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Places of Work

EASTERN Office Design
Benoy

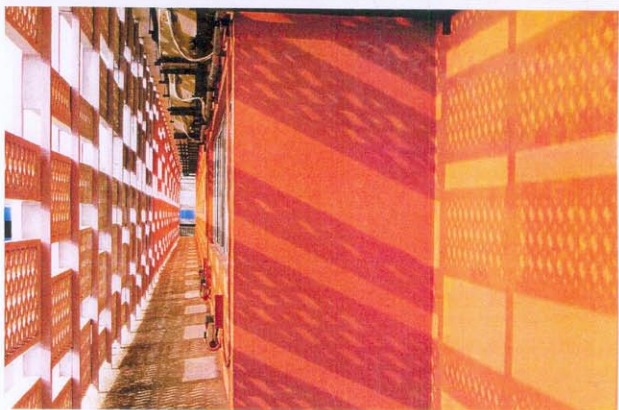
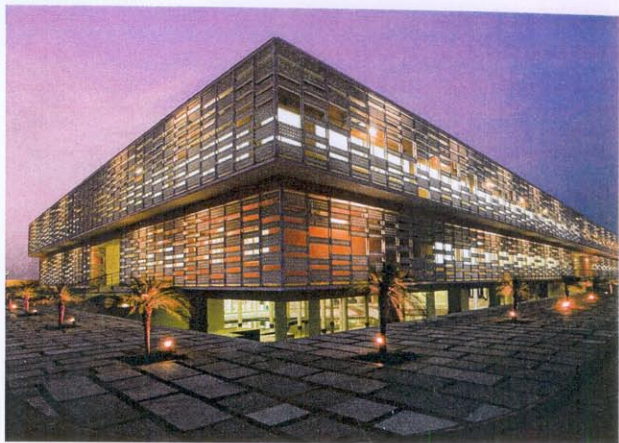
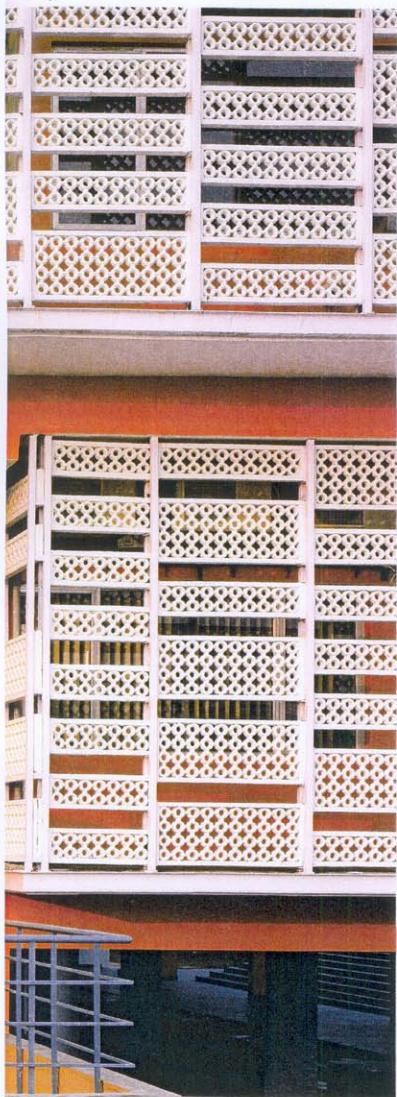
Morphogenesis
 Camenzind Evolution

WOHA
 RMJM

Department of ARCHITECTURE

Klein Dytham architecture van der Architects
 Nevzat Sayin Mimarklik Hizmetler Axis Identity Group





THE PEARL OF JAIPUR

A fashion institute located within the outskirts of Jaipur -

a climatically challenging desert environment - serves up unique possibilities for its designers.



> **BUILT-UP AREA**
11,745 square metres

> **ARCHITECT**
Morphogenesis

> **DESIGN TEAM**
Sonal Rastogi, Rudrajit Sabhaney, Anna Kristiana Bergbom, Shrutí Dimri, John Alok Decruz

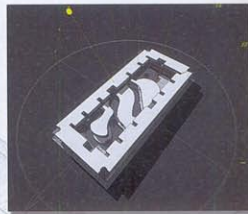
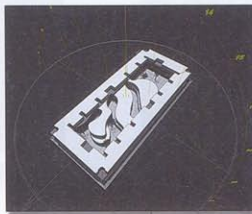
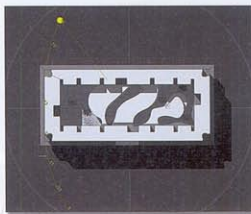
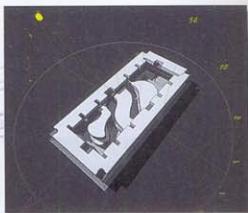
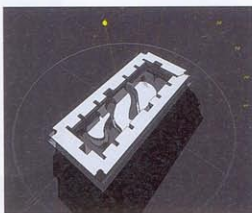
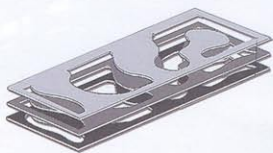
> **LANDSCAPING CONSULTANT**
Oracles

