

Phase II Combined Cycle Power Plant Expansion

West Central Florida

The diverse requirements for an industrial plant expansion included large diameter pipeline installation, precast concrete trench installation, dewatering, and multiple ancillary works associated with the expansion project. All of these requirements were met by Moretrench Industrial under a single contract.



The project

Moretrench was retained for installation of 2,300 LF and 1,500 LF respectively of 108-inch and 42-inch diameter, concrete-lined steel pressure pipe; installation of 2,500 LF of precast concrete electrical trenches between the cooling water reservoir pump locations and the power block; and ancillary works including storm drainage, dredging, riprap embankment, 12 acres of grading, asphalt roads, concrete pavement, rock surfacing, and grass restoration.

The challenge

The most complex aspect of the overall work was the installation of the 2,300 LF of 108-inch diameter pressure pipe, which consisted of a double-barrel run within the power block area, splitting into single runs approximately midway, with one heading north to the cooling water reservoir intake structure and one to the east to the discharge structure. The installation presented a number of challenges:

- Significant alignment obstructions
- Large pipe section handling
- Restricted access

The solution

The complicated nature of the pipeline installation and the unique challenges it presented were overcome with forethought and thorough pre-planning. Streamlining of all the elements of the contract for the most efficient work plan, while at all times paying the highest level of attention to safety within the active power plant, was carefully coordinated with the general contractor, the owner, engineer, and plant operations personnel. Aspects of implementing pressure pipe installation included:

- Remote LiDAR scanning & 3-D modeling to ensure adequate overhead natural gas line and high voltage transmission main crossing clearances as well as optimum crane positioning
- Wellpoint dewatering to maintain trench stability
- Custom trench boxes and sheet piling were required, together with open excavation for production pipeline installation
- Complex pipe transition from normal trench subgrade to clear active existing large-bore circulation water piping

As a result of the extensive pre-production work coupled with experienced site personnel, the project was executed flawlessly.

Project facts

Owner(s)

Confidential Client

Markets

Power

Keller business unit(s)

Moretrench Industrial

Services

Concrete
Civil works

Main contractor(s)

Confidential Client

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