Book Series No. 39

A&i Digest

Pune

Architecture & Interior Design Digest of Pune

Educational Institutes Special

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M. E. S. Bal Shikshan Mandir English Medium School,
Mayur Colony, Pune.

This school has won-

a) Indian Institute of Architects IIA- Snowcem Award for Excellence in Urban Architecture 2000 (public building category) for the school campus in Pune.

b) Young Designers Award 2001 (architecture category), IA & B Award winning project.

c) Design Share Award 2004- The International Forum for Innovative Schools. Amongst the 11 participating countries, India received three awards, out of which two went to Group Phi. Bal Shikshan Mandir received the Citation Award, instituted to recognize important work.

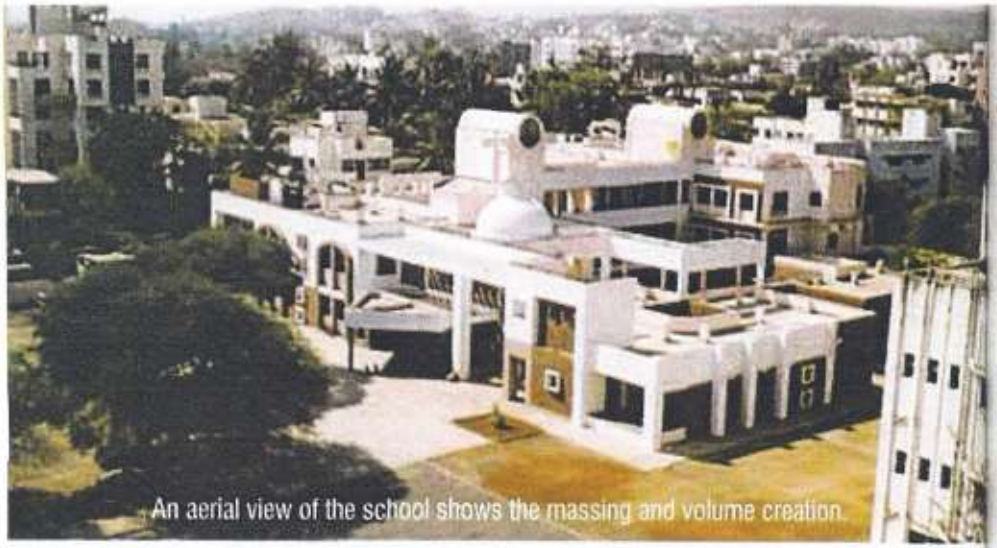
The Bal Shikshan Mandir stands as a solitary example in its category for reasons far greater than the accolades received by them. At the onset, it is the only building without HVAC to have received these awards. Second, more on the local premise, is the fact that this school made the ordinary man and the professional designer sit back and take notice- here was a Pune school that actually used the textbook language of 'courtyards, interlinking spaces, and play of light and colour' for the students. This was not a project presentation, nor was it a thesis- it was a living, breathing, working school for about thousand students. Though the architects at Group Phi- Hemant Mahajan and Prashant Shah are modest and matter-of-fact about the entire process of design, the fact remains that the Bal Shikshan Mandir has really put back the fun into school designing, apart from having stood the test of time.

The beginning-

When the architects approached the client with the presentation, it was a complete 'campus plan' for the entire 3 acre land, with every single aspect being thought of, including scope for further development, landscape, and changing needs. The educational institution was intentionally brought into the planning process and what emerged is a design that allows for additions, changes, and growth. Essentially, all this has been planned when the building was conceived on the drawing board. The school today has excellent facilities for its student strength of a thousand, from Playgroup to the tenth standard.

Main body of plan-

The main school building is designed around a hierarchy of open spaces as courtyards- conceived as an extension to the teaching activity. The four wings are self sufficient and are interlocked with these courts bringing in natural light, wind along with meeting spaces for everyone. All the four wings with the courtyards converge into the main center court to form the gathering space for all. These courtyards allow visual communication and continuity to other areas. The building facade depicts the modern elements brought out of traditional elements of exposed brick with arches in proportion to the main framework, breaking the monotony of the straight lines, hence bringing about a congruent facade.



An aerial view of the school shows the massing and volume creation.

Internal spaces-

The arrangement of internal spaces is worked out such as to get necessary shaded areas by means of pergola giving the required depth to the building at various points. Primary colours are used to create focal points and give distinguishing characters to different elements inside the building, thus highlighting the features like staircase, doors, railings, colonnade, etc. The main building is connected to the existing ones by means of pergola to dining and a multipurpose hall to the right binds the two building giving space for parking underneath. The main building is set up at the rear side of the campus making way for the play ground and swimming pool. This enables the required ground to appreciate the façade and facilitates various school activities.

