

ARCHITECTURE + DESIGN

A JOURNAL FOR THE INDIAN ARCHITECT VOL V, NO 5 JULY-AUG 1989 Rs. 35

DESIGN

PAPANKALA

Another Planning Disaster?

Tuwaiq Palace, Saudi Arabia

Spatial experiences

“One of the most profound and splendid expressions of oriental architecture in hot climates has always been the generous creation and use of ‘inside-outside’ spaces, whether they be the open-to-sky courts of the Maratha wadas, the exquisite terraces and courts of Rajasthani architecture or the spacious verandas of colonial buildings. Even the sphere of education and the pursuit of knowledge in our lands has been picturized by the guru sitting with his students under the shade of a tree. This element of unfettered space became the predominant factor guiding the design of the EDI where we explored to its fullest potential, the element of landscaping.

“The three major departments of administration, research and training are organized around open-to-sky courts. Each individual working space contains two types of spaces: a general area for meeting people, and a more private alcove or storage area for books, documents, etc.

“The Computer Centre is located in a central position on the first floor and is accessible from all three major departments. Deep verandas protect the rooms from excessive heat, keeping the Centre cool. The library was conceived as the fastest expanding facility on campus, and designed so that the existing service and control areas become centrally located once the building is extended. Maximum use of indirect north light helped to reduce dependence on artificial lighting. The documentation centre was also attached to this facility and placed on the first floor.

“However, the focal point of the Institute is the main court, defined by the canteen and the auditorium, and intended as an informal meeting place for the faculty and students. Institutional buildings occupy the higher areas of the site and are visible from the main point of access. The housing (not shown here), has been allocated a more secluded area and is further detached from the institutional facilities



Entrepreneurship Development Institute

Ahmedabad, 1987 (Phase I)

Architect **Bimal Patel**, M/s Hasmukh C Patel, Ahmedabad

by a large patch of green space. As the students and trainees will reside in the campus only for short periods of time, the hostels and guest rooms have been kept in close proximity to institutional activities. They are accessible primarily from the entrance pavilion, and are also organized around landscaped, open-to-sky courts. The facilities common to these buildings are located along the major spine. Within the hostels, each room consists of two study alcoves, two beds, storage space, a pantry and a toilet.

"We welcomed the suggestion of the management to design a building where the use of artificial energy was kept to the minimum. However, past experience limited our enthusiasm for non-conventional sources of energy using untested systems that often turn out to be most impractical. Instead, the open-to-sky courts which have been repetitively used are a time honoured solution. Verandas and recessed windows in relatively thick masonry walls, also help by forming

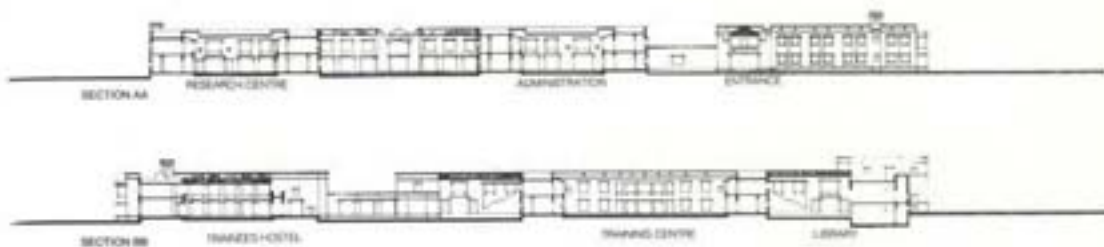
barriers to the sun without shutting off natural light. The RC slabs, insulated by the use of inverted clay pots, are another means of reducing heat gain, as is the china mosaic finish on the terrace.

"While designing, the need for future expansion was kept in mind. Additional work areas are proposed to be incorporated on the floors above the existing facilities. The courtyard spaces have been studied to accommodate these so that additions do not seem haphazard. To introduce new facilities, the main spine of the present building can be extended and new departments attached. Additional facilities can also be directly connected to the open side of the entrance plaza if required." **Bimal Patel**

