

EROSION PROTECTION FOR TRANSMISSION TOWER LAMPANG PROVINCE, THAILAND

ENVIROMENTAL / GEOTECHNICAL / GRAVITY RETAINING WALL / SLOPE PROTECTION

Product: PVC Coated Gabion & MacTex

Problem

High voltage power transmission tower was constructed at flood risk area in Lampong District, Thailand. A 2m high flood control embankment with an area of 25 length and 25m width was constructed to protect the foot of the transmission tower. During monsoon season, flash flood occurs resulting in severe erosion at the surface of the embankment. Further erosion could expose the tower foundation, thereby weakening the tower leg. Underground seepage is also a main treat to the structure due to the high water table at the area. After inspection, three towers were identified for immediate protection.

Solution

A solution using combination of gabion retaining wall and filter fabric was proposed by Maccaferri technical team. The proposal includes;

- 1.0 Gabion gravity wall with front steps retain 5m high embankment as retaining structure and at the same time protects the embankment against strong water current during flood.
- 2.0 Filter fabric was used at the back of the retaining wall to prevent erosion.
- 3.0 An embedment depth of 3m using gabion gravity wall was constructed to protect the concrete foundation.

The client favoured the proposal compared to other erosion prevention method because of its simple construction method and also economical. In addition, locally available boulders made the construction period shorter. The rate of construction is estimated at 25 cubic meter per man per day.

Client name:

ELECTRICITY GENERATING AUTHORITY, THAILAND

Main contractor name:

SILA MAE TA LTD., PART.

Consultant:

NA

Product used:

3,921 CUBIC METER - GABION

Construction info

Construction date: JUNE 2007

Construction end: DECEMBER 2007



During construction

Date: June 2007



During construction

Date: July 2007



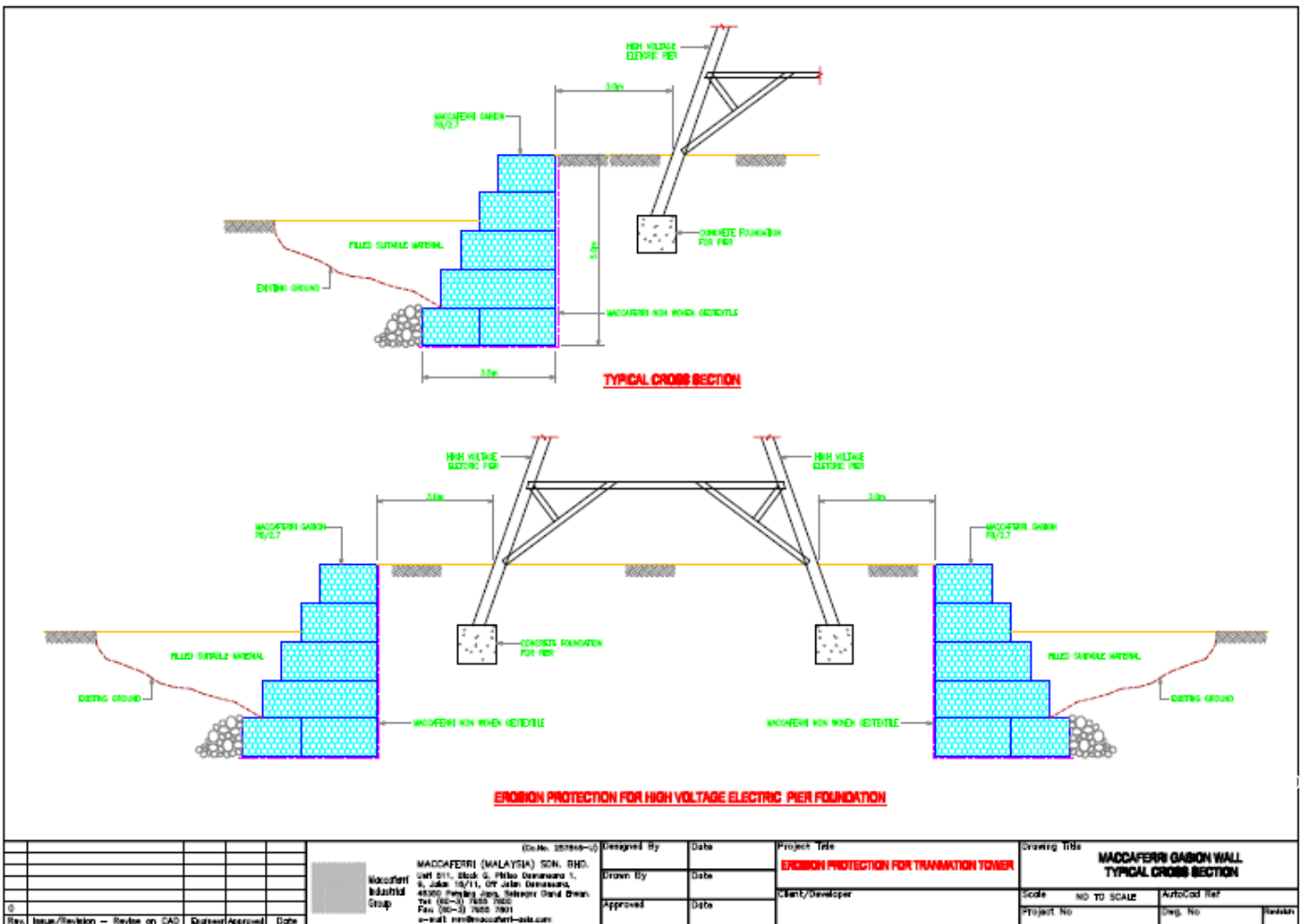
During construction

Date: July 2007



After construction

Date: Dec 2007



Project section

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