



PROJECT DESCRIPTION

PROJECT TITAN (MRO HANGER)

PENSACOLA INTERNATIONAL AIRPORT

MORRIS-SHEA PROJECT COMPONENTS

DEWAAL PILE SYSTEM

16 INCH DIAMETER (200K COMP. LOAD) - 194 PILES

16 INCH DIAMETER (140K COMP. LOAD) - 128 PILES



MORRIS-SHEA

Pensacola International Airport

DEWAAL PILES:

- VE alternate to conventional augercast
- Higher production rates
- Reduced material expense
- Improved load capacity
- No drilling spoils



PROJECT OVERVIEW

Morris-Shea, a leading foundation contractor, installed deep foundation piles for the new Titan Project Maintenance, Repair and Overhaul (MRO) Hanger at the northeastern corner of Pensacola International Airport. A total of 322 DeWaal Piles with two different configurations of steel reinforcing cages were drilled at the busy airport. Morris-Shea deployed a PVE 90 drill rig to accommodate the 80 foot height restriction inherent at many active airport job sites. The DeWaal piles were set in a subsurface soil environment of predominantly sands and silty/clayey sands that were overly moisture sensitive.

DEWAAL PILE SYSTEM

Morris-Shea engineers advised the installation of the DeWaal Pile System, rather than originally specified augercast piles. The hanger's structural load requirements and the job site's subsurface soil conditions recommended the use of patented DeWaal Piles as an improved Value Engineered Alternate. The DeWaal Pile System is a drilled, full displacement, cast-in-place concrete pile installed by powerful, fixed mast drill rigs capable of applying high rotational torque and crowd forces to the unique DeWaal tool. This single-pass process densifies the soil, improves shaft friction and increases overall pile capacity.



PILE LOAD TESTING

Test piles were installed in non-production pile locations. Two 16 inch diameter piles were subjected to compression testing, an additional pile was tested for tension strength, and another pile test demonstrated lateral reliability. The DeWaal pile tests determined theoretical pile capabilities that met or exceeded pile requirements.



VALUE ENGINEERED REDESIGN

The Morris-Shea engineering team redesigned the deep foundation specifications from various sizes of augercast piles to 16-inch diameter DeWaal piles with two different types of reinforced steel cages. The use of the DeWaal Pile System reduced material expense, increased production rates, and improved load capacity. DeWaal Piles were ideal in this subsurface environment.

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