View of the main entrance

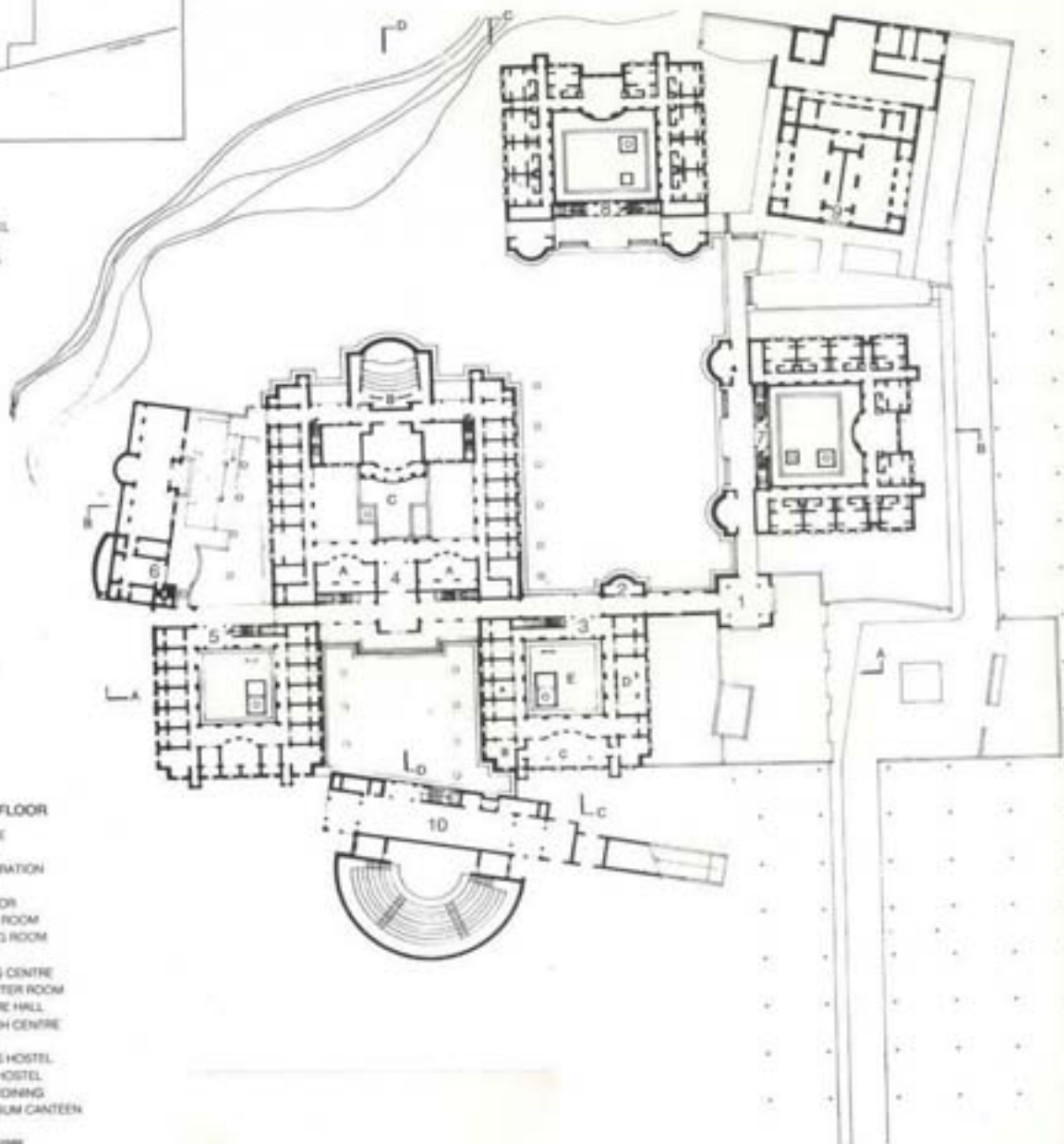
Photos Dinesh Mehta





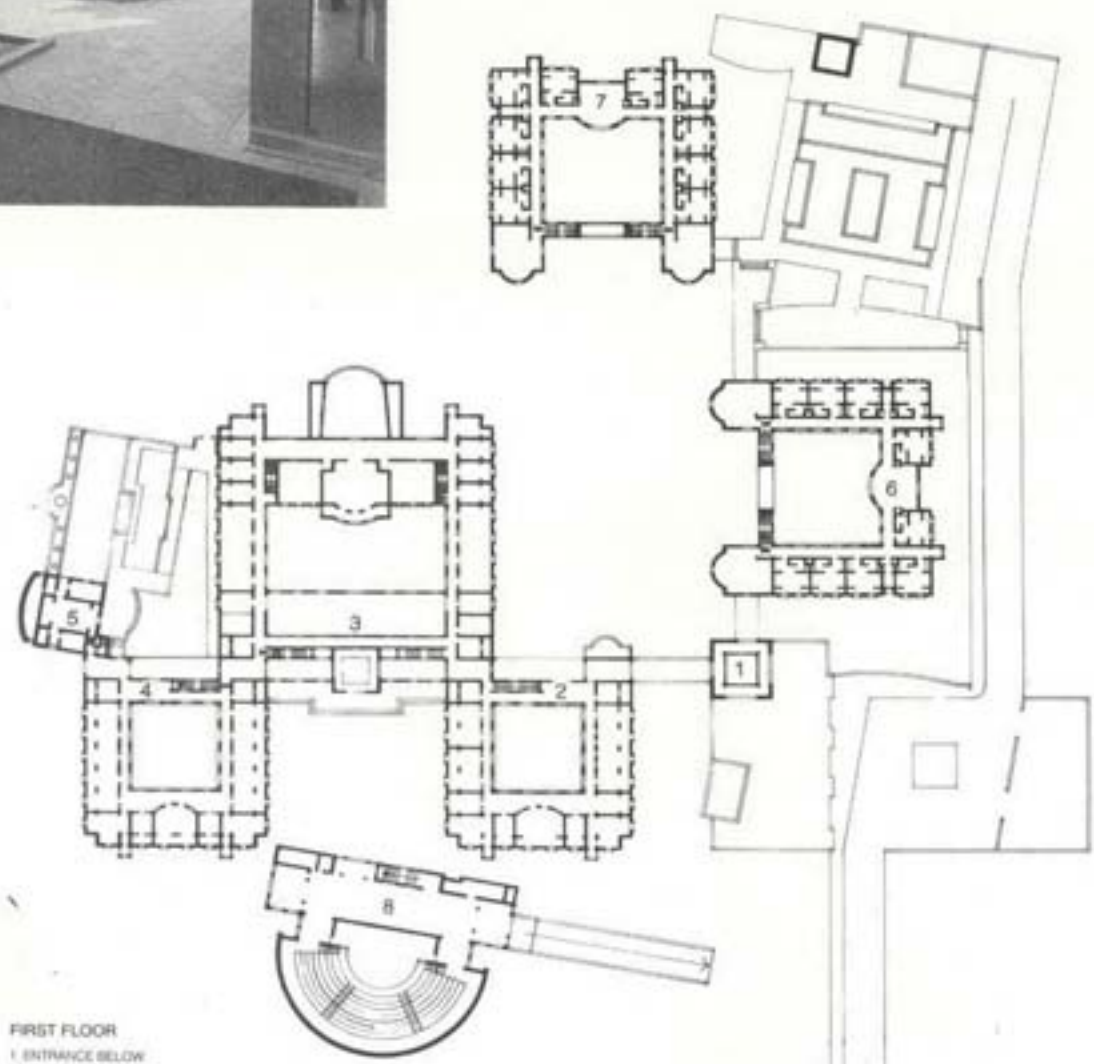
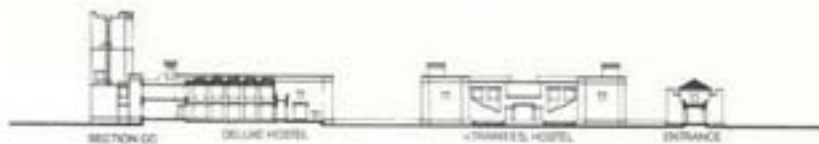
SITE PLAN

- | | |
|-------------------|--------------------|
| 1 ENTRANCE | 6 LIBRARY |
| 2 ENQUIRY | 7 TRAINERS' HOSTEL |
| 3 ADMINISTRATION | 8 DELUXE HOSTEL |
| 4 TRAINING CENTRE | 9 KITCHEN/DINING |
| 5 RESEARCH CENTRE | 10 AUDITORIUM |



