

**EROSION CONTROL AT CISUMDAWU TOLL ROAD-PHASE II-TUNNEL AREA
SUMEDANG, JAWA BARAT, INDONESIA**

Slope Protection

Problem

Cut slopes at Cisumdawu Toll Road (Phase II – Tunnel Area) are prone to soil erosion due to its vulnerability to rainfall and lack of vegetation on the slope surface. The selection of proper material was necessary in order to provide an integrated and comprehensive solution. Erosion Control Solution by Maccaferri Indonesia was selected considering its ability to allow surface seepage and to grow vegetation (LCC – Legume Cover Crop). Permanent Open Drainage (Vertical and Horizontal) is constructed on the cut slopes and it enhances controlling the surface water flow.

Solution

The inclination of the slopes is 45° degree (V:H = 1:1), referring to Public Works Ministry Specification “Spesifikasi Khusus Interim SKh-1.3.17 Pengendali Erosi Lereng” following the inclination of the slopes, the suitable material is “Tipe II – Selimut Pengendali Erosi Polimer”. Hence, the material MacMat EM was selected. MacMat EM is made from UV Stabilized HDPE Geomat. The polymeric Geomat controls surface soil erosion and helps to propagate vegetation. An array of mulching contained seeds was applied onto the MacMat EM to bring vegetation.

Available in rolls of 2m x 30m, MacMat EM was installed with the support of a T-shape deformed bar to hold the material on the cut slopes. Erosion Control System by Maccaferri Indonesia has great advantages such as:

- Easy and Convenient Installation;
- Available for Combination with Soil Nailing for Slope Stabilization;
- Allows drainage on the surface of the slope;
- Vegetation as Rehabilitation;
- Economically Competitive.

Client: MCC-WIKA-NINDYA-WASKITA JOINT OPERATION

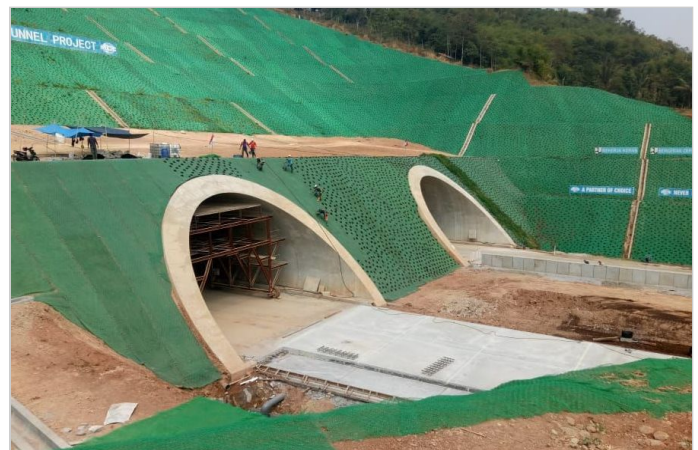
Designer / Consultant: PT. Maccaferri Indonesia

Contractor: PT. Geonusa Utama

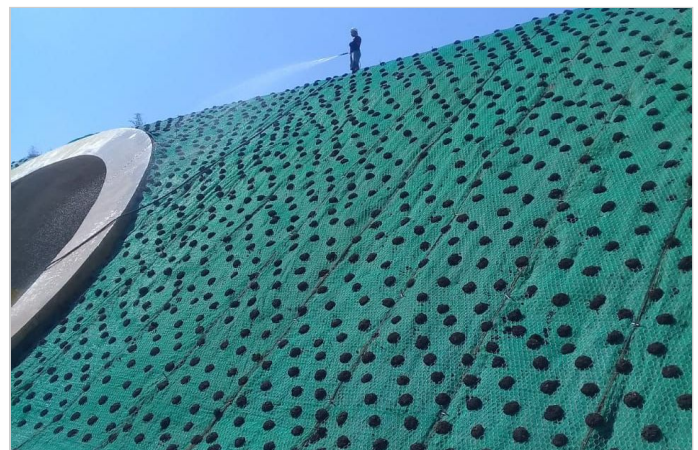
Products used (Qty.)

- MacMat 25,000 sqm
- MacMat HS 2,500 sqm

Date of construction: 04/2019 - 02/2020



Mulching process on MacMat EM



Overview of mulching result



Overview of the vegetation



Overview of the vegetation



Overview of the vegetation