

**RANCAMAYA RETAINING WALL**  
**BOGOR, WEST JAVA, INDONESIA****Reinforced Soil Walls and Slope Reinforcement****Problem**

Rancamaya Golf Estate is a residential area located in Bogor (West Java).

Some houses, part of the residential complex, are located onto an embankment not far from an open drainage channel running at its toe. The water course is approximately 5 m wide. The embankment height is around 10 m making a steep slope inclined 60 degrees on the horizontal. Due to the combined action of the water flow causing the erosion of the embankment and the heavy rainfalls saturating the clayey embankment, a landslide suddenly occurred threatening the stability of the houses.

Rapid countermeasures in order to guarantee the safety of the housing area are mandatory.

**Solution**

As landslide rehabilitation, Maccaferri provided a solution using a 7 m high Gabion made retaining wall. In addition, as scour protection of the Gabion wall, Reno Mattresses were placed at the toe of the gravity structure. All the stability checks were performed using the internally developed Maccaferri software (MacStars W 4.0).

The retaining structure stability was checked under both static and seismic conditions. Furthermore, the stability during soil excavation and construction phases has been verified.

Maccaferri provided the Client with jobsite supervision and the Contractor with installation assistance in order to ensure that the highest construction and installation standards were followed. The construction works of the retaining wall lasted around 2 months.

**Client:** PT. SURYAMAS DUTA MAKMUR

**Designer / Consultant:** PT MACCAFERRI INDONESIA

**Contractor:** PT. ANUGRAH HARAPAN MANDIRI

**Products used (Qty.)**

- Gabion	N/A
- Reno Mattress	N/A
- MacTex Non-woven Geotextile	N/A

**Date of construction:** 03/2016 - 05/2016



Landslide at Rancamaya housing complex



Landslide at Rancamaya housing complex



Reno Mattresses installation as scour protection



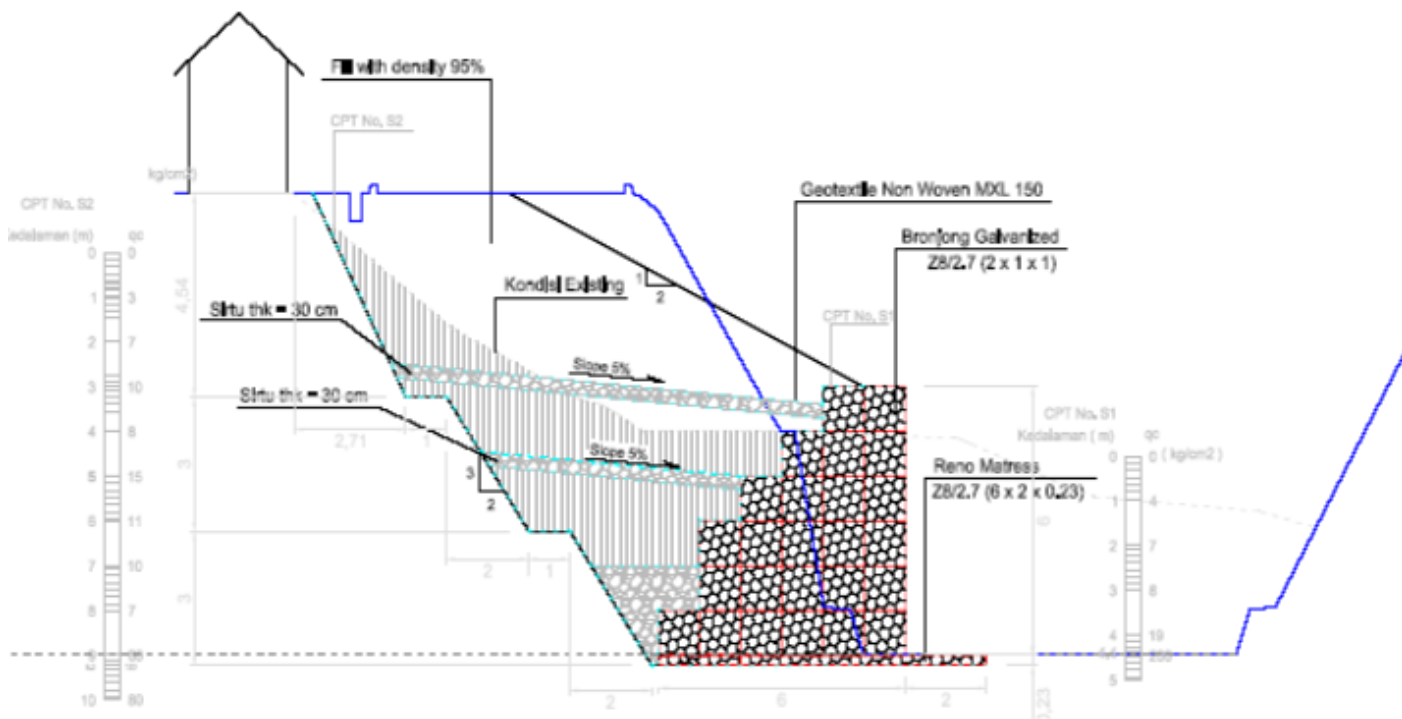
Gabion retaining wall during construction



Gabions and Reno Mattresses during construction



Gabion retaining wall during construction



Typical Gabion retaining wall cross section

PT. Maccaferri Indonesia  
 Aminta Plaza 2nd Floor, Suite 204  
 Jln. TB Simatupang Kav.10 Jakarta 12310  
 Ph: +62-21 750 6555  
 Fax: +62-21 750 6553  
 E-mail: [info.id@maccaferri.com](mailto:info.id@maccaferri.com)