

COMPOSTELA STEEL ROLLING MILL

COMPOSTELA, CEBU, REGION VII, PHILIPPINES

Reinforced Soil Walls and Slope Reinforcement

Problem

Due to the increasing demand of construction materials in the Philippines, SteelAsia, the country's leading provider of world-class steel products, has expanded its production facility through its subsidiary - Compostela Steel Inc. The new rolling mill facility, with an estimated land area of about 19 hectares, is located in Compostela, Cebu.

Based on survey plans, the overall topography of the facility has been found to be lower than the existing immediate access roads which made the area a natural catchment basin for rainwater. In this, the facility's final grade elevation has been raised to address the ingress of surface runoff that also includes a proper drainage system. A wall system was required to be constructed along the perimeter of the facility for the planned change of grade.

Solution

Maccaferri recommended an economical, suitable, and environment-friendly mechanically-stabilized earth (MSE) wall system using MacGrid WG high-tenacity woven polyester geogrids.

The approved design incorporates a subsurface drainage system to address possible variation of water levels inside the wall using MacDrain drainage geocomposite connected to geopipe. When constructed, the subsurface drainage system aimed to reduce impact of build up of pore water pressure inside the wall. And to stiffen the facing of the MSE wall, MacBag Soil Bags was included in the design.

With the system's simplicity and use of qualified in situ materials, the overall project cost was minimized, and the speed of construction has been assured. A wrap-around construction technique combined with over 30,000 MacBag Soil Bags were used for the MSE wall. Over time, vegetation can be seen covering the facing of the MSE wall, leading to an aesthetically-pleasing green fascia that camouflages well with the scenery whilst ensuring that surface erosion is prevented.

Client: SteelAsia Manufacturing Corporation

Designer / Consultant: SteelAsia

Contractor: Upbuck Enterprises Inc.

Products used (Qty.)

- MacGrid WG	238 rolls
- MacBag	74,768 pcs
- MacDrain W	39 rolls
- HDPE Pipes	2290 ln.m

Date of construction: 05/2019 - 10/2019



During Construction



During Construction



Project Completed



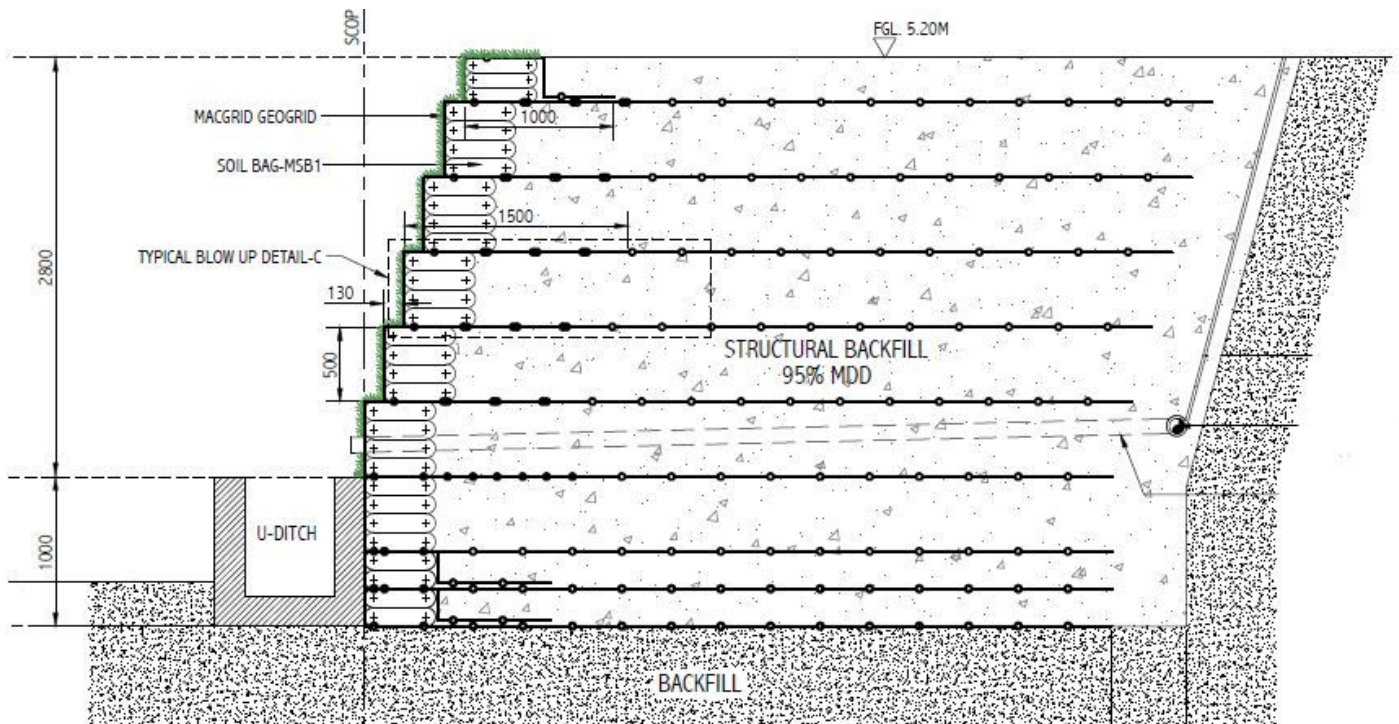
Project Completed



Project Completed



Project Completed



Typical Cross Section Detail

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