Construction details-

R.C.C framed structure, beams restricted to a depth of @ 2'0".

Composite type brick Masonry is used throughout the campus, all 10" thk.

Walls are plastered from inside & from external side are kept exposed with sunk pointing.

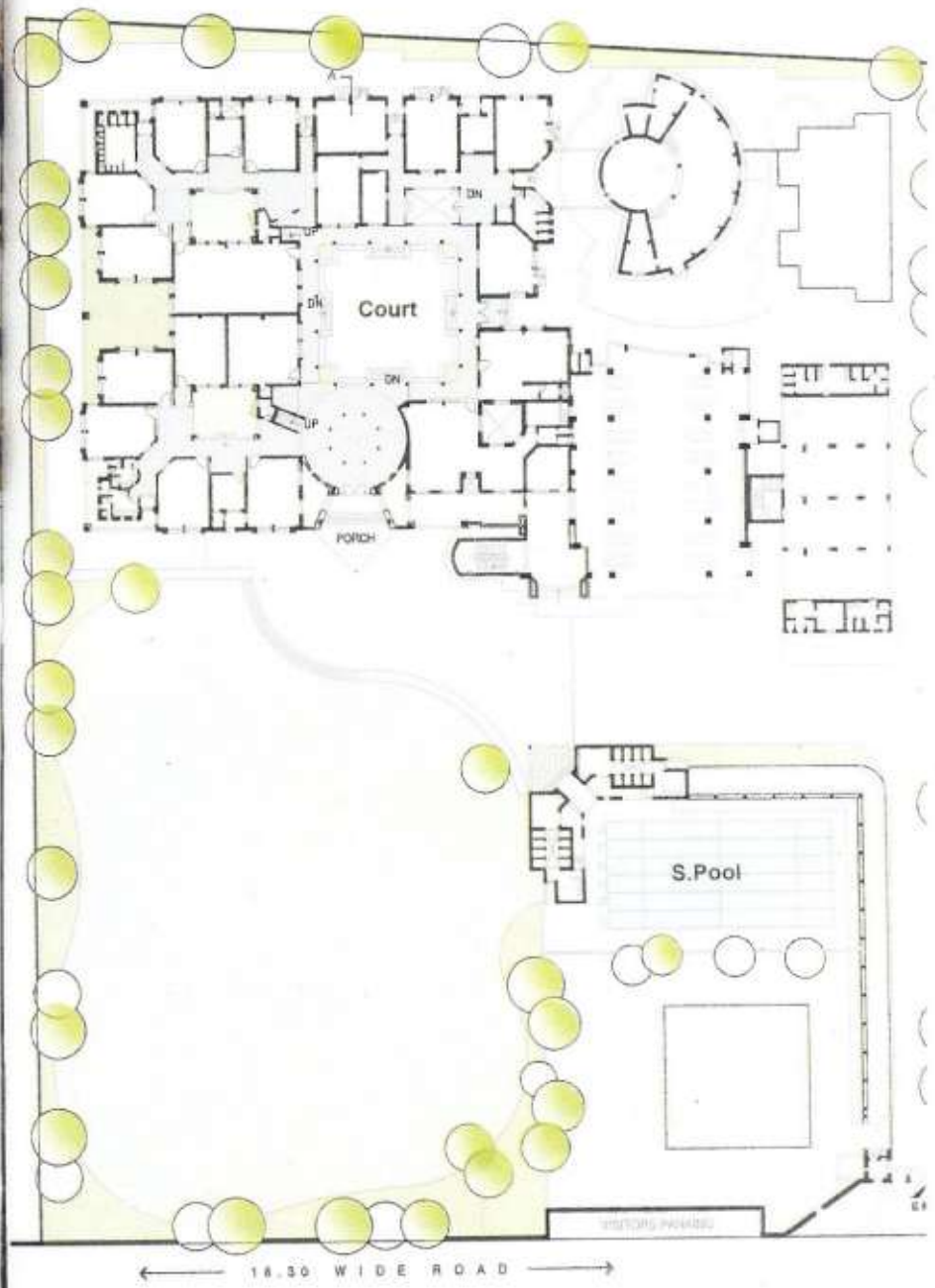
Flat arches over small openings in brickwork, Big arches over big openings.

Staircase, Common areas & lobby areas are treated as elements in the school. Use of natural light is also made possible for the first floor classrooms. Bright colours stimulate the children throughout the day, which makes atmosphere pleasant & cheerful.

The main central court & surrounding area is paved, only courts inside each wing are kept green. Entrance pockets are well landscaped. All Existing trees are maintained as it is.

In the main central court arrangement for seating is made which forms the central gathering space for various activities.