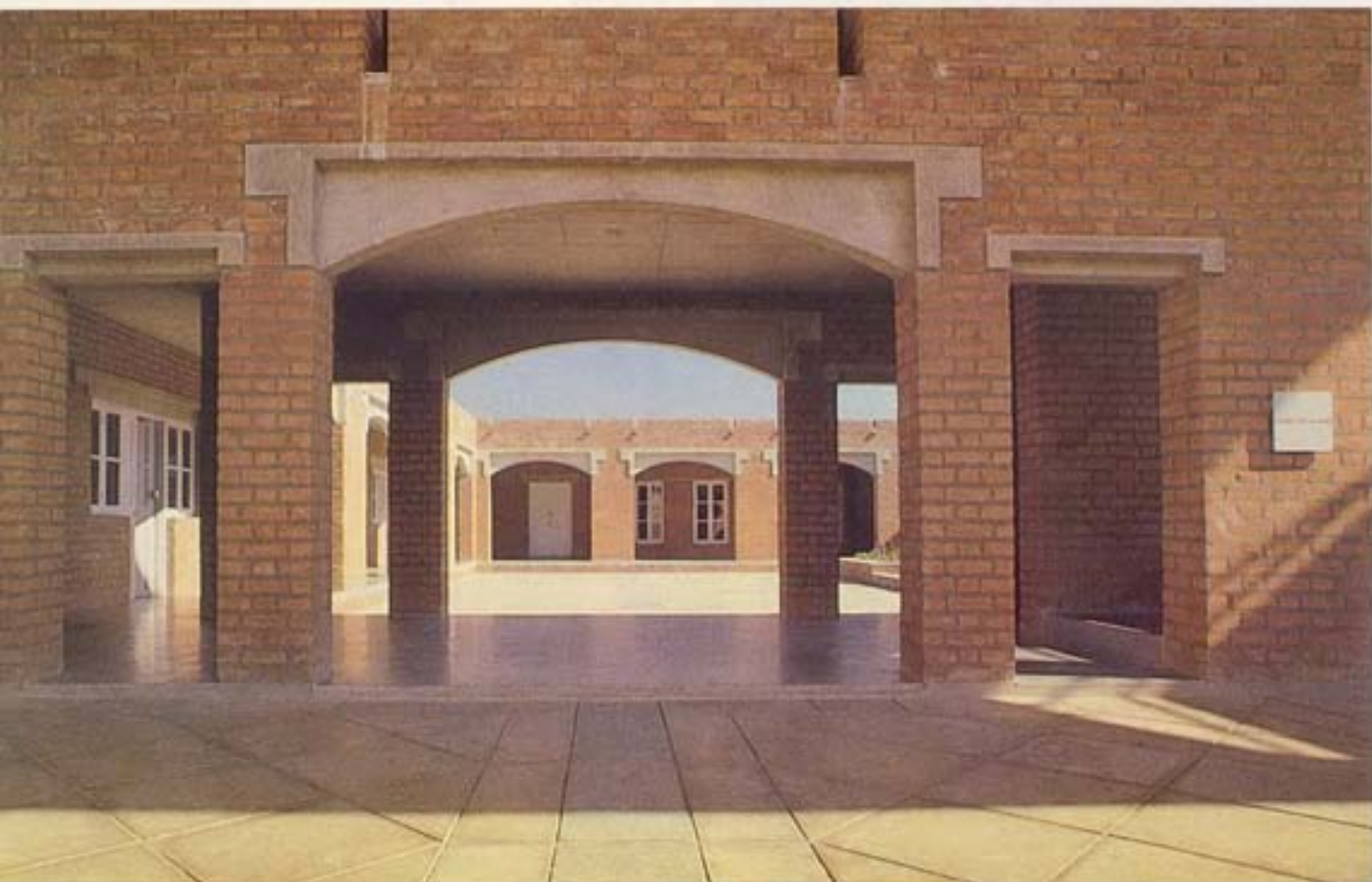
GROUND FLOOR

- | |
|-----------------------|
| 1 ENTRANCE |
| 2 ENQUIRY |
| 3 ADMINISTRATION |
| A ROOM |
| B DIRECTOR |
| C BOARD ROOM |
| D WAITING ROOM |
| E COURT |
| 4 TRAINING CENTRE |
| A COMPUTER ROOM |
| B LECTURE HALL |
| 5 RESEARCH CENTRE |
| 6 LIBRARY |
| 7 TRAINERS' HOSTEL |
| 8 DELUXE HOSTEL |
| 9 KITCHEN/DINING |
| 10 AUDITORIUM CANTEEN |



- FIRST FLOOR
- 1 ENTRANCE BELOW
 - 2 ADMINISTRATION
 - 3 TRAINING CENTRE
 - 4 RESEARCH CENTRE
 - 5 LIBRARY
 - 6 TRAINEES HOSTEL
 - 7 DELUXE HOSTEL
 - 8 AUDITORIUM







Facing page above The somber expression of the hostel block. *Below* The administrative block courtyard through the main spine. *This page above* Sequence of spaces along the main spine. *Right* Faculty cabin. *Below* The hostel court opening the built form to the sky.



