

Bio: Jacob Porter, PE, BCEE graduated from Clemson University with a M.S. in Environmental Engineering and Science. Mr. Porter is a Senior Associate with Hazen and Sawyer with more than 20 years' experience in providing professional engineering services for numerous municipal water and wastewater infrastructure projects including pump stations and treatment facilities.

Bio: Rusty Haughn is a Senior Project Manager with Garney Construction with more than 46 years' experience in managing heavy civil construction projects specializing in water treatment, wastewater treatment, pipelines and pump station projects.

Abstract: The City of Tampa's San Carlos Pump Station (SCPS) is located within the Sunset Park neighborhood of Tampa. It was placed into service in 1981 and pumps raw wastewater directly to the City's Howard F. Curren AWTP through approximately 8 miles of 48-inch diameter force main along with four smaller pump stations. Average daily flows to the SCPS are 15 mgd with peak flows near 55 mgd. Prior to rehabilitation, the SCPS had two 1,500 HP pumps and one 250 HP pump. The smaller pump was responsible for most of the dry weather flows, with the larger pumps operating on a limited basis. The City's goals for the project included the following.

- Improve pumping reliability for all flow conditions
- Automate screening and provide additional pump protection
- Reduce impacts on the surrounding neighborhood
- Provide permanent back-up power
- Maintaining budget and schedule

This presentation will discuss the design and construction challenges associate with this complex project and the approach to addressing these challenges while meeting all the City's goals. The challenges include adding pump capacity to an existing station, minimizing neighborhood impacts, maintaining operations of the station during construction, severe space constraints, and constructing major improvements within an active wastewater facility. The presentation will also discuss why the City selected Progressive Design Build and the advantages including better ability to maintain budget and schedule.