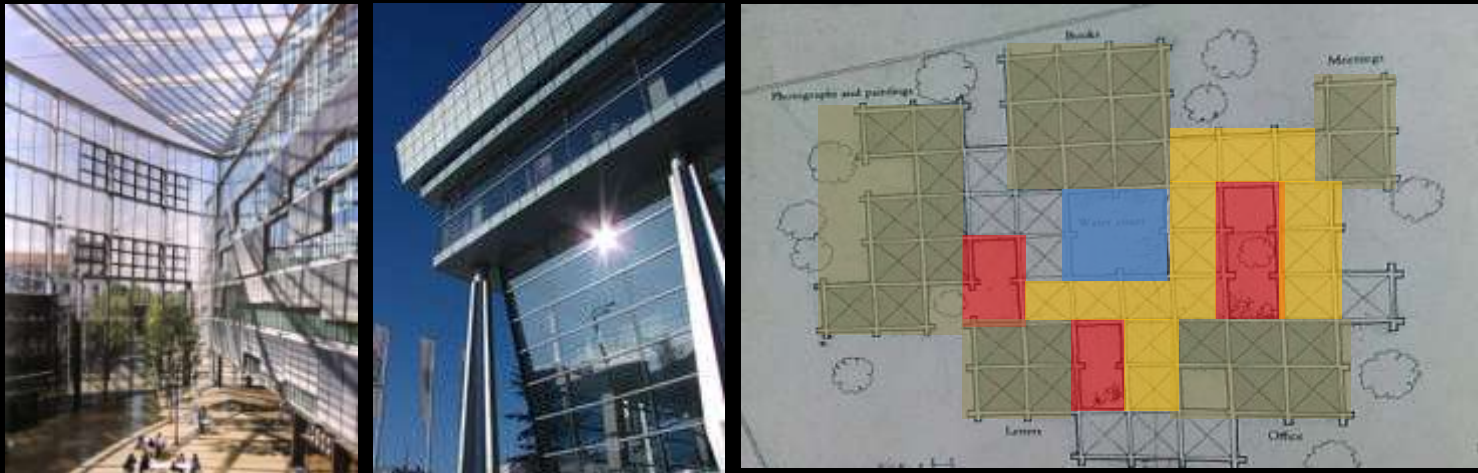


# ***‘TRANSPARENCY’*** *in architecture*

The Dictionary meaning of Transparency states:  
“Transparency as being something that is clearly evident  
and present in its absolute visual entirety. “

Transparency can be **literal**, as the physical quality of a  
substance.



Transparency can be **phenomenal**, as the quality of  
organization of spaces.

Aim – ***To Study the transparency in a building with regards to the material used.***

MATERIAL APPROACH

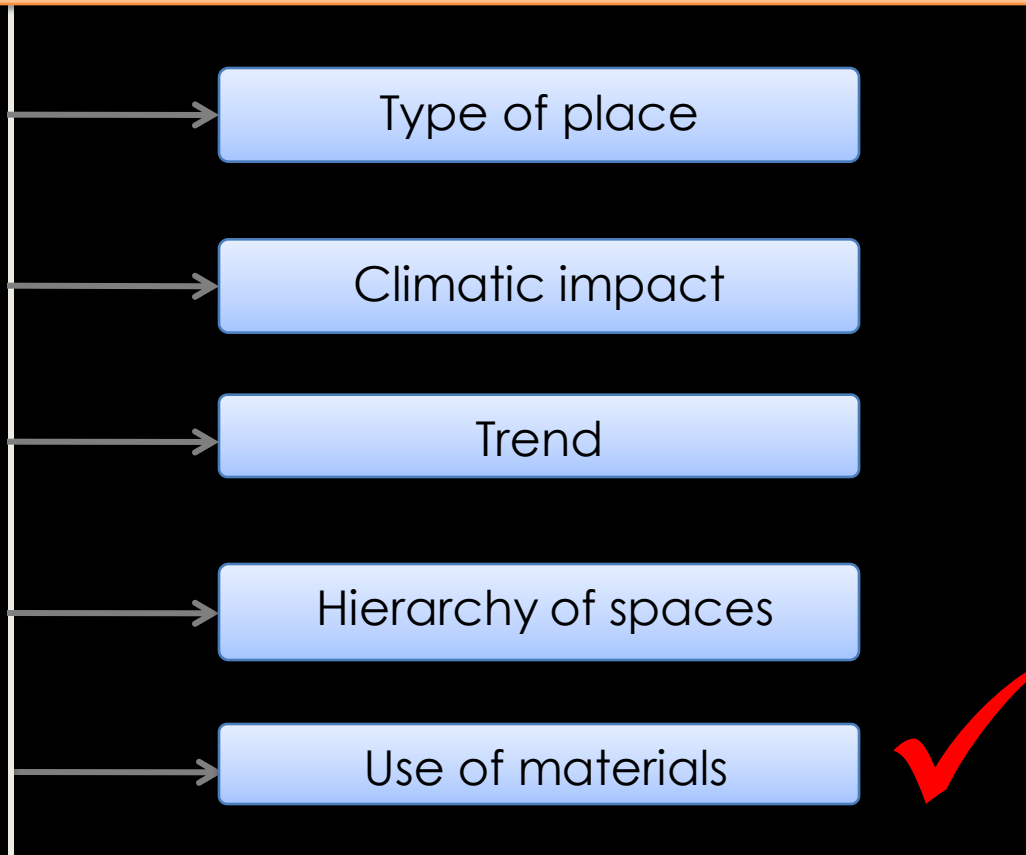
→ Material used in way ***to create porosity..***

