## ARMY ENGINEER MAGAZINE

January / February-2018 Edition

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## FROM THE EXECUTIVE DIRECTOR | xd@armyengineer.com

## AEA Members:

I have added the letter from AEA President MG (Ret) Russ Fuhrman that went out electronically in Nov. He highlights several decisions made at the October AEA Board of Directors meeting that will become more apparent as those changes take place.

He highlighted the decision to have a more digital based magazine and an improved website. Many other changes will be forthcoming as we get the basics services adjusted.

Welcome to the first digital edition of the Army Engineer Magazine. We have now launched a new platform that allows us to reach more of our members in a medium that is more portable for their high OPTEMPO service in the US Army Engineer Regiment.


In conjunction with the digital magazine we have done an update to the website. You will find the site easier to navigate and more intuitive in design and useful to you. http://www.armyengineer.com/index.htm

We will continue to expand the website to add additional functions as they are developed. We will send the digital magazines to your listed email address. The cut out below outlines ways to update your member information to get your Army Engineer Magazine where you want it. You can even mail it to us to update your files.


Dave Theisen AEA Executive Director COL EN (Ret)

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The Army Engineer Magazine is proud to launch our digital edition in 2018. The printed edition will be limited so all emails need to be up-to-date for most members to still receive the magazine. To ensure your electronic delivery of the Army Engineer Magazine, please update or verify your email by any of these methods:

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# AEA MEMBER UPDATE 

November 2017

## Fellow AEA members:

I wanted to take this opportunity to update you on changes that will be taking place in our Association over the next several months.

AEA has supported our Regiment for a quarter century. Our operating model has been to obtain financial support from three sources: Industry, Regimental Store, and Membership. For two decades this model worked. Recent
consolidations in industry, reduced industry business development budgets, more stringent DoD conference rules, reduced engineer force structure, and increased op tempo have proved challenging. Since 2011 we have been losing money at an unsustainable rate. Reducing overhead has somewhat tempered our losses. Most associations are facing the same challenges.

The hardest decision the Board faced was moving to an electronic magazine (many associations have already done so). The hard copy magazine represented over $25 \%$ of our operating costs. Our member survey showed young members and Industry (advertising) preferred the electronic version, while our senior (retired) community preferred a hard copy. We will provide members with 6 electronic magazines a year and one hard copy that will be a year in review addition. We will continue to maintain the high quality content.

Over the next several months you will see a significant improvement in the Association's IT infrastructure. Our legacy IT infrastructure became unsupportable. The Board approved an offer from PubK group to update our website and face book, plus consolidate our magazine and website advertising.

Our survey also showed members wanted a web store and more unit specific memorabilia. This should increase merchandise accessibility and store revenue. The staff has already rolled out a website for purchasing limited unit memorabilia and over time this will be expanded to include merchandise carried in the Regimental Store.

The Board approved a revised membership plan to simplify the number of memberships from 15 to 3 and reaffirmed the requirement that Bronze and Silver De Fleury recipients must be AEA members.

The Board also authorized the Executive Director to continue to work with SAME on a strategic partnership whereby AEA members could gain access to SAME continuing education and credentialing programs.

The bottom line is AEA must adapt to a changing world if we are to continue to serve the total Army Engineer Regiment (Active, National Guard, Reserve, D.A. Civilians, and their family members). The Association will continue to foster esprit and cohesion within the Regiment by recognizing excellence, honoring sacrifice, preserving our engineer heritage, and providing a conduit to our nation's industrial base.

The Board hopes these incremental changes are a start in helping to keep AEA healthy in the next quarter century. An organization is only as good as the passion of its members. I encourage all to continue to be actively engaged with your time and resources.


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PUBLICATION: Army Engineer is published six times a year on a bimonthly basis. It's primary distribution is thru email to members preferred email address.

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# 150TH ENGINEER CASTLE BALL COMMEMORATIVE PRINT 

This coming August we will celebrate the 150th Engineer Castle Ball in the Nation's Capitol. In our history, the Regiment has moved 5 times: West Point, Willets Point, Washington Barracks, Camp Humphries/Fort Belvoir, and Fort Leonard Wood.

Each move has come about due to mission growth and changes for the Engineer Regiment. The significant change we are celebrating this year is the official addition of Public Buildings and grounds to the already existing civil works mission in our Regimental repertoire.

With the aid of the USACE history Dept, I learned so much about the last 150 years and how the Army Engineers helped shape a nation.

The early Nation's Capital was laid out by Pierre Charles L'Enfant, a French architect, in grid and radial system. This system created several small parks, trapezoids and areas that had not been maintained or improved. While it did provide early versions of green space it also lacked a general infrastructure to support the city. Several military engineers worked on specific projects in the capitol, but it was site specific to a building most often. The US Capitol and Dome expansion was placed under CPT Montgomery Meigs as the engineer in charge of the project in 1853.

The project had been floundering and CPT Meigs was brought into bring the project back on track.

