

## U.S. 29 Water Transmission Main Columbia, MD



### PROJECT OVERVIEW AND CHALLENGES

Bradshaw recently completed construction for a portion of the US 29 Water Transmission Main project, installing 752' of 60" steel casing under MD Route 108 in Columbia, MD for a 36" water transmission main. Bradshaw recently completed a similar 470' drive as part of the previous phase to this project. Tunnel depths for the single drive ranged from 6' to 30' below the surface, with the alignment passing through partially weathered rock, dense silty sands, and cohesive clays. Bradshaw constructed a 32' diameter, 38' deep steel rib-and-board launch shaft to facilitate tunneling activities, as well as a 16' diameter, 20' deep rib-and-board shaft to recover the MTBM. The alignment passed beneath an existing 24" RCP sewer with only 2' of clearance, requiring precise control of tunnel grade. The nominal 36" BWCCP ran at an OD of 49" with an approximate weight of 820 LB/LF, requiring critical care in handling and installation within the casing.



### PROJECT INFORMATION - 570

#### OWNER:

Howard County  
Paul Dimarco  
410-313-6375  
pdimarco@howardcountymd.gov

#### ENGINEER:

O'Brien & Gere  
Louis Ragozzino  
301-731-5622

#### CONTRACTOR:

W.F. Wilson and Sons, Inc.

#### COMPLETION DATE:

9/14/2017

#### GEOLOGY:

Partially Weathered Rock, Silty  
Sands & Cohesive Clays

#### EXCAVATION METHOD:

Herrenknecht AVN-1200 MTBM

#### MINING DIMENSIONS:

752' x 60" Ø

#### FINAL LINING:

36" Bar Wrapped Concrete Cylinder  
Pipe

#### FOR MORE INFORMATION:

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Refer to Project 570