MACCAFERRI

CASE HISTORY

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NEW MANILA INTERNATIONAL AIRPORT PORT CONSTRUCTION

BULAKAN, BULACAN, REGION III, PHILIPPINES

Sub-grade Improvement

Problem

The Philippines is poised for a significant leap in its air travel infrastructure with the New Manila International Airport project. This ambitious endeavor envisioned as a world-class facility, will be constructed in phases to ultimately handle a staggering 100 million passengers annually. A critical aspect of this project involves the development of wharves on reclaimed land to provide convenient access to bring in all the equipment and supplies needed to construct the airport. However, building on reclaimed land presents unique challenges, particularly regarding ground stability. Geohazards like liquefaction, a phenomenon where water-saturated soil loses strength during earthquakes, and settlement, the gradual sinking of the ground, pose significant risks to the long-term viability of the wharves and the overall airport structure.

Solution

Maccaferri was awarded the purchase order to supply geogrids for the wharves' pavements, as specified in the design. Placed between the subbase and subgrade, these geogrids act as a stabilizing layer, reducing stress and minimizing differential settlement within the subbase. This innovative approach not only mitigates potential geohazards but also delivers significant cost benefits.

By distributing weight more evenly, the geogrids enable a one-third reduction in crushed stone volume. This translates to both financial savings and a reduced environmental footprint. The New Manila International Airport project showcases how geosynthetic reinforcement contributes to sustainable and cost-effective infrastructure development.

This stable and efficient foundation, created with the help of geogrids, paves the way for the airport to deliver on its promise of safe, reliable, and efficient air travel. By addressing potential ground instability issues, geogrids directly contribute to the airport's long-term sustainability goals, meeting the Philippines' need for a modern international gateway.

Client: Prime Metro BMD Corporation
Designer / Consultant: Royal Haskoning
Contractor: Prime Metro BMD Corporation
Products used (Qty.)

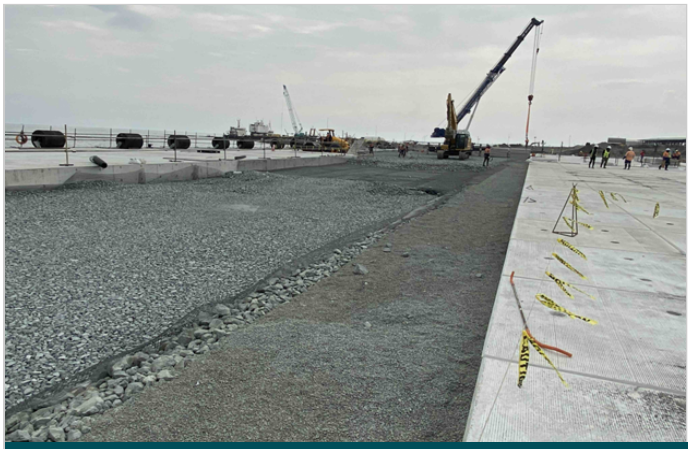
- Biaxial Geogrids	18000 sq.m. MacGrid EG20S
- Nonwoven Geotextiles	7200 sq.m. MacTex N 50.2

Date of construction: 10/2023 - 03/2024

Google Maps Google Earth



During Installation



During Installation



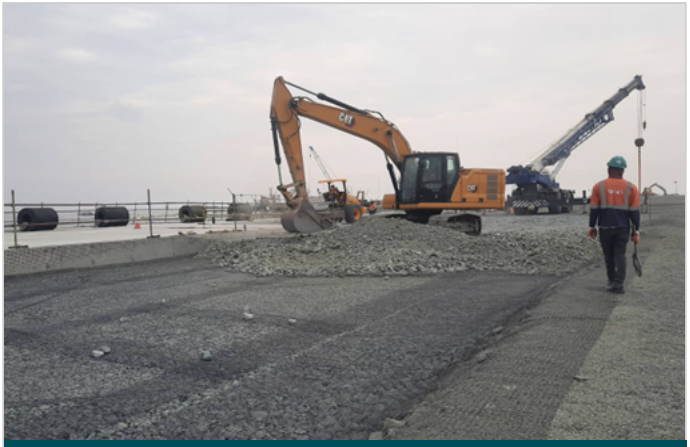
During Installation



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