There was no budget for the territorial government Washington and the results were sporadic. Congress was very stingy with funds. The project was completed on time but not without acrimony. In 1860 after a spat with the Secretary of War, Meigs was assigned to the Tortugas in the Gulf of Mexico to built forts. This was the farthest and most remote duty station possible in getting him away from Washington DC.

The outbreak of the American Civil War brought engineering to the Washington on an industrialized scale. The defense of Washington was of vital importance to the North and the area would serve as a marshalling point for much of the Army of the Potomac. A series of 53 forts were built around the capitol to protect it from the Army of Northern Virginia. The military brought a systematic approach to
infrastructure to Washington and improved roads, railroads, and military encampments throughout the area. The use of centralized planning for roads, forts railroads, storage facilities brought high order of efficiency to the city. Much changed in the operation of the city during those four years.

After the Civil War the transition to a peacetime Army happened at a quick pace and left the Capitol and the Government in a predicament. As the American Army does after each war, it quickly transitions draftee and volunteers back to civilian life. The Civil War had placed the United States on the world stage. The breakaway colonies had proven itself as an innovator in technology and martial skill.




#### Abstract

The Winning of the Civil War had thrust America onto the world stage and traffic from leaders around the world increased dramatically. These same visitors were struck with how primitive and backward the Capitol was compared to those of Europe. The well ordered engineer support for the city evaporated with the Army drawdown and without upkeep and planning the city started to experience growing pains.


By March of 1867 , Congress stepped in to fix the problem. Legislation signed by the President directed the Office of Public Buildings and Grounds be removed from the department of Interior and moved to the War Department under the Chief of Engineers. This move expanded the Engineer mission for just military construction in Washington DC to now include all government construction and maintenance.

This required an engineer staff to manage the construction and maintenance, instead of individual project officers. This engineer staff would have the first Engineer Castle Ball in the Washington DC area, and we proudly carry on this tradition annually. One of the common concerns I get from members of the regiment is about the lack of Engineer art, or more narrowly, new engineer art. While the start of USACE begins in 1867, you can see the preamble of this date in several areas and then the tasks completed since then and the leaders involved. We have a great story to tell about our Soldiers our leaders and the accomplishments.

I thought that one of the best ways to celebrate the 150 th Engineer Castle Ball is with a commemorative print. We will have a draft product available in February and the finished product in June for the 3 Aug Engineer Castle Ball in the Crystal City Hyatt hotel on 3 Aug. LTC Michael Solovey, an active duty Special Forces Army Officer stationed in Europe, is the artist we have commissioned.

He is a pencil sketch artist, and there are numerous examples of his work on his website: www.soloveyart.com/soc. htm. The challenge of telling the Engineer Story is that no one picture, or image captures the depth and breadth of the Engineer Regiment. He has done several of these collage type of prints that take the various elements of an organization or history and blends them together.

We will commission 500-750 numbered and signed prints that we will pre-sell through our online website. Themes chosen so nominated for this artwork are as follows:

1. The Washington Aqueduct system for drinking water and fire protection
2. Several Bridges in the Area
3. Capitol Expansion
4. Pentagon
5. Washington Monument
6. Lincoln Memorial
7. Tidal basin dredging and flood plain managment (Potomac River)
8. Gen Montgomery Meigs
9. Survey and Topographic
10. Smithsonian Museums
11. Washington Parks and the Mall
12. Flood Control and power generation
13. Divers

We will post the initial concept sketch on line in February and start presale of the print as we work forward to the 3 Aug 2018 Engineer Castle Ball.


HUNTINGTON DISTRICT PUBLIC AFFAIRS STAFF

## THE GREAT LAKES AND OHIO RIVER DIVISION'S REGIONAL RIVERS REPAIR FLEET

As the operations and maintenance needs of our navigation infrastructure outpace funding levels, the U.S Army Corps of Engineers needs to ensure that our limited resources, personnel and funds are applied to actions that minimize the greatest risk of failure and yield the greatest benefit to the sustainment and reliability of the inland waterways system.

In May 2015 the Commanding General, Great Lakes and Ohio River Division, approved a reconfiguration of the separate river district's fleets to the Regional Rivers Repair Fleet (R3F). The former River maintenance fleet and service repair station configuration and management structure was not sustainable for several reasons; aging and deteriorating infrastructure that exceeded its economic design life, the major maintenance needs outpaced operations and maintenance funding
levels in the region, even as O\&M budgets have increased over the last five years; and, a growing number of major maintenance needs not within the essential core River Repair Fleet capability that we need the Rivers Repair Fleets and Stations to be doing. Essential core capability includes miter gate replacement and repair, and filling/emptying valve replacement and repair, hydraulic, mechanical and electrical equip replacement and repair.


The Regional Rivers Repair Fleet (R3F) provides the capability to execute major maintenance and repair efforts along 2,225 miles of the Alleghany, Clinch, Cumberland, Green, Kanawha, Monongahela, Tennessee, and Ohio Rivers on 56 Navigation Locks and Dams, 4 Hydroelectric Power Plants, and 74 Flood Risk Management Dams across Ohio, West Virginia, Kentucky, Virginia, Indiana, Tennessee and Pennsylvania.

