

MWCI RESERVOIR SLOPE PROTECTION

Brgy. San Rafael, Rodriguez, Rizal, Philippines

GRAVITY & MECHANICALLY-STABILIZED EARTH WALLS / SLOPE PROTECTION / GEOTECHNICAL / ENVIRONMENTAL

Products: PVC & Zinc-Coated Gabion, System Terramesh, MacGrid Geogrid & MacTex Non-woven Geotextile

Problem

In line with the Manila Water Company Inc.'s (Project Owner) extensive water supply infrastructure improvement, a 250,000gallon-capacity water reservoir was designed for construction. BC Cuerpo Construction Corporation, the General Contractor of the project, initially planned to build a concrete gravity wall to act as a retaining structure for slope protection on portions where the huge reservoir would be constructed. Cost and stability of structure were the major concerns of the contractor.

Solution

Maccaferri Philippines, Inc. recommended two wall systems and were accepted by the General Contractor and the Project Owner. One of the systems involved the **Gabion Gravity Wall** placed along the upstream of the reservoir's intake to hold curing tanks, machine room and other equipments; and the other one featured the **Sytem Terramesh with MacGrid Geogrid Reinforcements** located along the downstream area to secure the 250,000 gallon capacity water reservoir. Gabion mattresses of 6m length x 3m width x 0.5m height were placed at the base of the intake structure for additional resistance against scouring due to the flowing water of the river near the site, particularly when the water level rises up during typhoon. The proposed solutions were found advantageous for their flexibility, drainage capacity, and high structural resistance than any other systems, and were further proven to be more economical without compromising the systems' integrity.

Project Owner

Manila Water Company, Inc. (MWCI)

General Contractor

BC Cuerpo Construction Corporation

Consultant

Maccaferri Products

1,930 cu.m. of Heavily Zinc-coated Gabion
 356 sq.m. of System Terramesh
 2,800 sq.m. of MacGrid Geogrid
 4,000 sq.m. of MacTex Non-woven Geotextile

Construction Info

Start of Construction : March 2007

Completion Date : April 2007



Before Construction

February 2007



During Construction

March 2007

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MACCAFERRI



Project Completed

April 2007



Project Completed

April 2007

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