

Yankee Engineer

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Building Strong®



District, partners break ground on
Hanscom Dormitory Project
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Yankee Voices

John Shannon and Michelle O'Donoghue



Historian returns to receive award

Retired New England District Corps of Engineers Historian Timothy Hays returned to the New England District's Executive Office, Feb. 13, to meet with Col. Christopher Barron, New England District Commander, to, "just take care of one last piece of business."

Col. Barron presented Hays with a Commander's Award for Civilian Service for his many distinguished years of service.

Brig. Gen. William Graham, North Atlantic Division Commander, signed the award as a symbol of his appreciation not only for Hays' work for the District and the Division, but also the entire Corps of Engineers.

Engineer discusses engineering response to natural disasters with Concord school students



Mark Anderson, New England District's Science, Technology, Engineering and Math (STEM) Coordinator and Emergency Support Function (ESF) #3 (Engineering and Public Works) Assistant Team Leader, participated in an outreach event at the Alcott School in Concord, Massachusetts, Feb. 27.

Speaking to a group of about sixty 5th grade students, Anderson focused on emergency preparedness, response, and recovery, based on his personal experience. Natural disasters is an educational module for the Concord Public Schools.

"The ATL is responsible for assisting ESF#3 Team Leaders in managing and executing all ESF activities and serves as the Acting Team Leader when the TL is absent," said Anderson. "The ATLs are a cadre of individuals assigned to Headquarters, USACE, for disaster response/recovery operations."

According to Anderson, those ESF#3 responsibilities include management of all activities related to FEMA mission assignments; coordinating the formulation, acceptance and funding of mission assignments; supporting coordination with FEMA, state and local governments and other federal agencies during disaster response/recovery; serving as the primary point of contact; determining appropriate staffing assignments to support the response/recovery; developing and submitting status reports as required, and other duties to support FEMA and the states during disasters.

After his presentation, Anderson took questions from the students for about 45 minutes. This is the second year that a representative of the New England District participated in this event.

"The outreach opportunity supports the New England District's Partnership in Education Agreement with Concord Public Schools," said Anderson.





(U.S. Army photo by John Prettyman)

A solar array, such as this one at Fort Hunter Liggett, Calif., will secure reliable, renewable, locally-generated electricity for the Cape Cod Canal and New Bedford Hurricane Barrier.

New England District proposing solar array at Cape Cod Canal

A team of New England District personnel is working on a proposed project with U.S. Army Corps of Engineers Headquarters and the Huntsville Engineering Support Center that would reduce the carbon footprint of the Cape Cod Canal in Bourne, Massachusetts and the New Bedford Hurricane Barrier in New Bedford, Massachusetts. The New England District proposes to lease approximately six acres at the Cape Cod Canal for the installation of a solar array via a Power Purchase Agreement (PPA). This would be the first Civil Works renewable energy PPA within USACE. Both the Canal and the New Bedford Hurricane Barrier will be connected to the solar energy grid.

“The solar array will be constructed approximately halfway between the Bourne and Sagamore Bridges on the Cape Cod side of the canal,” said Lindsay Flieger, Sustainability Program Coordinator for New England District. “The project will require 5-6 acres of land and will provide 680kW of power.”

According to Erika Mark, Project Manager, USACE Headquarters provided the funding to do the feasibility work such as real estate, NEPA and environmental baseline conditions, but the District will not be paying for

the array itself.

“The third party vendor who wins the bid for this contract will pay for installation, operation and maintenance costs,” she said. “There are no out-of-pocket costs for USACE as the array will be fully funded by the vendor and the District benefits by paying a discounted rate on our power.”

In 2007, Congress mandated the federal government to acquire 25-percent of its energy needs through renewable resources by 2025, according to Mark. Flieger said the Canal and NBHB, the District’s second largest energy user, have had several energy-saving initiatives introduced over the last few years. These initiatives included replacing the lighting along the Canal and on the Bourne Bridge with LED lights and making the maintenance building a high performance sustainable building. Despite all these efforts, the Canal still uses a huge amount of energy.

“New England District enlisted the support of Huntsville to assess the canal and determine what type of large scale renewable energy project would be the best fit,” she said.

The team visited the Canal in 2014 and determined a solar panel array would be the best method. “The Power

Purchase Agreement method was also determined as the best way to make the project a reality,” said Flieger. “The solar array will provide 100-percent of the power to the Cape Cod Canal and the New Bedford Hurricane Barrier.”