The previous repair fleet configuration for the Rivers Districts consisted of 4 Repair Fleets and 4 Repair Stations controlled separately by each respective River District Operations Division. The Regional Rivers Repair Fleet (R3F) is now consolidated into 3 Repair Fleets and 4 Repair Stations all under the Command and Control of the Huntington District. The reorganization is meant to increase consistency across the fleets and stations to improve safety management, synchronize training, increase efficiency, and reduce overall operating expenses. The R3F Chief, Brady Beckman, reports directly to the Huntington District Commander and is responsible for managing and directing a total staff of 138 personnel, the operation and maintenance of over 145 pieces of floating plant and heavy equipment, and executing an annual budget of approximately $\$ 37.5$ million. The R3F is divided into 4 separate geographically separated sections, the Heavy Capacity Fleet, the Medium Capacity Fleet, the Light Capacity Fleet, and the Marietta Repair Station, each managed by a Section Chief who reports directly to the R3F Chief.

The Heavy Capacity Fleet is homeported at the Louisville Repair Station located on Shippingport Island, adjacent to the McAlpine Locks and Dam in Louisville, Kentucky and consists of the Heavy Capacity Fleet Unit and the Louisville Repair Station Unit.

The Heavy Capacity Fleet and Louisville Repair Station have a total compliment of 50 Employees.
The Medium Capacity Fleet is homeported at the Pittsburgh Engineering Warehouse and Repair Station located on Neville Island in Pittsburgh, Pennsylvania and consists of the Medium Capacity Fleet Unit and the Pittsburgh Repair Station Unit. The Medium Capacity Fleet and Pittsburgh Repair Station have a total compliment of 55 employees.

The Light Capacity Fleet is homeported at the Cumberland River Operations Center located adjacent to the Old Hickory Lock and Dam in Old Hickory, Tennessee and consists of the Light Capacity Fleet Unit and the Cumberland River Operations Center Unit. The Light Capacity Fleet and Cumberland River Operations Center have a total compliment of 21 employees.

The Marietta Repair Station is located at the confluence of the Muskingum River and the Ohio River at Marietta, Ohio and has a compliment of 13 employees. The R3F also employees 2 intermittent employees who are both retired Towboat Operators, and fill in on an as needed basis across the fleets.
"With the condition of the infrastructure being what it is today, and a level of uncertainty on receiving adequate funding necessary to conduct major rehabilitation to our structures, I think the biggest single challenge that faces the R3F into the future is the ability to keep up with unscheduled outages primarily at our Navigation Facilities," said Beckman. "We have had to reduce our capacity in order to survive in a constrained budget environment, now it is our responsibility to make sure what we have left to work with is fully utilized and capable to meet an ever increasing work load," he said.

## MAJ ROB FAIREL

Major Rob Fairel completed 20 OC/T rotations at The National Training Center. While assigned to the Sidewinder Team, Operations Group, MAJ Fairel coached and developed BEB Executive Officers, BEB S3s and multiple staff sections. MAJ Fairel is currently assigned to the TRADOC, International Army Program Directorate LNO program at USAREUR HO.

## DECISIVE ACTION BEBS

## "Fighting" the Brigade Engineer Battalion (BEB) in a Decisive Action Training Environment (DATE) is more than just Engineer Operations.

In ATP 3-34.22, Engineer Operations-Brigade Combat Team and Below, the BEB provides each BCT $(I, S, A)$ with a baseline of combat capabilities that can be augmented with specialized units from EAB units. Typically, BEBs deploy to The National Training Center (NTC) with organic and various EAB assets. The unique skills of the BEB enable the BCT to fight forward but provide varied planning challenges for the BEB Staff. To overcome these challenges, the BEB staff must conduct effective internal and external planning while understanding the BEBs strengths.

Typically, BEBs are tasked with four responsibilities in support of BCT operations. The four tasks include: Engineer Synchronization, Enabler Wrangler, Area Security and Face of Brigade (KLE).

The four tasks are within the scope of the BEB to plan and accomplish concurrently or separately. At NTC, concurrent planning of more than one of these responsibilities creates challenges for the BEB staff. Key challenges include integration of specialized enablers, information collection, task organization, relationships with BCT staff and sustainment.

## START WITH PLANNING:

At NTC, we discuss four methods of planning during the rotation. These methods of planning are presumptive, reactive, parallel and collaborative. In order to enable the BCT, the BEB staff must avoid presumptive and reactive planning. Presumptive Planning is guessing without analysis leading to poor execution. Reactive planning reflects bad time management, exhausts the staff and subordinates and failure to anticipate requirements. Parallel planning is a method that produces success without direct contact with the BCT planners. Parallel planning has pitfalls, as BCT plans may change without knowledge of the BEB staff. Collaborative planning is the best method because it provides the BEB a voice during the BCT planning cycle. Additionally, collaborative planning provides the BCT staff an understanding of capability.

