Emergency Management Flight)

Active Duty
51 CES, Osan AB, Republic of Korea
27 SOCES, Cannon AFB, N.M.

Air Reserve Component
434 CES, Grissom ARB, Ind.

Maj Gen Joseph A. Ahearn Enlisted Leadership Award
CMSgt. Chad D. Brandau
436 CES/CEM, Dover AFB, Del.
CMSgt David A. Ayers
HQ AETC/A7OX,
JBSA Randolph, Texas

Maj Gen William D. Gilbert Award
(Outstanding Staff Action Officer)

Officer
Maj George E. Nichols
HQ USAF/A7CIP, Pentagon, D.C.
Capt Clemente A. Berrios
HQ AFCEE/CXT, JBSA-Lackland, Texas

Enlisted
SMSgt Christopher J. Warsitz
HQ AFMC/A7OS,
Wright-Patterson AFB, Ohio
MSgt. Daniel L. Dalrymple
HQ USAFE/A4/7, Ramstein AB, Germany

Civilian
Lara A. Schoenenberger
HQ AFCEE/CXT, JBSA-Lackland, Texas
Jadee A. Purdy
HQ USAF/A7CXR, Pentagon, D.C.

Harry P. Rietman Award
(Senior Civilian Manager)
Mark O. Pinnau
718 CES/CED, Kadena AB, Japan
Jennifer A. Harris
47 CES/CD, Laughlin AFB, Texas

Maj Gen L. Dean Fox Award
(Senior Military Manager)
Maj Joel A. Bolina
375 CES/CEO, Scott AFB, Ill.
Maj Brandon H. Sokora
7 CES/CEO, Dyess AFB, Texas

Maj Gen Eugene A. Lupia Award
Company Grade Officer
Capt John P. Conner
823 RHS/DE, Hurlburt Field, Fla.
Capt Matthew R. Borawski
52 CES/CED, Spangdahlem AB, Germany

NCO
TSgt Tracy L. Passerotti
4 CES/CED, Seymour Johnson AFB, N.C.
SSgt Mark O. Hajduk
354 CES/CED, Eielson AFB, Alaska

Airman
SrA Jaymes A. Crusan
633 CES/CEOFE, JB Langley-Eustis, Va.
SrA Paul J. Orosz
87 CES/CED,
JB McGuire-Dix-Lakehurst, N.J.

CMSgt Larry R. Daniels Award
(Military Superintendent)
MSgt David A. Belanger
627 CES/CEO, Lewis-McChord, Wash.
MSgt Robert J. Laning
96 CES/CEF, Eglin AFB, Fla.

Outstanding Civil Engineer Manager
Civilian Manager
Christa L. Gunn
718 CES/CEP, Kadena AB, Japan
Patrick M. Ross
HQ AFCESA/CEMT, Tyndall AFB, Fla.

Civilian Technician
Richard Espiritu
AFCESA/CEMR, Travis AFB, Calif.
Ayano Kinjo
18 CES/CEOIH, Kadena AB, Japan

Outstanding Civil Engineer Manager

Air Reserve Component Officer

Maj Melvin L. Ibarreta
349 CES/CEO, Travis AFB, Calif.
Capt Kevin M. Clapp
HQ AETC/A7ND, JBSA Randolph, Texas

SNCO

SMSgt Terry L. Wooldridge Jr.
45 CES/CEF, Patrick AFB, Fla.
SMSgt Gregory G. Noll
HQ AFCESA/CEXF, Tyndall AFB, Fla.

NCO

TSgt Daniel R. Feland
21 CES/CEOIH, Peterson AFB, Colo.
TSgt Russell J. Szczepaniec
307 CES/CED, Barksdale AFB, La.