Mark said the Canal’s and the hurricane barrier’s energy needs would be covered on days when solar power might not be an option. “Both will be on solar power most of the time; however, this is New England and we have some pretty grim winters,” she said. “If there isn’t sun, or it’s night and they’re not producing power, we will still have access to a power grid as a backup.”

The Canal and the hurricane barrier will be running on solar power as soon as the array is installed and online, according to Mark.

Flieger said because the District will be the first to have an agreement of this kind, the team will compile a summary of the process, tools and lessons learned into a guidance document for other districts who wish to implement something similar. The New England District team members on the Cape Cod Canal Solar Power PPA project are: Erika Mark, Megan Burke, Anne Kosel, Mary Mason, Rose Schmidt, Grace Moses, Kate Atwood, Jeff Teller, Scott Barr and Eric Pedersen.

District, Partners break ground for new Hanscom dormitory

New England District officials participated in an event to kick off the construction of a project that will result in a better life environment for unaccompanied Air Force service members.

The ground breaking ceremony for the new \$12.6 million Airman dormitory took place March 13 at the construction site on Hanscom Air Force Base. Col. Christopher Barron, New England District Commander, joined Col. Roman Hund, 66th Air Base Group Commander, Chief Master Sargent Patricia Hickey and Allen Shaffi, Principal Contractor for BBIX of Boston, Massachusetts to put shovels to the ground and kick off the project.

“The project calls for the design and construction award of a three-story, 2,376-square-meter dormitory,” said Project Manager Mike Tuttle. “The new dormitory will be constructed near the two existing, 62-year old dormitories on Hanscom.”

According to Tuttle, the dormitory will consist of two 2-bed units, two 3-bed units and 14, 4-bed units. “Each unit will contain a shared common area, kitchen, laundry area and bulk storage,” he said. “Each bedroom unit will have



Artist's rendition of the new dormitory.

its own full bathroom and closet.”

David Wong, Chief of Engineering, 66th Air Base Group/CENC, served as narrator for the ceremony. “Over the past two years a team of personnel from the 66th Air Base Group, the Air Force Civil Engineer Center and the U.S. Army Corps of Engineers have worked diligently to plan the replacement for our 62-year-old dormitory,” he said. “When complete, this new dormitory will provide a huge improvement in the quality of life for Hanscom’s Airmen.”

Col. Barron said a large part of New England District’s mission is to support Air Force and Army installations on

construction projects both large and small. “We work closely with the Air Force Civil Engineer Center at Lackland and with our customer, in this case the 66th Air Base Group, to provide the best possible engineering solutions to meet the needs of today’s Airmen,” he said.

The New England District Commander said the District views itself as part of a team and is personally invested in getting the design right, finding skilled and dedicated contractors, executing first-class construction management and being there every step of the way, all the way, through turning over the keys and closing the project out.

Crediting what he called his superb internal team, Col. Barron praised the Military Programs and Construction Division personnel. He said that the District was fortunate to have its most important military customer, Hanscom, right next door. “Hanscom has been, and will be for quite some time, the jewel in our military construction crown,” he said.

The District recently completed a new middle school for the base, according to Col. Barron and future work on the base includes a systems management engineering facility and a research and production facility. “At



Col. Christopher Barron addresses the audience at the ground breaking ceremony.

Photo by Brian Murphy

some point the District plans to move onto Hanscom and renovate the old AFRL facilities,” he said. “As you can see, the relationship between the New England District and Hanscom Air Force Base is strong and deep. Our nation’s Airmen deserve the best, and we’re going to make sure they get it.”

Col. Hund said the ground breaking event was a historic day for the Air Force base. He thanked the New England District for all of their hard work. “We look forward to working closely with you as we build the facility,” he said.

The Colonel said the new facility will be indicative of the support the 66th provides for the Airman at Hanscom. “Right now the facility they are in is not up to the standard we typically have for our Airman,” he said. “This new facility will provide the most up-to-date standards for them.”

After the remarks, Col. Hund, Col. Barron, CMS Hickey, Shaffi and Airman First Class Kenzie Williams, President of the Dorm Council, picked up the ceremonial shovels and broke ground, signifying the beginning of construction and the conclusion of the ceremony.

“One goal of this project is to achieve a U.S. Green Building Council’s LEED Silver Certification,” said Tuttle. “The Designer of Record will integrate sustainable design strategies and features to minimize the energy consumption of the facility; conserve resources; minimize adverse effect to the environment and improve occupant productivity, health and comfort.”

Tuttle also said that the dormitory will be designed and constructed in compliance with the Anti-Terrorism/Force Protection standards and Architectural Barriers Act Guidelines for Accessibility.