## FOUR LINES OF EFFORT: ENGINEER SYNCHRONIZATION, ENABLER WRANGLER, AREA SECURITY AND FACE OF BRIGADE)

At home station, the BEB S-3 section generally functions along traditional lines of Plans Section, CUOPS Section or even a FUOPs Section. The method of planning in a garrison environment works well for anticipating requirements, meeting training goals and enabling the $B C T$.

This methodology does not work well during a DATE fight at NTC. BEBs that plan with a garrison mindset are too slow and rigid to meet the fast paced planning cycles at NTC. Stepping away from the home station methods of organization, by planning along lines of effort, greatly increases the BEB staff's ability to advise the BEB Commander on solutions to mitigate the BCTs problems.

## LOE 1 ENGINEER SYNCHRONIZATION

According to FM 3-96, the BEB Commander is the senior engineer in the BCT and advises the BCT Commander on how best to employ combat, general, and geospatial engineering capabilities to conduct combined arms integration in support of decisive action. In practice, BEB Commanders and BCT Commanders are embracing this role. Engineers typically understand how to employ Engineer capability to enable the BCT. The challenge for the BEB staff with M/CM/S planning is Task Organization. According to FM 3-34, Engineer planners must determine the best methods to task-organize forces at the lowest level to support the maneuver of combat forces to win decisively. Engineer task organization must be aligned with M/CM/S requirements for the BCT. In order to "win decisively", the BEB Engineer planner must visualize the Engineer requirements for the BCT combined with the Assistant Brigade Engineers understanding of requirements.

## LOE 2 ENABLER WRANGLER

This is a task assigned to the BEB by the Brigade. Embrace this role. This will be the hardest and most frequent planning requirement for the BEB. During DATE rotations, the BEB absorbs various enablers, like EAB Engineer assets (for combat, general and geo spatial engineering), Military Police Platoons, Explosive Ordinance Company, Chemical Company, and Civil Affairs. Typically, the first time the BEB staff and enabler leadership meet face-to-face is during RSOI. The BEB staff must quickly integrate enabler units with the $B E B$, along with a solid understanding of capabilities, in order to facilitate effective employment of assets to support the BCT. Dedicated planning for enabler integration from Leader Training Program (LTP) to Reception, Staging, Onward Movement and Integration (RSOI) to employment in support of the BCT is critical for BEB Staffs and BEB Commanders.


## LOE 3 AREA SECURITY

BEB staffs have difficulty planning and resourcing the Area Security mission. BEB staff must plan and resource Area Security with little augmentation from the BCT. In FM 3-96, the BEB of an IBCT or ABCT conducts five primary tasks during combat operations for reconnaissance and security of the rear area. One of the five tasks is to conduct area security when properly augmented. In FM 3-96, the BCT Commander may direct the BEB to secure one or both of the SBCTs command posts, assign the BEB to their own area of operations or give the BEB responsibly for base or area defense. A significant change to the engineer battalion mission may affect its ability to provide engineer support to the SBCT. Providing area security for the BCT may require assets not aligned with the BEB. BEB staffs must understand where the BEB Commander or BCT Commander can assume risk with security. Some BEB Commanders assume risk with TAA security while others assume risk with Lines of Communication (LOCs). LOCs during a DATE rotation are challenged by OPFOR, multiple avenues of approach and total distance required to maintain. BEB staff must plan and resource shortcomings to aligning assets against an evaluated requirement, requesting resources from the BCT and not understanding where the Commander is assuming risk.

## LOE 4 FACE OF BRIGADE (KLE)

BEBs are not always assigned this task by the $B C T$. The BEB staff is ready to plan and resource when this task is identified prior to deployment to NTC. Planning Key Leader Engagements is difficult without prior knowledge of the requirement. When assigned this task by the BCT, make the time to develop a plan that includes enablers, security, talking points, and exit plan.

DEVELOP A PLAN TO PLAN

Prior to deployment to NTC, develop a plan to plan. Home station planning methods are slow and cumbersome. In a DATE rotation, the tempo is particularly fast over a vast training area while contending with a skilled OPFOR. The BEB staff must be prepared for the multiple challenges. Dedicating a planner to plan along an LOE will increase the ability of the BEB staff to manage various problems.

## Committed to delivering geospatial solutions that strengthen our defenses



Michael Walsh

BRADDOCK, PAUL F.

## EVOLUTION OF WORLD WAR I-ERA DOG TAGS




#### Abstract

With the passing of the centennial of America's entry into World War I, 6 April 1917, much focus in the history community, as well as the public at large, has recently been placed on the Army's contribution to the conclusion of that "war to end all wars."


With that in mind, this article is written to offer some insight into one aspect of the Engineer Museum's collection that has to do with World War I, and how the Engineer Museum uses these artifacts to accomplish its mission of educating soldiers and the public about the history of the Corps of Engineers. . These artifacts not only help to draw connections between today's Engineer soldiers with the Engineers that have come before them, they are also valuable in helping to add context to historical events. One small, seemingly mundane, perhaps a little macabre, piece of metal provides a significant amount of information to the researcher, but also helps to provide that historical context.