- Punctures
- Jaalis
- External shading devices like Louvers, fins etc.
- Etc.

***Study will be limited to facades only.***

# ***Transparency*** in Architecture

## Factors on which it depends



## MATERIALS USED IN BUILDING FACADES

- Mud / Earth  
Ex: Compressed earth blocks, Rammed earth, CSEB
- Stone masonry / Stone Cladding
- Exposed brickwork ✓
- Exposed concrete – Shading Devices Ex: Pergolas, Chujjas, Fins, etc. ✓
- Steel / Composite Structures (Steel & Glass, Steel & Concrete)

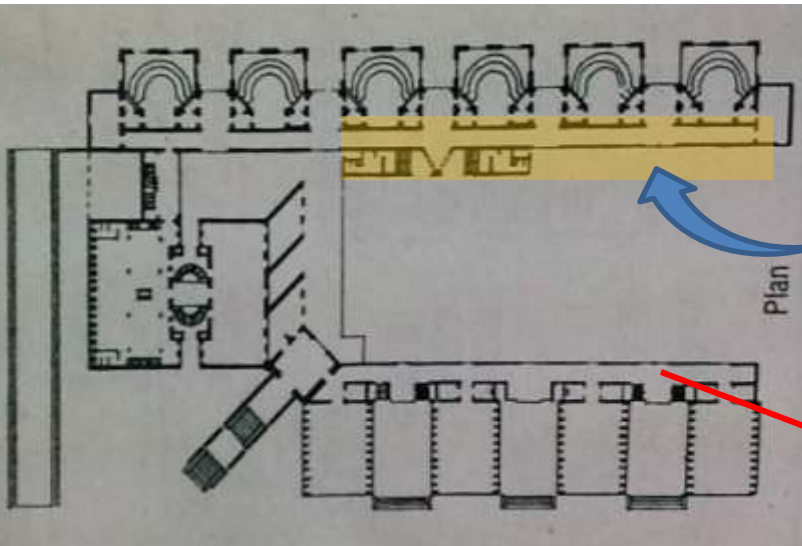
# *Exposed brickwork*

IIM AHMEDABAD

MPSC OFFICES

EXAMPLES TO STUDY EFFECT OF  
PERFORATIONS, LAURIE BAKER

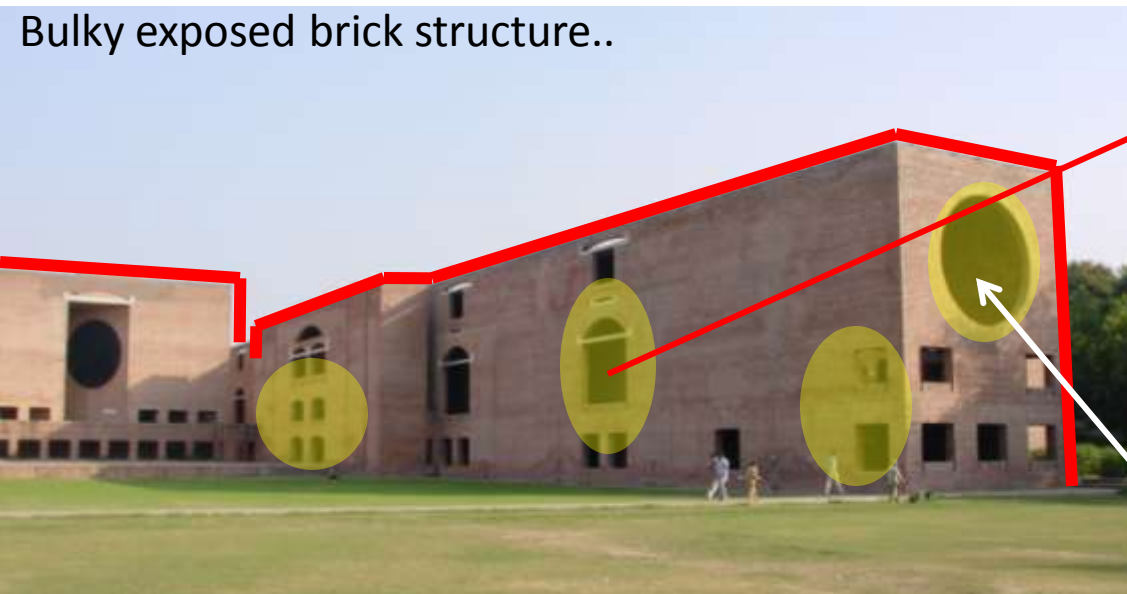
ANDREWS GANJ COMMUNITY  
CENTRE, NEW DELHI



The corridors have arched openings on regular intervals which add *porosity* to the structure.