Outstanding Community Planner

Gary R. Hallmark
20 CES/CEAO, Shaw AFB, S.C.
Maureen E. Goodrich
502 ABW/JB7CP,
JBSA Ft. Sam Houston, Texas

Outstanding Military Airman Dorm Leader Award

Senior Military

MSgt Bradley D. Gifford
22 CES/CEAC, McConnell AFB, Kan.
MSgt Harley L. McCurter
100 CES/CEA,
RAF Mildenhall, United Kingdom

Military Airman

SSgt Jason A. Barber
325 CES/CEA, Tyndall AFB, Fla.
SSgt Anthony Moss
92 CES/CEAC, Fairchild AFB, Wash.

Society of American Military Engineers Newman Medal

Col David L. Reynolds
AFCESA/CC, Tyndall AFB, Fla.
Col Gary D. Chesley
ACC/A7-2, JB Langley-Eustis, Va.

Society of American Military Engineers Goddard Medal

Active Duty

SMSgt Gary R. Szekely
HQ AFCESA/CEOF, Tyndall AFB, Fla.
SMSgt Mark H. Jenson II
4 CES/CEOS, Seymour Johnson AFB, N.C.

Air Force Reserve

SMSgt Gary W. Smith
567 RHS/CEOA, Goldsboro, N.C.

National Society of Professional Engineers Federal Engineer of the Year

Military

Lt Col Michael E. Klapmeyer
61 CELS/CC, Los Angeles AFB, Calif.

Civilian

Todd R. Martin
628 CES/CEPM, JB Charleston, S.C.

Maj Gen Augustus M. Minton Award

(Outstanding ***Air Force Civil Engineer*** Article)

Maj Madeline Rivero
AFZA-AE-T-133, Fort Bragg, N.C.
Lt Col Gregory Ottoman
HQ USAF/A7CE, Pentagon, D.C.
Lt Col Michael Nester
141 CES/CC, Fairchild AFB, Wash.
Maj Mel Ibarreta
349 CES/CEO, Travis AFB, Calif.

Air Force Energy Conservation Award

Individual

Rodney A. Fisher
HQ AFCESA/CEXX, Tyndall AFB, Fla.
Robert D. Montgomery
23 CES/CEAO, Moody AFB, Ga.

Team

96 CEG, Eglin AFB, Fla.
86 CES, Ramstein AB, Germany

Balchen/Post Award

(Snow and Ice Removal)

100 CES,
RAF Mildenhall, United Kingdom
75 CES, Hill AFB, Utah

Bulldog Award

Col Douglas Hardman
823 RHS/CC, Hurlburt Field, Fla.

Gen Thomas D. White Environmental Awards

Environmental Quality Award

(Industrial Installation)

78 CES, Robins AFB, Ga.

Environmental Quality Award

(Overseas Installation)

52 CES, Spangdahlem AB, Germany

Environmental Quality Award

(Air Reserve Component)

434 MSG, Grissom ARB, Ind.

Cultural Resources Management Award

(Installation)

99 CES, Nellis AFB, Nev.
Cultural Resources Management
(Individual/Team)
99 CES/CEAN, Nellis AFB, Nev.

Natural Resources Conservation Award

(Large Installation)

673 CES,
JB Elmendorf-Richardson, Alaska

Environmental Restoration Award

(Installation)

92 CES, Fairchild AFB, Wash.

Sustainability Award

(Non-Industrial Installation)

673 CES,
JB Elmendorf-Richardson, Alaska

Sustainability Award

(Individual/Team)

61 CELS/CEAN, Los Angeles AFB, Calif.

National Environmental Policy Act Award

(Team)

11 CES/CEAN, JB Andrews, Md.

Air Force Engineers Visit Korean Defensive Obstacles

Seventh Air Force and Republic of Korea engineers come together to become familiar with the Korean Barrier System

Maj. David Noble, USA
USFK/FKEN-PO

Although recent events have brought defense of the Republic of Korea to the forefront, readiness and training have always been a focus for U.S. forces in the area. During one busy week in late October 2012, military engineers and security force experts in the ROK observed river crossing training and combined airfield damage repair exercises. But the highlight for the Seventh Air Force engineers was a tactical reconnaissance of the Korean Barrier System.

