



DAV Institute of Engineering & Technology, Jalandhar

Department of Civil Engineering

CONSULTANCY PROJECT - SAHARANPUR SMART CITY

1. Background

Saharanpur is the northern most city and a Municipal Corporation in the state of Uttar Pradesh in northern India. It is the administrative headquarters of Saharanpur District and the Saharanpur Division. Saharanpur city grew in a region named after a Sufi Saint Shah Haroon Chishti. It was founded by Sah Ranbirsingh, a Jain nobleman who was the Mughal treasurer. Saharanpur is known for its wood carving cottage industry as well as a thriving market for local agricultural products including basmati rice, vegetables; Horticulture produces including litchis, mangoes, guavas etc., Gur and Sugar. District have 33229 Hectares of Forest. A variety of industrial enterprises are located here including textiles, sugar, machinery, and paper and cigarette factories. It is located at tri-junction of 3 states- Himachal Pradesh, Haryana and Uttarakhand situated about 550 km from the capital city Lucknow, 164 km from Government of India has announced the list of 90 cities to be taken up for development as smart cities. The cities have to now move towards converting their plan proposals to projects.

2. Area Based Development

Saharanpur envisions retrofitting of 1260 acres of selected local area confined by rivers Dhamola and Paondhoi in East, old municipal limit in North, Gote Shah Road in west and railway line in south. It contains most of the Old City, residences and commercial spaces area development. The retrofitted area can become a new socio-economic engine for the City Core Area. Through a systematic retrofitting approach and smart infrastructure services, the proposed project will positively impact livability of inhabitants, improve livelihood with diverse mix of residential, commercial, retail and industrial development. The modules (set of projects) identified under the ABD proposal is as below:

Module 1: SAHART MULTIPLE ECONOMY

- 1.1 Strengthening Common Facility Centre and development of Research and Design centre for wooden handicrafts with Tools, Machinery and equipments for wooden handicrafts carving at Old Bus Stand.
- 1.2 Development of cold storage & food processing unit at Mandi Samiti with logistic center reinforcement with Dedicated Eastern Freight Corridor and railway station.
- 1.3 Development of Commercial Shopping & Office Complex with Multilevel Parking at Delhi Bus Depot

Module 2: SAHART SEWERAGE AND SANITATION

- 2.1 Strengthening Sewerage Network



- 2.2 Provision of SCADA monitoring for Sewerage System
- 2.3 Automatic sewer cleaning machine for cleaning sewers
- 2.4 Fecal Sludge Management System and Novation of FSTPs with SCADA & Energy Generation
- 2.5 Development of Solar based Smart Public Toilets with facility of self- cleaning, display Boards and Voice Guidance and ICT based monitoring

Module 3: SAHART SOLID WASTE MANAGEMENT

- 3.1 Sensor based garbage bins with Bin Clearance -RFID readers and GPRS Systems, GPS devices
- 3.2 GPS installed vehicles for primary segregated garbage collection
- 3.3 Bio-composting in Sabzi Mandi & wood carving areas to decompose the horticulture and wood waste
- 3.4 Household bins for segregation of organic and inorganic wastes
- 3.5 Provision of Compactors for Secondary Garbage transportation
- 3.6 Land for Disposal of Solid based under convergence of SMC fund

Module 4: SAHART TRANSPORT-WALKABILITY

- 4.1 Development of Internal Roads, strengthening, widening and beautification in ABD area with NMT friendly features
- 4.2 Junctions Improvement (Qutubsher, Ghanta Ghar, Fountain Chowk, Nehru Market Chowk, and Railway Station Chowk)
- 4.3 Development of Pedestrian Infrastructure along Railway Road, Chilkana Road, Sohraab road, Bhagat Singh Road, NH73, Road along River Paondhoi, Gurudwara Road, Abdul Salam Road
- 4.4 Development of Smart ON & OFF street Parking along Railway station Road, Mandi Samiti Road and over Paondoi River
- 4.5 Smart Underground & Multilevel parking at Jubilee Park & Old Bus Stand

Module 5: SAHARAT SAFETY AND SECURITY

- 5.1 Installation of CCTV camera with night vision and control Cables in Public Open spaces on Roads and Streets not covered under ITS
- 5.2 Traffic Police booths for safety & Security
- 5.3 Variable sensors for pedestrian/ traffic count

Module 6: SAHART WATER SUPPLY IMPROVEMENT

- 6.1 Development of feeder mains and Water Distribution Network
- 6.2 Provision of Smart Consumer Water Meters with SCADA based monitoring
- 6.3 Automated online water quality Monitoring System for distribution network
- 6.4 Geo-Thermal Imaging Leak detectors

Module 7: SAHART POWER SUPPLY STRENGTHENING

- 7.1 Smart Components in Power Sub-stations 33/11 KV & 11KV/440 V



- 7.2 Smart Distribution Network with sensors
- 7.3 Smart Consumer Metering with SCADA based monitoring

Module 8: SAHART ROBUST INFRASTRUCTURE

- 8.1 Robust retrofitting of Old city area of Raj Colony, Hayat Colony, Municipal colony, Baba Laldas, Hasan colony, Madanpuri & Khatakheri
- 8.2 Underground Utility Duct with Sensors
- 8.3 Development of facilities for Urban Poor (with 2 Raen Basera-night shelters at Delhi bus stop & Government Hospital & 1 Old age home)