View of the corridor showing arched openings..



The circular window behaves as an image maker for the entire complex.

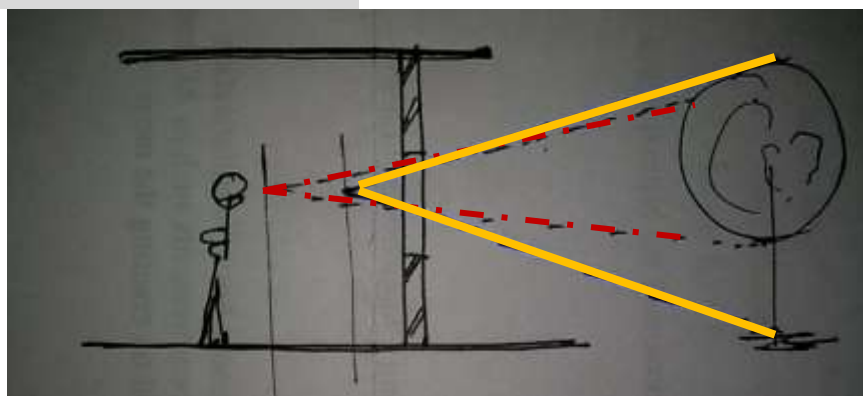




Punctures Frame the view to the outside courtyard.

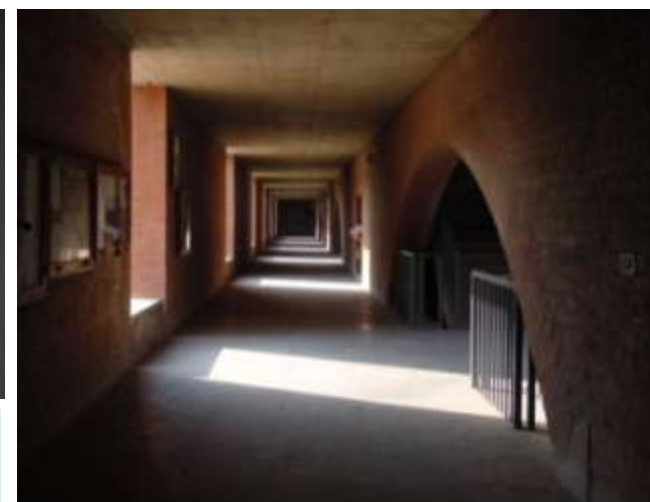


Rectangular windows giving scale to the facade.



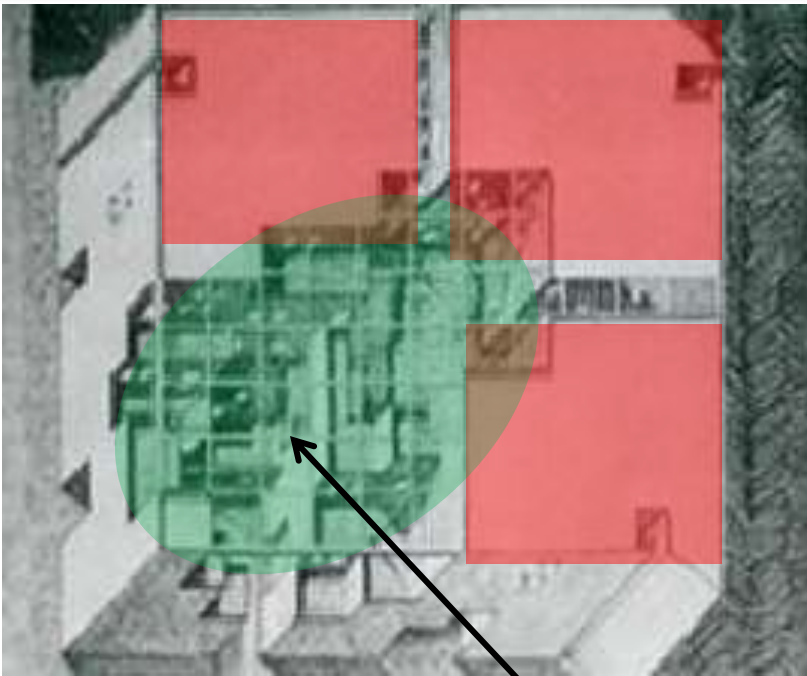
### Inferences:

- Windows/Punctures are used as a modulator of the facade.
- Window act as a visual link to the outside.
- Windows frame views to the outside if placed properly.
- Window acts as an aperture for light, air & view.

