Project Profile: TBM TUNNELING

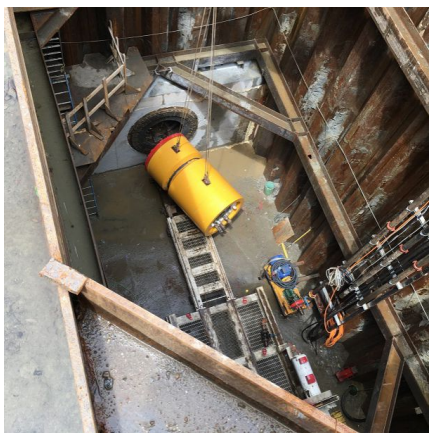
BRADSHAW CONSTRUCTION CORPORATION
TUNNELING SPECIALISTS

Ruby Avenue Storm Sewer Extension
Kansas City, KS



PROJECT OVERVIEW AND CHALLENGES

Bradshaw Construction installed 1,665' of 143” O.D. steel rib and board tunnel for a 96” RCP storm sewer using a modified Lovat TBM. The tunnel was part of a 6,630’ storm sewer project to alleviate flooding in the Argentine area of Kansas City, Kansas. Bradshaw also installed a solder pile and wood lagging mining shaft that attached to an existing box culvert storm drain. The primary challenge on the project was the mixed face ground conditions. The tunnel started in fat clay, progressed into soft shale and finally into shale with limestone cap rock. Unexpectedly, the limestone exceeded 19,000 psi necessitating TBM modifications so that 6.5” rock disk cutters could be added underground as the tunnel was mined. This innovative solution proved to be highly effective and the project was completed on time and within budget.





PROJECT INFORMATION - 273

OWNER:
City of Kansas City

ENGINEER:
Burns & McDonnel
David Hauser, PE
(816) 333-9400

CONTRACTOR:
Garney Construction

COMPLETION DATE:
2/15/1995

GEOLOGY:
Clay, Shale and Limestone

EXCAVATION METHOD:
143"Ø Lovat TBM

MINING DIMENSIONS:
1,665' x 143"Ø

FINAL LINING:
96" Reinforced Concrete Pipe

FOR MORE INFORMATION:
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Refer to Project 273