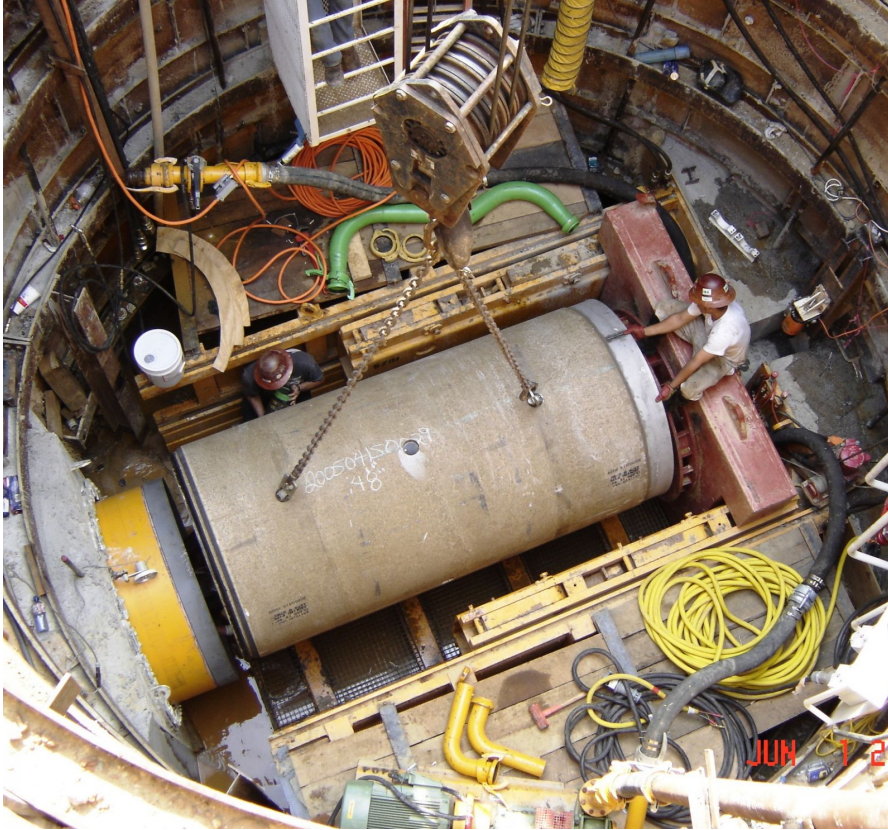
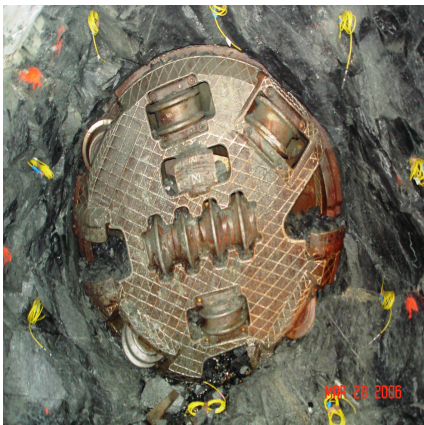


Upper Jones Falls Interceptor Sewer - Phase 2 Baltimore, MD



PROJECT OVERVIEW AND CHALLENGES

Bradshaw jacked 6,000' of 48" polycrrete sewer pipe using slurry microtunneling through rock and mixed face ground conditions. The longest microtunnel drive was over 900'. Drill and blast tunneling was used for 600' of the sewer installation. The rock strength (UCS) was up to 43,500 psi. Eleven access shafts with pre-cast manholes and/or cast-in-place structures were installed. A unique live sewer crossover structure was installed in an elliptical NATM shaft 40'x70'. Finally, two 48" polycrrete river crossings and 1,500' of 18" DIP sewer pipe were opencut. The challenges on this project were extremely hard and abrasive rock ground conditions, limited access to jacking and receiving pits, and the project location in a highly visible part of the City's business and education centers.



PROJECT INFORMATION - 434

OWNER:

City of Baltimore
Department of Public Works
Jonathan Scott
410.396.3671
jonathan.scott@baltimorecity.gov

ENGINEER:

Patton, Harris, and Rust Associates
Graeme Lake, PE
410.997.8900
graeme.lake@phra.com

CONTRACTOR:

Bradshaw Construction Corporation

CONTRACT VALUE:

\$23,000,000

COMPLETION DATE:

6/30/2007

GEOLOGY:

Weathered to Strong Granitic Rock -
Full and Mixed Face

EXCAVATION METHOD:

Herrenknecht 60" Ø MTBM
Drill & Blast Horseshoe

MINING DIMENSIONS:

6,000' x 60" & 600' x 96" Ø

FINAL LINING:

Polycrrete Pipe 48" Ø

FOR MORE INFORMATION:

Todd Brown, Project Manager
(410) 970-8300
TBrown@Bradshawcc.com
Refer to Project 434