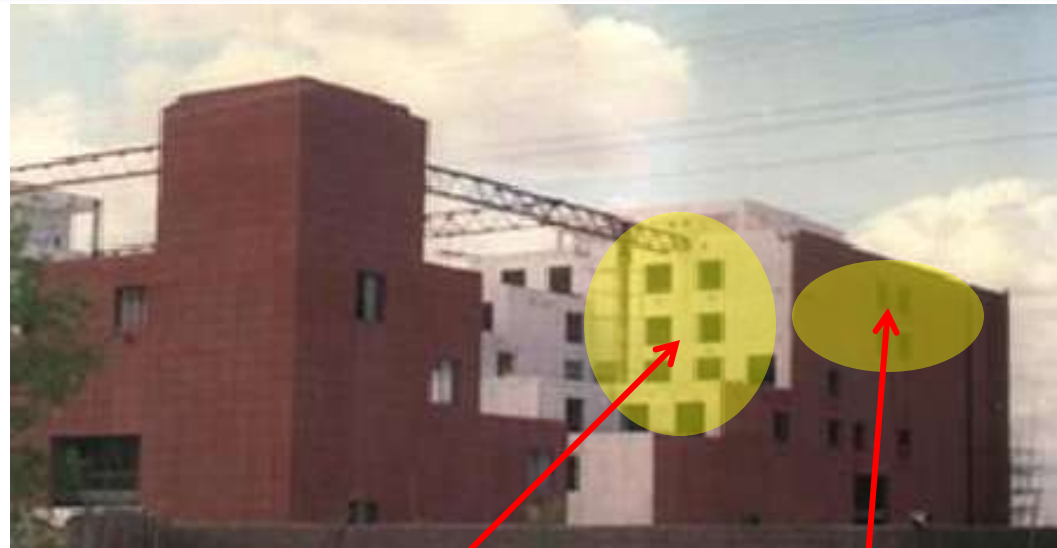


Rectangular punctures illuminate the corridor, and also act as seating spaces.





3 buildings set around a courtyard



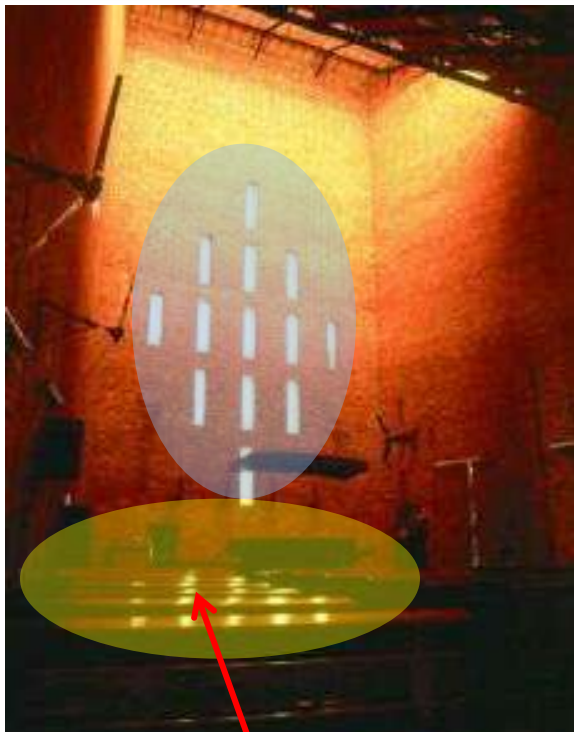
The lighting of the offices is from windows overlooking this central space

Random punctures made in the facade.



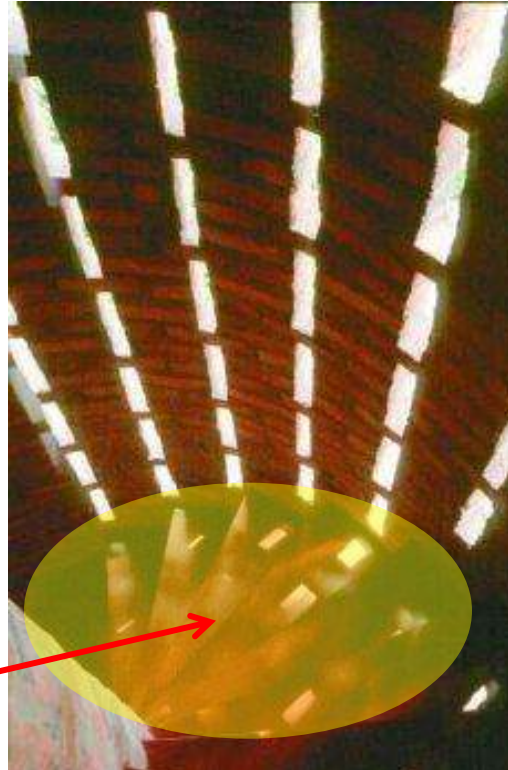
The punctures provide scale to the façade.

