

## WIDENING AND STRENGTHENING OF KURAGALU - MALKAPURAM ROAD AT VELGAPUDI GUNTUR, ANDHRA PRADESH, INDIA

### SOIL STABILIZATION & PAVEMENTS

**Product:** MacGrid EG, MacTex, MacDrain

#### Problem

The current work is a part of construction and rehabilitation of AP new secretariat Road from Velgapudi situated in Guntur district, which is a part of Urban notified area of Amaravati, State Capital for Andhra Pradesh. The major portion of soil condition in Guntur district is poor due to the presence of silty clay with CBR < 3%. The weak subgrade condition calls for heavy pavement sections even with low design traffic resulting high cost. Also, water table is at a shallow depth which continuously degrades the structural functioning of the pavement section. With low CBR and shallow water depth, speedy construction is difficult while, Client demanded solution with faster construction for pavement.

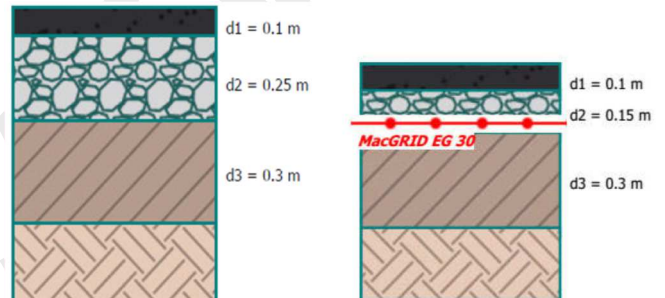


Laying of MacGrid EG at base course

#### Solution

The department has looked for alternative pavement solution through which the road can be constructed quickly and yet cost effective. Maccaferri proposed an innovative alternate pavement stabilization solution with MacGrid EG and MacDrain.

As the subgrade is soft, Base/ subbase laid over it will intrude and may not work to its intended function effectively, hence a geotextile separator MacTex N 30.2 is used between subgrade and subbase. Using MacGrid EG it was possible to reduce the thickness of base course by 40% there by reducing the quantity and time and of construction. Proper drainage measures are ensured with MacDrain. MacTex N 30.2, MacGrid EG and MacDrain are easy to install and doesn't require skilled labour for installation.



Note : d1, d2 & d3 : Thickness of Surface, base and subbase course

Unreinforced & reinforced (MacGrid EG) pavement section

Client:

R&B GUNTUR, ANDHRA PRADESH

Main contractor:

M/S. JAYRAM CONTRACTOR

Designer:

MACCAFERRI ENVIRONMENTAL SOLUTIONS

Products used:

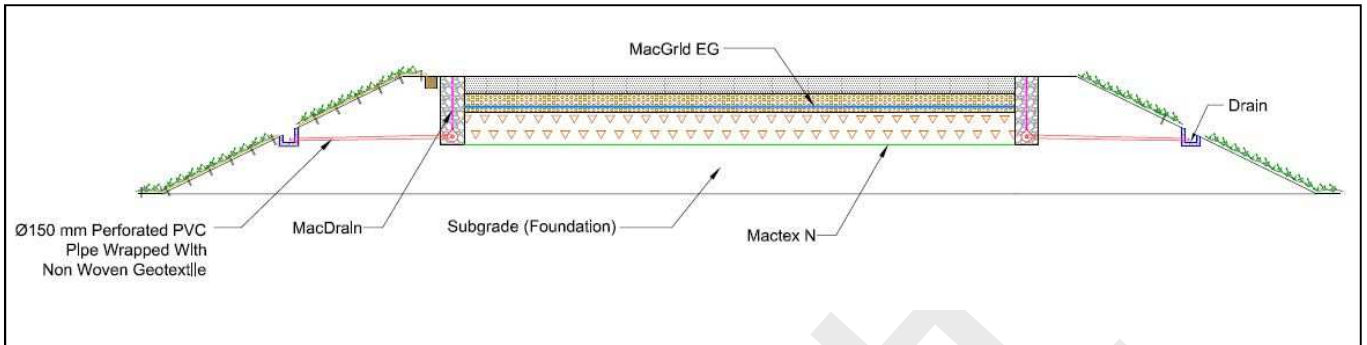
MACGRID EG, MACTEX, MACDRAIN W

Date of construction

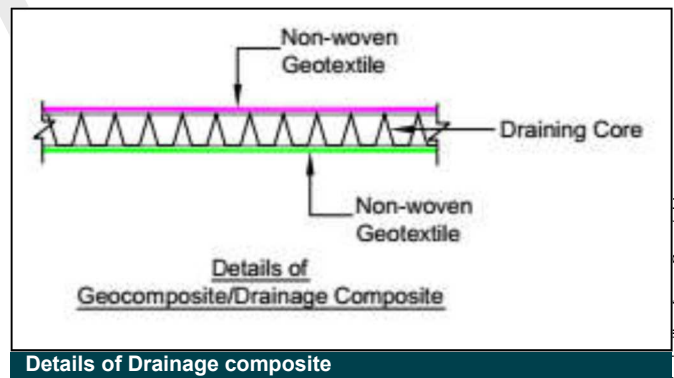
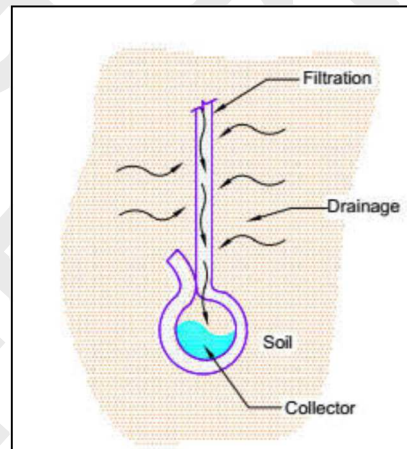
AUGUST 2016



Unrolling & laying of MacGrid EG at base course (WMM)



Typical cross section drawing of pavement stabilization



Details of Drainage composite

## Present Status of the project :

The project is completed successfully and functioning effectively.

### Maccaferri Environmental Solutions Pvt. Ltd.

Unit no. 403-409, Fourth Floor, Suncity Success Tower, Golf Course Ext. Road, Gurgaon – 122 005

T: + 91- 124 - 284 1400 F: + 91- 124 - 284 1444

E: [info@in.maccaferri.com](mailto:info@in.maccaferri.com)

[www.maccaferri.com/in](http://www.maccaferri.com/in)