Ancillary structures such as road, entrance gate, security cabin, compound wall were completed on site & done as per the master plan development.



The imposing gate of the school campus.

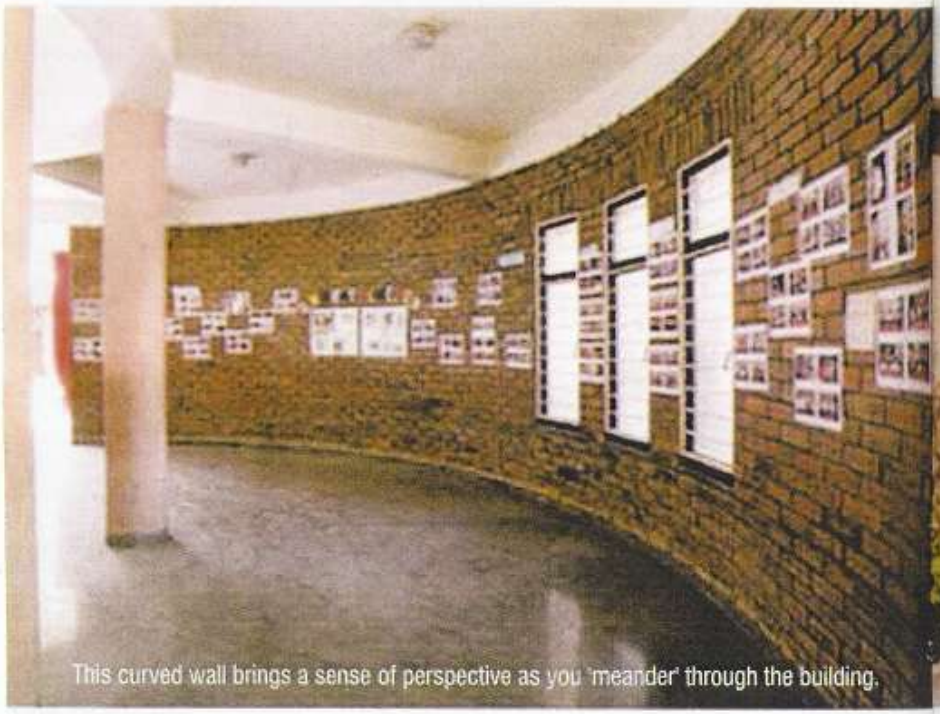
This is the view that greets a visitor.

A combination of materials and forms gives the facade its charm.

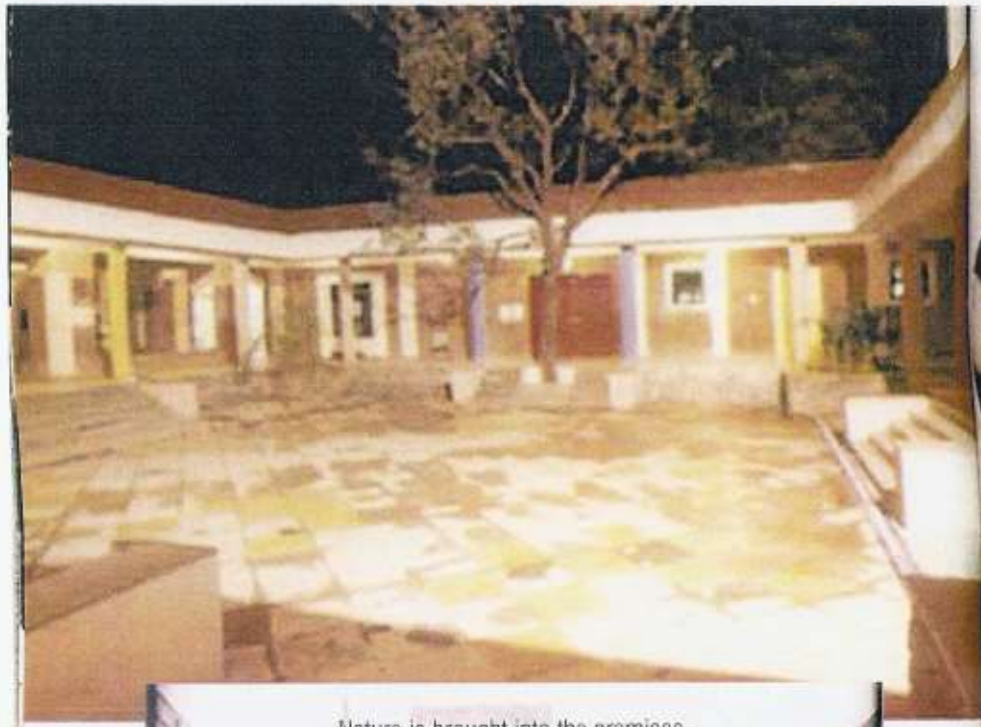
A view of the building from the right.