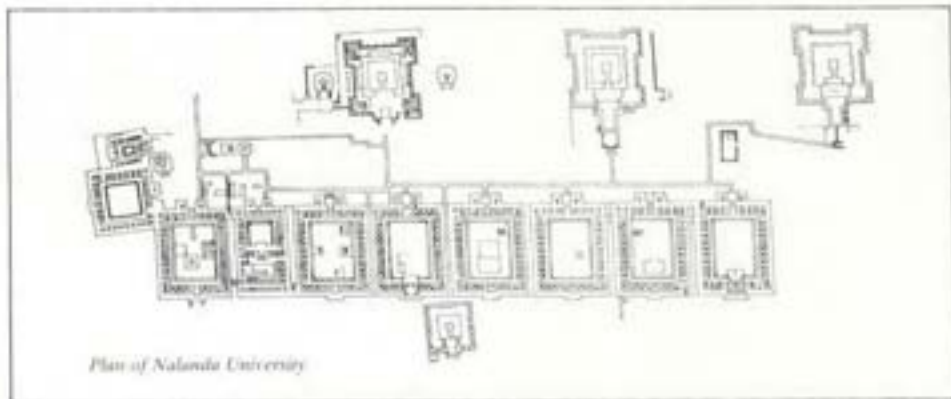
The Entrepreneurship Development Institute campus very clearly manifests the dilemma, not necessarily a negative one, faced by the emerging stream of third generation architects in independent India. The dilemma, purely in terms of campus planning and architectural design, relates to the nature of outdoor spaces as defined by buildings surrounding them and the principles used in relating these buildings to each other and to the site.

The dilemma is essentially caused by two diametrically opposite attitudes the architect-planner has to reckon with at this juncture. The first of these attitudes is best exemplified, in its most raw, primordial sense, by the historical Nalanda campus. This complex consists of a series of building units (the individual *vihara*) laid along a path, facing a few temples. The layout gives no indication of where one arrives, destinations within the group of buildings, a focal point if any, or other such attributes of a campus in contemporary parlance.

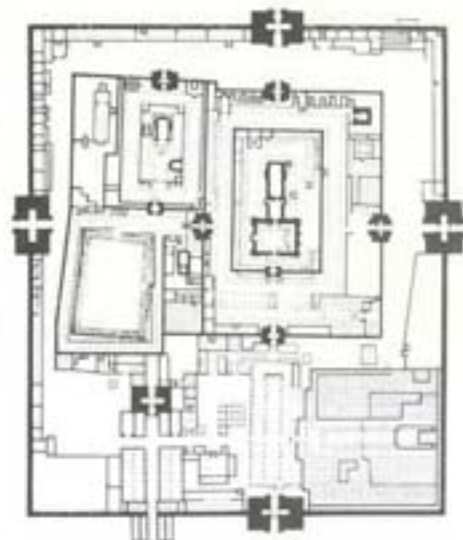
In the same vein, there are medieval campuses which, (while perhaps more religious or administrative in nature, such as our temple and palace complexes), clearly exhibit the principles underlying the layout of a particular group of buildings. In the case of temples, these are more esoteric, whereas in the case of palace complexes they are more utilitarian. Nevertheless, both of these types manifest an introverted approach, where constituent buildings are physically continuous and relate to each other through, or around courtyards. The courts, despite being open-to-sky spaces, come into being by a clever, but strong disposition and massing of buildings around them. Their existence is mutually interdependent and defined by one another. Temples at Tanjore, Madurai, or in another context, even a large-scale campus such as the Red Fort at Delhi, are examples that could be cited in this regard.

However, in modern India, in a manner of speaking, the above approach has been turned 'inside out'. Layouts on the whole, form the major concern of campus planners today, wherein a sense of hierarchical organization prevails beginning with the arrival and continuing with the disposal of individual buildings. To reflect this hierarchical relationship, paths of movement become a dominant feature of campus planning.

