

Electrical

Date Completed:

2013

Construction Cost:

\$6.2 Million

Client or Owner's Rep:

*Mr. John Msigwa, PE
Managing Engineer
City of Houston*

Highlights:

- ✓ **All Disciplines Involved – Architectural, Civil, Structural, Mechanical, Electrical, Instrumentation, Controls and SCADA**
- ✓ **Planning, Study, PER, Design Phase and Construction Phase Services**
- ✓ **Minimal Disruption to Existing Operations**
- ✓ **M/WBE goals and objectives**
- ✓ **On Budget and Schedule**
- ✓ **Cost Savings/Innovations**

Photos: *Sims Bayou Electrical Building and Switchgear.*



Water Pumping Station Upgrades at Sims Bayou, Acres Homes and Willowchase

City of Houston | Houston, Texas

Project Description | The project includes replacing Electrical Switchgear and Controls, new Generator at various ground water pump stations.

Services Provided | City of Houston selected KGI for preparation of Preliminary Engineering Report with recommendations for improvements required at various water pumping stations. KGI was responsible for preparing the bid documents (construction plans and specifications). In addition, KGI performed Short Circuit and Relay Coordination Studies to determine electrical equipment ratings and medium voltage relay settings. Some of the major improvements included:

Sims Bayou and Acres Homes

- New 2.4 kV electrical service from CenterPoint Energy.
- New ductbank and transformers for the new 2.4 kV Electrical Service.
- New 2.4 kV Generator Switchgear.
- New air-conditioned Electrical Building.
- Connect new equipment signals to existing SCADA system.

Willowchase

- New 480 volt electrical service from CenterPoint Energy.
- New 480 volt Motor Control Center.
- New standby Diesel Generator in an outdoor sound attenuated enclosure and double walled diesel fuel tank.
- New Automatic Transfer Switch.
- New air-conditioned Electrical Building.
- New PLC based water plant control system.
- Connect new controls to existing SCADA system