Project Profile: MICROTUNNELING

BRADSHAW CONSTRUCTION CORPORATION
TUNNELING SPECIALISTS

Crabtree (Phase II) & Upper Pigeon House (Phase I) Interceptor Tunnels, Schedule 1 & 2
Raleigh, NC



PROJECT OVERVIEW AND CHALLENGES

The City of Raleigh, NC Public Utilities Department has constructed a major upgrade to its Crabtree Creek Interceptor system designed to alleviate hydraulic restrictions, accommodate future projected flows, and minimize SSOs by installing 41,000 lf of 54”, 60”, and 72” gravity sewer. A total of 5,000 lf broken into 14 separate drives by slurry microtunneling methods that went underneath railroad crossings, under densely populated areas and affluent neighborhoods of the City of Raleigh. These tunnel drives were accomplished by Bradshaw Construction in highly variable subsurface conditions that required tunnel excavations in partial face and mixed reaches that ranged from loose alluvial granular materials to 25,000+ psi competent rock. Both 1-pass & 2-pass methodologies were accomplished. The microtunneling was let as a separate general contract before the open cut work.





PROJECT INFORMATION - 551

OWNER:
City of Raleigh
Dept. of Public Works
Eileen Navarrete
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ENGINEER:
Hazen & Sawyer
Joshua Farmer
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CONTRACTOR:
Bradshaw Construction Corporation

COMPLETION DATE:
4/15/2017

GEOLOGY:
Crystalline rock, PWR, residual soil, & alluvium

EXCAVATION METHOD:
Herrenknecht AVN-1500 MTBM
Herrenknecht AVN-1200 MTBM

MINING DIMENSIONS:
640', 150', 770', 125' @ 75.4" Ø &
100', 310', 230', 367', 150' @ 60"Ø

FINAL LINING:
42", 54", & 57" Fiberglass Reinforced Pipe

FOR MORE INFORMATION:
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Refer to Project 551