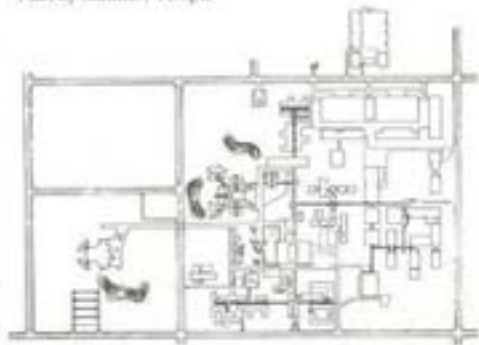
This new approach no doubt manifests a desired change, but along with it emerged the principles of modern architectural design. The open-to-sky spaces, earlier contained strongly by the built form, were opened up and merged with the infinite space of the terrestrial world. The individual building itself became the focus of design effort, as a three-dimensional object set in this infinite space. The open-to-sky space, so vital for tropical conditions (if con-



Plan of Nalanda University



Plan of Madurai Temple



Site plan of the Indian Institute of Technology, Kanpur. Architect: A P Kanvinde.

trolled) now became a mere foreground to the buildings. You could be either indoors or outdoors and the option of an 'indoor-outdoor' space offered by a built-up courtyard was lost. The Benaras Hindu University (BHU) campus and its more orthogonal variations right down to the Indian Institute of Technology campuses are examples that could be cited in this regard. To adhere to the planning principles of Nalanda or the BHU, the Madurai temple or the Institutes of Technology constitutes the dilemma confronting Indian architects and planners today.

Which of these above two attitudes does the campus for the Entrepreneurship Development Institute (EDI) manifest? Interestingly, both. The EDI campus responds to both latent desires: on the one hand, to organize a campus as an introverted built environment as conveyed by internal courts, and on the other, to set the buildings with a foreground which, in the third dimension, merges into infinite space.

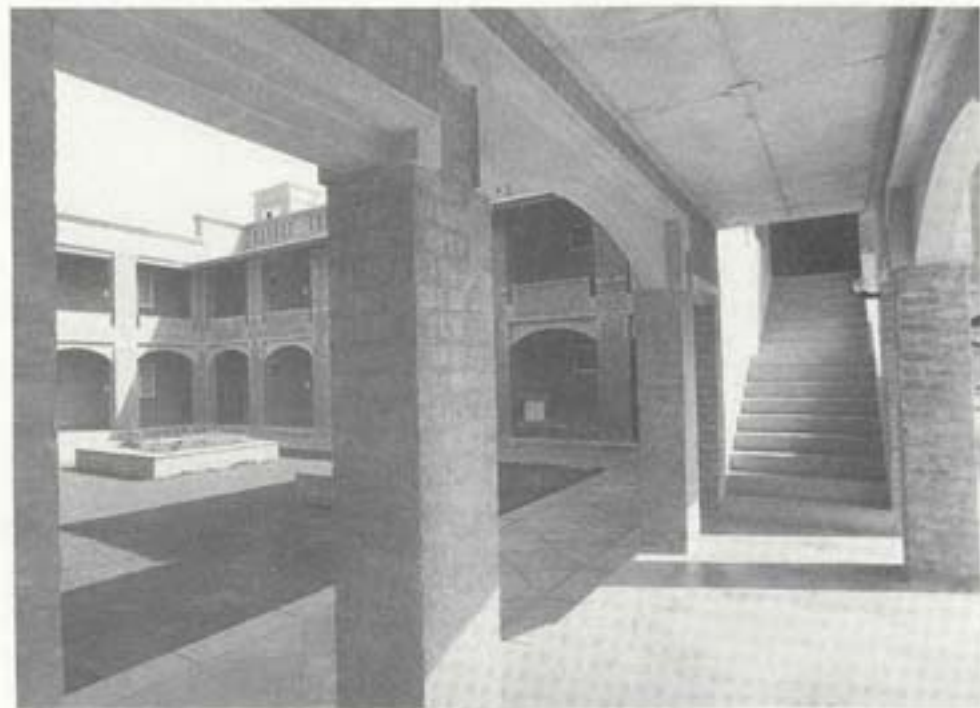
This is evident by the manner in which the courtyards of individual buildings are clearly defined emphasizing the built form in the first place, and in the second, the manner in which the outside spaces between the buildings are left unbuilt or undefined. This gesture strongly conveys the impression of freeing these outside spaces as in the case of the space immediately south-west of the entrance pavilion, between the hostel blocks and the rest of the academic blocks.

