

# CASE STUDY

## Strata India sets New Benchmark in RS Wall Construction

**Owner:**

National Highway Authority Of India (NHAI)

**Contractor:**

IRB Infrastructure Developers Ltd.

**Project Size:**

106,366 sqm

**Max. Height of Wall:**

11.5 m

**Project Type:**

Construction of Reinforced Soil Walls using StrataGrid

**Location:**

Surat – Dahisar (NH-8 in the state of Maharashtra and Gujarat)

**System Offered:**

StrataGrid + StrataBlock

**Consultant:**

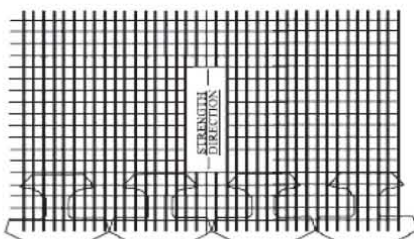
STUP Consultants Pvt. Ltd.

**Completion Year:**

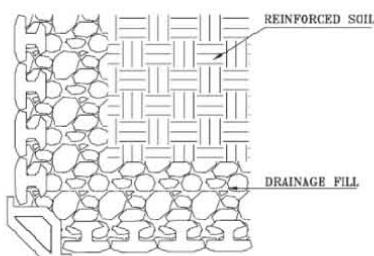
2011

**Duration:**

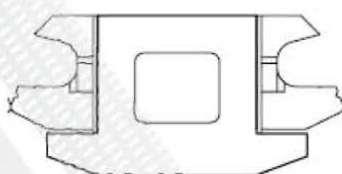
6 months



CONNECTION BETWEEN STRATAGRID AND BLOCK (PLAN)



ARRANGEMENT OF BLOCKS RIGHT ANGLE CORNER



EXPANSION JOINT

### Project Brief

The section of National Highway (NH-8), between Dahisar (suburb of Mumbai) and Surat has been plagued with high-traffic density consisting of heavy vehicles. In order to ease the traffic, the National Highway Authority of India decided to construct 16 new structures over chainage 300 to 375 and widen the road to six laning. Reinforced Soil Walls were selected for their ease in construction in constrained spaces, cost benefits and quality assurances. Strata proposed the use of StrataBlock system on the basis of its cost and time advantages, amongst other things.

### Challenge

The biggest challenge for Strata had been time constraints. Even though the casting of blocks started on time, the erection of the structures was delayed due to the prolonged and erratic monsoon season in 2010. Thus the hurdle faced, was in erecting all 16 structures before the next monsoon season which gave Strata only ten months to complete all the structures. To complete a project of this scale, Strata had to accelerate and provide extra capacity and resources.

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### Strata Solution



Strata's professional team at both the head office and at the project site coordinated their activities on a daily basis. A unique and advanced technology software (called "Site Tracker") was custom built for this project, which recorded the various reports and updates regarding the construction of the structures. For smooth management and greater efficiency, the erection stages were divided into three independent projects and two separate casting yards were established.

The StrataBlock system has been used as they have a built-in slope, are self aligning and are cast with an inter-locking system. The structures were designed using Federal Highway Administration – National Highway Institute (FHWA-NHI) guidelines and comprised checks for external, internal and global stability under static and seismic conditions. To make the structure look aesthetically pleasing corner blocks and expansion joint blocks were incorporated by the design team. Strata provided a turnkey solution right from supplying raw materials, designing the structures, casting of all the blocks, to the final construction of the relevant structures.

### Benefits to client

Strata not only helped the project meet its deadline, but also helped maximize the projects profitability to the owner/client by allowing it to open on schedule.

### About Strata

**Strata Geosystems (India) Pvt. Ltd.**, established in 2004, is a joint venture with Strata Systems Inc., USA (part of the 130-year old Glen Raven group of companies). Strata India is a one-stop shop for geotechnical applications like retaining soil walls, soil stabilisation, slope protection, load support, weak soil solutions, unpaved roads emergency solution etc.

We are renowned for our quality, durability and cost effectiveness and manufacture conforming to strict international quality standards. Our committed team of experienced design engineers and project implementation specialists ensure timely and accurate installation.



**STRATA**  
GEOSYSTEMS (INDIA) PVT. LTD.  
(A Joint Venture with Strata Systems Inc. U.S.A.)  
ISO 9001 : 2008 Certified



**Head Office:** 317, Tantia Jogani Industrial Premises, J. R. Boricha Marg,  
Lower Parel (East), Mumbai 400 011.  
Tel.: +91 22 4063 5100 | Fax: +91 22 4063 5199  
e: [info@strataindia.com](mailto:info@strataindia.com) | w: [www.strataindia.com](http://www.strataindia.com)