Dead facade punctured uniformly, to minimize the visual weight.



The Loyola Chapel

Chapel reflecting Baker's mastery over light.



Nalini Nayak's Residence, Trivandrum



IISE, KERALA

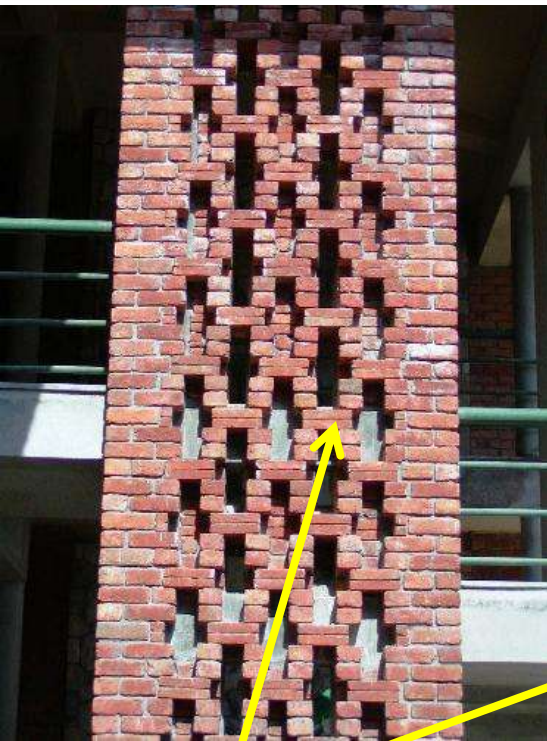
Simple manipulation in the way bricks are placed...



### Inference:

- Perforated brick walls create dappled patterns of light creating interest and adding to the visual transparency





- One can easily recognize Baker's structures by the presence of jaalis on them.
- Glass windows, frames and sills are replaced by traditional jaalis.



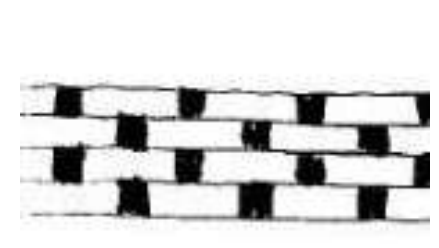
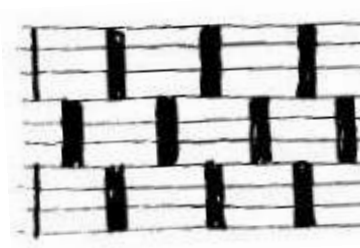
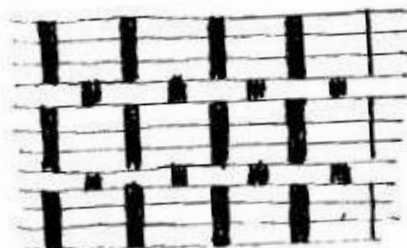
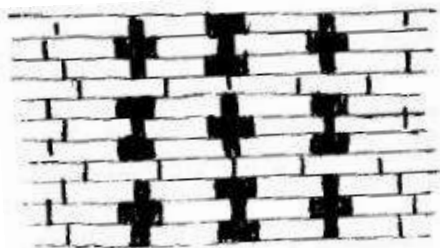
*IISE, KERALA*

Centre for Development Studies, Trivandrum



Innovative system of curved double walls.

Jaalis can be designed in various patterns as desired.



# *Exposed concrete*

**SECRETARIAT, CHANDIGARH**

**MILL OWNERS ASSO.  
BLDG, AHMEDABAD**

**WORLD BANK  
OFFICE, NEW DELHI**

**HIGH COURT, CHANDIGARH**

MILL OWNERS ASSOCIATION BUILDING IN AHMEDABAD  
(1951-1953) (Architect: LE CORBUSIER)

*'The Millowners' building is a little palace genuine evidence of an architecture for modern times adjusted to the climate of India. With the other Ahmedabad buildings... it will be a true message towards an Indian architecture.'*

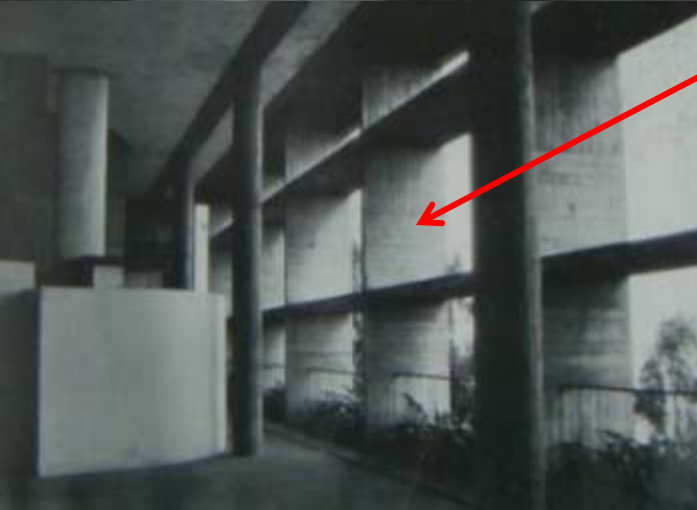
*Le Corbusier, 1953*

Use of shading devices (fins and loggias) to address to the stringent weather.

