



सत्यमेव जयते

URBAN MAPPING AND GEO-DATABASE GENERATION FOR LEMMI, TATO & BASAR DISTRICT HEADQUARTERS OF ARUNACHAL PRADESH USING REMOTE SENSING AND GIS

Request for Proposal (RFP)



**Department of Town Planning and Urban Local Bodies
Govt. of Arunachal Pradesh
Mowb-II, Itanagar-791111
www.arunachaltp.nic.in**

December 2021



नगर नियोजन एवं शहरी स्थानीय निकाय विभाग

Department of Town Planning & Urban Local Bodies
अरुणाचल प्रदेश सरकार Govt. of Arunachal Pradesh
ईटानगर/Itanagar

File No. DTP/MP-111/2021-22

Dated Itanagar the 25th November' 2021

NOTICE INVITING TENDER

Request for Proposals (RFP) for Consultancy Services
Urban Mapping and Geo data base generation for Lemmi, Tato & Basar
district headquarters of Arunachal Pradesh.

The Governor of Arunachal Pradesh, Itanagar proposes to undertake Urban Mapping and Geo database generation for Lemmi, Tato & Basar district headquarters of Arunachal Pradesh, under the provisions of Arunachal Pradesh Urban & Country Planning Act, 2007(Act. No. 3 of 2008).

Proposals are invited to conduct the assignment and submit the deliverables from Public Sector Undertakings/Autonomous Bodies/ISO certified Organizations and consulting firms/ consortium that have requisite experience and infrastructure.

The interested consultants/consortiums can download/purchase the RFP/application forms online from the departmental Tendering website: <http://arunachaltp.nic.in>. The completed application, as per instructions in the RFP document, should be submitted latest by 3rd January 2022 upto 1500 hours. For further details may contact Shri Siyang Rebe, Assistant Town Planner at +91 8837484019.

The Department reserves the sole right to accept or reject any or all proposals without assigning any reason whatsoever.

Sd/-

Mitali Namchoom, IAS

Secretary to the Govt. of Arunachal Pradesh
Department of Town Planning and Urban Local Bodies
Govt. of Arunachal Pradesh
Itanagar

File No. DTP/ MP-111/2021-22/1488-90

Dated Itanagar the 3rd December' 2021

Copy to:-

1. SPA to Secretary to the Govt. of Arunachal Pradesh, Department of Town Planning & Urban Local Bodies, Itanagar for information please.
2. The Director, IPR, Papu Nallah, Naharlagun for information with request to publish the same in any one of the Local News Paper preferably, The Arunachal Times and in one of the National News Paper please.
3. Office copy/Guard file.

(Likha Suraj)

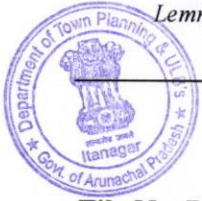
Director

Department of Town Planning and Urban Local Bodies
Govt. of Arunachal Pradesh
Itanagar



CONTENTS

	Title		Page No.
Section 1.	Letter of Invitation	.....	05
Section 2.	Terms of Reference	.....	06
Section 3.	Information to Consultants	.....	10
Section 4.	Prequalification- Standard Forms	.....	18
Section 5.	Technical Proposal - Standard Forms	.....	22
Section 6.	Financial Proposal - Standard Forms	.....	31
Section 7.	Standard Form of Contract	.....	36



SECTION 1. INVITATION

File No. DTP/MP-111/2021-22

Dated Itanagar the 3rd December' 2021

1. Department of Town Planning and Urban Local Bodies, Government of Arunachal Pradesh, Itanagar invites Request for Proposal for "Urban Mapping and Geo database generation for Lemmi, Tato & Basar district headquarters of Arunachal Pradesh".
2. The objective of the assignment is to prepare Urban Mapping document and collection of Geo-Database for Lemmi, Tato & Basar district Headquarters under the provisions of Arunachal Pradesh Urban & Country Planning Act, 2007(Act. No. 3 of 2008).
3. A consulting firm will be selected as per procedures described in this RFP.
4. The RFP includes the following:

Section 1 - Invitation

Section 2 - Terms of Reference

Section 3-Information to Consultants

Section 4 - Prequalification - Standard Forms

Section 5- Technical Proposal - Standard Forms

Section 6 - Financial Proposal - Standard Forms

Section 7 - Standard Form of Contract

Likha Suraj
Director

Department of Town Planning and Urban Local Bodies
Govt. of Arunachal Pradesh
Itanagar

Director
Town Planning & ULBs
Govt. of Arunachal Pradesh
Itanagar



Section 2. Terms of Reference

Contents

1. Introduction
2. Scope of Work
3. Deliverables Time/ Payment Schedule
4. Procedure for Monitoring & Review of the Assignment
5. General



Terms of Reference

“Urban Mapping and Geo database generation for Lemmi, Tato & Basar district headquarters of Arunachal Pradesh”.

1. Introduction

- 1.1 The Govt. of India as well as the Government of Arunachal Pradesh has intended to provide basic services (e.g. water supply, electricity, urban transport) to all households and build amenities in all the urban centers and potential growth centers of the state which will improve the quality of life for all, especially the poor and the disadvantaged. The major components of the Government Policy decision are to (i) ensure that every household has access to a tap with assured supply of water connection; (ii) increase the amenity value of cities by developing greenery and well maintained open spaces (e.g. parks); and (iii) reduce pollution by switching to public transport or constructing facilities for non-motorized transport (e.g. walking and cycling). For provision of those quality services, Urban Planning and City Level Planning including Preparation of Master Plan using GIS is mandatory in the modern days. Master Plans provide the basis for infrastructure provision, effective landuse management and utilization, spatial growth management, enable project planning, and urban management.
- 1.2 Planning response in Arunachal Pradesh has generally not been able to keep pace with the rate of urbanization and formation of towns. The State of Arunachal Pradesh as on September 2021 has 47 notified towns, 1 census town and identified 9 other potential growth centres.
- 1.3 The number of urban settlements in Arunachal Pradesh is increasing relatively rapid growth and the percentage of state's population living in urban areas is expected to increase to nearly 40% by 2026 and cross 50% by 2051. This means that a larger number of settlements, as well as a larger percentage of population, has to be planned for urgently to ensure economic growth of the nation and well-being of the people.
- 1.3.1 The State of Arunachal Pradesh has been recorded with very high urban growth rate of 37.55% (Census 2011) and annual growth rate of 5.44%. The urban sprawl has been towards the sub-urbs and rural vicinity. It is immediately required to regulated the growth and development of urban and potential growth centers of the state. Almost all the urban and potential growth centers being located in the hilly areas, it is required to incorporate advanced technology of Remote Sensing and GIS for preparation of the Development/Master Plan.
- 1.4 In order to address this requirement, the Government of Arunachal Pradesh under Department of Town Planning and Urban Local Bodies, has intended to hire world class GIS experts and urban planners and formulate GIS-based Master Plan for all the urban and potential growth centers of the state in phased manner using Remote Sensing and GIS technology. Department of Town Planning and Urban Local Bodies is the State Nodal Agency (SNA) for Formulation of Master/Development Plan in the state of Arunachal Pradesh.



- 1.5 Accordingly, the Department of Town Planning and Urban Local Bodies, Government of Arunachal Pradesh, Itanagar proposes to undertake work on creating Geo-Database inventory prior to Formulation of GIS-based Comprehensive Master Plan for Lemmi, Tato & Basar district Headquarters of the State of Arunachal Pradesh.