That piece of metal is the Identification Tag, or Dog Tag. Present day soldiers are certainly familiar with Dog Tags, but may not know or understand the history behind them. Early Dog Tags not only help to identify soldiers, as they were intended to, they also provide information to present day researchers on the changes that were taking place within the Army.

During the Civil War, there was no system in place to identify soldiers who were killed on the battlefield. Oftentimes, soldiers remains were unable to be identified which resulted in a deceased soldier's widow not being able to draw his pension from the Pension Bureau in Washington, D.C.

This was due to the fact that she was unable to prove that her husband was killed during the war. To compensate for this, soldiers marked their belongings with their names, initials, or regiments and companies. Some soldiers even purchased their own form of identification. Figure 1 shows the initials "EH." PVT Edward Hammond of Company I, 15th New York Volunteer Engineer Regiment, took the time to carve those initials into the stock of his M1853 Enfield musket. Figure 2 shows two different styles of private purchase identification tags both belonging to the same soldier. The first is a simple circular disc stamped from a dime with the owner's initials "OHL" engraved on it. The second is a badge with the owner's name, company, and regiment engraved on it, "O.H. Langdon, Co M, 50th N.Y. Eng."

Personal identification tags did not become mandated until General Order \#204 was issued on 20 Dec 1906. The initial M1906 tag was to be: An aluminum tag the size ( 30 mm ) of a half-dollar...stamped with the name, rank, company, regiment, or corps of the wearer.

The M1910 tag was larger ( 35 mm ), but contained the same information as the M1906. Both tags were issued at the start of World War I, but only one was issued per soldier. Figure 3 is an example of the M1910 tag. Figure 4 is a tag that belonged to the same soldier. Per Change \#3-G.O. Number 21, HO, AEF, 13 August 1917, "...The Quartermaster Corps will supply, in addition, a second aluminum tag one inch square, with the same marking as the first one now used, to be worn suspended by a cord one inch long from the bottom of the first or circular tag."

This square tag is the M1917. From this set of dog tags the researcher is able to deduce several bits of information. First, with the addition of the square tag, one can deduce that this soldier was one of the first soldiers to go to France. This is known because the square tag was issued early in the war. Early units were issued only one tag, but as the Army began to realize that there were going to be American casualties, they also realized that they needed a way to better identify them. For those soldiers arriving in France with only one tag, a second, square tag was issued. Also, the 13 th Engineer Regiment was a railway regiment. Railway units were the first units dispatched to France. This was in preparation for the large influx of men and materiel that was to begin flowing into France with America's entry into the war. The 13th Engineers arrived in France 17 August 1917. Later in the war another addition was made to the dog tag. That was the assignment and stamping of Army serial numbers for enlisted personnel as stated by General Order \#27 dated 12 February 1918 from the Headquarters in France. Serial numbers were issued in blocks to each area commander. The block of numbers issued to the AEF were 1 to 310,000. The "low" serial number of the soldier from Figures 3 \& 4 identifies him as an early member of the AEF.

Another railway unit that went to France early in the war was the 12th Engineer Regiment. Organized in St. Louis, MO, in May 1917, the 12th Engineers arrived in France 18 August 1917 and was immediately assigned to the British Army and served with them at the Somme, Cambrai, and North Picardy. While at the Somme, the 12 th came to be known as "The Twelfth American Royal Engineers."


The British Army issued its soldiers identification tags made of pressed fiber board. Figures 5 and 6 are the identification tags of SGT Elmer Rudder of the Headquarters Detachment of the 12th Engineers in the British style, made of pressed fiber board. Rudder also has a "low" serial number, 162,816, identifying him as one of the early AEF soldiers.

As the war progressed in Europe, so too did the Dog Tag. Whereas the M1910/M1917 tags not only contained the name, rank, and serial number of the soldier, they also contained the unit information of the soldier as well. In Change \#9-No. 1318, adopted 1 April 1918, the size of the tags were shrunk from 35 mm back to 30 mm and called for two holes in each tag rather than a single hole, although existing stocks were to be used up. Figure 7 is an example of a tag conforming to this order. These tags, known as the M1918 tag, belonged to PVT John H. Grauel of the 68th Engineer Regiment. The 68th Engineers arrived in France on 18 September 1918, and were engaged in railway operations. Due to the arrival date of the regiment and the "high" serial number, this verifies the authenticity of these tags. Change \#13-G.0. 91, HO, AEF, 10 June 1918, called for the elimination of unit information and "The stamping on tags previously issued will be altered as far as practical to conform to this order."

Figures 8 and 9 are two examples of Dog Tags that were altered to meet Change \#13. Figure 8 are the tags of John F. Dowd. Although Dowd's tags are the M1910 type, he scratched out his unit information that was stamped on them. Dowd was a member of A company, 5th Engineer Regiment.