Crates of brises-soleil, towards the gardens and the river.

**Inference:**

- The design maximized the duality between solid walls and perforations.
- Views and vistas created which address to the outside environment.

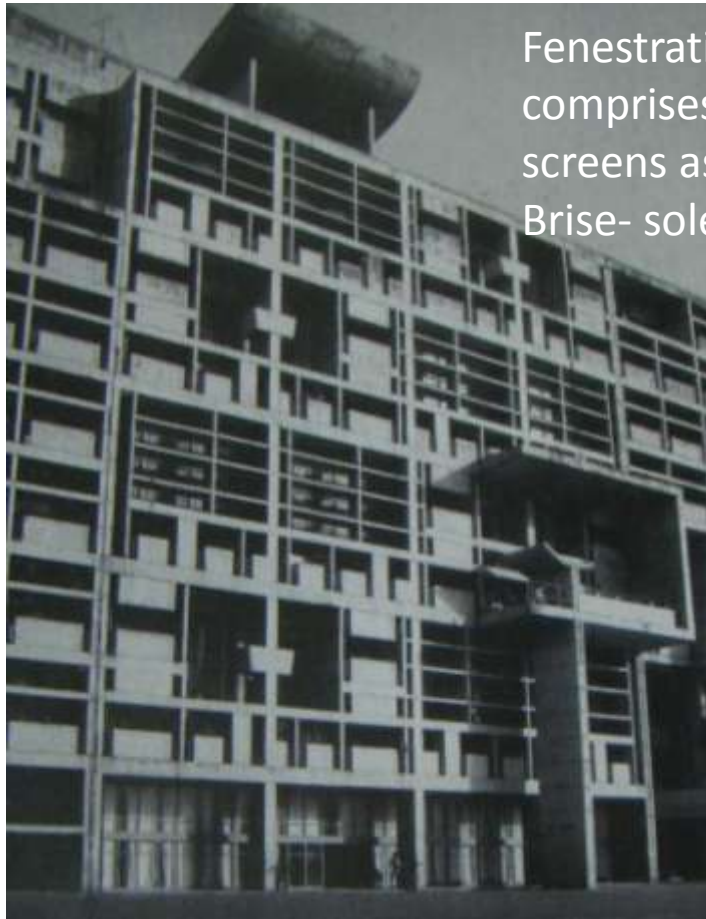


**Level 1 looking towards the river**



**East facade**





Fenestration systems comprises of insect screens as well Brise- soleil.



Deep Crates of brises-soleil also used as balconies.



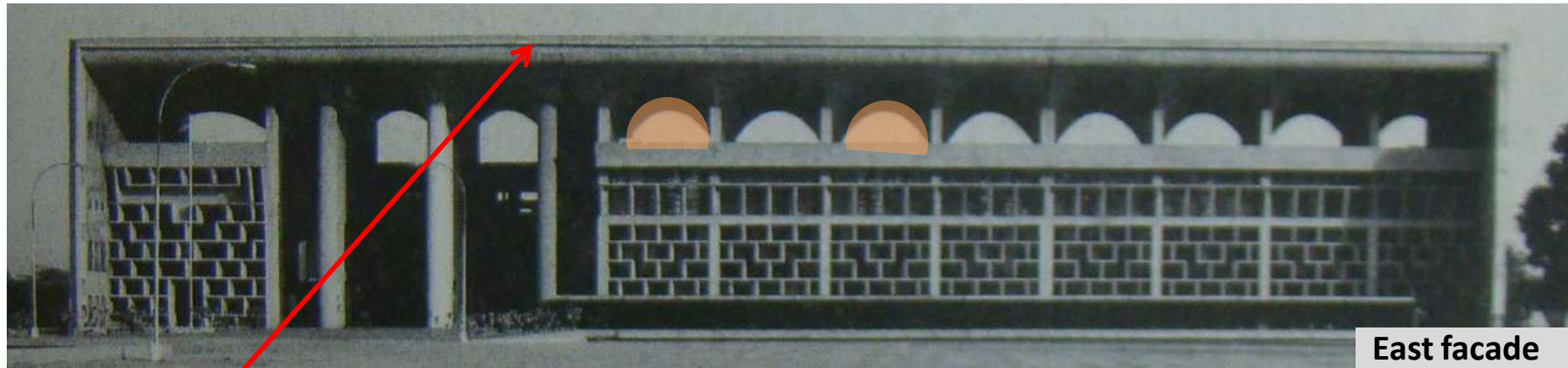
**Secretariat and Assembly Hall**

### Inference:

- Porosity created by the articulation of opening, hence the building acquires lightness and transparency.

