



South Ferry Terminal Project New York City Transit

Location: New York City, New York

Date: 2008 – 2010

Structure: Terminal Station, Approach Tunnel,
and Reconstruction of Fan Plant

Length: 1,340 feet (408.4 meters)

Cross-Section: Width Varies from 35 – 54 feet
(10.7 – 16.5 meters); Height Varies
from 15 – 50 feet (4.6 – 15.2 meters)

Geology: Manhattan Schist Underlying Soils and
Fill Material

Cost: Approximately \$530 Million

Client: Metropolitan Transportation Authority
Capital Construction (MTACC)

Owner: Metropolitan Transportation Authority
(MTA) – New York City Transit (NYCT)



Figure 1. Waterproofing membrane placed on sidewalls and installation of reinforcing bars. (Courtesy of MTACC)

South Ferry Terminal Project Waterproofing Leakage Assessment:

The Metropolitan Transit Authority (MTA) and MTA Capital Construction (MTACC) constructed the new South Ferry Terminal for the No. 1 Subway underneath Peter Minuit Plaza in Lower Manhattan, adjacent to Battery Park.

During the latter part of its construction, the South Ferry Underground Station and adjoining ancillary structures and tunnels experienced water leakage into the finished underground space. MTACC engaged Gall Zeidler Consultants (GZ) to review the leakage manifested in view of the waterproofing system chosen. The waterproofing system utilized consists of a combination of thin adhesive High-Density Polyethylene (HDPE) membrane sheets (Preprufe) in the inverts and on sidewalls and bituminous sheets (Bituthene) on the roof. In their analysis, GZ reviewed the waterproofing design and design detailing in view of construction versus support of excavation and final concrete structure, its installation along with particular construction characteristics of South Ferry civil underground work and quality assurance and control measures implemented on site.

The review work was closely coordinated with MTACC and NYCT representatives and concluded in a findings report that was utilized by MTA in the arbitration process in presentations to a Dispute Review Board (DRB).



Figure 2. Waterproofing placement on structural box roof. (Courtesy of MTACC)