> **HVAC CONSULTANT**
Design Centre

> **STRUCTURAL CONSULTANTS**
NM Roof Designers

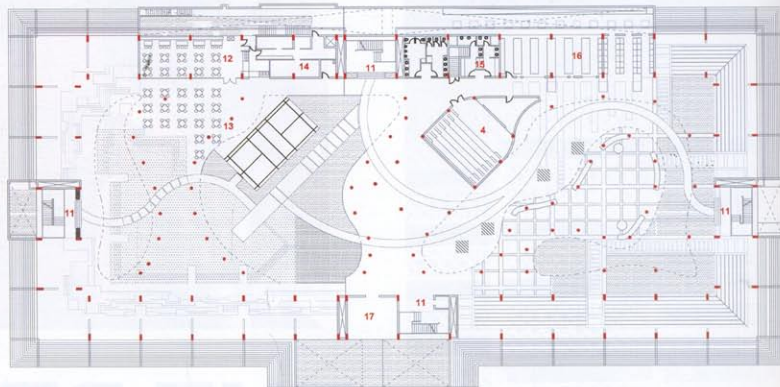
> **M&E CONSULTANT**
Integral Designs

> **PHOTOGRAPHY**
Andre J Fanthome and Edmund Sumner



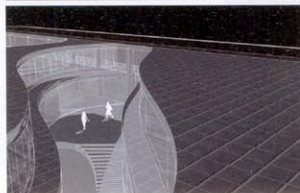
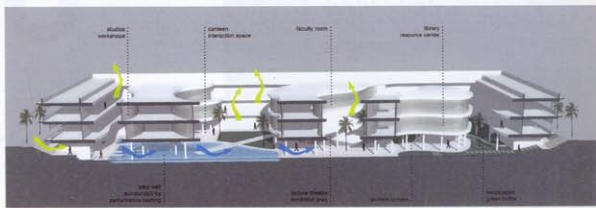
The Pearl Academy of Fashion, designed by Morphogenesis, is a campus that, by virtue of its design, is geared towards creating an environmentally responsive passive habitat. The institute sought to provide interactive spaces for a highly creative student body to work in multifunctional zones that blend the indoors with the outdoors seamlessly. The institute is located in a typically hot, dry, desert type climate on the outskirts of Jaipur, in the soulless Kukas industrial area, which is about 20 kilometres from the famous walled city. It ranks third in the top 10 fashion design institutes in India, and the design of the institute needed to represent the seriousness of its academic orientation through its formal geometry.

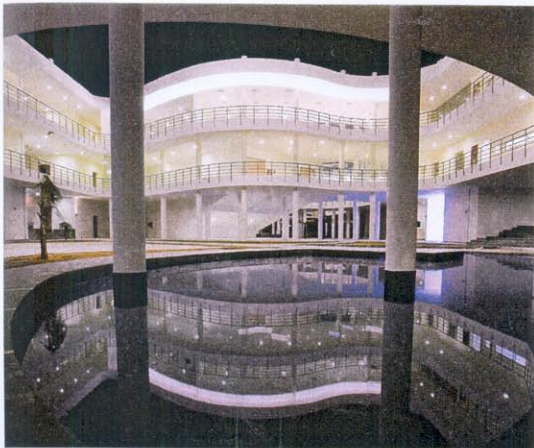
Given the nature of an institution, budgetary constraints on the project necessitated the use of cost effective design solutions to keep within the price points set by the client, and yet be able to achieve the desired functionality and effect. The adverse climate made it a challenge to control the micro-climate within the project, and thus Morphogenesis incorporated various passive climate-control methods in an attempt to reduce the dependence on mechanical environmental control measures. The architecture of the academy needed to be



Landscape

- 1/ Main Entrance
- 2/ Reception
- 3/ Exhibition Area
- 4/ Lecture Theater
- 5/ Studios
- 6/ Library
- 7/ Resource Center
- 8/ Class Rooms
- 9/ Labs
- 10/ Administrative Offices
- 11/ Staircases
- 12/ Carleem
- 13/ Outdoor Seating
- 14/ Kitchen
- 15/ Backstage
- 16/ Lockers
- 17/ Shop





a confluence of modern adaptations of traditional Indo-Islamic architectural elements, and passive cooling strategies prevalent in the hot-dry desert climate of Rajasthan. Among them were the use of open courtyards, water bodies, a step-well or *baoli*, and *jaalis* (perforated stone screen). All these elements have been derived from their historical application, but will manifest themselves through the built form and become an intrinsic part of the daily life of the design student.

The building is protected from the environment by a double skin which is derived from a traditional building element called the *Jaali*, which is prevalent in Rajasthani architecture. This double skin acts as a thermal

buffer between the building and the surroundings. The density of the perforated outer skin has been derived using computational shadow analysis based on the orientation of the façades. The outer skin, positioned 1.2 metres away from the building, reduces the direct heat gain through fenestrations. Drip channels running along the inner face of the *Jaali* allow for passive downdraft evaporative cooling, thus reducing incident wind temperatures.

The scheme relies on self-shading sliver courts to control the temperatures of internal spaces and open-stepped wells, while allowing for sufficient day lighting inside studios and classrooms. The entire building is raised above the ground and a 'scooped-out' underbelly forms a natural thermal sink that is cooled by water bodies. This underbelly – the anchor for the entire design – is thermally banked on all sides, and serves as a large student recreation and exhibition zone. During the night when the desert temperature drops, this floor will slowly dissipate the heat to the surroundings, in turn keeping the area thermally comfortable.

The materials used for construction are a mix of local stone, steel, glass, and concrete chosen keeping in mind the climatic needs of the region while retaining the progressive design intent. Energy efficiency is a prime concern and the institute is 100% self sufficient in terms of captive power and water supply and promotes rain water harvesting and waste water re-cycling through the use of a sewage treatment plant. Aside having become a very successful model for cost effective passive architecture in desert regions, the design and facilities of the campus complements the ideology of the client – that of a cutting edge design institute with a sustainable approach. As a whole, the thoughtful design approach of The Pearl Academy of Fashion is a sterling example of 'inclusive architecture' – accommodating local heritage values within a culturally and architecturally contemporary paradigm. ©