"This was a good opportunity for U.S. and Korean officers to understand the procedures of the Korean Barrier System." said Lt. Col. Kim Jun Ho, a ROK Army engineer assigned to the Combined Forces Command engineer staff.

The KBS is a series of defensive obstacle belts emplaced by ROK military forces, intended to deter and defend against North Korean aggression. It is sometimes identified as being part of the demilitarized zone which stretches the length of the border between North and South Korea. Some of the obstacles in the DMZ are remnants of the Korean War, including anti-tank and anti-personnel mines. Use of the latter in the Korean DMZ minefields continues to be the subject of much discussion. Although 160 countries have agreed to the Ottawa Treaty, which prohibits the use, stockpiling, production and transfer of anti-personnel mines, other nations, including Russia, China, Republic of Korea, and the United States, have not.

Because it is illegal to populate the DMZ with new munitions under the 1953 Armistice Agreement, the KBS system includes obstacles systems positioned south of the DMZ. All of the obstacles built within KBS are designed to disrupt, fix, turn, or block enemy efforts, creating delays to provide the time needed for friendly forces to defend north of the Greater Seoul Metropolitan Area.

Engineers from the U.S. Seventh Air Force; the Republic of Korea 7th Engineer Brigade; United States Forces Korea; U.S. Eighth United States Army; and Combined Forces Command headquarters pose along the Demilitarized Zone in Panmunjom, Republic of Korea. (courtesy photo)

"Korean engineers address the threat of a dangerous mechanized enemy across the border with well thought-out solutions," said Lt. Col. Steven McCollum, a U.S. Air Force engineer officer assigned to the U.S. Forces Korea engineer staff.

As part of the growing collaboration of efforts on the Korean Peninsula, Combined Forces Command engineers invited their U.S. engineer counterparts on a day-long trip to learn about the KBS. The trip included site orientations along the western portion of the Korean Peninsula, presentations by the 7th ROK Engineer Brigade, and observations of training and planning exercises before a visit along the DMZ itself, where some obstacles were examined and discussed.

"Only an up-close experience like the one we were afforded could help anyone serving in Korea understand the significance of the defensive posture that the South Korean military maintains day in and day out," said Capt. Rebecca Corbin, a U.S. Air Force engineer assigned to the 7th Air Force engineer staff.

The combined collaboration served to strengthen the ROK and U.S. alliance, placing the ever-present "We Go Together," or "Gatchi Gapsida," mentality at the forefront of all engineer efforts within the Korea theater of operations.

Maj. Noble is a U.S. Army engineer officer assigned to the USFK joint staff, currently serving a second tour in Korea in the Yongsan, greater Seoul metropolitan area.

TWO BASES MAKE DEDICATIONS

IN MEMORY OF FALLEN HEROES

HILL AFB DEDICATES SOLESBEE STREET

Maj. Rob Baran
775 CES/CED

On December 4, 2012, the family of Tech. Sgt. Kristoffer M. Solesbee, joined by Maj. Gen. Timothy Byers, unveiled a sign that would forever designate "Solesbee Street" at Hill Air Force Base, Utah, in his memory.

His wife, Lilia Solesbee; mother, Sandy Parker; stepfather, Louis Parker; father, Larry Solesbee; sister, Trina Solesbee; and approximately 100 friends, dignitaries and members of Team Hill gathered in a light drizzle on the scenic road that overlooks the Great Salt Lake and Wasatch Range.

Solesbee was assigned to Hill's 775th Civil Engineer Squadron Explosive Ordnance Disposal Flight. He was on his third deployment when he was killed on May 26, 2011, near Shorabak, Afghanistan by an IED blast that also killed his teammate and seriously injured several others.

Sandy Parker reflected on her son's love of the outdoors, skydiving and skiing.

"A mother's biggest fear is that their children will be forgotten, and this is a way that the military community has shown us that they care and they'll remember," she said.

Speaking for his fellow EOD Airmen, we lost a brother that day and Solesbee Street is an indelible way to ensure he is always with us and to remember the mark he left on us all.

