

MTA Purple Line Plymouth Tunnel Exploratory Shaft

Client:

Confidential Client

Location:

Silver Spring, MD

Services Provided:

- Rock identification
- Rock strength, abrasivity, & index testing

Value Provided:

- Ability of our laboratory to perform a wide-range of tests and materials while being flexible enough to modify equipment to test non-standard sized cores.

Background & Project Challenges

The Purple Line is a proposed \$2.2 billion, 16-mile light rail transit project that will provide faster, more direct service for the citizens of Bethesda, Silver Spring, Takoma/Langley Park, College Park, and New Carrollton. The proposed Plymouth Street tunnel would begin at Manchester Place, and then run under Plymouth Street to the proposed station at Manchester Place. The proposed location of the Plymouth tunnel would pass through bedrock with poor RQD which caused issues for recovery and lab testing.



GeoTesting Role & Accomplishments

GeoTesting Express (GTX) was delivered multiple rock cores of material by client. Upon initial sample inspection, it was clear that a large portion of the material was damaged. We were able to implement the necessary precautions to the samples to ensure that there was minimal sample loss during the course of the project. The client was aware of the fragile material and was satisfied with our approach and consideration we were able to give to each sample. Close communication with the client about which samples could and could not be tested had to be established at an early stage of the project.

The cores that were provided were one inch diameter, highly weathered Granofels. The dimension of the core provided problems as most of our equipment and training was based off of the typically tested NX and NQ core. The ability for our technicians and equipment to adapt to the different core sizes proved to be vital in meeting the clients expedited time line. The standard procedure for achieving the end flatness and parallelism for unconfined compression testing had to be altered to achieve the necessary tolerances.

The technical experience of our lab technicians and staff were highly valuable during this project. Each sample had to have a 'Hand Specimen Identification' performed on it. Our geologists were able to perform 62 classifications before any sample preparation was performed. This expertise also helped to determine which samples would need to have more care and consideration to prevent unwanted failures.

For More Information Contact:

Gary T. Torosian Director of Testing Services
125 Nagog Park t 978.635.0424
Acton, MA 01720 f 978.635.0266
gtt@geotesting.com