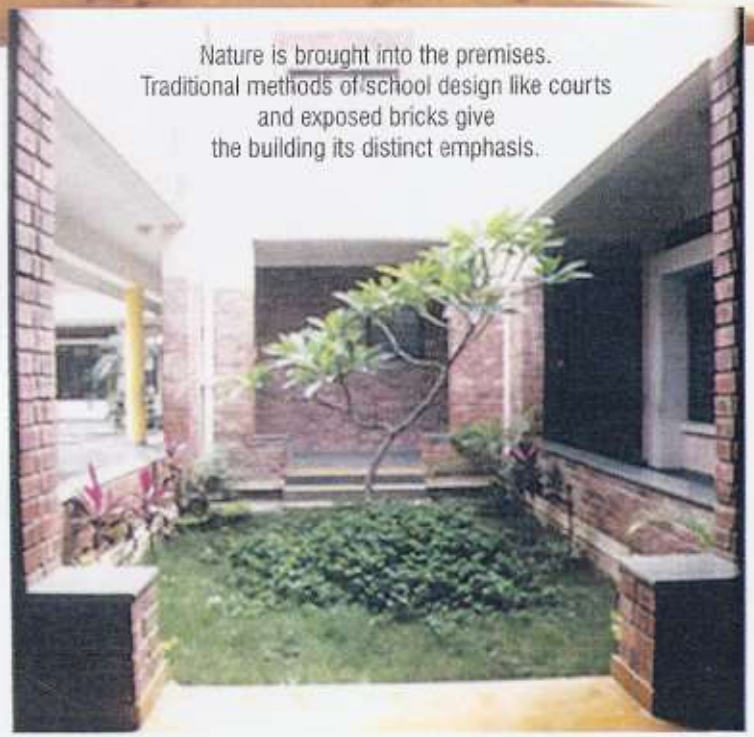
Pergolas and intermittent voids allow the sun to peep in without the harshness.

Connections made are through elements like these, effectively allowing the drama of sciograph



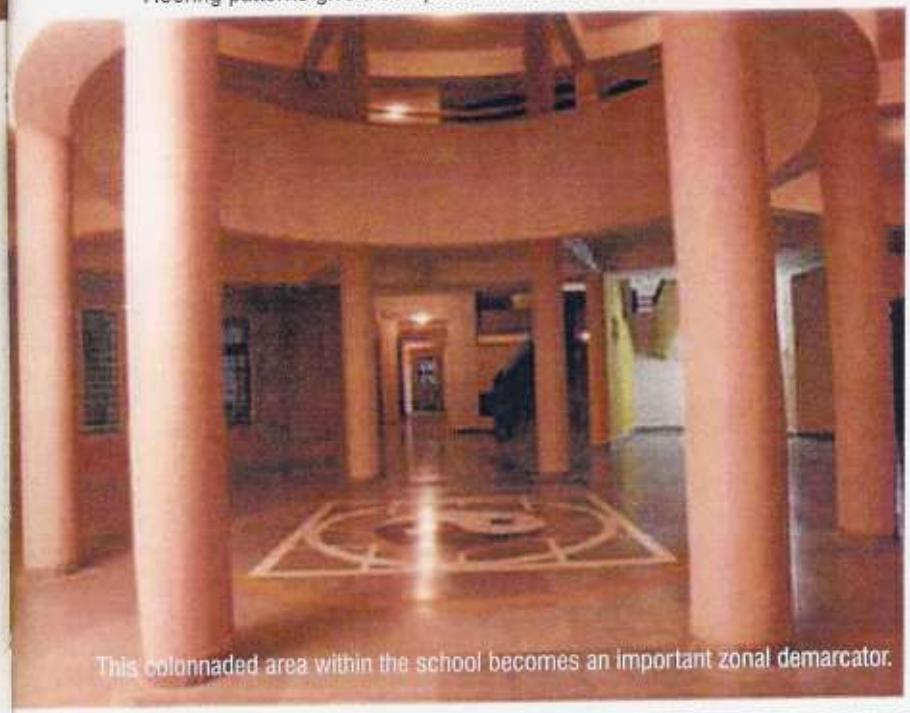
This curved wall brings a sense of perspective as you 'meander' through the building.





Nature is brought into the premises.
Traditional methods of school design like courts
and exposed bricks give
the building its distinct emphasis.

Flooring patterns give a completeness to the relevant enclosed areas.



This colonnaded area within the school becomes an important zonal demarcator.

