



Muck Probing from Small Boats
and Kayaks



Very Wet Site Conditions

Market: State, Transportation **Client:** Parsons Transportation Group **Owner:** FL Dept. of Transportation

Project Profile

MAE was the Geotechnical Engineer of Record for this new 4.1 mile, four-lane divided highway serving as a SR 201 (US 301) bypass on the west side of the Town of Baldwin in Duval County Florida. The roadway includes a bridge over two CSX railroad right-of-ways, a bridge crossing over the Jacksonville-Baldwin Rail Trail, associated high fill embankments, mechanically stabilized embankment (MSE) walls, double and triple box drainage structures, stormwater ponds and two signalized intersections. During the design phase of the project, MAE performed more than 100 Standard Penetration Test (SPT) borings along the roadway alignment and in proposed pond areas in very difficult site conditions including 3 to 7 feet of standing water in some areas of the site. These difficult conditions included locating soil borings in contaminated soils caused by adjacent land uses, which required special sampling procedures and advanced PPE. Geotechnical engineering reports were prepared including recommendations for design and construction of driven pile deep foundations, embankment and MSE wall construction and foundation preparation for culverts. Technical Special Provisions were prepared for the project to address anticipated total and consolidation settlement of embankments and high fill areas of the roadway, which required the placement of settlement plates and monitoring during the initial phases of roadway construction.

Services: Construction Materials Testing, Geotechnical Engineering