

Temporary Unit of Action Utilities Design-Build, Fort Bliss, El Paso, Texas

- \$8-million design-build (DB) project, including nearly 22 miles of water, sanitary sewer, and storm sewer utilities
- Accelerated delivery approach allowed the design and permitting activities to progress in parallel with early construction activities, maintaining the aggressive project schedule
- Design and installation of the utilities occurred within a 6-month period

CH2M HILL was initially awarded a \$3.5-million DB contract with the Fort Bliss Water Services Company of El Paso, Texas, to provide the design and construction of off-site water and wastewater services for the new Temporary Unit of Action at Fort Bliss. This fast-track project, administered by the U.S. Army Corps of Engineers (USACE), provides immediate temporary housing and support facilities for approximately 4,000 military troops.

The procurement for DB services was initiated by the USACE in early summer of 2005. Upon selection of the DB team proposed to the USACE, CH2M HILL was selected to move forward with design and construction services for this work. Clark Design-Build LLC was selected as the DB contractor for the barracks and facilities installation while CH2M HILL prepared the off-site facilities. Upon further negotiations for additional work in a limited time frame, CH2M HILL was selected to proceed with the construction of the on-site utilities, designed by Clark DB.

The project consists of a new 1-MG water storage tank; booster pump station; 1,800 linear feet of 12-inch waterline and connections; 8,400 linear feet of new 12-inch force main; as well as a 2.4-mgd sewage lift station.



CH2M HILL was subsequently selected as the pipeline subcontractor to install 52,000 linear feet of 6- to 12-inch waterline, 32,000 linear feet of 6- to 12-inch sanitary sewer line, and 21,000 linear feet of storm sewer piping for the DB contractor installing the temporary facilities — an additional project value of \$4.5 million.

At the height of construction, 5 CH2M HILL pipeline crews along with several pipeline subcontractors were engaged to complete the project on schedule. The work required significant coordination between CH2M HILL, Clark DB, Ft. Bliss Water Services Company, USACE, and the pipeline subcontractors (Pate Construction, KR Swerdfeger, High Country Pipeline, Garney Construction).

Issues requiring considerable coordination included design changes in barracks configuration and connection material; schedule changes; and added or modified work scope during the project which necessitated re-scheduling of crews to perform the additional work while maintaining the contract schedule.

The project was further complicated by Hurricane Katrina which limited availability of pipe and other construction materials on the market and placed a premium on available labor.

Despite the fact that there were multiple subcontractors and issues to coordinate, CH2M HILL maintained the project schedule without adding additional work days.

The Ft. Bliss DB project was effectively completed on-budget and on-schedule. All design and construction, which started in earnest by October 2005, was accomplished by early March 2006 to meet the schedule in support of troop arrival.