BASAL REINFORCEMENT SOLUTION FOR PROVING GROUND
BEKASI, JAWA BARAT, INDONESIA

Basal Reinforcement

Problem

At the construction site of the roadworthiness testing area in Bekasi, there are several points along the track where filling will be carried out to raise the elevation according to the design plan set by BPJLSKB. Based on soil testing results, it is known that the area to be filled is situated on soft soil, which tends to have lower stability compared to hard soil. This soft soil is highly susceptible to uneven settlement (differential settlement), which can cause damage to the track and reduce the quality of the road structure built on top of it.

This condition adds challenges to the planning and implementation of the project, as the filling process must be managed carefully to avoid damage to the track due to varying settlement in different areas. The soft soil also has the potential to cause damage to the road pavement layers, reduce the soil bearing capacity, and affect the long-term performance of the road. Therefore, measures are needed to strengthen the foundation soil, such as using soil stabilization techniques or foundation reinforcement to minimize the impact of differential settlement.

Reinforcement of the embankment slopes is also necessary to prevent potential landslides or soil movement that could damage the structure and track that has been built. If these measures are not properly implemented, it could lead to greater damage to the track and potentially disrupt the smooth operation of the project, resulting in cost overruns and delays. Appropriate treatment, including reinforcement techniques and better soil management, is crucial to ensure the stability of the track, safety, and long-term sustainability of the project.

Solution

To address the challenges faced in this project, the proposed solution is the implementation of Basal Reinforcement with Paralink material to minimize the risk of differential settlement on the track and improve the stability of the embankment slopes with MacTex N50.2 as a separator and filtration layer between the foundation soil and the reinforced fill soil. By using Maccaferri’s solution, reinforcement of the foundation soil can reduce significant settlement differences caused by the addition of fill-over soft soil,preventing

Client: Balai Pengujian Laik Jalan & Sertifikasi Kendaraan Bermotor (BPLJSKB) Bekasi

Designer / Consultant: PT Indokoei International

Contractor: PT Hutama Karya

Products used (Qty.)

- Nonwoven Geotextiles 20,800 SQM
- MonoAxial GeoGrids 20,700 SQM

Date of construction: 04/2024 - 05/2024

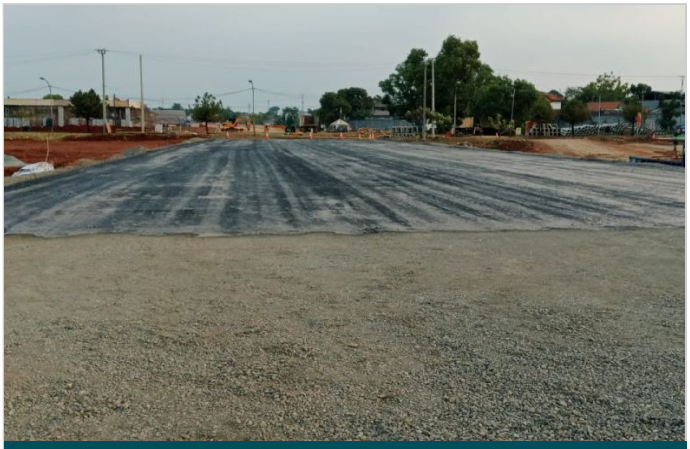
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Before Cosntruction



Construction Work



Finish Work

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