US Army Corps of Engineers®
Far East District

EAST GATE EDITION

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The Business of the FED: Turning an Idea Into a Building

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FED Public Affairs

The U.S. Army Corps Engineers (USACE) Far East District (FED) operates on the Korean peninsula, an area about the size of Indiana. With 339 current projects and project amounts totaling 6.9 billion dollars, the FED is the paramount engineering solution in South Korea for multiple stakeholders.

The Far East District's team of multidisciplinary professionals have a synergistic workflow that empowers collaborative accountability from each of its divisions. Conversely, each division must rely on its respective branches to complete the individual tasks required to push a project from cradle to grave and deliver a quality product to customers and stakeholders.

The Business of the Program and Management Division

"We become advisors to our customers on what is in the realm of possibility and we take them through the steps to get to that building, parking lot, or final product," says Richard Byrd, Deputy District Engineer and Chief of the Program and Project Management Division.

As the senior civilian in the Far East District, responsible to the Commander, Col. Christopher Crary, Mr. Byrd maintains complete project oversight to ensure his team of professionals deliver the program and meet customer requirements. He oversees the planning, design, and construction of military, environmental and host nation funded construction programs in Korea.

The Far East District is renowned for its unparalleled engineering and construction capabilities. As such, it is responsible for taking a customer's idea or intent and turning that concept into a completed project. This seamless action has made the U.S. Army Corps of Engineers one of the most sought-after engineering firms in the world.

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The Far East District Commander Col. Chris Crary and other dignitaries participate in the Camp Walker access control point groundbreaking ceremony. (FED file photo)

Ground is broken for Camp Walker Access Control Point

U.S. Army Corps of Engineers Far East District Commander Col. Chris Crary and other dignitaries participate in the Camp Walker access control point groundbreaking ceremony on Sept. 25. (FED file photo)

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The Corps' sophisticated project vetting and approval processes set the organization apart from its would-be contenders. In fact, a project manager leads a methodical series of events anytime the District is consulted for services or presented with a new project. While the FED may be approached with the best of ideas, it begins its process by determining the viability of each request.

Mr. Byrd's Program and Project Management Division (PPMD) is adept in taking the customer's ideas and helping them define that scope into a deliverable project.

"A project manager is assigned to ascertain the customer needs and a Project Delivery Team (PDT) is assembled to refine the scope of the project and determine the best acquisition, design, and construction tools to execute the work in accordance with the stated time and financial requirements," said Byrd.

The PDT includes contracting specialists, design managers, project or resident engineers, and counsel that all work collaboratively with the project manager to help the customer with their final product.

"Clear and concise communication is the pillar of the District's Program and Project Management Division's processes," said Project Manager Eman Sundquist.

The subject matter experts who make up the PDT have essentially perfected their value-based business procedures, incorporating their customers in the design process the entire way. FED is equipped with the capability to complete their customer's designs internally. This in-house capability allows the Corps to trim down their total completion time by passing the viable idea along to their Engineering Division's Design, Geotechnical and Environmental, and Cost Engineering Branches for the design process.

The Engineering and Design Process

"FED creates customer designs based on the customer intent in one of three ways. They solicit an external Architectural Engineering (A/E) firm, complete the design with the in-house staff in the District, or engage another U.S. Army Corps of Engineers district who may be the center of expertise and best suited to design the specific project," said Byrd.

The customer's concept comes alive in design after detailed planning and a civil layout of the structure is completed by the U.S. Army Corps of Engineers Design Branch or Architectural Engineering firm with support from the subject matter experts in the Technical Review Branch.

The geotechnical team uses the civil layout of the structure to begin their on-site research. The branch's geotechnical investigation starts with branch surveyors providing the lay of the land and drillers that sometimes drill as deep as 130 feet or more into the ground to investigate subsurface conditions needed to inform the designers.

This daunting task also falls within the Far East District's exceptional internal proficiencies as they are one of nine districts within the U.S. Army Corps of Engineers with this unique drilling and sampling capability.

