



Up-gradation of JIPMER Rural Health Centre

Location	: Puducherry
Site Area	: 17,174.62 m ²
Built-up Area	: 3,355 m ²
Energy Consumption Reduction	: 71% reduction in Energy Consumption compared to GRIHA benchmark
EPI	: 39 kWh/m ² /year
GRIHA Provisional Rating	: 3 Star Rating (Version: 3.1)
Year of Completion	: 2019

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

📍 Sustainable Site Planning:

- Out of 195 existing mature trees, 48 trees were cut and 200 new trees were planted.
- Air pollution control measures such as site barricading, coverage of fine aggregates and other appropriate measures were strictly adhered to during construction.
- 77.6 m³ of top soil was reused in landscaping and the remaining has been stored for future use.

📍 Water Management:

- Reduction of 62.35% from the GRIHA base case has been demonstrated in the building water demand by installing water efficient fixtures.
- Reduction of more than 50% 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.

📍 Water and Waste:

- Reduction of 50.16% from the SVAGRIHA base case has been demonstrated in building water demand by installing water efficient fixtures.
- Reduction of 53.44% from the SVAGRIHA base case has been demonstrated in the landscape water demand.
- Rainwater recharge pit of 1,14,290 litres capacity has been constructed on site.

📍 Energy Optimization and Occupant Comfort:

- For achieving visual comfort:
 - » 67.5% of total living area is day-lit and meets the daylight factor as prescribed by NBC 2005.
 - » The lux level of interior lighting is designed as per NBC 2005.
- For achieving thermal comfort:
 - » EPI reduction of 71% from the GRIHA base case has been demonstrated through the integration of high-performance systems.

📍 Renewable Energy Technologies Installed on Site:

- Solar Photovoltaic system of capacity 1 kWp is installed on-site in the project for complying with the mandatory clause.

📍 Sustainable Building Materials:

- Pozzolana Portland cement with 30% fly-ash content by weight has been used in plaster and masonry mortar.
- Vitrified tiles with recycled content, ceramic tiles and granite have been used as a flooring material in the project.
- 76% of the products used for doors, windows and frames are low-energy.

📍 Waste Management:

- Multi-colored bins have been provided in the project to collect and segregate waste at source.
- A dedicated place has been provided on site to store segregated waste prior to disposal.

Integrated Design Team:

Client	: Dr. K C Premarajan
Project Coordinator	: Dr. Rajkumar S (L&T Construction)
Principal Architect	: Mr. S. Krishnamoorthy, EDRC, L&T Constructions
Landscape Architect	: Mr. Arun KH, EDRC, L&T Constructions
Structural Consultant	: Dr. Justin S., EDRC, L&T Construction
Electrical Consultant	: Mr. Ramesh Ramasubramanian, EDRC, L&T Constructions
Planning Manager	: Mr. G. Tamilarasan
Green Building Design and Certification	: Mr. Ebenezer G.R