Module 9: SAHART PUBLIC OPEN SPACES DEVELOPMENT

- 9.1 Revitalization of Paondhoi River (Desilting, Bund strengthening, Deweeding, Turfing and Lining Cleaning through aeration techniques, Drains development, inter-linkages Retaining wall/fencing)
- 9.2 Vending zones development in ABD area
- 9.3 Rejuvenation of parks in ABD area (Smart Chaupal- Model of a low cost, conversion of small and underutilized spaces for the passive or active recreation & seating of people, 1 Wellness center including Yoga center, Jubilee park-Child- friendly, disabled & Gandhi Parks-open air gym & age friendly)
- 9.4 Urban forestry and Landscaping through block plantations, Avenue Plantation, Lined Tree Plantation etc. (Hardscape, Softscape, Signage & furniture)- Along the sides of Dhamola river with Meshed Fencing and Other Green Spaces
- 9.5 Mega Park development at Plot No. 355 KHA(1.342 hectare) at Sadak Dudhli, Dehradun Road

Module 10: SAHART HEALTH CARE EDUCATION

- 10.1 First-aid centers for quick medical facility incase of emergency
- 10.2 Mobile clinic & Telemedicine facility

Module 11: SAHART RESPONSIVE GOVERNANCE

- 11.1 Wi-fi Hotspots for Internet facility
- 11.2 Capacity building programs of SMC officer for efficient management of ICT based infrastructure and new technology
- 11.3 Training and Orientation for citizens (video tutorials clips on SAHARAT App for training & guidance)

3. Objective of the Assignment for DAVIET, Jalandhar

The objective of the assignment for the Department of Civil Engineering - DAVIET, Jalandhar is to provide assistance to Kiranotech Engineering Consultancy (P) Ltd. (KECL) for Saharanpur Smart City Project of the Saharanpur for the preparation of Situation Analysis Report, Feasibility Report and Preliminary / Detailed Project Report as per Smart City Mission Guidelines for the following Projects:



Module No.	Description of the Project
M.No. 1.3	Development of Commercial Shopping & Office Complex with Multilevel Parking at Delhi Bus Depot
M.No. 4.1	Development of Internal Roads, strengthening, widening and beautification in ABD area with NMT friendly features
M.No. 4.2	Junctions Improvement (Qutubsher, Ghanta Ghar, Fountain Chowk, Nehru Market Chowk, and Railway Station Chowk)
M.No. 4.5	Smart Underground & Multilevel parking at Jubilee Park & Old Bus Stand
M.No. 8.1	Robust retrofitting of Old city area of Raj Colony, Hayat Colony, Municipal colony, Baba Laldas, Hasan colony, Madanpuri & Khatakeri
M.No. 9.5	Mega Park development at Plot No. 355 KHA(1.342 hectare) at Sadak Dudhli, Dehradun Road

4. Scope of Services

The expert shall also support the KECL in the different activities (listed below) for Saharanpur Smart City Project of the Saharanpur in overall project management of Smart City projects, including designing, developing, managing and implementing smart city projects as listed above including the review of the reports as given below:

Activity 1: Situation analysis report

- Integrated Projectisation - The expert will review and re-verify the integrated modules (group of projects) in the smart city proposal and regroup them into modules in consultation with the Saharanpur Smart City Limited
- Consult the available documents such as city development plans /strategy plans, sanitation plans. Mobility plan and review feasibility study etc.
- Review existing status of physical Infrastructure, available GIS maps and other available secondary data.
- Identify requirements of surveys, studies and investigations;
- Carry out necessary surveys, investigations, situational analysis

Activity 2: Feasibility Report

- Prepare feasibility study report of modules (group of projects) to ascertain both technical and financial viability based on financial models. The feasibility report should describe the various technical options with recommendation for most appropriate option
- Preparation of project development and implementation road map, project prioritization, carryout project phasing matrix and risk mitigation plan.
- Review land availability, rehabilitation - resettlement & environmental issues for identified projects



- iv. Coordinate with stakeholders and other departments of central and state governments wherever convergence is required, to facilitate integration with AMRUT, Digital India, Skill India, Make in India etc. and develop module wise action plan for completion of work
- v. Identify the possibility of private / public participation in the service delivery, as feasible and applicable and prepare contract document for such packages.

Activity 3: Preliminary / Detailed Project Report

- i. Based on the approved feasibility report prepare module wise preliminary/detailed designs report (PDR/DPR) as per requirement of the project in accordance with established engineering practices, tender drawings, and cost estimates etc.
- ii. For preparing DPR, the consultant will carry out all the required engineering surveys and investigations: such as total station/LiDAR survey, geotechnical investigation, soil survey, construction material survey, ground water investigation i.e. hydro- geological investigations, rainfall data collection, Identification of underground utilities and their mapping, water sampling and analysis etc. including sufficient off- site information to allow relationship with possibly useable off-site infrastructure to be established.
- iii. The PDR/DPR should also include assessment of utility shifting requirements and costs estimations including O&M requirements and estimates; preparing document required for statutory clearances and other clearances like Railway, Forest, National Highways etc. including environment management plan (EMP) and mitigation measures;
- iv. Assist the Saharanpur Smart City Limited on technical, commercial, financial, and legal aspects for project development as per requirement.



SMART CITIES MISSION

Ministry of Housing and Urban Affairs, Government of India

सहारनपुर
स्मार्ट सिटी



स्मार्ट सिटी के हितों को ध्यान में रख हो डीपीआर तैयार : कमिश्नर

संबंधित नामित कंपनियों ने शहर के विकास कार्यों की रूपरेखा का किया प्रदर्शन



जयपुर, सहारनपुर, बुधवार शाम सात बजे जिला और जिला अधीनस्थ एचआरडीओ के अध्यक्ष के आलावा शहर के विकास के हितों को ध्यान में रखकर हो डीपीआर तैयार करें।

कमिश्नर ने कहा कि शहर के विकास के हितों को ध्यान में रखकर हो डीपीआर तैयार करने के लिए संबंधित कंपनियों को निर्देशित किया गया है।

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