Construction on the new dormitory is expected to be completed in August 2018. Once the dormitory is complete, the two existing dormitories will be torn down.

Corps proposes emergency maintenance dredging of Kennebec River Federal Navigation Project

**By Timothy Dugan
Public Affairs**

The New England District plans to perform emergency maintenance dredging of portions of the authorized, 27-foot deep, 500-foot wide federal navigation channel in the lower Kennebec River between Phippsburg and Bath, Maine.

The emergency dredging is needed to provide safe passage of the USS RAFAEL PERALTA, a U.S. Navy Destroyer, scheduled to set sail from Bath Iron Works and transit the channel on or about April 27. The RAFAEL PERALTA has been deemed critical to USN Fleet Operations and to National Defense.

Hydrographic surveys of the Doubling Point area (near Bath) and Popham Beach area (at River mouth) indicate that the channel has shoaled to -18.4 feet below Mean Lower Low Water (MLLW) across almost the entire 500-foot wide channel at Doubling Point and to -16.7 feet below MLLW across more than half the authorized channel near Popham Beach. Based on this, there is concern that the RAFAEL PERALTA cannot transit the channel safely even during high tide.

The emergency dredging would restore the channel to its authorized dimensions and will provide safe operating depths for the RAFAEL PERALTA and subsequent future transits by other vessels of this type.

“A hopper dredge would remove about 70,000 cubic yards (cy) of clean sand,” said Project Manager Bill Kavanaugh, of the Corps’ New

England District, Programs/Project Management Division in Concord, Massachusetts. “Approximately 50,000 cy of material will be removed from the Doubling Point area and approximately 20,000 cubic yards of material will be removed from the Popham Beach area.” The shoals in the channel near Doubling Point consist of massive sand-waves.

As part of this proposal, advance maintenance may be performed to remove the sand-waves in the vicinity of Doubling Point to a maximum elevation of -32’ MLLW in an effort to improve the chance that adequate depths will endure. The 50,000 cy to be removed from the channel at Doubling Point includes approximately 35,000 cy of advance maintenance dredging.

Material dredged from the Doubling Point area will be placed in the previously used in-river placement area north of Bluff Head in about 95-100 feet of water. Material dredged from the Popham Beach area will be placed in the previously used 500-yard diameter nearshore placement area located about 0.4 nautical miles south of Jackknife Ledge and in about 40-50 feet of water.

Contingent upon the availability of funds to perform this work, emergency dredging would begin late April 2017 in the channel at Doubling Point to clear the most critical shoals, and absent of significant weather-related delays, dredging will take about 3-5 weeks to complete.

New England District's Bridge Safety Program Monitors Nation's Vital Infrastructure

By Jess Levenson
Public Affairs Office

The U.S. Army Corps of Engineers New England District's Bridge Safety Program is a vital public service that ensures the health of bridges throughout the six-state region.

The New England District has authority over 80 bridges within its inventory; 45 are open to public vehicle traffic, the most of any Corps District. John Kedzierski, District Bridge Safety Program Manager, leads a team that conforms with federal guidance, procedures, and standards; coordinates with Operations Branch to prioritize and fund any needed repairs and inspections; and maintains the District's Bridge Inventory System database.

"[W]e must ensure the safety and structural integrity of all the bridges within our inventory, and that all comply with current public law regarding bridge safety," Kedzierski said.

The United States has over 600,000 bridges, of which the Army Corps is accountable for 921. The Corps is responsible for ensuring those bridges are consistently inspected and kept in a state of good repair.

Every state and agency responsible for bridge safety adheres to the same national standards as defined by statute. The Federal Highway Act of 1968 initiated a national bridge inspection program that recognized the need for periodic and consistent bridge assessments. The first National Bridge Inspection Standards were developed in 1971, mandating public bridge owners to develop a program maintaining and monitoring their bridges.

In New England, the Bridge Safety Program is currently collaborating with the U.S. Forest Service on a demonstration project to paint the North



Workers perform an inspection of the Bourne Bridge's gusset plates in this August 2011 photo.

Photo by John MacPherson

Springfield Spillway Bridge in Vermont using a new paint and sealant system. The project is expected to prolong the service life of the overall paint system and maintain the bridge's structural integrity. If successful, the sealant and paint technology will be shared with other federal agencies.

"This project will demonstrate the overall effectiveness of this type of paint system. The data and information can then be shared with other federal agencies so they can also maintain their bridges in a cost-effective manner," said Kedzierski.