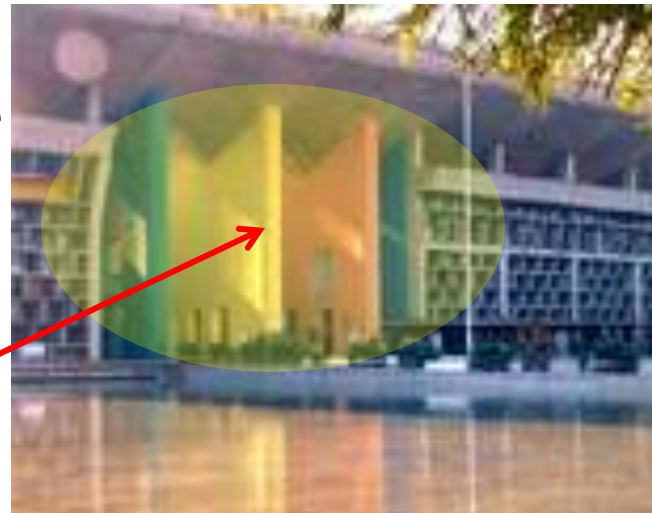
## HIGH COURT, CHANDIGARH (1951 – 1955)

The High Court is one of the first monuments to be built in the Capitol complex.

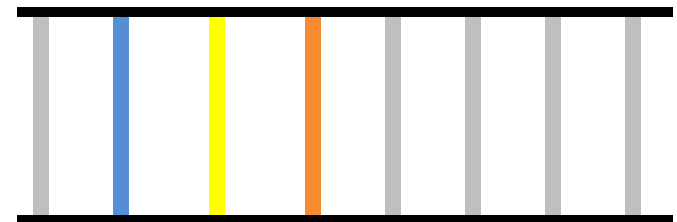


East facade

Double roof, projecting over the office block, like an inverted umbrella.



Piers, rising 60 feet from the floor and painted in bright colours.



Horizontality broken by the vertical piers

### Inference:

- Porosity achieved by the semicircular openings which also marks the end of the structure. The perforated screen monitors the solar radiation and adds porosity to the facade.





THE DESIGN IS BASED ON A CENTRAL COURTYARD ENSURING NATURAL LIGHT AND VENTILATION TO ALL THE ROOMS.



PERFORATED SCREENS/JALIS MADE OF CONCRETE; CONTROLS THE LIGHT AND VENTILATION.

VISUAL CONNECTION IS MAINTAINED.





The external finishes are **Pink Dholpur stone and Red sandstone** appropriately panelled.



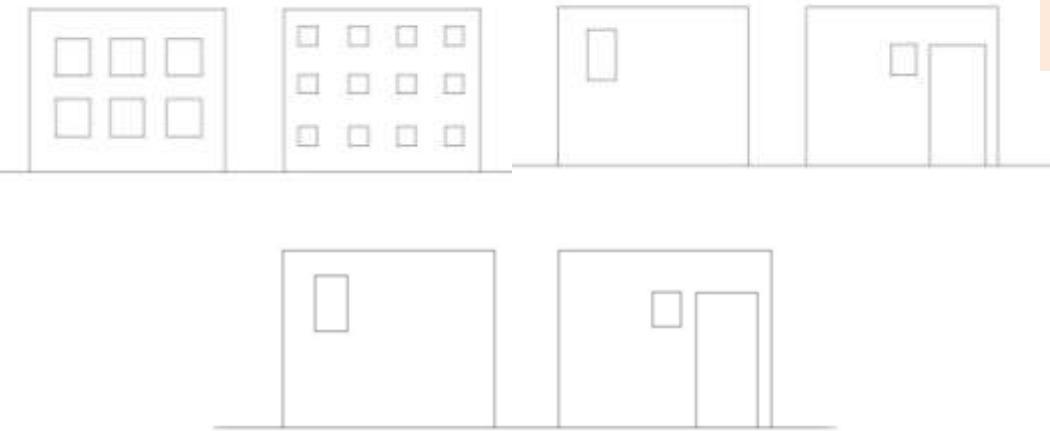
A **concrete jaali** adding delicacy to the otherwise massive structure.

