

# LOCH RAVEN SUBSTATION

### • Baltimore, MD

### BACKGROUND

In 2023, Baltimore Gas & Electric Company (BG&E) launched the Loch Raven Substation project in Baltimore, Maryland. This project involves the construction of a new electrical substation to replace an aging facility nearing its distribution capacity. The new 110-13kV substation is designed to meet increasing regional energy demands and enhance service reliability, with the goal of minimizing potential customer outages.

### **SCOPE OF WORK**

Schnabel teamed up with the precast installer Nelson Precast and the General Contractor New River Electrical Corporation to install drilled shafts and soldier piles for the proposed perimeter wall. This work was essential for installing wall panels that will protect the future substation. Schnabel's scope included:

- **Installation of Drilled Shafts**: 170+ drilled shafts reinforced with rebar cages to anchor protective walls.
- **Installation of Soldier Piles**: Structural piles installed to provide lateral support for the retaining system and wall panels.

### **CHALLENGES**

A major challenge during this project was the drilling conditions, as Schnabel had to drill through hard rock during the installation of the drilled shafts. Drawing on decades of experience and specialized equipment, Schnabel quickly adapted to the tough subsurface conditions. In addition, the team had to maintain high precision in pile placement and concrete elevation to ensure both structural integrity and proper project alignment.

#### OUTCOME

Despite the geotechnical challenges encountered during the project, Schnabel completed its phase of the project on schedule and to the client's satisfaction. Schnabel's efforts will play a big role in helping BG&E to upgrade their electrical substation.



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## **AT A GLANCE**

### WORK PERFORMED BY SCHNABEL

- Installation of 170+ drilled shafts.
- Installation of soldier piles to support wall panels.

### **BENEFITS FOR CLIENT**

The work was completed on schedule despite

• encountering hard rock during drilling, allowing the overall project to proceed without delays.

### **BENEFITS FOR COMMUNITY**

The new BG&E electrical substation will help to

• meet growing energy demands and help reduce potential customer outages.



### **KEVIN CARGILL, PE** Schnabel President

"With over 60 years of experience, Schnabel is committed to being the safest and most efficient geostructural company, providing effective and timely solutions for our clients."