Colours used in many methods- as pure 'colour', as elements to bring a focus to the space, and as an essential tool to define the 'school' identity.

Bhartiya Vidya Bhavan's

Muktangan Exploratory Science Centre at Shivajinagar, Pune

This building has been awarded the AESA Beheray Rathi Award 2007 for Best Project in non-residential category.

The exploratory was established by Late Prof. V.G.Bhide, former V-C, Pune Univ., in 1992, but since it was only 900 sq.ft, the institution decided to expand it and now it is a well equipped five-storeyed science centre of 15,000 sq.ft.

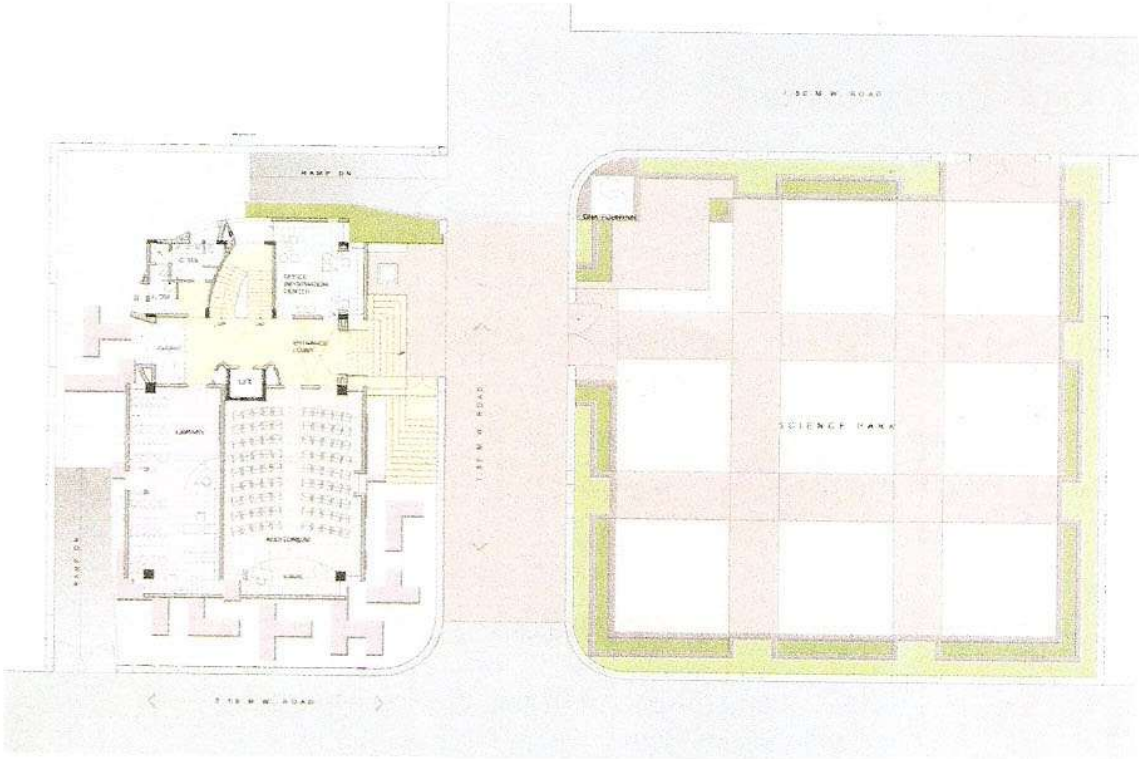
Exploratory is a unique and novel institution recognized all over the country as a new initiative in the field of science.

Exploratory is neither a school laboratory nor a museum but a place where students explore & experiment, invent & innovate and design & fabricate.

It is a place where students are acquainted with the methods used by the great scientists to question the nature through well planned experiments to reveal her secrets. It also excites the curiosity of children, communicates a sense of excitement in doing science, nurture and nourishes their creativity and innovativeness. In a sense in the exploratory, children are launched on an unending path of exploration and on an adventure of discovery.

Exploratory lays out a large number of activities designed around basic concepts of physics, chemistry, mathematics, computers electronics, life science etc. The response of students, their parents, their teachers to exploratory way of learning science has been both overwhelming and enthusiastic.

The work of exploratory has been lauded by even the highest academic body such as Indian National Science Academy.



PROJECT BRIEF

An open competition was held by Bharatiya Vidya Bhavan Pune Kendra in the year 2003.

Among the eleven entries this entry was selected by the panel of expert jury members.

The exploratory being a source of inspiration to the science students, science educators and administrators, it was a challenge to create a landmark structure in Pune to be completed within a period of 18 months.

