



Meskel and Associates Engineering, PLLC

GEOGTECHNICAL ■ CONSTRUCTION TESTING



Clay County, Florida

CR 224A – Pedestrian Bridge ; FDOT District 2, FPID: 428307-1-52-01

Estimated Construction Cost

\$500,000

Design Completion Date

2011

Client

Landmark Engineering

Contact

Mr. Steve Starnes, P.E.

This project included construction of a sidewalk and pedestrian bridge along Doctors Lake Drive in Clay County, Florida. The bridge was designed to be supported at each end bent on 12-inch diameter closed-end, driven pipe piles designed for a maximum factored design load of 15 tons per pile.

MAE's tasks for the project included exploring the subsurface conditions within the proposed bridge construction area, presenting the results of the field exploration, and presenting recommendations to guide design of the proposed structure foundation system. We accomplished these tasks by advancing Standard Penetration Test (SPT) borings, obtaining soil samples, and measuring groundwater levels within the proposed bridge area. Static pile capacities were estimated for the chosen deep foundation system following FDOT procedures utilizing SPT N-values. The computer program FB-Deep (version 2.02) was used for these calculations. Pile tip elevations versus Davisson pile capacities (Nominal Bearing Resistance, R_n) and estimated minimum pile tip elevations for the 12-inch diameter closed-end, driven pipe piles were presented.