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Government of Andhra Pradesh
Panchayati Raj Engineering Department
Expression of Interest (EoI)
Establishing a GIS system for monitoring the assets of the department

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1. The department intends to establish a GIS system enabling it to map capture all its assets (Roadnetwork of about 1.4 lakh KM being primary feature and other related features) on to GIS platform and help in spatial analysis, aid decision making, instant access to spatial and attribule information over web, prioritization, generation of query driven dynamic reports & maps.

2. Detailed proposals are called from such Agencies, Organisations(Govt/Semi Govt/Public/Private)Companies/consultants who have experience in executing similar kind of work, preferably for Government departments dealing with Road networks.

3. The proposal shall include
    - A detailed technical proposal with solution overview, methodology, implementation/execution, Maintenance Plan etc.
    - Details of work experience in executing similar works. This should include such details like the project dates, Duration, Project cost, Project executing authority etc.
    - Experience certificates on similar works
    - Turnover details for the last 3 years
    - Employee strength and key employee details
    - Organisation details.

4. On receipt of such details, the department shall issue Terms of Reference(ToR)/ Request for Propsal (RFP) to shortlisted consultants for them to respond to it.

5. Clarifications in respect of above, if required, can be obtained from the Executive Engineer, PMGSY on 09440802965/09701882525 or over email on ee_wd_encpr@ap.gov.in.

6. More detailed information can be obtained at http://pred.gov.in/

7. The EoI may be submitted to the Engineer in Chief (Admn& PMGSY), Panchayati Raj, 6th Floor, Office of Engineer in Chief, PRED,SRTGN Bhavan, Errum manjil,Hyderabad latest by 3 pm on 23rd Oct 2013.

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Sd/-
Engineer in Chief (Admn & PMGSY),
Panchayat Raj Engineering Department,
Hyderabad.

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Annexure I
(Brief Description of objective and scope of Work)

1. The objective behind taking up this initiative is for establishment of a GIS system which would help in meeting the following
   - To serve as an effective tool for Planning, optimization and aid for decision making.
   - To access to any detail sought by any officer/public representative or for that matter general public, instantly.
   - To ensure that duplication of work within a dept across all projects or across depts are notified
   - To provide a GUI platform, the visual presentation of which would serve as an effective tool for prioritization and identification of works.
   - To generate spatial and MIS reports as and when required.
   - The system is envisaged to serve as an integrated tool in terms of depicting the details of not just PRED but the assets of all government agencies like National Highway/State Highway, R&B, Irrigation, Forestry, Agriculture etc.

2. The features that are proposed to be included are as below:
   a. Road Network of about 1.4 lakhs for the entire state of AP.
   b. Cross Drainage works on the above roads
   c. Habitations.
   d. The geographic details owned by other Govt departments with seamless integration.
   e. Any number of additional features that the department may decided to add at any point of time.

3. The indicative scope of functional requirements of the proposed system at a very high level would be as below
   a. To capture all the assets of PRED on to GIS platform and develop a web based application that
      - ✓ Provide a means to spatially edit, create, split, merge, delete the roads as necessary
      - ✓ Capture and maintain DRRP(District Rural Road Plan) road network with provision to classify roads as Through Roads(TRs),Major Rural Link Roads(MRLs), Link Roads(LRs) based on their definitions to be defined from time to time.
      - ✓ Offer the functionality that would enable the changes made to surface types(Reaches) at attribute level to automatically get reflected at spatial level.
      - ✓ Link the attribute information to spatial information
      - ✓ Identify/Locate the Point information like Habitations,CD works, Buildings, Local and marginal material information/quarries etc.
      - ✓ Provision to capture the locational details(Latitudes/Longitudes) of point, line, polygon features through a handheld GPS device and seamlessly upload the information on to GIS platform with no compatibility issues.

✓ Facilitate for analysis that relates the Line and point features. For example determine the population served(sum of the population of enroute villages within a proximity of say 100 mts) by a particular road. Like wise highlight such habitations with over and above 250 but not linked by any road etc.

✓ User management with appropriate roles, hierarchy, authentication etc.

✓ Provide a Query building tool with such inputs identified by the department.

✓ Dash board with predefined queries/reports etc.

✓ Query driven Spatial and tabular reports. Flexibility to add/alter/delete the fields of the reports. Dynamic reports.

✓ Access to field level staff with proper authentication, to edit the spatial information, update tabular information, Download/upload tabular information.

✓ Event based alerts to concerned officers on certain events to be defined by department from time to time.

4. The indicative technical requirements of the proposed system at a very high level would be as below
   a. It shall preferably adopt open source softwares for all softwares.
   b. The data security is of utmost concern and stringent data security policies shall be in place.
   c. Provision for Disaster Recovery with recovery within a day.
   d. Firewall server shall be provisioned for.

5. To enable the above, the department shall provide the consultant with the following data
   a. The spatial information in the form of shape files of the entire PRED Road network.
   b. The digital information of state/district/mandal boundaries, water bodies, forest demarcation, all spatial features of the state, R&B Road network etc.
   c. Attribute information for PRED Roads, Habitation details, Cross drainage works etc in the form of excel sheets.

6. The department shall engage in all discussions, assist the consultant towards the formulation.

7. The following activities are proposed to be covered under the project.
   a. Setting up GIS based system, integrating and validating all the information/data provided by the department.
   b. Building a web based application with the features mentioned above.
   c. Procurement of hardware and software as required. As mentioned above, open source softwares are preferred.
   d. Assist the department in finalisng the web hosting related activities
   e. Deployment, Installation, Commissioning, UAT, Production movement
   f. Documentation
   g. Training
   h. Maintain for a period of five years.

Sd/-
Engineer in Chief (Admn & PMGSY),
Panchayat Raj Engineering Department,
Hyderabad.