

# ARCHITECTURE+DESIGN

A N I N D I A N J O U R N A L O F A R C H I T E C T U R E



## INSIDE

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## RETHINKING DESIGN EDUCATION

with

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## A New Educational Ecosystem

**Project:** The Northstar School, Rajkot, Gujarat

**Architects:** Shanmugam Associates, Trichy

“School is an enjoyable and enriching part of life where students can safely explore their True North,” reads the vision of The Northstar School, a progressive institution established to transform the educational ecosystem. The client’s initial brief was that a very important part of every child’s experience at Northstar be shaped by architecture. The project sits on the south-eastern corner of a 17.8 acre barren site, adjoining the RK University campus on Rajkot-Bhavnagar highway.

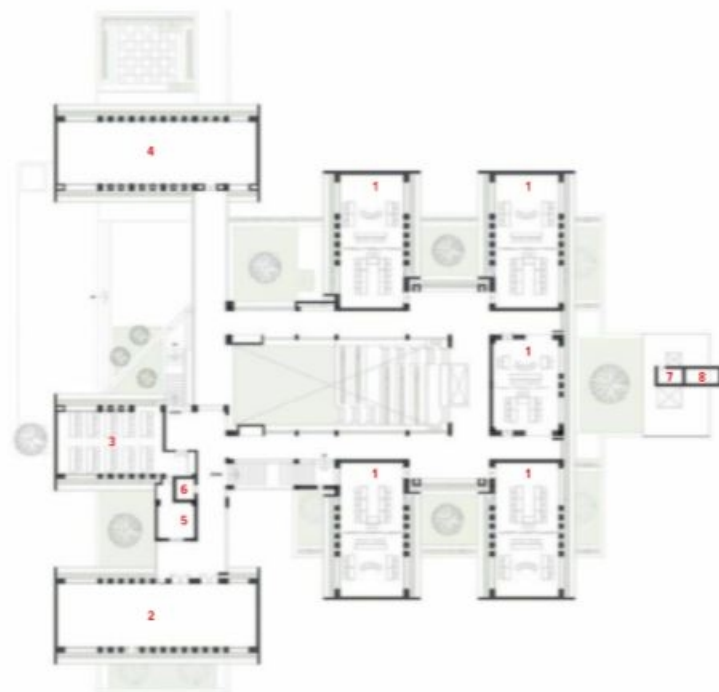
The semi-arid climate of north-west India, dusty yet windy site conditions, 20-30 days of monsoons in Rajkot and supply of STP water

from RK University were influential, contextual pointers. The overall master planning was conceived by integrating three phases of development, of which only Phase-1 is built. Open-ended corridors, building orientation and future development were factored into the overall planning. Key functions are accommodated on the ground and first floors to keep the built space child-friendly.

The primary intent was to find ways to learn with nature. The fundamental units of schools are classrooms. So, the design process started with programming a single classroom module with cross ventilation, its own private garden and an open-to-sky jaali-ed courtyard. This module



1. RECEPTION
2. WAITING
3. HOD
4. DIRECTOR
5. PANTRY
6. LIBRARY
7. MEETING
8. STAFF ROOM
9. CLASSROOM
10. CENTRAL COURTYARD
11. OUTDOOR ACTIVITY AREA
12. TOILETS
13. LIFT
14. EB PANEL ROOM



1. CLASS ROOM
2. PERFORMANCE ROOM
3. COMPUTER LAB
4. LAB
5. SERVER ROOM
6. LIFT
7. MOTOR ROOM
8. WATER TANK







1. SEMINAR HALL
2. LIFT
3. WATER TANK

SECOND FLOOR PLAN

was iterated to arrive from a part to a whole. Between two classrooms is a larger garden that is easily monitored, has a performance space and provisions for conducting classes.

Drawing inspiration from the stepwells of Gujarat, a central courtyard ties all the spaces within each module and is replicated in all phases. This central stepped and vegetated courtyard serves for circulation and for larger gatherings as a multi-purpose space. Integrated within the courtyard amidst the green pockets, creepers and vines is a stage, which is used by children and staff for performances. With due credits to the structural engineer, the massing on the second floor sits lightly on the floor below and houses a 250-persons capacity multipurpose hall. The structure creates a presence visually, as one walks along the heavily canopied main entry walkway.

A secondary skin jaali on the ground floor and an ambitious creeper screen on the first floor have been planned to allow natural light, shield dust and provide security. When exploring material for the façade, the criteria were for it to be locally available, have an earthy tone, reflect an institutional character and be economical.



1. Mesh - A secondary skin for the green creepers that helps to avoid harsh sun and allows enough light into the classroom.

2. Locally available Kota stone flooring

3. 5' cantilever provides shade for the ground floor level, the cantilever thus accommodates a planter box for creepers in first floor level.

4. Large Aluminum windows - an insulating material and acts as a thermal barrier.

5. Locally available natural bella stone as secondary skin for the premises acts as a security and a barrier from both harsh sun and wind.



MATERIAL DETAIL





ELEVATION



Bella, a natural hard limestone in terracotta colour, has been used to blend the built form with the existing surroundings.

Architecture at The Northstar School has been planned such that as the building ages, the landscape adds more life into the space, thereby taking ownership. Presently, an Indian owl resides in an unused truncated duct, Gulmohar trees lay down a red carpet on the main pedestrian entry, and Northstar's horticulture program enlightens the learners on the importance of flora and fauna. The design foundations at Northstar lie on ideologies of exploring contemporary design with local material, using regional references to define built form, and finding simplistic solutions for complex design problems. ✦

Photo credit: Ishita Sivara

#### FACTFILE

**Client:** Mahit Patel  
**Lead architects:** Raja Krishnan, Santhosh Shanmugam, Shanmugam A  
**Design team:** Raja Krishnan, Santhosh Shanmugam, Balasubramanian, Manish Bokdia, Vimala  
**Engineering:** Jayant Lalani, Lakshmi Associates  
**Landscape:** Sandip Patil, Tapan Modi, Earthscapes Consultancy Private Ltd  
**Collaborators:** Gudgudee - Playground Design  
**Gross built area:** 33,000 sq ft  
**Year of completion:** 2017

