TENCATE
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Confinement | Filtration | Separation | Soil Reinforcement

Case Study

application	Transmission Line Roads
location	Florida
product	Mirafi® HP570
job owner	Power Utility Companies

TenCate develops and produces materials that function to increase performance, reduce costs and deliver measurable results by working with our customers to provide advanced solutions.


Site being cleared for roadway

THE CHALLENGE

The challenge of the project was to construct access roads to 230kV transmission lines throughout Florida. Many of these roads needed to be developed through swamps and wetlands. Various power companies have used Mirafi® HP570 over the last eight years to construct these roads.

THE DESIGN

The design challenge was finding a geosynthetic material that separated the clean fill being brought in to build the access roads from the wetlands below. The geotextile also had to provide the tensile strength to handle the weight of the transmission line trucks. The use of a geogrid material was initially discussed but based on the separation requirement, it was


Finished, fully compacted roadway with Mirafi® HP570


Finished roadway with Mirafi® HP570

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determined that a high strength geotextile would be a better solution. Typically, there are 3-5 feet of fill placed over the Mirafi® HP570 but that would vary depending on the increase in elevation needed to get out of the wetland areas. The Mirafi® HP570 is also used to stabilize the 100' x 100' pole-staging pads that are constructed. These pads are required for the power utility companies to work on each individual pole. In Florida, speed of response to a hurricane is critical. These power utility companies need to be able to react quickly to get the power restored after a major storm event. Keeping these sites accessible by their service vehicles and personnel is critical to their performance.

THE CONSTRUCTION

Some projects require pre-fabricated panels to be deplyed across swampy site conditions. Panels as large as 60' x 200' were provided and fabricated by TenCate Geosynthetics. There have been over 250,000 sq. yds of Mirafi® HP-Series geotextiles used on these types of roads in Florida since 1999.

THE PERFORMANCE

Mirafi® HP570 was first designed and used for this application in 1999 and has been the product of choice ever since based on the results the power companies have achieved. The importance of accessing these sites during inclement weather is a major reason why the customer has opted to utilize a high strength geotextile. During major outages it is imperative that site access be available.

Centerline photo of completed roadway.

Photo of the pole pads so trucks can work on each pole in time of repairs.

Some areas had to be encapsulated with Mirafi® HP570 and an aggregate in-fill layer.

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