

Groundwater Battle in Miami

Underground construction in South Florida is difficult due to the high groundwater level and permeable subsurface conditions. Dewatering of multi-level excavations typically involves costly tremie seals and massive dewatering and shoring schemes. Over the past years, Malcolm developed a unique solution for safe and fast excavation in the dry.

For the 57-story Jade Signature luxury residence tower, its extensive soil mixing expertise enabled the push of soil mixing into new dimensions. Never before has Miami limestone been chewed up with large soil mixing columns to provide a continuous soil mix plug for the entire excavation. No tremie seal is required, which eliminates the risk of leakage, and dewatering becomes a matter of days instead of years. Large diameter auger cast piles drilled through the soil mix plug from original grade



For the foundation of the Jade Signature tower in Miami, Malcolm Drilling avoided sealing and dewatering challenges by installing large diameter soil mixed piles.

elevation provide the required support for the uplift during excavation and the final building loads. Since every inch of the 'bathtub' will be mixed, the excavation can be performed in the dry. Powerful drilling machines and specially

designed mixing tools will allow the entry of this technique into other regions where coastal environments have previously made it very difficult and costly to efficiently build deep underground structures. ■

PHOTO: MIAMI AERIAL

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precision & perseverance

Earth Retention Systems:

- Value Engineering
- Design Build Capabilities
- Secant Piles
- Steel Sheet piling
- Driven/Drilled Soldier Piles
- Internally braced/tieback systems

Drop Shafts:

- Drilled shafts
- Design and install shaft reinforcement (CMP Plate)

Drilled Caissons

Dock Wall Construction

OIL AND GAS

COMMUNICATIONS

DEEP FOUNDATIONS

SEWER AND WATER

HEAVY CIVIL

POWER DELIVERY

RAILWAY WORK

RENEWABLE ENERGY

TRANSPORTATION

MATERIALS

Equal Opportunity Employer: Minorities, Women, Veterans, Disabilities

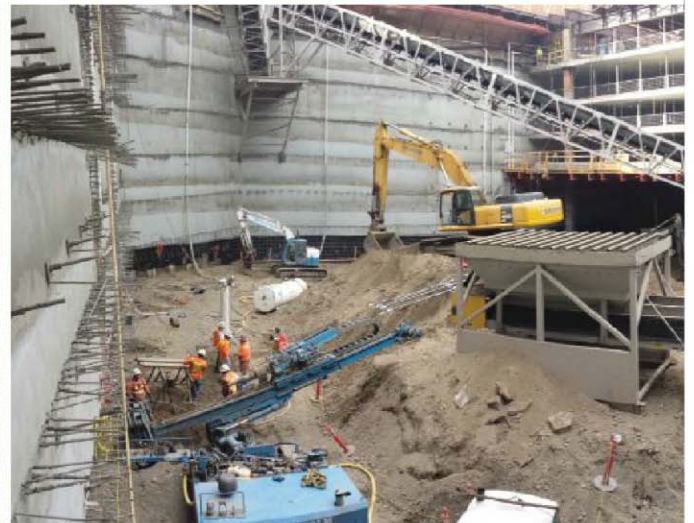


MALCOLM

Retention Systems

We excel at solving difficult problems. Malcolm's experience and specialized resources drive the construction state-of-practice, with evolving solutions to satisfy the demands of our clients. Our retention systems are tailored to diverse challenges on projects with; very soft or hard ground, high groundwater, sensitive structures and facilities while addressing noise and vibration concerns. When you encounter unique conditions which require a high level of expertise contact us at MalcolmDrilling.com

Soldier Pile Walls
Soil Nail Systems
Secant Piling
Soil Mix Walls
Underpinning
Slope Stabilization



Above: **935 Market Street**, San Francisco, CA, Braced Soil Mix Wall
Right: **Centre 425**, Seattle, WA, Partial Top-Down Internal Bracing
Left: **Port of Miami Tunnel**, Miami, FL, Anchored Soil Mix Wall With Gravity Block