When Group Phi entered the scene, they interviewed the staff and students, understood the working methodology. It was a difficult task to put before our views to all stalwarts in the field of science and education 3d views made it easy. So almost all things their inter relationship, working problems, were explained through 3d working for better understanding. Several presentations were made to the directors and then the plans were finalized.

SITE CONSTRAINTS

Plot was given by the government

Since the site was not fenced it was encroached upon.

There was no electricity.

The drainage line was at a higher level.

Open space in front of the plot was not in use for many years.

Road was not developed.

DESIGN PHILOSOPHY

The plot has been integrated with open space and developed as a whole with a concept of Science Park attached to the main exploratory science centre.

Project was designed to be developed in two phases:-

Civil building + laboratory + furniture.

Landscape and Science Park - Murals on the façade of the building.

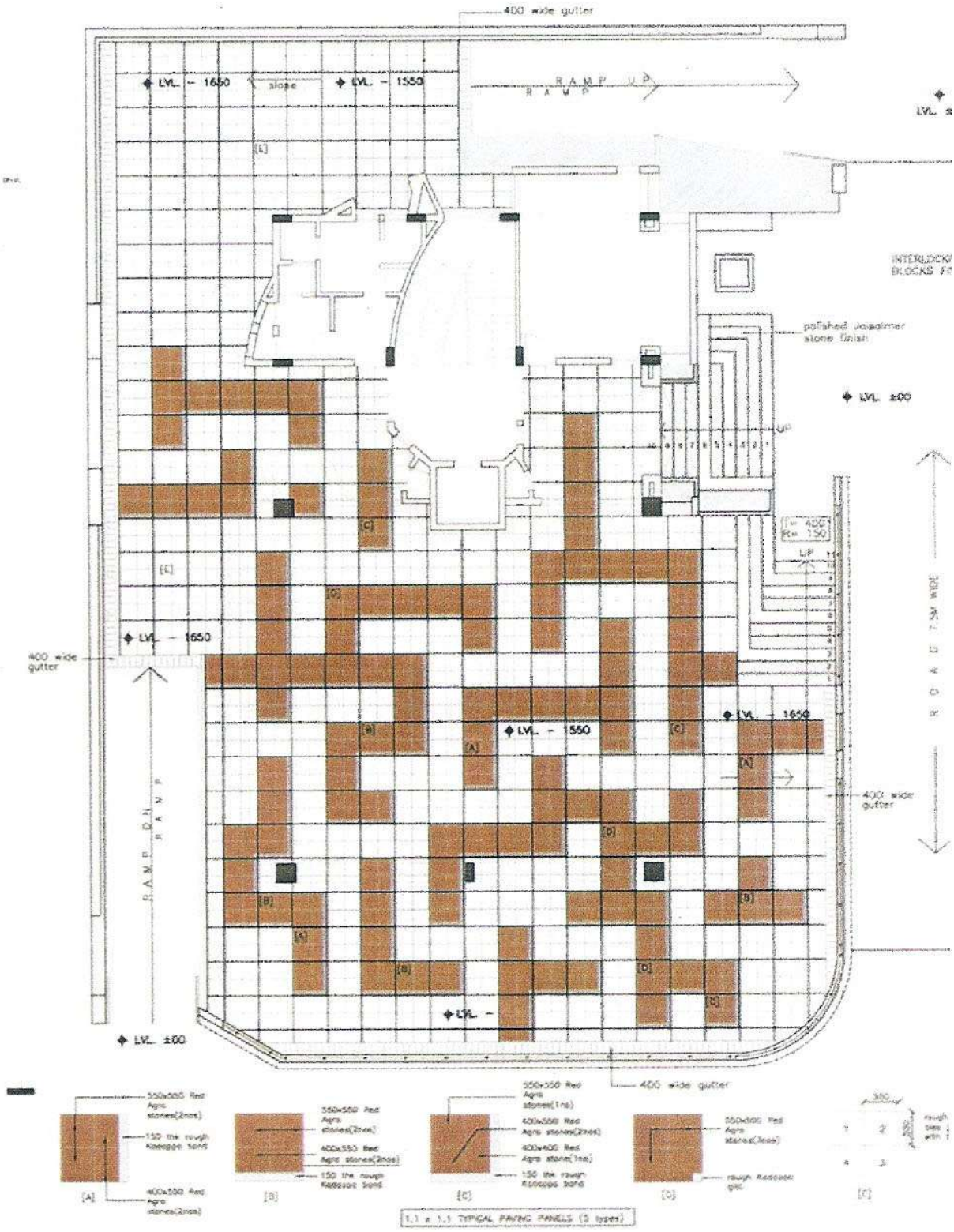
At present 1st phase is complete on site.