The geotechnical professionals of the Far East District assess soil samples in the Materials Testing Lab

FED is one of nine districts within the U.S. Army Corps of Engineers with this unique drilling and sampling capability. (FED file photo)

(MTL) utilizing another unique district capability. Housed within Chief Pam Lovasz's Engineering Division, the MTL is one of eight district labs within the U.S. Army Corps of Engineers. The assessments from the hydrological and geological exploration at the proposed site are compiled into the branch's comprehensive study.

The geotechnical lead will use these results to begin their work with the project manager as the interdisciplinary design continues and their results are incorporated into the overall design process. This group of focused professionals will work with others from the Engineering Division to create the final computer-aided draft of the proposed structure.

Geotechnical Branch Chemist, Kim Kyong-ho reviews samples in the branch's state of the art chemistry lab. (FED file photo)

Geotechnical Branch Chief Sarah Woo's MTL is the only commercial lab in Korea to have met the ASTM (formerly American Society for Testing and Materials) validation standards. (FED file photo)

The geotechnical engineer uses the results and analysis of their comprehensive investigation to create a foundation design and soil movement recommendations.

These reports along with others are used to refine the design the Engineering Division produces whether in-house or through an A/E firm. Once the design is completed, a set of plans and specifications are reviewed by the project manager and the Project Delivery Team before being handed off to the Office of Counsel for a legal review and then to the contracting office to award to a construction contractor.

Jon Cole, Business Process Manager, gives a simplified explanation of the Corps' contracting process, "Our Contracting Division along with the rest of the Project Delivery Team (PDT) uses the scope of work and other associated documents to determine an acquisition strategy and then issues a Request for Proposal (RFP) to award a construction contract. The Contracting Division reviews the proposals to determine if they meet the necessary criteria. Once a contractor is deemed technically acceptable, their proposal is reviewed for proper cost estimates and the contract is awarded to the company who can provide the best value based on their written proposal."

The Construction Process

Chief of Construction, Chad McLeod explains his division's entry into the project. "Up until this point the Corps' Construction Division has limited involvement with the design other than reviews to make sure the project is constructible. Once the design is approved,

and the construction contract is awarded, the onsite work of building the structure begins."

He expounds on the process by explaining, "The FED's Construction Division operates as the government's representative on the worksite. The Construction Division Resident Office takes the lead during the construction process to provide quality assurance through its three-phase inspection process as they administer the construction contract."

"Quality is essential to our Construction Division as they deliver best value to our customers. They ensure all phases of construction are within the specifications, plans, and requirements of the contract," remarks Mr. Byrd.

"The Construction Division's cyclical three-phase inspection process is the main driver behind the Corps' reputation for high quality and is required for every feature of work," says Chad McLeod.

Phase One of Construction

The construction division team meets with the contractor's staff to review the contract requirements in the preparatory phase of construction. They also discuss the contractor's plan to meet those specifications.

"The preliminary phase identifies what we're building and how we're going to build it," says McLeod. "It ensures the construction crews have a total understanding of the work to be performed and the way in which it must be completed to achieve the Corps' quality standards."

Phase Two of Construction

The initial phase is the second step in the division's inspection process. Here, the contractor completes a small sample of work and then calls for the initial inspection.

"The Construction Division reviews the representative sample with the contractor and once any identified deficiencies are corrected, a consensus is reached, and the work will set the standard for all other areas of the project," says Mr. Ricky Thomas, Construction Control Representative.

Phase Three of Construction

After the initial phase is completed, the contractor and Construction Division representatives continually inspect the work to ensure that the standards continue to be met. These daily follow-up inspections are the third phase of the process.

"We stand by the quality of what we build here," says Resident Engineer Aaron Schuff. "I would gladly live in the buildings we build because of the way they are constructed. They are built to last. Our buildings stand and I am proud of our work."

Mr. Rich Byrd echoes, "Everything we build is governed by a specification. We use those specifications to guarantee quality. Our Construction Division ensures all phases of construction are within the specifications, plans, and requirements of the contract. This is how our team brings the best value synonymous with the Corps' projects."

