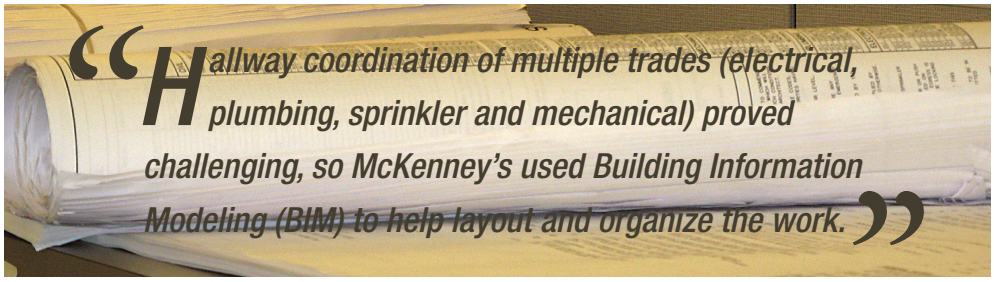
PROJECT HIGHLIGHTS

Fort Benning Adds Energy-Efficient Barracks

Fort Benning is a U.S. Army base located near Columbus, Georgia. As part of the BRAC realignment program, approximately 30,000 new troops from Fort Knox were scheduled to relocate to Fort Benning's 182,000-acre base in 2010. To provide facilities for this transition, the U.S. Army Corps of Engineers (USACE) initiated a multibillion-dollar expansion of the base.



Starting in April 2009, McKenney's performed HVAC, sheet metal and piping installation on multiple energy-efficient barracks which included a total of 125 dorm-style rooms with kitchenettes. To lower costs and improve energy efficiency, the USACE chose to install unique LoadMatch® technology–an advanced hydronic heating and cooling system that operates on a single-pipe primary, closed loop system. Unlike a typical two-pipe system, the LoadMatch system uses the same pipe for chilled water supply and return. This allows heating and cooling to occur on demand, requiring less power and reducing energy consumption.

Hallway coordination of multiple trades (electrical, plumbing, sprinkler and mechanical) proved challenging, so McKenney's used Building Information Modeling (BIM) to help layout and organize the work. To streamline installation, the majority of pipe was prefabricated in McKenney's shops, minimizing the time and expense of welding in the field. The pipe crew used duct jacks to lift the 20-foot prefabricated sections of pipe into the hangers, then bolted the joints together with Victaulic® couplings. Ductwork was also prefabricated, with taps cut in just prior to shipment.

Evidence of the project's success was acknowledged when the general contractor received an outstanding rating from the USACE. Subsequently, the general contractor recognized McKenney's exceptional performance. McKenney's was also the single largest subcontractor on the barracks project–representing 11% of the total work completed–and this presence allowed McKenney's to work closely with the general contractor, architects and engineers to incorporate sustainable design elements for the barracks mechanical systems in support of the USACE's goal for LEED® certification.

The content of this document is not intended as an endorsement.

For more information contact McKenney's at 404-622-5000.
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McKenney's Inc
Building A Higher Standard

Project Team

- General Contractor: Whiting-Turner Contracting Company
- Architect/Engineer: Clark-Nexsen Architecture and Engineering
- Owner: U.S. Army Corps of Engineers

The Challenge

- Perform HVAC, sheet metal and piping
- Install unique energy-saving hydronics system

The Solution

- Prefabricate pipe to minimize welding time/expense
- Install pipe with duct jacks
- Prefabricate ductwork
- Hallway coordination of multiple trades using BIM

The Results

- Project completed on time and on budget
- Recognized by general contractor for exceptional performance
- Supported sustainable design goals for LEED® certification

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