



Farley Post Office



Top left: The completed theatre on 34<sup>th</sup> Street. Lower left: Underpinning of the neighboring historic red church was required. Top right: Rock cut along 34<sup>th</sup> Street. Lower right: Close-up of underpinning showing support buttons.

## 34<sup>th</sup> Street Lowe's Theatre and Hotel Complex

New York, NY

Mueser Rutledge Consulting Engineers (MRCE) served as the geotechnical and foundation engineer for the Hotel / Theatre Complex located between 33rd and 34th Streets, west of 8th Avenue in New York City. Services included two stages of boring and test pit exploration, including packer permeability tests in the rock, followed by design recommendations for foundations and excavation support, and inspection of a deep, large foundation cut. The project also entailed conceptual design of an underpinning system for the neighboring historical church, contract drawings, and geotechnical specifications.

The 40-foot cut included removal of approximately 30,000 cubic yards of rock, principally by excavation drilling and blasting. The work involved interface with AMTRAK regarding protection of the underground wall of Penn Station, which exists below 33<sup>rd</sup> Street adjacent to the project's southerly property line, and interface with New York City Transit authority (NYCTA) regarding monitoring the A, C, and E subway line during blasting. The project was particularly challenging due to the presence of two adjacent high-rise structures, a 4-story masonry structure, and a 2-story brick addition to a church.