

## Battery Park Trunk Sewer Tunnel Richmond, VA



### PROJECT OVERVIEW AND CHALLENGES

As part of a new 3,400' by-pass sewer tunnel, Bradshaw also hand tunneled a total of 200' of 96" liner plate for a 72" fiberglass storm sewer pipe. Each hand tunnel intersected the 144" rib and board tunnel for underground Y connections or was combined in three way manholes at the shafts. Just as for the primary by-pass tunnel, other major challenges were the extremely accelerated schedule, solid waste from the City dump that crossed the tunnel, and constant risk of flooding during operations until the new pipeline was put into service. Bradshaw's value engineering saved the owner \$1.8 million.



### PROJECT INFORMATION - 457

#### OWNER:

City of Richmond  
Department of Public Utilities  
Robert Stone, Project Manager  
804.646.8557  
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#### ENGINEER:

Greeley and Hansen Engineers  
Kurt Stykemain  
804.355.9993  
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#### CONTRACTOR:

Bradshaw Construction Corporation

#### CONTRACT VALUE:

\$23,698,300

#### COMPLETION DATE:

4/16/2008

#### GEOLOGY:

Miocene Clay, Solid Waste

#### EXCAVATION METHOD:

Liner Plate by Hand Tunneling

#### MINING DIMENSIONS:

200' x 96" Ø

#### FINAL LINING:

72" FRP

#### FOR MORE INFORMATION:

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Refer to Project 457