Inspections are led by the Contractor's Quality Control Staff and the FED's Quality Assurance Representatives and Project Engineers. They assist during this process by conducting major milestone inspections at critical points in the project.

This three-step process is a repeating one that guarantees quality levels of work throughout the varying features of the job and ultimately prepares the team for successful project completion via the Red Zone Process.

"We make sure everything requested by contract is satisfied and simply, that everything we said we would do, is done and that the contractor has been paid properly. The red zone is a very involved process to make sure everything is wrapped up contractually," said Byrd.

Chad McLeod explains the red zone, "The red zone is an American football term that refers to the last 20 yards before a touchdown. It is oftentimes the hardest to complete. Similarly, the final activities of a construction project are often the most challenging to finish. As such, we normally execute the red zone process 60 days from completion to guarantee a timely and smooth turnover to the customer."

This red zone meeting requires input from each of the project's stakeholders and sets the conditions for the way the project will be completed. Co-chaired by the Project Manager and Resident Engineer, the final status, milestones, estimated completion dates, and all the actions necessary to complete the project are discussed, resulting in the schedule of events needed to meet project completion and financial closeout.

A Value-based Organization Culture

This FED's objective is to ensure that each project meets the quality requirements in the scope of work and is turned over within budget and on time.

"This includes the quality assurance of each project component from the foundations up to the roof, all the interior work, and even landscaping," said McLeod. "Once the contractor has completed the work, the Resident Office and stakeholders will conduct their final inspection. Then keys are turned over to the customer and the ribbon cutting is planned."

Customer value, quality performance and exceptional results are the foundation of the Far East District's organizational culture.

Allowing each division to operate within their robust and unique cross-sections of expertise has created a secret sauce few engineering providers have been able to mimic. As such, the U.S. Army Corps of Engineers have made a successful business of bringing diverse groups of construction and engineering professionals together to continue their longtime trend as the agency of choice in Korea.

Col. Christopher Crary visits AFH100 (Humphreys Family Housing Towers). The Commander is seen here with Project Engineer Steve Fowler to his left, Construction Representative Ricky Thomas, and Contract Quality Control Manager Kwak Ho. (FED file photo)

Leaders from the 8th Fighter Wing, Hanwha Engineering and Construction, Far East District, and the Republic of Korea Ministry of National Defense, cut a ribbon inside a new hardened aircraft shelter on Kunsan Air Base, Republic of Korea, July 31, 2020. The ribbon-cutting marks the completion of 20 new aircraft shelters built on Kunsan's flightline. (U.S. Air Force photo by Tech. Sgt. Will Bracy)

FED Safety Gram

October 2020

Autumn Safety

Autumn brings one of the most beautiful times of the year with colorful leaves, twilight sunrises and sunsets. It can be dangerous if you don't prepare your POV for the weather.

Driving Safety:

- Leaf-covered roadway may be slippery when wet.
- Bright sun glaring into your windshield makes it difficult to see.
- Wear sunglasses to minimize the glare.
- You may have frost or dew on windshield and windows driving into work.
- Know the route you are driving on before setting out on a long drive.
- Expect the days to get shorter and the evenings to be cooler as the month goes on.

Winter is Coming! Check for the Following:

- Tires for traction in case of snow.
- Antifreeze Reservoir at full.
- Windshield Washer fluid at full.
- Windshield Wipers for serviceability.
- Emergency gear to include: flashlight, warning triangles, jumper cables.
- Heater/Defroster that blows hot/warm air.

Weather Safety:

- Apply sunscreen to your skin even when the weather isn't hot.
- When hiking or camping, be aware of quickly changing weather conditions.
- Temperatures can drop faster than your body can react sometimes.
- Hiking in the mountains can be dangerous because of the colder temperatures.
- Just because it is warm in the daytime, doesn't mean it will be warm when the sun goes down.
- Bring along with you extra clothing if hiking or camping.

Autumn weather can prepare your family for safety precautions that may be needed while you enjoy the great outdoors during this month.