MACCAFERRI

PARAMESH WALL FOR NOMAS MOUNTAIN DEVELOPMENT JEDDAH, JEDDAH, SAUDI ARABIA

Reinforced Soil Walls and Slope Reinforcement

Problem

The proposed Nomas Mountain Development project is is located in the Al Amir Fawaz district of Jeddah, south of Makkah Al Mukarramah Road. The site is situated on a northern promontory of a range of hills to the south.

The project development plateau is situated at the top of the hill at an elevation of approximately 106m above Datum (AD) with the base of the hill being at an elevation of approximately 76m AD. The project site was approximately 250m long (east to west) and 60m wide (north to south). A large L- shaped building is located along the southern boundary of the site.

In order to attain a flat formation at the uphill area of the project site that is required for the proposed development, a series of retaining walls were required, up to a maximum height of 38m.

Solution

Maccafferi's proposal of ParaMesh wall was approved by the client from various other proposals, finding the ParaMesh wall was more economical, flexible and its simplicity of installation.

The proposed ParaMesh wall is estimated to be between 400m and 500m long and up to 38m high at the junction of wall-2 & wall-3 (refer plan view).

As per the Geological Report by M/s. Coffey for the project site, most of the area within the location of the proposed ParaMesh wall is bed rock and hence a trapezoidal design section was con-sidered in the ParaMesh Wall design.

Two analytical cases were carried out for each design section, STATIC and SEISMIC with a seismic horizontal coefficient of 0.1g. The primary reinforcement considered in the designs were PG80, PG100, PG200 & PL300 which varied for different wall heights.

A total of 5 different wall alignment are considered separately as seen in the plan drawing.

Client: Al Mufrif Contracting Company Designer / Consultant: Maccaferri Middle East LLC Contractor: Al Mufrif Contracting Company Products used (Qty.)

- Terramesh	9999
- ParaGrid	9999
- ParaLink	9999

Date of construction: 03/2015 - 08/2017











View of wall outline from top of slope with neighboring buildings



View of installation from corner of wall



ParaMesh Retaining Wall ; 18m high under Construction



Officine Maccaferri S.p.A. Via Kennedy, 10 40069 Zola Predosa (Bologna) Italy Tel: +39 051 6436 000 E-mail: info@hq.maccaferri.com