The dual-response organization succeeds because of the manner in which the single, major route of movement is established and strengthened as an architectural element. This becomes the key element of the EDI campus organization: the spine stretching from the entrance pavilion to the library. It works owing to the intense give and take that occurs between this rather narrow, straight, linear space which is alternately relieved and enriched by the outdoor and indoor, open-to-sky spaces as one moves along it. The aggregate visual experience here is one of contained spaces; the eye does not travel too far out towards the horizon. The net result is one of a unified relationship of spaces, internal courts as well as outdoor spaces and the buildings that define them both.

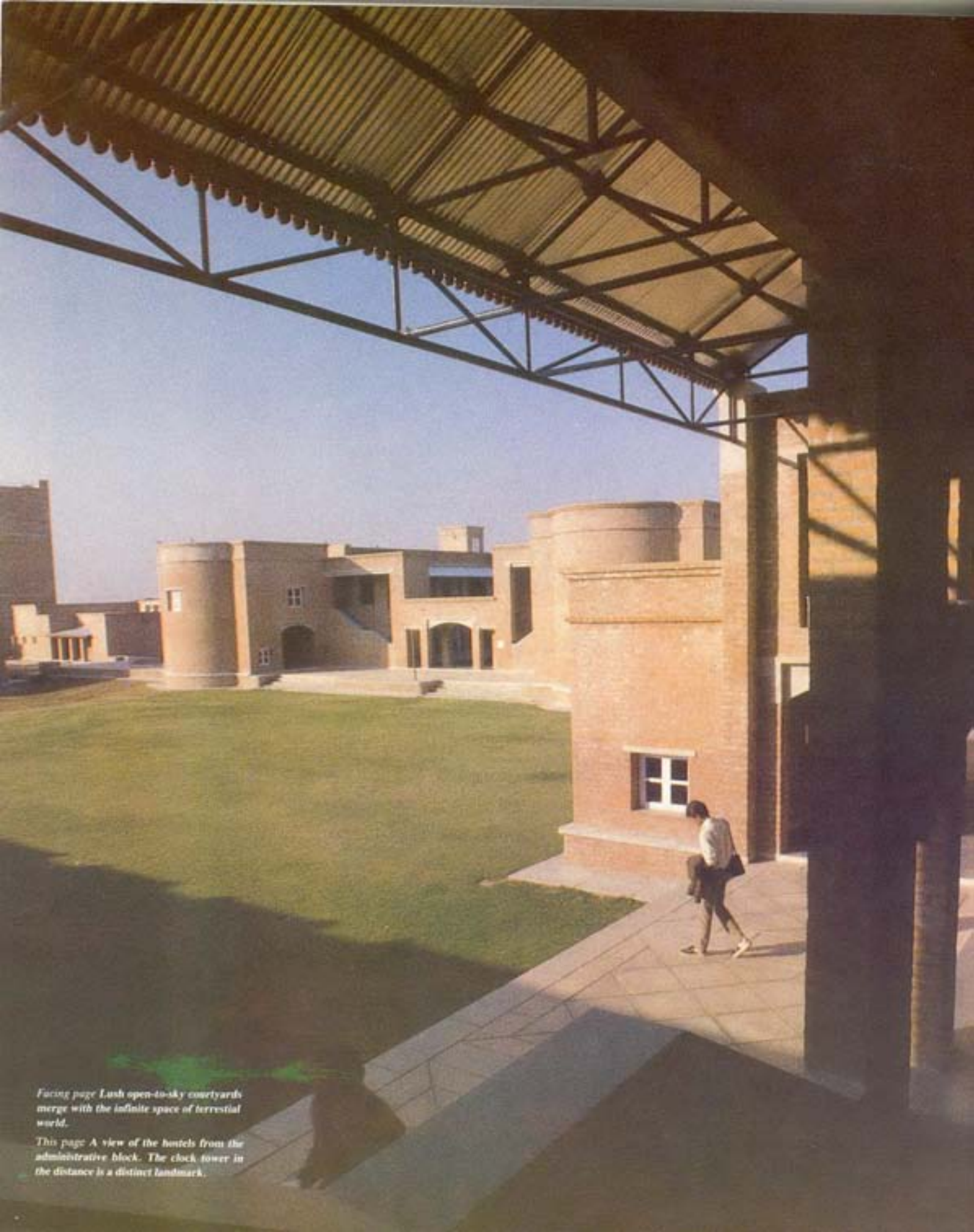
The hierarchical relationship of buildings from the entrance onwards is as one would normally expect in the case of an academic building. More than its location, the manner of routing the movement only through the entrance to the hostels from the academic block is puzzling. It is suggestive of a greater linkage between the hostels and the world outside the campus, rather than with the training block or the library itself. This is true because the campus is quite far away from both Ahmedabad city and Gan-



