RENOVA CITY
THE FUTURE

Energy Saving, Sustainability , Smart Cities.

Shoubra Faculty of Engineering

DESIGN OF ELECTRICAL DISTRIBUTION SYSTEM FOR RENOVA SMART CITY.

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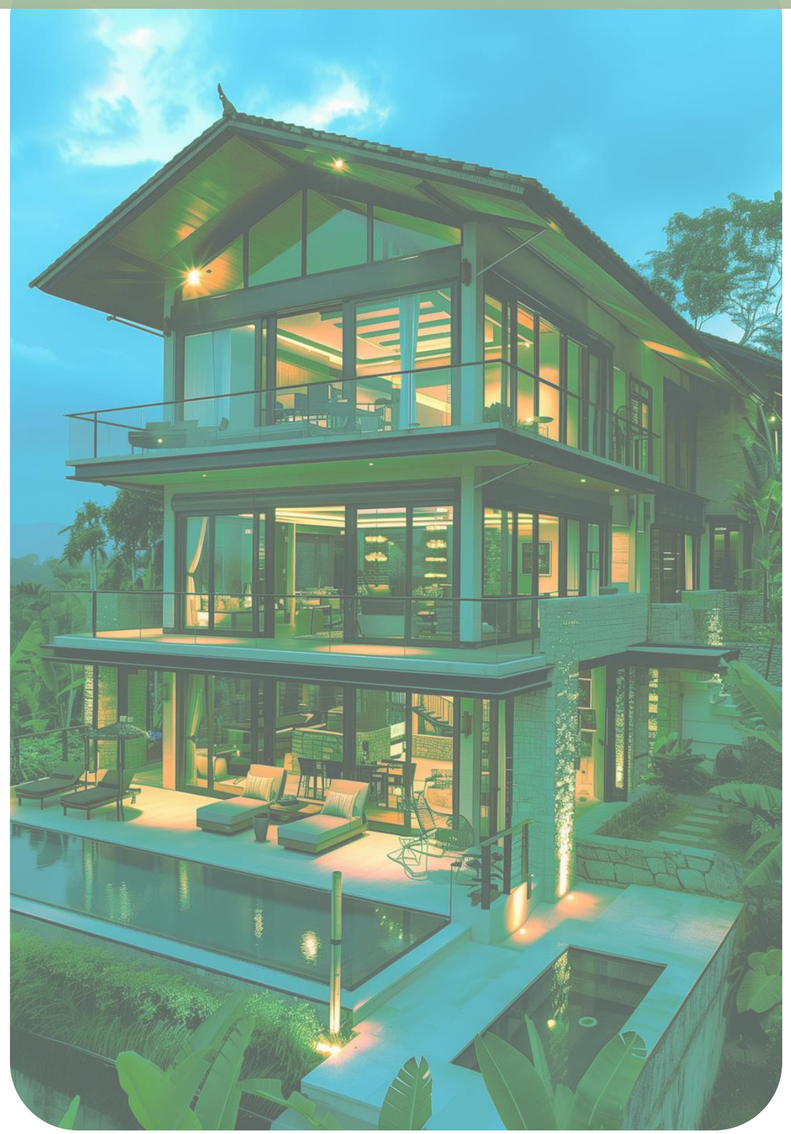
OUR AGENDA



Why Smart City ..?

- Smart cities offer a transformative solution to the challenges of urbanization by integrating advanced technologies with sustainable practices.
- With intelligent energy management, LEED-certified green infrastructure, and data-driven systems, smart cities reduce environmental impact while enhancing the quality of life.
- By choosing a smart city, we embrace a future of efficiency, resilience, and sustainability, fostering economic growth and ensuring resource conservation for generations to come.

PROJECT OVERVIEW

- A smart and green city embodies efficiency, livability, and sustainability—economically, socially, and environmentally.

- This vision is now achievable through the integration of smart systems and renewable energy which can integrated together to perform our vision, offering advanced operational and information technologies that harness real-time, reliable data.

- Our project merges these smart technologies with sustainable practices, creating a green city consisting of 140 villas, two schools, a Bank, and a hospital. This harmonious blend promotes energy efficiency, enhanced quality of life, and long-term sustainability for future generations.

BUILDINGS

BANK

HOSPITAL

SCHOOL

VILLA

DESIGN STEPS

1
Conceptual Design 30%

- Load Estimate
- Tie In
- Bulk Equipment sizing
- Zoning
- Space Program
- Concept SLD

2
Schematic Design 70%

- Lighting
- Small power
- MEP Coordination
- Schematic SLD

3
Detailed Design 100%

- Cable & CBS sizing
- V.D and S.C Calculations
- Cable routing
- Earthing
- Lightning
- SLD

4
project systems Integration

- Smart Infra
- KNX
- BMS
- Light Current

PROJECT SYSTEMS

KNX

- LIGHTING CONTROL
- BLIND & SHUTTER CONTROL
- HVAC CONTROL
- MOBILE APPLICATION
- INTEG WITH OTHER DISCPLINES

BMS

MONITORING :
- HVAC
- BULK EQUIPMENTS

MONITORING & CONTROLL:
- FIRE PUMP

OTHER DISCIPLINES

- PV GRIDS
- EV INTEGRATION
- SMART STREET LIGHTING
- SMART PANELS
- SMART GRIDS
- SMART METERS

LIGHT CURRENT

- FIRE ALARM
- DATA & TELECO.
- SOUND
- NURSE CALL
- CCTV
- ACCESS CONTROL
- IP TV
- GRMS
- PARKING SYSTEM