The 5th Engineers were a Sapper Regiment that arrived in France on 13 August 1918. They were the divisional Engineers of the 7th Division and served on the front with them. Figure 9 are the tags of SGT Jerry R. Hoge. Hoge was a member of C company, 7th Engineer Regiment. The 7th Engineers arrived in France 7 April 1918 and were a Sapper Regiment that were divisional to the 5th Division. They served in the Vosges sector, St. Die sector, and later St. Mihiel and Meuse-Argonne Operations with the 5th Division. To conform with Change \#13, SGT Hoge had his unit information stamped over. The reason for the deletion of unit information on the tags was to keep this information out of German hands should the soldier be captured.

Although the iconic Dog Tag is easily recognizable and oftentimes overlooked as insignificant, it helps to provide context for an Army that was forced to mobilize and expand to meet the demands of war in a foreign land, where causalities were sure to take place. Its inclusion as part of the Engineer Museum's artifact collection provides an opportunity for the museum staff to continue to educate soldiers and the public about the Engineer's contribution to World War I.

SFC AMES, BENJAMIN

## TRIMBLE SURVEY

Like a ticking time bomb, Army Engineer capabilities are fighting against the clock. A clock that we have ignored for far too long; attached to a bomb that we created and now must defuse!

Anyone that's spent a Monday morning in a motor pool doing preventive maintenance checks and services on their equipment knows just how important continual maintenance is for the Army's readiness. This holds true no matter what the equipment. It must be done before, during, after, weekly, monthly and yearly for every piece of equipment used by the Warfighter.

As an Army Technical Engineer, it is my responsibility to ensure those yearly services are done on all my equipment - particularly on the Automated Integrated Survey Instruments or AISI. A typical service for an AISI consists of a cleaning, battery replacement, and calibration. The only cost to your unit is the amount to ship the equipment to the manufacturer and back your unit.

My name is SFC Benjamin Ames, I am a Senior Technical Engineer NCO currently working under the Army's Training with Industry Program at Trimble Inc. in Dayton, Ohio. Trimble supplies the military with their surveying and machine control equipment. As an end user, I provide a voice to Trimble of how we, as Army surveyors, utilize this equipment in both garrison and contingency environments.

Over the last several years or so, Trimble has noticed a decline in the number of AISIs sent in for service, most likely due to our high OPTEMPO during that time in both Iraq and Afghanistan. But this has put our maintenance program well behind the power curve. Trimble estimates that there are more than 380 instruments currently over-due for service. That's a staggering 72\% of the 531 AISIs throughout the Active Army, National Guard and Army Reserves.

Not only is this an overwhelming maintenance issue, but it's a severe readiness issue. The internal batteries of the 5600 -series AISI is estimated to last seven years. During a routine cleaning and calibration, required every five years, Trimble service technicians replace the internal batteries giving longevity to the equipment. If units are not sending in their equipment, the chance for operational survey data being lost and equipment being non-mission capable for extended periods of time is dangerously high.

Army Technical Engineers utilize the AISIs to collect data of the earth's surface that directly effect a project's design whether that design is for a road, air field, structure, etc. Constructing units then use this information to build the design and again Technical Engineers use their survey instruments for quality control and quality assurance purposes to ensure all design specifications are met. Without properly working survey instruments, construction is at a halt!

There are two ways to determine when an AISI is in need of service: 1) Check the Calibration Due Date Sticker just below the distance meter head; or 2) Turn the power on. The AISI may quickly display INFO 26 " or "INFO $26.8^{\prime \prime}$ on the screen, beep multiple times, and then display "change backup battery". This means the batteries need to be replaced as soon as possible. Continuing to operate the AISI in


INFO 26/26.8 condition, "change backup battery" mode or with expired batteries can result in the loss of the AISI's memory or programs, or complete AISI failure. For instruction and approval for AISI maintenance, or for more information about what to do if an Army Engineer AISI is inoperable, contact US CECOM Brian Slovitsky at brian.d.slovitsky.civ@ mail.mil, or at (443) 861-2964. Please include your AISI's serial number, the owing unit name and address and POC and commercial telephone number.


## CPT STEPHEN BROOKS

CPT Stephen Brooks is assigned to the Corps of Engineers (Mississippi Valley Division, Vicksburg District) as a project engineer and served in support of Hurricane Irma with the South Atlantic Division, Jacksonville District (SAJ). He served as a Battle Captain in the emergency operations center.

## HURRICANE IRMA

Irma hit the Florida Keys as a category 4 hurricane and knocked out power to over 6.8 million Floridians. The damage estimate is up to $\$ 100$ billion.

Upon completion of Company Command I was selected for Advanced Civil Schooling with the University of TennesseeChattanooga. My utilization tour is with the U.S. Army Corps of Engineers (USACE) Mississippi Valley Division (MVD), in the Vicksburg District (MVK). After four months, I had the privilege of serving with the South Atlantic Division, Jacksonville District (SAJ) in support of Hurricane Irma. President Trump issued a pre-landfall emergency declaration, which authorized FEMA to coordinate all disaster relief efforts. After landfall, state or local entities identify the need to activate any of the 18 emergency support functions ranging from law enforcement, energy, hazardous materials, search and rescue, etc.