Maj. Baran is the 775th EOD Flight commander, Hill AFB, Utah. (U.S. Air Force photo)

BARKSDALE AFB NAMES BUILDING FOR FALLEN HERO

M. Sgt. Sabrina D. Foster
2 BW/PA

Barksdale Air Force Base's fitness center was officially renamed "The Senior Airman Bryan Bell Fitness Center" on March 8, 2013 during a dedication ceremony at the Louisiana base. More than 200 people attended to honor Bell, an Explosive Ordnance Disposal Technician assigned to the 2nd Civil Engineer Squadron, who was killed Jan. 5, 2012, by an improvised explosive device in Afghanistan while supporting Operation Enduring Freedom.

"The Fitness Center was chosen because it is an extremely visible facility," said Steven Vincent, 2 CES deputy commander. "Also, fitness is of paramount importance to the EOD mission. These two factors made it an obvious choice in honoring the first combat fatality from the 2nd Bomb Wing since World War II."

Bell joined the Air Force in 2007, and in his four short years in the Air Force, directly contributed to more than 209 successful counter-IED missions; cleared IEDs from an area of over 745 miles of supply routes; and earned the Bronze Star Medal with Valor, the Air Force Combat Action Medal, both the Air Force and Army Commendation Medals and the Purple Heart.

Senior Airman Candice Bell, Bryan's sister, stationed at Wright Patterson Air Force Base, Ohio, spoke at the dedication on behalf of the Bell family. She recalled Bryan as a kind, loving individual who cared about those around him and was always willing to lend a helping hand. Because of his size, she referred to him as a "big, friendly giant."
(U.S. Air Force photo/Staff Sgt. Amber Ashcraft)

Carter to be Next AF Civil Engineer

Brig. Gen. Theresa C. Carter has been selected to become The Civil Engineer, Deputy Chief of Staff, Logistics, Installations and Mission Support, Headquarters United States Air Force, Washington, D.C. She will replace Maj. Gen. Timothy Byers in that position, as announced by the Air Force on Feb. 21.

"General Carter's selection is a testament to her ability to lead people to make a positive difference where they serve and deliver mission success," said Byers. "I'm confident her leadership will empower our engineers to continue leading the change for our Air Force."

Carter is currently the Commander, 502nd Air Base Wing and Joint Base San Antonio, Texas, which includes Randolph, Lackland, Fort Sam Houston and Camp Bullis. In this position she oversees an annual operating budget of more than $700 million and a $10.9 billion plant replacement value, for more than 80,000 full-time personnel, 145,000 students and a retiree community of more than 250,000.

Carter entered the Air Force in September 1985 as a distinguished graduate of the Air Force Reserve Officer Training Corps program at Purdue University in Indiana. She has a

Master's degree in industrial engineering from the University of Oklahoma and a Master's in national resource strategy from the Industrial College of the Armed Forces.

The U.S. Senate confirmed Carter's nomination to the rank of major general on March 5.

Tech. Sgt. Ronnie Brickey, an Explosive Ordnance Disposal CE, poses for a photo with Chief Master Sgt. James Brewster after receiving his fifth Bronze Star medal on March 22 at Hurlburt Field, Fla. Brickey, the U.S. Air Force Special Operations School force protection branch NCO-in-charge, is only the fifth Airman to receive five Bronze Star medals. He said Brewster was his first mentor in the Air Force and that he wouldn't be where he is today without his advice. Brewster is now the Air Force EOD career field manager at the Air Force Civil Engineer Center, Tyndall AFB, Fla. *(U.S. Air Force photo/ Sr. Airman Melanie Holochwost)*

Key Personnel Updates:

Col. Crinley (Scott) Hoover is now the Associate Civil Engineer, Office of the Civil Engineer, Washington, D.C. He was previously the chief of the Installations Division in the Office of the Civil Engineer. Col. Hoover replaces Col. Markus Henneke, who deployed to the Southwest Asia Area of Operations.

