Geocomp
Trusted to help mitigate risk

Fort Lauderdale Hollywood Int. Airport MSE Wall Design & Construction

PROJECT PROFILE

CLIENT:
Odebrecht - CFE Joint Venture

LOCATION:
Dania Beach, FL

VALUE:
- Provided methodology to determine if actual settlements are exceeding design values

SERVICES PROVIDED:
- Risk based monitoring

- Evaluation and mitigation services

"In addition to instrumentation recommendations, our plan also included provisions for installing and retrieving durability samples of the reinforcing strips."

MSE WALL DESIGN & CONSTRUCTION AND MONITORING

Due to our expertise in MSE wall design and construction, Odebrecht-CFE JV called upon Geocomp Engineering to prepare and implement the MSE wall monitoring plan. Our first step was to review all available data including, but not limited to, geotechnical reports and soil borings. From this information, we prepared a monitoring plan which included: prisms, settlement platforms, crack gages, strain gages,inclinometers. In addition to instrumentation recommendations, our plan also included provisions for installing and retrieving durability samples of the reinforcing strips. Evaluations of metal losses at specific periods in the life of the walls will confirm expected behavior. Samples will be pulled at ten year increments beginning at 10 years and ending at 90. As power was not available on the site, Geocomp designed and installed solar panels to power the data loggers required for automated data acquisitions.

BACKGROUND

Runway 9R-27L at the Fort Lauderdale – Hollywood International Airport is being expanded / lengthened to increase capacity. This will be only the third airport in the US with an active runway over a major highway US 1. Mechanical Stabilized Earth walls (MSE), which range up to 50 feet in height, are being used in conjunction with the runway expansion. FDOT Specification 548 requires the preparation and implementation of an instrumentation plan to monitor the walls during construction and during the settlement period.