View of the main corridor



The hostel block



Facing page Lush open-to-sky courtyards merge with the infinite space of terrestrial world.

This page A view of the hotels from the administrative block. The clock tower in the distance is a distinct landmark.



dhinagar and is not well served by mass transportation.

Apart from formal, planned routes of movement, yet another characteristic of modern campuses is the lack of a network of paths, informal and unsheltered, which complement casual and direct relationships between buildings. This is certainly true of the EDI campus where movement from each building, even to the next one, is only through the main spine.

Another feature worth noting is what may be termed as the absence of a main focal building which should be suitably disposed and expressed in the third dimension. A larger facade, perhaps a bit taller than the rest, does seem to be called for, to strengthen that one block which might be more important than the others.

This brings into discussion one major component of design that has not received the attention due to it. That is, the treatment of facades, especially the external ones. While the internal walls facing the indoor courts are spatially enriched by an arcade running all around and a well developed court surface, the external surfaces appear to have been deliberately treated like the rear faces of the buildings. This makes them visually dull and climatically places them at a greater disadvantage. Fenestration too, further accentuates this experience by suggesting a massive, monotonous exterior. There is a therefore,

a marked contrast between a rather rich inside environment and a stark, plain exterior. If this was indeed the intention it has certainly worked.

Fortunately, the design of a campus calls for many more important considerations than those discussed above, and EDI succeeds in responding appropriately to several of these.

To begin with, the dual response to the dilemma discussed earlier, itself generates an environment which is infinitely richer compared to the 'solid blocks spaced far apart along a movement network' kind of campus environment that one often observes. The spatial experience at EDI is therefore a great improvement over normal current practices. This is because it is rare in contemporary design that indoor open-to-sky spaces be employed as an active design element, and be treated as more than mere picturesque, green pockets in a large structure, or simply as light and air shafts. In more academic terms, the changed attitude may be seen as the reintroduction of the introverted character of built form historically practised in India; that is, the outside is again being shaped as the inside.

Starting with an almost perfect location of activities, the design effort in EDI is carried further to attend to more secondary and tertiary aspects of the buildings. Take, for instance, the main movement spine. Unlike other contemporary campuses, this

is not just a stretch of finished floor with a monotonous row of columns supporting a 'dropped' slab. Practically each metre length of this spine responds to what is made to happen on its edge, in both the horizontal and vertical dimensions. Its articulation at the point of entrance to the training block is amply indicative of the sensitivity of the design response, not to mention the three-dimensional treatment accorded to an otherwise plain flight of steps to the first floor.

The most striking experience, and therefore the most lasting of the impressions of the EDI campus, is the solemn and serene nature of spaces. A restrained and austere use of materials and finishes has definitely helped to create a built environment at peace with its setting and perfect for academic pursuits. **Muktirajsinhji Chauhan**

Owner Entrepreneurship Development Institute of India
Architect Bimal Patel, M/s Hanmukh C. Patel, Ahmedabad, Jayant Gunjaria, Arvind Patel (project team)

Consultants Yakil-Mehra-Sheth, Ahmedabad (structural), S K Murthy, Bombay (air-conditioning, electrical, drainage and water supply), P B Bhagvat, Ahmedabad (landscape)

Prime contractors Ganon Dunkerly & Co., Ahmedabad (civil, internal electrical and plumbing).

Area 6,820 sq m (Phase I) 2,390 sq m (Phase II)

Period of construction June '85 - Dec '87 (Phase I)

Cost Rs 1,65,00,000 (Phase I, including major infrastructural facilities for Phase II)