Construction of Super Specialty Block at Govt. Medical College, Patiala (Punjab) under PMSSY-III

Location	:	Patiala, Punjab
Site Area	:	13,522.10 m^2
Built-up Area	:	17,666 m^2
Typology	:	Hospital building
Energy Consumption Reduction	:	73.3% reduction in Energy Consumption compared to GRIHA benchmark
EPI	:	103.9 kWh/ m^2/year
GRIHA Provisional Rating	:	3 Star Rating (Version: 3.1)
Year of Completion	:	2021

The following strategies were adopted to reduce building impact on the natural environment:

Sustainable Site Planning:

- Air pollution control measures such as site barricading, wheel washing facility and other appropriate measures were strictly adhered to during construction.
- Out of 20 existing mature trees, 7 trees were cut and 65 new trees were planted.
- Solar insolation reduction of 7.2% as compared to GRIHA base case through favorable orientation and design of façade.

Water Management:

- Reduction of 65.43% from the GRIHA base case has been demonstrated in the building water demand by installing water efficient fixtures.
- Reduction of 42.20% from the GRIHA base case has been demonstrated in the landscape water demand.
- Gunny bags were used for curing of columns and ponding technique was used for curing of slabs.

Energy Optimization and Occupant Comfort:

- For achieving visual comfort:
  - » 65.14% of the regularly occupied spaces are day-lit and meet the daylight factor as prescribed by NBC Code 2005.
  - » Automatic timer control has been provided for 100% of the outdoor lighting system.
- For achieving thermal comfort:
  - » EPI reduction of 73.3% from the GRIHA base case has been demonstrated through the integration of high performance systems.

Renewable Energy Technology installed on site:

- Solar photovoltaic system of capacity 7.5 kWp has been installed.

Sustainable Building Materials:

- 80.54% of the materials used for false ceiling, paneling and internal partitioning is low-energy.
- Kota stone, PVC flooring, wooden flooring, granite and vitrified tiles have been used as flooring materials in the project.

Waste Management:

- Multi-colored bins have been provided for segregation of dry & wet waste other waste such as e-waste, used batteries, etc.
- Central waste collection area has been provided for storage of segregated waste on site.

Integrated Design Team:

Client	:	Rajendra Hospital, Patiala
Principal Architect	:	HSCC (India) Ltd.
Landscape Architect	:	HSCC (India) Ltd.
Structural Consultant	:	HSCC (India) Ltd.
Electrical Consultant	:	HSCC (India) Ltd.
Green Building Design and Certification	:	Mr.Akshay Kumar Gupta, Passive Design Consultants