Sl. No.	Name of City/ Town	Civic Status		Extent of planning area (sq.km)
1	Lemmi under Pakke Kesang District	Nagar (Proposed)	Panchayat	12.00 Sq.Km. approx
2	Tato under Shi Yomi District	Nagar (Proposed)	Panchayat	9.00 Sq.Km. approx
3	Basar under Lepa Rada District	Nagar (Proposed)	Panchayat	30.00 Sq.Km. approx

1.6 Description of the Assignment

The major components of the assignment are:

- 1.6.1 Geo-database creation:** To generate spatial information relating to existing landuse details (Private/Govt/Community) with landuse register, lithology, existing structures and their typology, geomorphology, contour profile and slope information, existing transport network, service networks (water supply, telecom, power, drainage), settlements, hazards and ground water prospects. The deliverables shall be in the form of base map, thematic maps specified, data analysis reports, etc.
- 1.6.2 Spatial Attribute data creation:** to generate non-spatial information relating to socio-economic conditions, rainfall, water quality, geo-technical properties of soil and rock and traffic condition.
- 1.6.3 Development of multilayered data system:-** To develop a value added multilayered Decision Support System (DSS) using the information generated on the above themes for solving specific problems related to landuse, transportation, service networks, hazard, drinking water, infrastructure provision etc for Lemmi, Tato and Basar district headquarters.

2. Scope of Work

- 2.1 Provisions under Section 15 of Arunachal Pradesh Urban and Country Planning Act, 2007, may be referred to for the purpose. (The Copy of the said Act. may be downloaded from www.arunachaltp.nic.in).
- 2.2 **Development of Decision Support System**

A Decision Support System (DSS) in the form of customized GIS application software consisting of all the spatial and non spatial database along with perspective land-use and transport plan for sustainable urban area development of Lemmi, Tato and Basar district headquarters.



Further to prepare the development plan and other plans for Lemmi, Tato and Basar district headquarters under provision of the Act and to further regulate the future growth and development of the town in a systematic way.

3. Deliverables and Time/ Payment Schedule

The following time schedule/payment schedule is proposed:

Particulars/Work component	1st year				2nd year			
	1st qtr	2nd qtr	3rd qtr	4th qtr	1st qtr	2nd qtr	3rd qtr	4th qtr
(For all the towns)								
Procurement of satellite data	■	■						
GCP collection & satellite data processing for DEM, contour generation & ortho-rectification		■	■					
Base map preparation & pre-field interpretation of thematic maps			■	■				
Field work & data/sample collection				■	■			
Testing/analysis of samples in the laboratory					■	■		
Traffic survey & analysis					■	■		
Post-field interpretation & finalization of thematic maps						■	■	
Generation of perspective land-use & transport plan							■	
Generation of DSS & report writing								■

The Consultant will be required to submit the status/work progress report of each quarter to the Nodal Officer at Directorate of Town Planning and Urban Local Bodies. The observations/ suggestions of the Nodal Officer will be incorporated in the next stage of data generation and submission.

The payment will be made in two consecutive financial years or on completion of the work.

4. Procedure for Monitoring & Review of the Assignment

The Consultant's work will be monitored and reviewed by the Nodal officer of Department of Town Planning and Urban Local Bodies, Govt. of Arunachal Pradesh from time to time.

The consultants shall submit each of the above-mentioned deliverables as per the schedule mentioned above. This will be followed by a presentation to the department and the department shall give their comments and suggestions in the form of feedback. Subsequently, the consultant will incorporate all such comments and suggestions in final stage report.

5. General

- i) The details about the methodology and data outputs in respect of consultancy shall be worked out in the bid offer by the consulting firm.
- ii) All data collected by the Consultant shall be made available to the Client in proper organized format and this data shall remain the property of the Client.
- iii) The data collected and the research results of the Consultancy shall not be divulged to other agencies without the explicit approval of the Client.
- iv) All reports should be submitted in hard and soft copy. Reports should be in Microsoft format, maps and drawings should be in the compatible format of GIS facilities available with the Client and in Auto CAD format as may be required by the client.
- iv) Quarterly Progress Report will be submitted by the consultant to review the progress of the work.



SECTION 3. INFORMATION TO CONSULTANTS.

