

CASE STUDY

MICROTUNNELING | PILOT MICROTUNNELING

**Project Name:**

Westridge Lift Station Project

**Prime/Sub Contractors:**

Boyer, Inc. – Houston, TX

**Location:**

Houston, TX

**Owner:**

City of Houston

**Ground Conditions:**

Lean clay conditions

**Akkerman Equipment:**

Model 4800C GBM System with Akkerman PCH. Temporary Cased Augers, Jetting and Lubrication System, Guidance Systems

**Pipe:**

15-in to 21-in VCP (2-m lengths)

**Total Length/Longest:**

2700 LF

PROJECT OVERVIEW

Boyer, Inc. completed pilot tube microtunneling operations for the Westridge Lift Station project as part of the City of Houston's ongoing wastewater infrastructure improvements. Operating in clay soils and constrained urban conditions, the crew utilized a 3-pass pilot tube method to achieve precise line and grade control throughout multiple installations.

Beginning with pilot tube installation, the operation progressed through intermediate casing and final pipe installation stages, ensuring alignment accuracy while supporting trenchless construction requirements. The project represents a continued expansion of trenchless solutions within Houston's water and sewer infrastructure network.

THE CHALLENGES

- Maintaining precise line and grade control through clay soil conditions
- Executing multi-pass installation (pilot tubes, casing, and final pipe) within constrained shaft environments
- Managing excavation and spoil removal efficiently over extended drive lengths
- Delivering consistent performance across multiple long installations within an active urban infrastructure program

THE SOLUTION

- Utilized the Akkerman 4800C GBM System with guidance systems to ensure accuracy during pilot tube installation

- Implemented a 3-pass pilot tube method to control alignment and support staged pipe installation
- Deployed temporary cased augers and jetting systems to manage spoil removal and maintain bore stability
- Used an Akkerman Powered Cutting Head (PCH) sized to match the VCP for efficient excavation and continuous advancement

OUTCOME

- Successfully completed approximately 2,700 LF of pilot tube microtunneling installation
- Maintained accurate line and grade through all phases of the multi-pass installation process
- Enabled efficient excavation and spoil removal through controlled shaft-to-reception workflows
- Supported the City of Houston's long-term wastewater infrastructure improvements
- Reinforced the effectiveness of pilot tube microtunneling for precision installations in clay ground conditions

