



*At left: Installation of a tunnel liner in WMATA station at Dupont Circle.
Right: Completed Glenmont Station.*

WMATA General Soil Consulting Contract

Washington, DC & suburbs

Mueser Rutledge Consulting Engineers (MRCE) has served as the General Soil Consultant on an ongoing basis for Washington Metropolitan Area Transit Authority (WMATA) since 1966. Work has included complete geotechnical investigations, evaluating construction conditions, and establishing design criteria. Tasks have comprised:

- Boring exploration contracts, inspection of the borings in the field, and testing of samples, and preparation of reports which contain a digest of exploration data
- Criteria for underpinning, design of tunnels and station structures
- Design criteria for rock tunnels constructed by conventional drill and blast techniques, TBM mining, and the New Austrian Tunneling Method (NATM).
- Detailed subsurface investigation for the design and construction of two sunken tube projects: One in the L'Enfant Plaza-Pentagon Route (Section L001) crossing the Washington Channel and the other was the F-Route (Section F004) crossing under the Anacostia River. The investigations led to recommendations on design and construction problems including stability analysis of the trench and foundation support of the tubes; an evaluation of spoil disposal was also performed, and the firm assisted during construction for two sections mined using earth pressure balanced (EPB) TBMs.
- Participated as members of the Board of Engineering Consultants on special construction and foundation problems, including the underpinning of numerous public and private buildings, subaqueous tunnels beneath the Potomac River, and wide-arch roof stations in rock.
- Performed subsurface investigations for the 103-mile Washington subway system, including:
 - Trackbed work for 40 miles of at-grade construction for Huntington, Franconia-Springfield, Vienna, Glenmont and Greenbelt routes of the subway system. The firm provided subsurface investigations and performed soil investigations including settlement and stability analysis, lateral earth pressures analysis for temporary and permanent earth retaining structures, and developed design and construction procedures.
 - Station work for Glenmont, Dupont Circle, Prince George Plaza, Georgia Avenue, Petworth, New York Avenue, Largo, and Dulles Airport, including geotechnical investigations, design review for geotechnical pressures and structural design.