The three zones have been formed according to the activities:-

1) Zone of Exploration Physics, chemistry, electronics, maths, labs etc.

2) Zone of Exposition

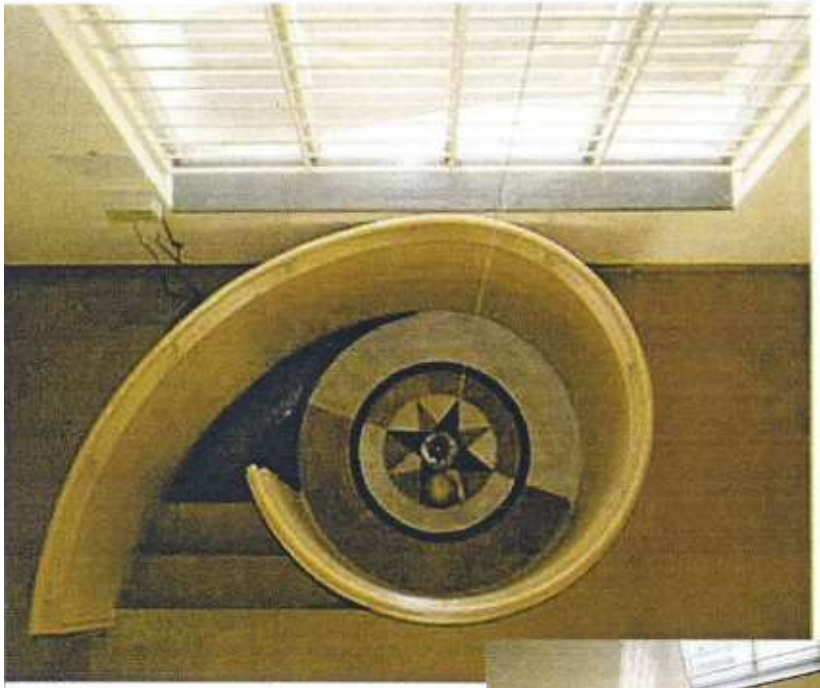
3) Zone of active and creative interaction Library, lecture hall, administration etc.



PAVING PATTERN

Use of natural stones like Kota, Red Agra, Kaddapa for paving developed on the principal of Maze.

This is a building that is neither a school, nor only a laboratory. As such, the form definitely caters to the 'curiosity level' of visitors.



Foucault Pendulum, periscope, telescope has been installed in the common space to experience the different principles.

Zone of Exploration Physics, chemistry, electronics, maths, labs etc.

Such interiors were preceded by several 3D views prepared prior to commencement.

Symmetry in railing.

Group PHI,
Architects and Designers,
8, Shreeram Jyoti Co-op.Hsg. Society,
Patwardhan Baug,
Opp.CDSS, Erandwane, Pune 411 004.
Ph: 91-20-2546 3434.
Telefax: 91-20-2544 2121.
Email- groupphi@vsnl.com

The School as a live, breathing nucleus of delight-

Group PHI Designs three award winning schools-

Hemant Mahajan

Prashant Shah

M.E.S. Bal Shikshan Mandir
at Kothrud, Pune.
Rani Laxmibai Military School for Girls
at Mulshi, Pune.
Bhartiya Vidya Bhavan's
Muktangan Exploratory Science Centre
at Shivajinagar, Pune.

Group PHI, with the principals Ar.Hemant Mahajan and Ar.Prashant Shah, has had an architectural career that can truly be described as 'comprehensive'. From cutting edge corporate hubs to warm little schools and cozy residences, there is nothing that Group Phi has left untouched. Moreover, whatever they design, invariably finds its way into the record books via an award. Such is their repertoire and design command. Nevertheless, even today, after twenty years in the profession, Ar.Hemant Mahajan still says that the most important thing for a creative mind to do is 'never stagnate, always change with the times'.

Photos courtesy architect

Rani Laxmibai Military School for Girls

at Kasar Amboli, Mulshi, Pune.

This school has won the prestigious Design Share Award 2004- fourth place award for value of project.

As the first Military School for Girls, this institute has brought about a revolution in Girl Education. Proposed by the Maharashtra Education Society, the school was aimed at providing a strong foundation for the girl student and making her independent and confident. In a campus sprawling over 30 acres amid the undulating terrain of this area, this picturesque institute makes many firsts, breaks many barriers, and most important, evolves a thought process into a vibrant response to social needs. Remarkably, the local materials used only enhance its unique flavour and personality.

Planning aspects-

The architects suggested a segregation of standards namely, Pre-primary, Primary & Secondary. Overall, the entire campus fulfills all the requirements of a military school. Outdoor activities are on par with indoor activities, therefore sports facilities are planned well. With excellent academic goals, the teacher student ratio is 1:40.