Col. Edwin Oshiba is the new Chief, Installations Division, Office of the Civil Engineer, Washington, D.C., replacing Col. Scott Hoover, who is now the Associate Civil Engineer. Col. Oshiba was previously the Chair, Installation Support Panel, in the Office of the Civil Engineer.

Col. Shawn Moore is the new Chief, Environment and Energy Division, Office of the Civil Engineer, Washington, D.C., replacing Col. Greg Ottoman, who deployed to the Southwest Asia Area of Operations. Col. Moore was previously the Deputy Chair, Installation Support Panel, in the Office of the Civil Engineer.

Col. John Lohr is now the Director of Installations and Mission Support, Pacific Air Forces, Joint Base Pearl Harbor-Hickam, Hawaii. He was previously the deputy director. Col. Lohr replaces Col. Karl Bosworth, who retired.

Final Farewell

for Renowned Air Force CE

Brig. Gen. William T. (Tom) Meredith, passed away Feb. 20, 2012, at the age of 93, following a brief illness. Although he retired from the Air Force in 1973, even today the initiatives he helped develop during his career remain the Air Force's fundamental programs for providing worldwide combat engineering support.

Meredith enlisted in the U.S. Army in 1941, joining the Army Corps of Engineers. During WWII, he was stationed in the China-Burma-India Theater as part of the Haynes Mission to build airfields in that area. He was a lead patrol scout for building the Ledo Road. While escorting a reconnaissance party that included Maj. Gen. Raymond Wheeler, they were surrounded by Japanese forces. After evading the enemy for two weeks, they were able to break through and walked 126 miles back to Ledo. As a result of this experience, Wheeler awarded MSgt Meredith a battlefield commission for his bravery and leadership.

After the war, Meredith left the Army for a short while, then rejoined and transferred his commission to the Air Force in 1949. As a CE officer, Meredith was stationed in Saudi Arabia and England, did tours at various Air Force bases in the United States and completed several tours at the Pentagon. In 1961, after graduating from the Air War College at Maxwell AFB, Ala., he began the Pentagon tour during which he accomplished some of the most notable work of his career. He led the Civil Engineering Manpower Study Group that gave birth to Prime BEEF, a new structure that reoriented and redistributed the CE force from a peacetime posture to one prepared to meet emergency requirements. Shortly after this, he was instrumental in establishing and equipping the first two RED HORSE squadrons headed for Vietnam.

Meredith commanded two RED HORSE squadrons. He led the 560th at Eglin AFB, Fla., that trained RED HORSE replacement personnel. From Oct. 1967 to Nov. 1968, Meredith commanded 554th Civil Engineering Squadron (Heavy Repair) at Phan Rang.

Meredith retired from active duty effective March 1, 1973, and worked for several private companies. As the first president of the Parsons Brinckerhoff Construction Services Company, one of the projects he oversaw was the Tampa-St. Petersburg's Sunshine Skyway Bridge in Florida. He retired from the company in 1990.

Meredith was a Society of American Military Engineers Fellow and recipient of both the Society's Newman Medal (1965) and Gold Medal (1985). The highest award at Air Force Civil Engineering's Readiness Challenge, the Meredith Trophy, is named in his honor, and he was the first combat support individual to be recognized for his enduring contributions to air and space power by Air Command and Staff College during one of their annual Gathering of Eagles.

(left) *At Readiness Challenge in 2002, then Air Force Chief of Staff, General Michael Ryan (left), and retired Brig. Gen. William Meredith (right) awarded the Meredith Trophy to a representative of the winning team from Air Force Space Command.* ***(right)*** *Retired Brig. Gen. Meredith speaks after being honored by Air Command and Staff College's Gathering of Eagles. (U.S. Air Force photos)*

The Keymaster

Jack Crain, 509th Civil Engineer Squadron locksmith, hammers pinning codes into a key, which prevents the duplication of keys and maintains the continuity of locks. (U.S. Air Force photo/Staff Sgt. Nick Wilson)

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