

**PROJECT:**  
**ESTERO BAY RITZ-CARLTON RESIDENCES**  
Bonita Springs, Florida

**MORRIS-SHEA PROJECT COMPONENTS**

DeWaal Pile System  
1,406 DeWaal piles  
(14" and 18" diameters to depths up to 133 ft)



**MORRIS-SHEA**  
BRIDGE COMPANY, INC.

**MULTISTORY BUILDING FOUNDATION**







## PROJECT: MULTISTORY HIGH-RISE BUILDING DEEP FOUNDATION

Deep foundation piles for the Ritz-Carlton Residences in Bonita Springs, Florida will support two 20 story towers and a parking podium. Morris-Shea installed 1,406 DeWaal piles throughout the project site. Project specifications required two successful 14 inch and two 18 inch static load tests and one lateral load test. The Morris-Shea crew completed the project one month early.

Two advanced Morris-Shea rigs, including the largest deep foundation multifunctional drill rig in use in North America, were utilized for this project. DeWaal DWP piles were drilled to depths up to 133 feet and then chipped and cut upon completion of drilling. Pile installation was completed on December 19, 2023. Pile cutting/chipping commenced on November 27, 2023 and concluded on January 20, 2024. Morris-Shea completed pile cutting ahead of schedule.

### DEEP FOUNDATION SOIL CONDITIONS

According to the project geotechnical report, “the subsurface soil conditions encountered at this site generally consist of sands with varying amounts of fines above clays and clayey sands to an average depth of 125 feet. Below this zone, loose to very dense granular soils were encountered to the boring termination depths. The upper zone of this formation is very dense.” In addition to testing provided by the engineering firm, Morris-Shea performed thirteen supplemental Cone Penetrometer Test (CPT) soundings at the project site.

### VALUE ENGINEERED ALTERNATE

As an alternate to the project’s initial specification for driven/drilled piles, Morris-Shea proposed the DeWaal Piling System. DeWaal DWP piles were determined to be more effective by decreasing the production schedule while maintaining foundation integrity.





## PROJECT EQUIPMENT

- DR-138 Fundex 5600
- DR-133 Fundex 3500
- 14" DWP tooling
- 18" DWP tooling
- Liebherr concrete pump
- mini-excavator
- air compressor
- forklift





## MORRIS-SHEA INSTALLS DEWAAL PILE SYSTEM THROUGHOUT THE WESTERN HEMISPHERE

Morris-Shea utilizes advanced equipment and techniques to install deep foundation systems for infrastructure development throughout the United States, the Caribbean and South America. Our geotechnical teams construct foundations under many of the world's largest energy, manufacturing, industrial and commercial projects.

Since 1992, Morris-Shea has installed hundreds of thousands of DeWaal DWP piles. Today, the DeWaal Pile System is providing foundation support for all types of structures including high-rise buildings, hospitals, water treatment plants, distribution centers and petrochemical facilities.

**MORRIS-SHEA**  
BRIDGE COMPANY, INC.

## DEEP FOUNDATION CONSTRUCTION



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