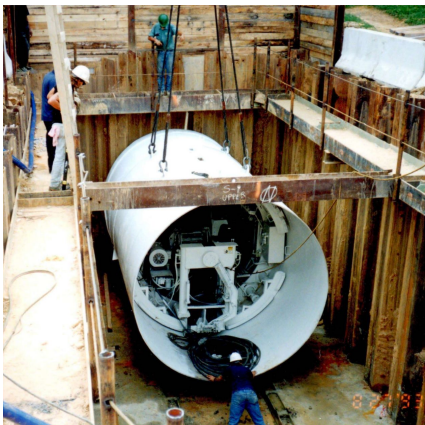


## 96-Inch and 84-Inch Diameter Steel Water Main Lanham, Maryland



### PROJECT OVERVIEW AND CHALLENGES

Bradshaw installed 900' of 132" OD rib and board tunnel in two drives with mining and receiving shafts for each. The tunnels were excavated through silts and sands using a TBM digger shield. The first tunnel was under Route 50 and the second was under Amtrak Railroad's high speed rails between DC and Baltimore. 84" and 96" OD steel water main was installed in the tunnels, respectively. The primary challenges on this project were: 1) controlling the tunnel face while mining through dense silt and sand below the water table with an open face TBM digger shield, 2) getting Amtrak Railroad to allow the use of steel ribs and wood lagging tunnel supports in lieu of steel casing or liner plates, and 3) achieving essentially no settlement given both tunnels had only 1-2 diameters of cover.



### PROJECT INFORMATION - 255

#### OWNER:

Washington Suburban Sanitary  
Commission  
Michael Crean  
(301) 206-8550

#### ENGINEER:

Owner

#### CONTRACTOR:

Corman Construction, Inc.

#### COMPLETION DATE:

6/1/1993

#### GEOLOGY:

Silt and sand

#### EXCAVATION METHOD:

TBM Digger Shield

#### MINING DIMENSIONS:

900' x 132"Ø Rib & Board

#### FINAL LINING:

96" & 84" Steel Water Main

#### FOR MORE INFORMATION:

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Refer to Project 255