1. Introduction

- 1.1 Department of Town Planning and Urban Local Bodies, Government of Arunachal Pradesh, Itanagar henceforth referred as Client, will select a Consultant for carrying out the assignment on “Urban Mapping and Geo database generation for Lemmi, Tato & Basar district headquarters of Arunachal Pradesh” using Remote Sensing and GIS under Department of Town Planning and Urban Local Bodies, Government of Arunachal Pradesh, Itanagar.
- 1.2 Interested consulting firms/consortiums may submit one proposal only.
- 1.3 Separate proposals are to be submitted for technical and financial bids.
- 1.4 Proposals should be submitted in English.

2. Method of selection

- 2.1 Selection will be done on basis of 3-stage process-
In the 1st stage, pre-qualification information submitted by interested Consultants in prescribed format will be evaluated. Only those who meet the pre-qualification criteria will qualify 1st stage and will be considered for 2nd stage.
In the 2nd stage, Technical Proposals will be opened and evaluated and Technical scores will be given.
In the third stage, Financial Proposals of those Consultants who have a technical score of 80% and above will be opened. The Consultant with the L1 bid will be called for further discussions to sign a Contract Agreement.
- 2.2 Interested consulting firms are requested to submit three-stage documents in separate sealed covers:
 - a) Pre-Qualification
 - b) Technical Proposal
 - c) Financial Proposal
- 2.3 Consultants must submit an original and two additional copies of Pre-qualification, Technical Proposal and Financial Proposal.
- 2.4 The proposals must be accompanied with a **non-refundable processing fee** of ₹ **10,000.00 (Rupees Ten thousand only)** in the form of a bank draft drawn in favor of Director, Department of Town Planning and Urban Local Bodies, Government of Arunachal Pradesh, Itanagar, payable at Itanagar from any Nationalized Bank.
- 2.5 The Technical Proposal should be accompanied with an **Earnest Money Deposit** (refundable for all non-successful bidders) of ₹ **2, 97,000.00 (Rupees Two lakhs Ninety-Seven thousand)** only for Local firms of State of Arunachal Pradesh and ₹ **5,94,000.00 (Rupees Five lakh Ninety-four thousand only)** for firms registered outside the state of Arunachal Pradesh in the form of bank draft drawn in favor of Director, Department of Town Planning and Urban Local Bodies, Government of Arunachal Pradesh, Itanagar, payable at Itanagar from any Nationalized Bank.



Refund/Adjustment of Earnest Money:

- Earnest money of the successful bidder(s) shall be refunded/ adjusted with the final payment to the Consultant.
 - Earnest money of the unsuccessful bidder(s) shall be refunded as early as possible.
 - No interest shall be paid on Earnest Money
 - Earnest money shall stand forfeited -
 - If the bid is withdrawn at any time before the validity period, or
 - If the successful bidder fails to execute the contract and/or does not execute performance guarantee/ the project within the stipulated time period.
- 2.6 The outer envelope containing proposal should be marked clearly “Urban Mapping and Geo database generation for Lemmi, Tato & Basar district headquarters of Arunachal Pradesh” using Remote Sensing and GIS.
- 2.7 The proposal may submit in the following address:

Likha Suraj

Director and Nodal Officer
Directorate of Town Planning and Urban local bodies
Govt. of Arunachal Pradesh
Mowb-II, Itanagar-791111

- 2.8 Proposals must be submitted not later than the following date and time:
Date: 3rd January’ 2022, Time: 3.00 pm (Local time).
- 2.9 Proposals must remain valid for 90 days after the submission date until validity extended by the Consultant. During this period, the consultant is expected to keep available the key professional staff proposed for the assignment. The client will make the best effort to complete the tendering process within this period. If the client wishes to extend the validity period of the proposals, the Consultants may do so and those who do not agree have the right not to extend the validity of their proposals.