USACE operates within emergency support function \#3 - Public Works and Engineering: commodities, emergency power, temporary roofing, temporary housing, infrastructure assessment, critical public facilities, and debris removal. Specific ESF \#3 mission examples include the Blue Roof Program, base camps for displaced residents, and emergency power courtesy of the 249th Engineer Battalion - Prime Power.

I served with the SAJ team at the Florida State Emergency Operations Center (FL SEOC) in Tallahassee and at Camp Blanding (in Starke, FL). My duties included the following: leveraging the ESF \#3 team for missions/ scoping/information, attending State EOC briefings and conference calls, and liaising with FEMA and State entities.

As an enlisted Soldier I served in support of Hurricane Katrina with the 82nd Airborne Division, so I was cognizant of the devastation from natural disasters.



However, serving as an SAJ Battle Captain provided the opportunity to learn about the mission assignment process, the Emergency Support Function (ESF) framework, Public Law 84-99 (PL 84-99), the Stafford Act, and the role USACE plays in supporting both the State and Federal Emergency Management Agency (FEMA). The ESF framework is the mechanism by which the federal government responds to emergency declarations - similar to how a Division, Brigade, or Battalion is taskorganized during a deployment or NTC rotation.

The Stafford Act triggers FEMA to coordinate relief efforts. Meanwhile, Public Law 84-99 is the Flood Control and Coastal Emergency Act, whereby the Chief of Engineers is authorized to respond via preparedness (emergency fund, response exercises, etc), response activities (flood fighting), and rehabilitation (restoring a flood system).

My major takeaway is the mission assignment (MA) process. The ESF \#3 field guide was the equivalent of the Sapper Handbook; it covers the MA from inception to completion, and is organized into seven sections ranging from concept of the operation, recovery field offices, decision support products, ESF \#3 management team, etc. Understanding the field guide (and how to reference it) set the conditions for a valuable learning experience. In addition to ESF \#3 missions, the SAJ team is responsible for water management operations (federal and non-federal beaches, federal channels, Lake Okeechobee, Herbert Hoover Dike, etc). Simultaneously, the primary mission assignment for the SAJ District in Florida was temporary roofing. As of October 15, 2017 the damage assessment was 15 K homes. There were 17,641 right of entries (ROEs) completed and 6,871 total installs.

The ROE is a legal requirement that allows Corps workers to access individual homes, assess roof damage, and allows contractors to perform the install. The temporary roof is a 6-12 month solution and each costs approximately \$3K. As previously mentioned, the mission assignment process requires collaboration at all levels. All parties involved must engage in continuous dialogue from start to finish in the same manner with which the Division, Brigade, or Battalion Staff does with its lower echelons. In conclusion, it was a valuable broadening experience and an excellent opportunity to help Floridians.

# JOINT MASSPORT, CORPS CEREMONY CELEBRATES THE BOSTON HARBOR NAVIGATION IMPROVEMENT PROJECT 

ANN MARIE R. HARVIE, USACE NEW ENGLAND DISTRICT

To kick of the beginning off the Boston Harbor Navigation Improvement Project, Col. William Conde, New England District Commander, and members of his staff gathered with Congressionals and members of state and local agencies, Sept. 15, for a ceremonial event in Charlestown, Massachusetts. Navigation improvements from this project will increase the efficiency for harbor operations and reduce tidal delays for larger vessels.

The event began with a tour of a dredging vessel.
Col. Conde and his staff briefed Massachusetts Governor Charlie Baker and a small group of other participants on the dredging project and observed dredge operations in action. When the group returned from the tour, Col. Conde, elected officials and key port stakeholders signed a propeller to celebrate the start of the project.

A speaking program followed the propeller signing. After an introduction by Massport Chief Executive Officer (CEO) Thomas Glynn, Col. Conde explained the project to event participants. "About 11.6 million cubic yards of silt, sand and clay and 400,000 cubic yards of rock will need to be removed to deepen the channels," he said. "We anticipate the deepening work will start in the spring of 2018 and be
completed late in 2022." Other speakers at the event supporting the project were Senator Elizabeth Warren, Senator Edward Markey, Congressman Stephen Lynch, Governor Baker, Massport CEO Thomas Glynn and head of the Kraft Group International Forest Products, Daniel Kraft.