The design approach was worked out on the basis of part to- whole & whole- to- part in the campus planning aiming to create:

-A student friendly atmosphere with military discipline- Dormitories & dining activities located at the strategic location, so it is well guarded on all the sides- an important aspect in female security.

-Inter-relationship of various activities, on their functioning- achieved through efficient planning with a detailed study of their daily routine

-Formulation of detailed requirements for the campus, like academic, administration, sports & recreation facilities- like separate parking, controlled access, and flexible seating arrangement.

Use of available resources-

The major design feature of the Rani Laxmibai School is the use of natural landforms not only as a physical asset, but also to determine several service-related activities. Thus, the work is phased out according to working feasibility & gradual increase of all levels.

Solar heating is used for hot water and students bathing timings are in the evening so that the maximum benefit of the natural energy source is achieved.

By taking advantage of gradations of site, ESR is placed at higher contours area and water is supplied to the buildings by gravity. There is no water tank above each building.

For the continuous & sufficient supply of water, scheme of lift irrigation is made. Water is lifted from the canal 2.5 km away from the site. All waste water generated is treated and refused for the gardening purpose

Fenestration and external

appearance:

A major emphasis is definitely on using natural materials available on site. These include water, stone and waste water. There is a careful study of landforms vegetation on site.

To create merging landforms transformed into landscape features, with indoor & outdoor activities, is another important facet of this entire campus.

The monotony is broken by placing the buildings so as to create a rhythm while walking along the internal road, the staggering gives congruent street facade with surfaces placed at different planes & thereby creating small spaces for seating, under large shady trees, these 'ottas' emanate inter-personal communication in a better way & thereby giving a street or gully look. The landscape proposal aims at creating an environment that accentuates the ambience at spaces created by the architectural design

An aerial view of the school.

The staggering of buildings gives congruent street facade.
The 'interactive' landscaping further enhances the rhythm.

View through playground.

Ottas and such other interaction areas that are in harmony with the surrounding nature

Entrance gate to the school.

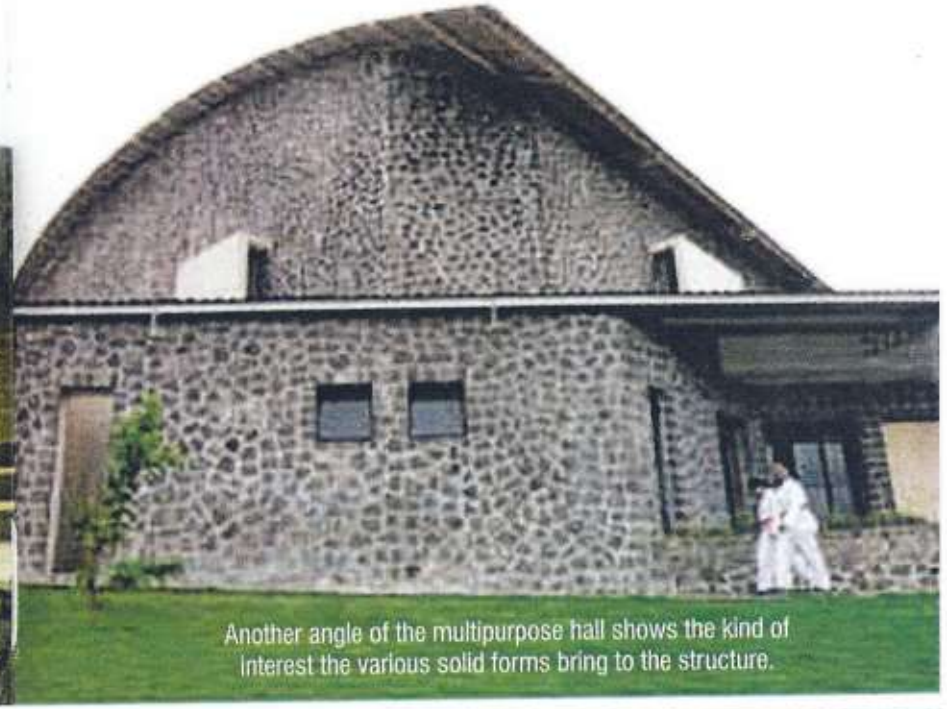
Teachers' quarters.

The dining area at night.

A major emphasis on natural materials like stone, and blending of the landscape with natural forms.

Respect for existing landforms gives this multipurpose hall a dignity that may not have been achieved even with very 'fine' materials.

'wall feature at obstacle track'.



Another angle of the multipurpose hall shows the kind of interest the various solid forms bring to the structure.

Geometric forms achieve their effect even when used with the local stone masonry.