3. Pre-Bid Conference

- 3.1 A pre-bid conference will be held on 17th December’ 2021 in the office of Director, Department of Town Planning and Urban Local Bodies, Govt. of Arunachal Pradesh, Itanagar. Consultants are encouraged to attend the conference before submitting their proposals. *(Subject to number of response from the consultants).*
- 3.2 Clarifications of the RFP may be requested by the Consultants (in writing only, by mail, fax or email) upto three working days prior to pre-bid conference. The address for requesting clarifications is:



Siyang Rebe

Assistant Town Planner
Directorate of Town Planning and Urban local bodies
Govt. of Arunachal Pradesh
Mowb-II, Itanagar-791111
Phone: +91-8415929244
Email:siyang.rebe@gov.in

4. At any time before the submission of Proposals, the Client may, for any reason, whether at its own initiative or in response to a clarification requested by an invited consulting firm, modify the RFP documents by amendment. The Client may at its discretion extend the deadline for the submission of Proposals.
5. The costs of preparing the proposal, including visit to the Client, etc., are to be borne by the Consultant.
6. Awarding the consultancy work will be in accordance with policies of Government of Arunachal Pradesh, including policies on corrupt and fraudulent practices.

7. Preparation of Proposal

7.1 Pre-qualification criteria

Interested Consultants shall submit information in the prescribed Pre-Qualification Forms provided in Section 4 of this document. Only those Consultants whose responses are found satisfactory will be considered for evaluation of Technical Proposal.

Technical Proposal

- 7.2 In preparing the Technical Proposal, consulting firms are expected to examine the documents comprising this RFP in detail. Material deficiencies in providing the information requested may result in rejection of a Proposal.
- 7.3 The Technical Proposal should provide information using the Standard Forms provided in Section 5 of this document only, failing which the proposal may be summarily rejected.
- 7.4 The Technical Proposal shall not include any financial information.

Financial Proposal

- 7.5 The Financial Proposal should be submitted in Standard Forms provided in Section 6 of this document only.



- 7.6 The proposal should be complete, i.e., it should list all costs associated with the Assignment.
- 7.7 The Financial Proposal should clearly identify, as a separate amount, the GST of 18% (including social security and 1.5% contingency charges to be deducted by the client), duties, fees, levies, and other charges imposed under the applicable law, on the consultants, the sub-consultants, and their personnel.
- 7.8 The financial proposal should be prepared in Indian Rupees.

8. Submission, Receipt, and Opening of Proposals

- 8.1 The original Proposal (including Pre-qualification, Technical Proposal and Financial Proposal) shall be prepared in indelible ink. Any corrections must be initialed by the person or persons who sign(s) the Proposals.
- 8.2 An authorized representative of the consulting firm shall put his/her initials at all the pages of the Proposal. The representative's authorization is confirmed by a written power of attorney accompanying the Proposal.
- 8.3 The original and all copies of the Pre-Qualification shall be placed in a sealed envelope clearly marked "**Pre-Qualification**".
- 8.4 Technical Proposal, including original and all copies shall be placed in a sealed envelope clearly marked "**Technical Proposal,**" and the original and all copies of the Financial Proposal in a sealed envelope clearly marked "**Financial Proposal**" and warning: "**Do Not Open with the Technical Proposal.**" Technical and Financial envelopes shall be placed into an outer envelope and sealed. This outer envelope shall bear the title "**Technical and Financial Proposal**". This envelope along with Pre-Qualification envelope will be placed in another envelope, sealed and clearly showing the name of the assignment, the submission address, and towns for which the proposal is submitted.
- 8.5 The completed Pre-qualification, Technical and Financial Proposal must be delivered at the submission address on or before the time and date specified. Any Proposal received after the closing time for submission of proposals shall be returned unopened.
- 8.6 After the deadline for submission of proposals the Pre-qualification envelope shall be opened immediately by the Evaluation Committee (EC). If the EC desires, the short-listed consultants may be called for power-point presentation. The information will be evaluated. The Technical Proposal of only the qualifying Consultants will be opened after evaluation process. The Financial Proposal shall remain sealed until technical capability statement of all submitted proposals is prepared and consultants short-listed. The consultant's representative may opt to be present during the financial bid opening. The date will be conveyed by the consultant to the client in advance.



