

Basal Reinforcement over Soft Subgrade Soil Entertainment City, Paranaque, Philippines



Mirafi® PET - Basal Reinforcement over Soft Subgrade Soil Entertainment City, Paranaque, Philippines

Project Data

Project	: Entertainment City Internal Road Network Road Project
Client	: Philippine Amusement and Gaming Corporation (PAGCOR)
Contractor	: D.M. Consunji Construction
Completion Year	: 2014
Material	: TenCate Mirafi® PET Reinforced Geotextile

Overview

Entertainment City, also known as E-City, is a gaming and entertainment complex under the development by PAGCOR spanning a land area of 8 km² on the reclamation area of Manila Bay, Philippines.

Soft subgrade soil over the reclaimed area poses a problem on the construction of 2.2 km road within the area. Thick fill material is required due to the initial displacement of fill material into soft subgrade resulting in an uneconomical filling method.

Solution

The use of Mirafi® PET reinforced geotextiles provided the most economical solution to address the localized failure of the road embankment. Shear stresses of the fill material was reinforced by using Mirafi® PET reinforced geotextiles leading to an increase bearing capacity of the foundation. This provided the optimum embankment height over a minimum area with steeper side slopes.

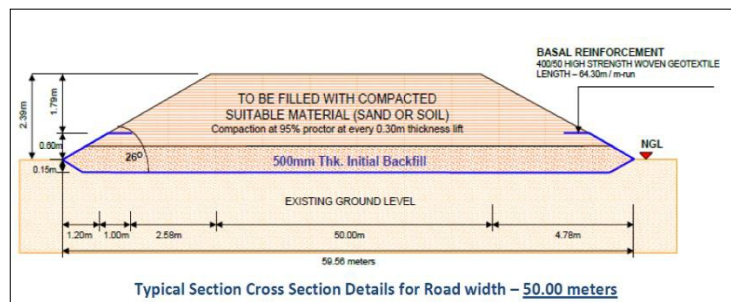
Construction

The design required the installation of Mirafi® PET 400/50 to be laid directly over the soft subgrade. The primary machine direction of the reinforced geotextile is in the traverse direction of the embankment. Thereafter, the embankment fill was carried out over the Mirafi® PET 400/50 geotextile for which the paved road is to be constructed.

The use of Mirafi® PET reinforced geotextile achieved a greater and quicker stability of embankments constructed on the soft foundations.



Overview of Mirafi® PET400/50 over soft subgrade foundation



Typical Section Cross Section Details for Road width - 50.00 meters

Cross section for basal reinforcement



Embankment fill over Mirafi® PET400/50 reinforced geotextile

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