



Manatee Continuing Services Child Protective Services Generator

Bradenton, Florida

Project Scope	Outdoor Natural Gas While Building Service Stand-by-Generator
DTC Role	Prime
Project Cost	\$375,000 / DTC Fee \$31,566
Completed	Professional Services & CA: October 2017 – June 2019 Construction: December 2018 – June 2019
Client/Owner	Mark Petrilla / mark.petrilla@mymanatee.org / 941.748.4501

PROJECT OVERVIEW

DTC designed and provided electrical services and complete construction administration services for a 350-kW natural gas generator and Automatic Transfer Switch (ATS) addition in order to power the entire building during hurricane season electric utility outages. This building houses the Children's Protective Services Department of the Manatee County Sheriff's Office. The existing building, approximately 22,000 square feet had an existing 800 Amp 3-Phase 240 Volt High leg DELTA pad mount transformer service from Florida Power & Light (FP&L)

Recorded demand Load metering for one week, as well as two (2) years of FP&L billing records with their peak demand history were reviewed and analyzed to determine the power load and required generator capacity needed to adequately serve the building. Other factors that influenced this design was the fact that the building had an existing 130 kVA roof-mounted solar power PV (Photovoltaic) array and inverter cogeneration system as well as a special IT Room with its own UPS System (Uninterruptible Power Supply) with a dedicated Roll-Up generator tie in and transfer switch. The facility's director specified that the fuel supply would be natural gas because a gas main ran adjacent to the property, and this eliminated any concerns with diesel fuel shortages or fuel truck delivery problems during storms. The design was optimized to take advantage of existing conditions to minimize the cost and complexity of the installation, and it also had to minimize the interference with existing operations during weekdays and any power outages for construction "switch overs" had to be limited in time to just a few hours in order to meet IT system UPS limitations, as well as, be conducted over weekends.

Construction administration services included Pre-construction meeting participation, bid evaluations, and selection recommendations, contractor RFI responses and coordination directives, owner requested design and equipment changes, construction progress inspections, pay application reviews, approvals and certifications, contractor equipment submittal reviews and approvals, electrical testing observations, test report reviews and approvals. The construction administration services contract also included locating and tracing electrical system feeders and panels for detailed "As-Built" documents in order to provide the facilities department with accurate "record documents" of the electrical system building plans and panel schedules.

