

CASE HISTORY

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REINFORCED SOIL WALLS WITH DESCRETE PANEL FACIA SYSTEM FOR FLYOVERS & ROB'S OF NH-76, EW-II (RJ-III), UDAIPUR, RAJASTHAN
UDAIPUR, RAJASTHAN, INDIA



RS Wall with Descrete Panel facia

Client:	Products used:
NATIONAL HIGHWAYS AUTHORITY OF INDIA (NHAI)	• TECHGRID KNITTED & PVC COATED POLYESTER GEOGRID WITH TENSILE STRENGTH OF 40 TO 250 KN/m
Main contractor:	
RANJIT TARMAT - JV	• NON WOVEN GEOTEXTILE
Consultant:	
SPAN CONSULTANT	Year of construction:
Manufacturer & Supplier:	MAY 2008
TECHFAB (INDIA) INDUSTRIES LTD.	

Project description:

M/s Roman-Tarmat – a joint venture has awarded the work of Reinforced soil wall to M/s Techfab India Industries Ltd. The scope of work include, design of reinforced soil wall, their approval, submission of drawings, supply of moulds and supervision at site. Reinforced soil wall structure with height ranging from 1 meter to 10 meter, for rehabilitation and upgrading of NH-76, Gogunda to Udaipur section Km 73+000 to Km 104+724, East – west Corridor Package RJ-III.

Project Challenges:

Work done should be within the stipulated time period, which included the casting erection and casting of crash barrier as well as friction slab. Total reinforced soil wall facia is 25500 sqm.

Solution:

With the increased Nos. of Mould for panel casting and work as per the planned schedule, has completed the project within stipulated time period.



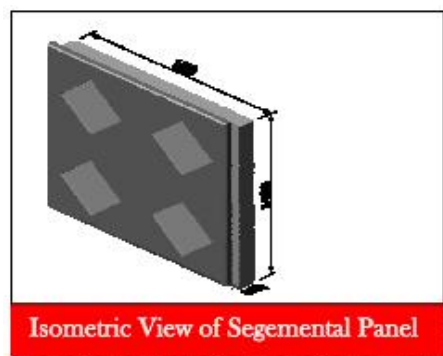
Photo 1 : Elevation view of RS Wall

Salient Features of the Reinforced Soil Walls :

- Wall Facing Area: 25500 Sqm.
- Wall Height: 10m
- Soil Reinforcement: TechGrid knitted & PVC coated polyester Geogrids with Tensile Strength of 40 to 250 KN/m
- Facing: Discrete Panel Fascia
- Design Methodology: BS 8006: 1995 (Static Condition)
FHWA-NHI-00-043 (Seismic Condition)
- TFIL's scope of work: Detailed Engineering designs & drawings, supply of Geogrids, supply of Moulds for Discrete Panels, Nonwoven Geotextile & Supervision of construction

Table-1 shows the property of the reinforced infill, retained fill and foundation soil taken into consideration in the designs.

Table-1



Property/Fill	Cohesion (C) - KN/m ²	Angle of Internal Friction (φ) -	Unit Weight (γ) - KN/m ³
Reinforced Infill Soil	0	34	20
Retained Soil	0	34	20
Foundation Soil	0	30	18

The design of the walls was carried out using the BS 8006: 1995 for Static Condition & FHWA-NHI-00-043 for Seismic Condition, which comprised checks for external, internal and global stability under static and seismic conditions.

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



Erection of RS Wall



Completed RS Wall



Elevation view of RS wall

Conclusion:

The project was successfully completed in May 2008.

For further details kindly contact :

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