### Inference:

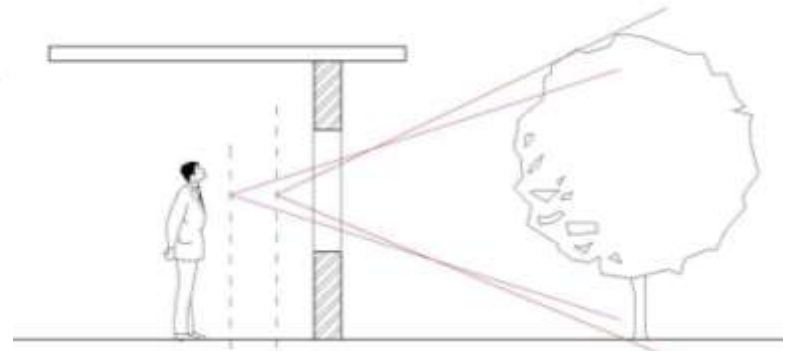
- Visual connectivity is maintained at the same time it enhances the quality of light in the space and avoids glare.

# INFERENCES:

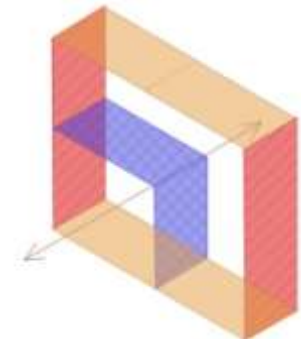
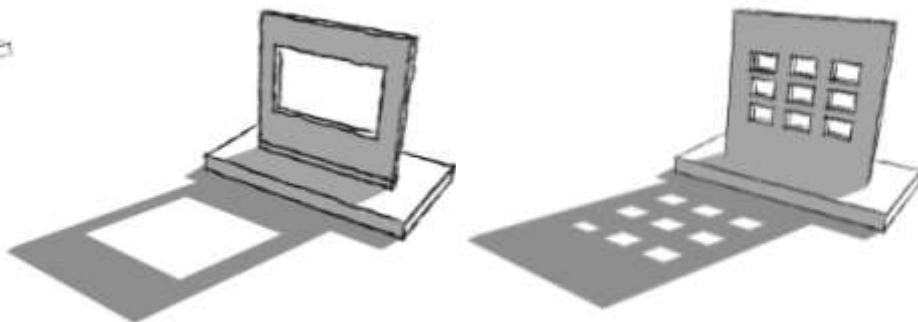
- Windows/Punctures are used as a modulator of the facade.



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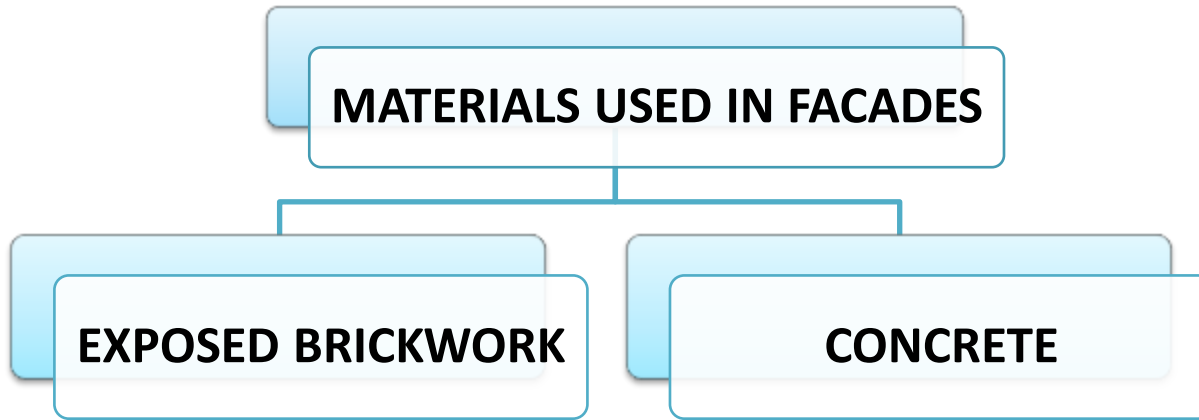


- Perforated brick walls create dappled patterns of light.

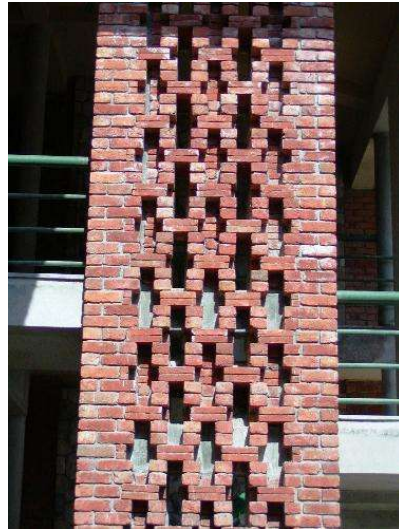


- Porosity created by the articulation of opening, hence the building acquires lightness and transparency

# INFERENCES:



Windows/Punctures are used as a modulator of the facade.



Perforated brick walls create dappled patterns of light.



Porosity created by the articulation of openings.

The design maximized the duality between solid walls and perforations.



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