

LONGITUDINAL PROTECTION OF SARDANETA CANAL LEON, GUANAJUATO, MEXICO

Longitudinal Protection

Problem

The Sardaneta Canal is a watercourse built during the Fifties to prevent flooding in the city of Leon.

Recently the Government planned to transform the Sardaneta into a public space to promote recreation, social cohesion, protection and conservation of the channel as well as the local economy. The aim of the overall project was to transform the public areas and also to improve cycle and pedestrian access in the public space.

With a length of 4.4 kilometers and an investment of more than 190 million pesos, The Lineal Park, including the Sardaneta canal, is also planned to connect the Zoo and The Metropolitan Park, including pedestrian walkways, bike paths, green areas, pedestrian bridges, graffiti areas, playgrounds and a tourist train, among other features.

A key part of this project has been the protection and longitudinal revetment of the canal; flooding is a very high risk for the entire area and protection measures were necessary to ensure the success of the Project and to maintain the storm water conveyance capacity in the region.

Solution

To solve the problem of erosion of the canal side slopes caused during storm events, a gabion mat and gabion protection revetment was proposed.

Maccaferri's gabion mats are a north and central American solution where wide and extensive river protection works have led to the creation of an innovative product; gabion mats are 'gabions on a roll' and available in lengths up to 30m. These units are unrolled in position and filled with hard- durable rock in the same way as a gabion or Reno Mattress. Their size enables rapid construction progress and helped to complete the works in time for the opening.

Beneath the gabion mats a non woven geotextile MACTEX® N50.2 was installed as a filter layer, and to prevent wash out of fine soils from beneath the mattress.

The work along the 4,4 km of Sardaneta channel was divided into three sections, with three different contractors and Maccaferri supported the three sub-projects with technical assistance during the installation phase.

Client: SECRETARIA DE OBRA PUBLICA, GUANAJUATO

Designer / Consultant: SUPERVISION Y DISEÑO, S.A. de C.V. (SUDISA)

Contractor: CIFSA, URBANIZADORA del CENTRO y COMINVI

Products used (Qty.)

- | | |
|------------|-----|
| - Gabion | n/a |
| - MacTex N | n/a |

Date of construction: 10/2014 - 03/2015



The Sardaneta Park (Render)



Sardaneta channel before work



Installation phase COMINVI



Finished installation phase CIFSA



Installation phase UCSA



CIFSA section functioning