

## CASE HISTORY

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**CONSTRUCTION OF EIGHT LANE ACCESS CONTROLLED EXPRESSWAY AS OUTER RING ROAD TO HYDERABAD CITY, PHASE-II PEDDA AMBERPET (KM. 95.000) TO BONGULUR (KM. 108.000) , ANDHRA PRADESH**  
HYDERABAD, ANDHRA PRADESH, INDIA



### RS Wall with Modular Block facia

Client:	Products used:
HYDERABAD URBAN DEVELOPMENT AUTHORITY	<ul style="list-style-type: none"><li>• TECHGRID KNITTED &amp; PVC COATED POLYESTER GEOGRID WITH TENSILE STRENGTH OF 40 TO 250 KN/m</li><li>• NONWOVEN GEOTEXTILE</li></ul>
Main contractor:	
KMC CONSTRUCTION LIMITED	
Manufacturer & Supplier:	Year of construction:
TECHFAB (INDIA) INDUSTRIES LTD.	MARCH 2010

### Project description:

Project of eight laning express Hyderabad outer ring road have been awarded to various contractors. M/s. KMC Construction Ltd. has awarded the work of reinforced soil wall facia with block as a facia and Knitted and PVC coated polyester Techgrid (TFI-Geogrid) as reinforcing member. M/s. Techfab India Industries Ltd. has give a total scope of design, drawings, their approval from Independent Consultant, Supply of block making machine and supervision at site.

### Project Challenges:

Height of Reinforced soil wall is on higher side, around 15 to 17meter. Considering the soil profile bore log data, need arises to make it safe in global stability analysis.



Photo 1 : Elevation view of Two Tier RS wall

## Solution:

The design of the walls was carried out using the BS-8006 / FHWA-NHI-00-043 guidelines and comprised checks for external, internal and global stability under static and seismic conditions. Considering the global stability analysis the berm has been given for the height more than 10 meter. Minimum 1meter of berm has been given for the wall height above 10 meter. Global stability checked has been performed for the two tiered wall, along with the external and internal stability checks.

Construction of the wall was carried out under the supervision of TechFab India Industries Ltd.

## Salient Features of the Reinforced Soil Walls :

- Wall Facing Area: 11,500 Sqm.
- Wall Height: 17m
- Soil Reinforcement: TechGrid knitted & PVC coated polyester Geogrids with Tensile Strength of 40 to 250 KN/m
- Facing: Modular Block Facia
- Design Methodology: BS 8006: 1995 (Static Condition)  
FHWA-NHI-00-043 (Seismic Condition)
- TFILL's scope of work: Detail designs & drawings, supply of Geogrids, Panels,  
Nonwoven Geotextile & Supervision of construction



Photo 2 : Abutment RS wall



Photo 3 : Elevation view of Two Tier RS wall

### **Conclusion:**

The project was successfully completed in March 2010.

### **For further details kindly contact :**

#### **TechFab India Industries Ltd.**

711/712, Embassy Centre, Nariman Point, Mumbai – 400021  
Tel: + 91- 22 - 2287 6224 / 6225      Fax: + 91- 22 - 2287 6218  
E: [info@techfabindia.com](mailto:info@techfabindia.com)  
W: [www.techfabindia.com](http://www.techfabindia.com)