Project Profile: MICROTUNNELING

BRADSHAW CONSTRUCTION CORPORATION
TUNNELING SPECIALISTS

Route 1 North Sewer Improvements
Stafford, VA

PROJECT OVERVIEW AND CHALLENGES

Bradshaw recently completed construction of 790 linear feet of 43 inch steel casing under US Route 1 for a 30 inch ductile iron gravity sewer. The project was divided into two tunnels (460 linear feet and 330 linear feet) sharing a common 32 foot diameter liner plate launch shaft installed by Bradshaw. The 43 inch tunnel was installed using an AVN-800 MTBM model developed by Herrenknecht. Tunnel depths ranged from 15 to 20 feet below the surface, with the alignment passing beneath the water table through silty sand, clay, cobbles and boulders. Challenges included maintaining line and grade despite encountering boulders, proximity to overhead power-lines, and a limited footprint for tunneling operations. However, each challenge was addressed and the tunnels and pipe were installed successfully.

PROJECT INFORMATION - 567

OWNER:
Stafford County
Department of Utilities
Christopher Conners
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ENGINEER:
Whiteman, Requardt, & Associates, LLP
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CONTRACTOR:
W.C. Spratt, Inc.

COMPLETION DATE:
6/7/2017

GEOLOGY:
Silty Sand, Clay, Cobbles, & Boulders

EXCAVATION METHOD:
Herrenknecht AVN-800 MTBM

MINING DIMENSIONS:
460' & 330' x 43"Ø

FINAL LINING:
30" Ductile Iron Pipe

FOR MORE INFORMATION:
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Refer to Project 567