



## 160 East 22<sup>nd</sup> St

This project entailed construction of a 21-story building with two cellar levels below street grade. A significant portion of the building was cantilevered over the neighboring 3-story building. Ground conditions on the site consisted of low bearing strength soils and shallow groundwater. Excavation required pile supported underpinning of the neighboring buildings and a combination of soldier beam and lagging and steel sheet pile support of excavation walls. Continuous dewatering was also required to maintain dry excavation conditions.

### Services provided

- Geotechnical Subsurface Investigation and Report
- Design and Inspection of Underpinning and Support of Excavation Walls
- Design and Inspection of Caisson Foundations
- Design and Supervision of a Monitoring Program
- Decommission and Backfill of Sidewalk Vault



Caisson Installation after Underpinning



Underpinning Pit with Titan Pile



Excavation Inside Second Level Sheetting



First Level Excavation after Underpinning



Caisson Cap Construction at Second Level Excavation



Backfilling First Level Foundation Walls



Backfilling Second Level Foundation Walls



Installation of Titan Piles Prior to Underpinning



Sheet Pile Installation for Second Level Excavation