

ACCESS ROAD AND PARKING FOR AL SAHAB REST AREA KHORFAKKAN, SHARJAH, U.A.E.

Reinforced Soil Walls and Slope Reinforcement

Problem

The Al Sahab Rest Area is a new tourist attraction in Khorfakkan, on the East Coast of the Emirate of Sharjah, United Arab Emirates. Initially designed by M/s. Khatib & Alami, the project involves constructing a new mountain road to connect the city to the peak point of Khorfakkan and, after that, building a Rest House at an elevation of 600 m above mean sea level. At the peak point, the visitors can get a panoramic view of the entire city of Khorfakkan and the Gulf of Oman. The mountain road was constructed with traditional cutting and filling techniques. A wider plateau was constructed at the top through peripheral filling to build the Rest House and the parking area. Following the first cycle of rains, there were stability issues for the filling along the sides of the top plateau that necessitated proper slope stabilization solutions. As the height of stabilization reached up to 13m in some locations with extreme space constraints along the toe, retaining structures were required rather than conventional, gentle, stable slopes. Due to the time constraints and environmental issues, the project stakeholders looked for a Mechanically Stabilized Earth wall system (MSE wall) that could be constructed quickly but also minimally interfere with the Khorfakkan mountain surroundings.

Solution

Maccaferri's Terramesh system was chosen as the desirable type of MSE wall in the project. Terramesh units meets the architectural requirement as the gabion face could be filled with the local gabbro stone that creates least visual intervention with the Khorfakkan mountain surroundings. Thanks to the superior quality BBA certified Paralink geogrid that could resist the potential installation damages due to the rock-fill backfill. A chimney drain was provided throughout the wall length for quick and effective internal drainage of infiltrating water. The infiltrating water could be either from the continuous irrigation at top or due to flowing storm water from seasonal rains. Maccaferri Middle East was subcontracted for design, supply, and construction assistance of the Terramesh MSE wall in the project.

Client: Sharjah RTA

Designer / Consultant: Dutch Engineering & Consulting

Contractor: Tilal Humos Road Contracting Company

Products used (Qty.)

- Terramesh

Terramesh wall area : 1,000 m²

- MonoAxial GeoGrids

Paralink geogrid: 3,200 m²

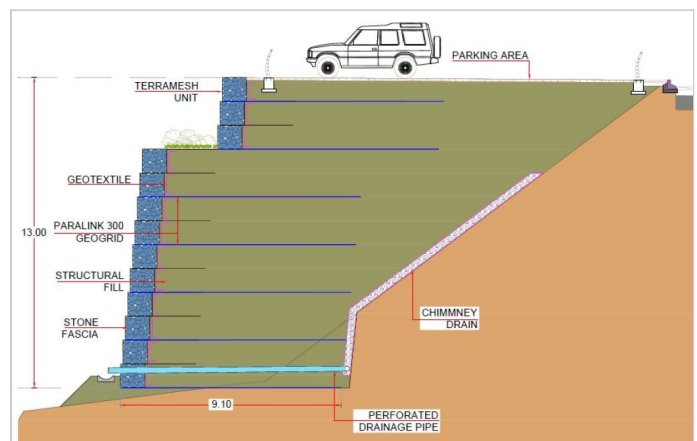
Date of construction: 08/2022 - 03/2023

[Google Maps](#)

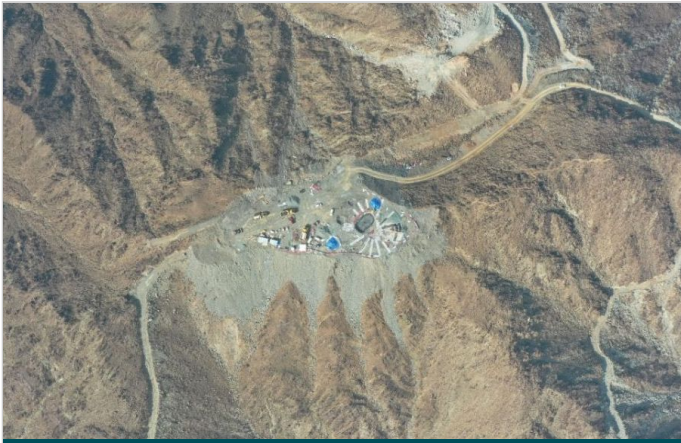
[Google Earth](#)



Road master plan by M/s. Khatib & Alami)



Section of Terramesh MSE wall



Aerial view of construction



Terramesh wall in progress



Terramesh wall in progress



Completed: side view of Terramesh wall



Completed: aerial view of Terramesh wall at parking area