

III. SMART ROADS (SMART POLES AND STREET LIGHTS) ON PPP BASIS – BHOPAL

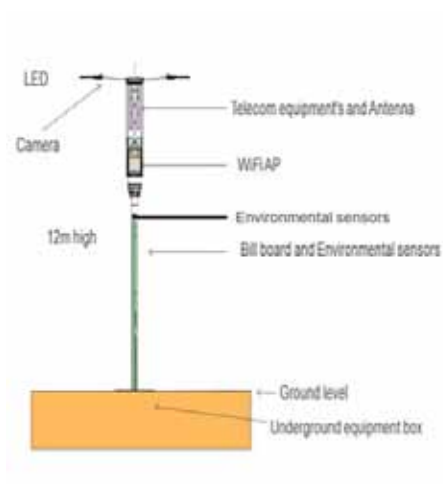
CONTEXT

Bhopal is the capital of the Indian state of Madhya Pradesh known for its lakes and world heritage sites. It is also one of the greenest cities in India. Bhopal has a population of 2,371,061 (2011). Bhopal is also a vibrant economic centre of the state. To position itself as a global capital city, Bhopal aims to improve its infrastructure by introduction of innovative Smart Solutions.

THE INTERVENTION

Project description

Bhopal has launched first an innovative Public Private Partnership (PPP) based smart poles and intelligent streetlights project under the Smart Cities Mission. The project is innovatively structured in such a manner that it delivers bundled smart services to citizens and maximum values for money to the city authority.



Smart Poles with Intelligent Street Lighting in Bhopal

The two major components of this project are as follows:

A. Smart Poles: 400 Smart poles to be installed across the city. Smart Pole offers multiple services to the city residents; the integral parts of the smart pole are as below:

- ~ Energy efficient and remotely controllable LED street lights
- ~ Surveillance cameras for safety and parking violation detection
- ~ Environmental Sensors to monitor air quality, temperature and humidity
- ~ Wi-Fi hotspot services for the city
- ~ Electric vehicle charging points to promote use of electric vehicles in the city
- ~ Mobile based application with functionality of SoS
- ~ Optical fiber for better bandwidth to the Wi-Fi users/ providing backhaul to telecom operators
- ~ Smart pole has telecom tower infrastructure to match with city aesthetic and ready to accommodate upcoming technology as 4G and 5G

B. Intelligent Street Lights: 20,000 LED street lights to be installed by replacing the conventional sodium lamps and mercury lamps. Main features of intelligent street lighting system are as follows:

- ~ Increased life of LED lights
- ~ Intelligent, programmable street light system for efficient power management
- ~ Remote operation and control of street light system
- ~ Report of operating (green sign) and non-operating (red sign) luminaries
- ~ Power theft control detection
- ~ SMS to maintenance field staff in event of faults
- ~ Workforce cost saving
- ~ Automatic report generation for day/ month/ year