

11-D-00012

YBOR PUMPING STATION REHABILITATION - BACKGROUND

The Ybor Pumping station is one of four major pumping stations that have a direct connection to the City's Howard F. Curren AWTP. More than 25% of the total flow to the treatment plant is conveyed by this station. The station was constructed in 1982 and was designed for a rated capacity of 95 MGD. The station's current ADF is less than 20 MGD, but during major rain events, peak flow rates to the station have exceeded 35 MGD.

Numerous improvements have made to the station; however a major rehabilitation has not been completed since the original construction. Currently the pump motor for pump No. 1 has damaged bearings and needs a complete rehabilitation. The No. 3 pump also has damaged bearings and is unreliable for extended operation. In addition, several of the electrical and controls systems and some mechanical components have reached the end of the useful life and require rehabilitation or replacement. The intent of this project is to replace or rehabilitate all failed components and the components that have reached the end their useful life in order to restore complete reliability of the station.

The elements required for the project include: selecting and designing required mechanical equipment, electrical components, pump control equipment, motor rehabilitation requirements, and installation details; developing all mechanical and electrical drawings and specifications; developing a sequence of operation and required methods to maintain flow to the station during construction; submitting and obtaining all required permits. Consultant must have considerable experience with the design and rehabilitation of large wet pit/dry pit pumping stations. The consultant must also have considerable experience in the selection and design of medium voltage electrical systems, variable frequency drives, relay protection systems, motor rehabilitation, and pump control systems. As-built drawing, electrical schematics, and specifications for the existing station are available. As part of the Consultants' Competitive Negotiations Act, the selected consultant may be retained, at the City's option, to perform engineering services during construction.