

## Fullerton Water Transmission Main Section I Fullerton, MD



### PROJECT OVERVIEW AND CHALLENGES

Bradshaw used a Lovat tunnel boring machine (TBM) to construct 1,707 feet of 112 inch OD rib and board tunnel for an 84 inch welded steel watermain. Bradshaw also installed a 42' x 72' x 35' deep elliptical NATM mining shaft. The tunnel ground conditions were alluvial deposits of silt, sand and gravel. The challenges of the project were: 1) the limited stand up time of the alluvial soils in the tunnel crown during TBM excavation and 2) grout backfilling the annulus between the tunnel supports and the steel water main given the long tunnel length and limited surface access along the alignment.



### PROJECT INFORMATION - 308

#### OWNER:

Baltimore County  
Department of Public Works  
(410) 396-3310

#### ENGINEER:

Rummel, Klepper, & Kahl  
Robert J. Halbert  
(410) 728-2900

#### CONTRACTOR:

Corman Construction, Inc.

#### COMPLETION DATE:

8/4/1997

#### GEOLOGY:

Alluvial silt, sand and gravel

#### EXCAVATION METHOD:

Lovat 112" TBM

#### MINING DIMENSIONS:

1,707' x 112" Ø

#### FINAL LINING:

84" Welded Steel Pipe

#### FOR MORE INFORMATION:

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Refer to Project 308