Working with Corps of Engineers national headquarters, Kedzierski recently secured funding from the Federal Highway Administration to make needed repairs at the Bourne and Sagamore Highway Bridges at the Cape Cod Canal in Massachusetts, and to the Choate Brook Bridge at the Everett Dam in New Hampshire. This is the third time within the last four years that the District has secured funding from the Federal Highway Administration for various aspects of the New England Bridge Safety Program.



The Cape Cod Canal Railroad Bridge is operated and maintained by the New England District.

Photo by Kevin Burke

College Fund representatives serve as speakers for District's Black History Month observance

The Black Employment Program and the Equal Employment Opportunity Office jointly hosted an observance for Black History Month, Feb. 28 in the Concord Park Theater. The U.S. Army's 2017 theme is, "The crisis in Black Education."

In keeping with this year's theme, Lois Ann Smith, the Area Development Director of the United Negro College Fund (UNCF) of Boston, Massachusetts, served as keynote speaker. Smith was accompanied by Sekou Biddle, leader of UNCF's advocacy efforts. "Lois and Sekou talked about the topic which was 'The Crisis in Black Education,'" said Grace Moses, Black Employment Program Manager. "They laid out problems that young black Americans face in the education system and solutions to those problems as well as ways that we as individuals could help."

Moses said that Smith and Biddle also brought materials about UNCF and a study that was recently completed called, "Building Better Narratives in Black Education."



Photo by Brian Murphy
Lt. Col. Daniel Herlihy presents certificates to Lois Anne Smith and Sekou Biddle.

After their presentation, Smith and Biddle answered questions. Lt. Col. Daniel Herlihy, Deputy District Engineer, presented both Smith and Biddle with Bunker Hill plaques in appreciation for coming to the District to speak with attendees.

New England District attends Engineers Week career fair

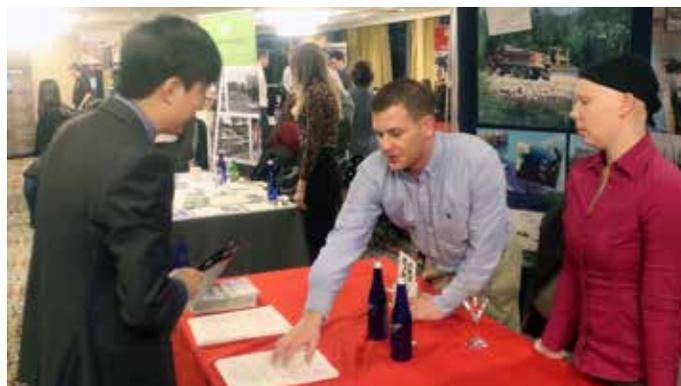
Two of New England District's engineers represented the agency at the 2017 TECT Engineers Week Career Fair, Feb. 27. The event took place at the Wyndham Boston Beacon Hill in Boston, Massachusetts. Joshua Helms, Regulatory, and Kristen Paul, Engineering Division, operated a table and an exhibit at the fair and answered questions about the different engineering careers budding engineers can find with the New England District.

The event was originally scheduled to take place on Feb. 9 for Engineers Week, but had to be rescheduled due to inclement weather. According to the Engineering Center Education Trust, over 300 college students and recent graduates were expected to attend. "It was a lot of fun," said Helms of the fair. "Roughly 20-25 students stopped by our table to talk and others grabbed information."

Helms and Paul were at the fair not to offer jobs, however, just to provide information. "Currently, due to the national hiring freeze, the U.S. Army Corps of Engineers, New England District is not hiring," said Sean Dolan, Chief of Construction. "When the freeze is lifted any vacancies we will be recruiting for, to include opening for entry level interdisciplinary engineer, will be posted on the USA Job website, <https://www.usajobs.gov>."

Dolan said that there is a section on the USA Jobs website for eligible recent graduates as part of the Pathways "Recent Graduates" program. "Please monitor the website for vacancy announcements," he said.

The U.S. Army Corps of Engineers offers a variety of opportunities for engineers and other career fields. For more information about the agency and its missions, please visit <http://www.usace.army.mil>.



Joshua Helms and Kristen Paul discuss an information sheet with a student.



Kristen Paul answers questions during the career fair.

Photos by Brian Murphy

Dredging up the past



Lt. Col. Michael Bradbury and Larry Rosenberg fold the American flag on the last day the New England District occupied the Murphy Federal Center in this March 1998 photo. Bill Scully can be seen taking down the Corps of Engineers flag in the background.

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