MACCAFERRI

CASE HISTORY

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EARTH RETENTION WITH GABION WALL AT EON IT PARK

PUNE, MAHARASHTRA, INDIA

Mass Gravity Retaining Walls

Problem

IT park at Kharadi, Pune is one of the major hubs for software infrastructure. Land development works were going on at the project site and fill at of about 7m had to be protected. It was also required that the protected slope needs to be aesthetically good in appearance. So the client was looking for a solution which allows vegetation to grow and is economical.
The existing foundation was a mixture of cohesive soil and boulders. Therefore, to avoid differential settlement a flexible structure would be a suitable solution.

Solution

Considering the site conditions, it was decided to construct a gabion retaining wall to mitigate the specified problem. Maccaferri gabions are rectangular cages which are engineered from double twisted hexagonal woven steel wire mesh. Delivered flat-packed, gabions are assembled and then filled with stones at the project site. They are typically used to form flexible, permeable and monolithic structures such as retaining gabion wall, channel linings, hydraulic control structures and erosion protection. Maccaferri gabion baskets are made from high quality steel wire, which is heavily galvanised to provide long term corrosion protection. An additional protective polymeric coating is also applied for gabions that are to be used in more aggressive environments, or where a longer design life is required.

A gabion wall of 2m to 7m height including foundation and batter of 6 degree was constructed. Geotextile was also provided as a filter media behind the retaining wall.

Advantages of gabion retaining wall are:
• Cost-effectiveness.
• Monolithicity.
• Simplicity in construction and economy.
• Environmental friendliness.
• Permeability.
• Flexibility & versatility.
• Structural safety.

Client: Panchshil Developers

Products used (Qty.)

- Gabion — Not Available

Date of construction: 07/2005 - 02/2006

Photo 1: During construction

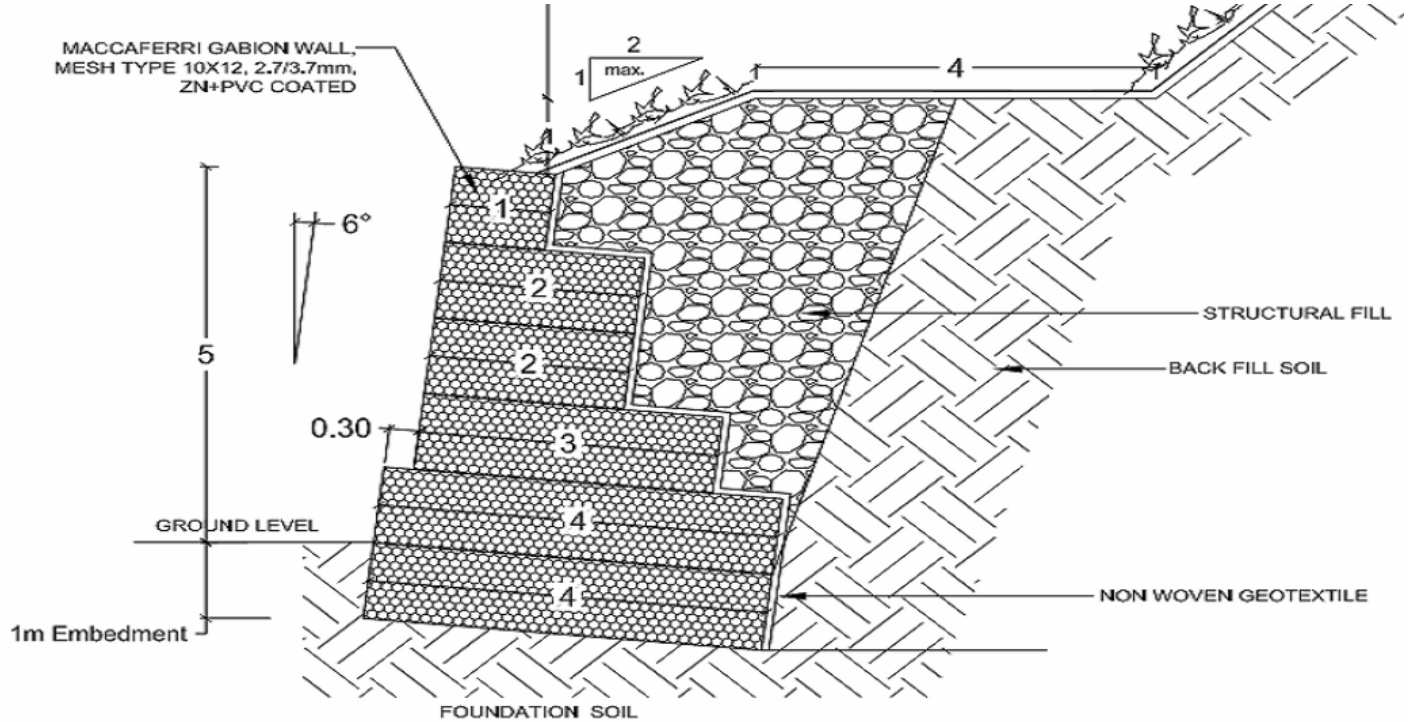
Photo 2: Maintaining horizontal and vertical alignment of wall using rods

Photo 3. Filling of gabion boxes

Photo 4: During construction

Photo 5: Completed structure in 2017

Photo 6: Completed structure in 2021



Cross sectional details for gabion wall

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