Boston Harbor is New England's largest port, serving as the principal distribution point for the export and import of commerce for Massachusetts, New Hampshire and Vermont. The project will deepen the Broad South North Entrance Channel to 51 feet; the President's Roads, the outer Main Ship and the Lower Reserved Channels to 47 feet; the Main Ship Channel between the Reserved Channel and Massport Marine terminal to 45 feet and the Chelsea River and a small portion of the Mystic River Channels to 40 feet. The project will help the larger vessels navigate in and out of the harbor.
"The recommended plan involves placement of all dredged material and rock at the Massachusetts Bay Disposal Site," said Project Manager Matt Tessier. "However, it is the policy of the U.S. Army Corps of Engineers to use dredged material, where practicable, for beneficial use." According to Tessier, the District will investigate uses of rock for offshore reef creation and shore protection. The dredged material may have beneficial use as well. "Use of the dredge material to cap the former Industrial Waste Site in Massachusetts Bay also will be investigated in partnership with the U.S. Environmental Protection Agency and others." Tessier said that none of the possible beneficial uses should increase the project costs. Col. Conde said that the Water Resources Reform and Development Act of 2014 authorized the Improvement deepening of Boston Harbor for construction. The authorization includes deepening and widening of existing channels throughout the harbor from Broad Sound North Channel to Conley Terminal as well as potential future improvements to the upstream Mystic and Chelsea River channels.

According to Col. Conde, this project will contribute significantly to the economic efficiency of commercial navigation in the New England Region. "This project has been a long time in the making, and I'm thrilled that we can all be here to celebrate that we're going to deepen Boston Harbor so it can remain competitive and be a vital hub for ocean freight for all of New England," he said. "This project would not have been possible without the combined efforts of all the partners involved, especially Massport and the Commonwealth of Massachusetts. "The non-federal sponsors, Massport and MassDOT will contribute $\$ 120$ million, while the federal government will pay $\$ 210$ million to complete the project. Col. Conde said that industrial, commercial fishing, and recreational vessels all use the harbor. This project will go a long way toward supporting the needs of the city of Boston, the region and the state in meeting the growing navigation requirements to remain competitive within the navigation industry.
"This improvement deepening will make Boston Harbor more competitive in the navigation business, allowing larger container ships to dock at Boston facilities," said Col. Conde. "This will be a major boost for Boston, the Commonwealth and the region".


ANN MARIE R. HARVIE, USACE NEW ENGLAND DISTRICT

## NEW ENGLAND DISTRICT TEAM RESPONDS TO COWORKERS EMERGENCY

History has shown that team members of the New England District readily respond to emergencies anywhere, anytime. The situation could be an earthquake recovery all the way across the country, or it could be as close as a few cubicles away.

In the late afternoon on Aug. 15, a member of the Contracting team experienced a medical emergency that caused her to collapse in her work area.
"Nothing like this has ever happened to me before," said the team member. "Just a couple of minutes before, I was speaking with Julio (Hall) about some year-end work and I sent out an e-mail. Suddenly, I felt very unwell and the next thing I knew I woke up in the Emergency Room."

Not long after Hall and his coworker discussed year-end work and Hall returned to his cubicle, he heard noises. "I heard something strange and at first I was like " what is
that?"" he said. "When I heard it again, I went to investigate."

According to Hall, he returned to the team member's cubicle and found her passed-out on the floor.

Hall, who recently retired from the U.S. Army with 22 years of service, is trained in combat lifesaving and C.P.R. Although he said his adrenaline was high, he did not let emotions get in the way. He quickly cleared her mouth and stabilized her while yelling for someone to call 911.

Contracting Chief Sheila Winston-Vincuilla, also working late to meet year end deadlines, heard Hall's shouts for help and called 911. Hall's voice carried over to Information Management, bringing Chief Greg Lantz and contractor Steve Wall to the scene. Lantz dialed the emergency Concord Park Medical Response Team, bringing first responders George Claflin, Sheila Harvey, and Kane Turmelle to assist. Coral Silgato happened to be in the area and responded. Engineering Chief Frank Fedele also was
on hand to watch for the paramedics and the Concord Police who were on the scene within minutes.

The team, most of who have been previously prepared to respond to an emergency, notified the guard on duty, Roudi Clerge, who raised the barriers for the paramedics and police. Team members brought the AED, cleared the area in the team member's cubicle, kept all bystanders away and escorted paramedics and police to the patient. All the while, Hall kept her calm and reassured as she slipped in and out of consciousness.

"My adrenaline was high, when I heard 911 being called and the others coming to help, the stress went way down," said Hall. "Everyone was calm and the New England District team was prepared. The situation could have been worse."
"The efforts of the team contributed greatly to a positive outcome during this medical emergency," said. Lt. Col. Daniel Herlihy. "The impact of Mr. Hall's efforts and presence of mind cannot be overstated." Col. William Conde, District Commander, assisted by Deputy Commander Maj. Sonny Avichal, held an awards ceremony for the response team, Sept. 5. "I wanted to give you my personal thanks for going above and beyond helping one of our family members at a time when she wasn't feeling well," said Col. Conde. "I know you would do it for anyone. On behalf of the District, thanks for what you did."

Hall received an Achievement Medal for Civilian Service for "exceptional service during a workplace medical emergency," read Maj. Avichal. "Mr. Hall's unhesitating selfless service and willingness to help his teammates sets an example for all to follow."

Winston-Vincuilla, Lantz, Harvey, Wall and Clerge all received Bunker Hill plaques in appreciation for their contributions to the successful response. Claflin, Silgato and Turmelle were not present at the ceremony, but also received Bunker Hill plaques.

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