



## Police Training School, Turchi, Tasgaon

|                                           |                                               |
|-------------------------------------------|-----------------------------------------------|
| <b>Location</b>                           | : Sangli, Maharashtra                         |
| <b>Site Area</b>                          | : 263046 m <sup>2</sup>                       |
| <b>Built-up Area</b>                      | : 17250 m <sup>2</sup>                        |
| <b>Non Air-conditioned Area</b>           | : 16841 m <sup>2</sup>                        |
| <b>Energy consumption Reduction</b>       | : 30% reduction from GRIHA benchmark          |
| <b>EPI</b>                                | : 12.3 KWh/ m <sup>2</sup> /year              |
| <b>Occupancy hours</b>                    | : Training institute: daytime, hostel: 24 hrs |
| <b>Renewable energy installed on site</b> | : 14 KW                                       |
| <b>GRIHA rating</b>                       | : 4 stars                                     |

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

- 🌍 Sustainable Site Planning:
  - Top soil stored and preserved for later use.
  - Existing trees preserved & protected on site.
- 🌍 Reduction in water consumption (compared to GRIHA benchmark):
  - 52% reduction in building water consumption by use of low-flow fixtures.
  - 64% reduction in landscape water consumption by minimizing lawn area and planting native species of trees and shrubs.
- 🌍 Reduction in energy consumption (compared to GRIHA benchmark) while maintaining occupant comfort:
  - For achieving visual comfort
    - Window to wall ratio as per GRIHA benchmark for optimal natural lighting.
    - External shading and efficient glazing systems to reduce solar heat gain and glare-free day-light.
    - ECBC compliant energy efficient artificial lighting design.
  - For achieving thermal comfort
    - Functional building plans with efficient circulation, optimal daylight and ventilation
- 🌍 Renewable energy technologies installed on site:
  - 21.5% annual energy requirement for internal artificial lighting met by solar energy system installed on site.
  - Installed capacity of solar and wind energy: 14 KW.
  - 28105 units of electricity generated annually.
- 🌍 Use of low-energy/green materials:
  - Regionally available grey basalt stone used in external facade.
  - 22% cement replaced by fly-ash in structural concrete.
  - Cabinetry provided with kaddapah stone partitions.
  - Aluminum with 70% pre-consumer recycled content used in windows.

### Integrated Design Team:

|                                                    |                                                  |
|----------------------------------------------------|--------------------------------------------------|
| <b>Project Management</b>                          | : Cube Gokhale & Associates, Sangli              |
| <b>Architect</b>                                   | : Chaugule – Patil Consultants Pvt. Ltd., Sangli |
| <b>Landscape Architect</b>                         | : Atul Daptardar                                 |
| <b>Electrical Consultant</b>                       | : SP Engineers, Miraj                            |
| <b>Green Building Design and Energy consultant</b> | : The Energy and Resources Institute             |