9. Proposal Evaluation

General

- 9.1 From the time the bids are opened to the time the contract is awarded, if any consultant wishes to contact the Client on any matter related to its proposal, it should do so in writing at the address indicated. Any effort by the firm to influence the Client in the Client's proposal evaluation, proposal comparison or contract award decisions may result in the rejection of the consultant's proposal.

Evaluation of Pre-Qualification Forms

The authorized Evaluation Committee (EC) as a whole will evaluate the Pre-Qualification Forms on the basis of their audited turnover, experience, projects executed, project experience, qualification and experience of key personnel, applying the evaluation criteria specified.

Sl. No.	Criteria	Marks
1.	Average audited turnover of the Consulting Firm/ Consortium Lead of the preceding five financial years	10
2.	Experience of the consulting firm	20
3.	Two major projects executed	20
4.	Relevant project experience of the consulting firm	20
5.	Qualification and experience of key professionals	10
6.	Write-up on the topic "Scopes for Urban Mapping and Geo data base generation using applications of Remote Sensing and GIS technology for Master Plan Formulation in Lemmi, Tato & Basar district headquarters of Arunachal Pradesh".	20

The qualifying marks will be 70%.

Evaluation of Technical Proposals

- 9.2 The authorized Evaluation Committee (EC) as a whole evaluates the proposals on the basis of their responsiveness to the Terms of Reference, applying the evaluation criteria specified. Each proposal will be given a technical score. A proposal shall be rejected at this stage if it does not achieve the minimum technical score.
- 9.3 The evaluation criteria are as follows:

No.	Criteria	Total points
1.	Specific experience of the consulting firm related to the Assignment	20
a.	Similar assignments (2 of 5 marks each)	10
b.	Experience and capabilities of the consulting firm Total experience in consultancy - 4 Experience in geo data base creation using GIS and RS - 6	10
2.	Adequacy of the proposed work plan in response to ToR	30
a.	Understanding the ToR	10
b.	Methodology suggested	10



No.	Criteria	Total points
c.	Adequacy of the proposed work plan	10

3.	Qualifications and competence of the key professional staff for the assignment	50
a.	Team Leader	10
b.	Image Analyst	10
c.	Geologist	10
d.	GIS Engineer	10
e.	Surveyors	10
	Total Score	100

Illustrative list of “Similar Assignments”:

- Generation of geospatial database for a city/ town
- Preparation of revenue/landuse/landcover maps for the government agencies.
- Preparation of geo-database inventory for New Town/ Industrial Township
- preparation of project inventory using GIS of urban sector projects like water supply, sewerage, etc., national highway/ metro/ similar large infrastructure projects

9.4 The percent distribution of points for qualifications and competence of the key professional staff for the assignment are:

(i)	Educational qualifications	20%
(ii)	Relevant experience for the project	40%
(iii)	Experience in the region	40%

9.5 The minimum required experience of proposed key professional staff is:

Sl. No.	Key professional	Qualifications	Area of Specific Expertise
1.	Team Leader	M.Sc/ M.Tech in Geo-Informatics with minimum of six year professional experience.	Experience in project management and with experience in handling similar projects in the hilly areas. Necessary proofs in this regard to be furnished.
2.	Image Analyst	M.Tech in Remote Sensing.	Minimum of five (5) years of professional experience in Creation of Digital Elevation Model from Stereo data, hands-on-training experiences in LPS Software, Image Enhancement Applications, Generation of Stereo data, etc.
3.	Geologist	B.Sc (Geology) with M.Sc in Geo informatics or M.Tech in Applied Geology with hands on training experience in Mineral Mapping/Rock Identification.	Minimum of five (5) years of experience in handling data pertaining to Geology like identification of rock structures, fracture zones, faults and lineaments, rock beds, etc.
4.	GIS Engineer	M.Sc in Geoinformatics/B.Sc (Geography) with P.G. Diploma in Geographical Information System and Remote Sensing. Basic Education in	Minimum of five (5) years of professional experience in creation of database, GIS Analysis and works in Decision Support System and Spatial Data Modeling.