

GOVERNMENT OF RAJASTHAN

Bid Document

For

Digitization of Cadastral Maps / Revenue Maps

And Integration with Revenue Records

across the State of Rajasthan

Office of the Registrar, Board of Revenue for Rajasthan, Ajmer e-mail: <u>BOR-rj@nic.in</u>

Bid Document for

Digitization of Cadastral Maps / Revenue Maps And Integration with Revenue Records across the State of Rajasthan

for

Board of Revenue for Rajasthan, Ajmer

BID No:	BOR/L	R/Serv	/ices/17	7.5cr/0	CB/2015/1
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Dated :04/09/2015

Mode of Bid Submission	Though eProcurement/ eBiding system at		
	https://eproc.rajasthan.gov.in		
Biding Authority/ Purchaser	Registrar,		
	Board of Revenue for Rajasthan, Ajmer		
Date & Time of Pre-bid meeting	Already held.		
Last Date & Time of Submission of eBid	29.10.2015 at 6.00 PM		
Date & Time of Opening of Technical Bid 02.11.2015 at 12.00 Noon			

Cost of BID DOCUMENT : Rs. 5000 Only (Rupees Five thousand Only)

Name of the Biddir	ng Company/ Firm:			
Contact Person	(Authorized	Bid		
Signatory):				
Correspondence A	ddress:			
Mobile No.			Telephone &	
Website & F-			1 ax 1005	
Mail:				

Note: This is draft bid document. Contents of this document would be added/edited/deleted after pre-bid meeting as per the requirements, to make final bid document.

Board of Revenue for Rajasthan, Ajmer

Website: <u>http://BOR.rajasthan.gov.in/</u> Email: <u>BOR-rj@nic.in</u>

OFFICE OF THE BORAD OF REVENUE FOR RAJASTHAN AJMER.

NOTICE INVITING BID

BID No: BOR/LR/Services/17.5cr/OCB/2015/1

Dated : 04/09/2015

The Registrar, Revenue Board, Rajasthan invites sealed single stage two envelopes unconditional bids on behalf of the Governor of Rajasthan for the work "Digitization of Cadastral Maps / Revenue Maps And Integration with Revenue Records across the State of Rajasthan" from interested and eligible Bidders. The proposals shall only be submitted through eBiding system at <u>www.eproc.rajasthan.gov.in</u>. The bidding details are as follows:

Nature of the Project	Digitization of Cadastral Maps / Revenue Maps and Integration.	
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Cost of BID DOCUMENT (non-refundable)*	Rs. 5000 (Rupees Five thousand Only)	
RISL Processing Fees (Non – refundable)*	Rs 1000 /- (Rupees One Thousand only)	
Estimated Project Cost	Rs. 17.5 Crores (Rupees Seventeen Crore and fifty lacs) Approx	
BID SECURITY	Rs. 8 lacs in the form as stated in this document	
Date of Uploading of RFP Bid Document	04/09/2015	
Date and time for submission of Pre-bid Queries. Pre- Bid Meeting Date & Time	Already held.	
Date of uploading Final Bid Document and Start of downloading Date	30/09/2015 at P.M.	
Last Date of Bid submission date/ Time	29.10.2015 by 6:00 PM	
Technical Bid Opening Date, Time & Place	02.11.2015 at 12:00 Noon, BOR, Ajmer	
Financial Bid Opening Date & Time	Will be intimated later to the technically qualified Bidders	
Websites for downloading Bid/BID	http://eproc.rajasthan.gov.in	
DOCUMENT/ Bidding Document,	and	
Corrigendum's, Addendums etc	http://BOR.rajasthan.gov.in	
Proposal & BID Validity	120 days from the last date of bid submission	
Start of downloading Date Last Date of Bid submission date/ Time Technical Bid Opening Date, Time & Place Financial Bid Opening Date & Time Websites for downloading Bid/BID DOCUMENT/ Bidding Document, Corrigendum's, Addendums etc Proposal & BID Validity	30/09/2015 at P.M. 29.10.2015 by 6:00 PM 02.11.2015 at 12:00 Noon, BOR, Ajmer Will be intimated later to the technically qualified Bidders <u>http://eproc.rajasthan.gov.in</u> and <u>http://BOR.rajasthan.gov.in</u> 120 days from the last date of bid submission	

1. Bidding Document including the contract, evaluation and qualification criteria and procedure, bidding forms, Delivery Schedule, etc. can be seen at the office during office hours in working days up to one day before the last date of submission of Bid. Alternatively, these may be seen and downloaded from the website of State Public Procurement Portal, <u>http://sppp.raj.nic.in</u> and http://BOR.rasjathan.gov.in

2. The procuring entity is not bound to accept the lowest bid and may reject any or all bids without assigning any reason thereof.

3. The Bidder shall have to submit a valid Service Tax clearance certificate from the concerned department and the 'PAN' issued by income tax department.

4. Bidder (authorized signatory) shall submit their offer on-line in Electronic formats both for technical and financial proposal. However, DD for Tender Fees, RISL Processing Fees and Bid Security should be submitted physically at the office of Tendering Authority as prescribed in NIB and scanned copy of same should also be uploaded along with the technical Bid/ cover.

5. In case, a Bidder fails to physically submit the Banker's cheque/DD/ Bank Guarantee (for bid security only) for Bid fee, RISL processing fee and Bid Security up to 11.00 AM on 02/11/2015, the bid of the Bidder shall not be accepted.

6. To participate in online bidding process, Bidders must procure a Digital Signature Certificate (Type III) as per Information Technology Act-2000 using which they can digitally sign their electronic bids. Bidders can procure the same from any CCA approved certifying agency, i.e. TCS, Safecrypt, Ncode etc. Bidders who already have a valid Digital Signature Certificate (DSC) need not procure a new DSC. Also, bidders must register on http://eproc.rajasthan.gov.in (bidders already registered on http://eproc.rajasthan.gov.in before 30-09-2011 must register again).

7. Board of Revenue will not be responsible for delay in online submission due to any reason. For this, bidders are requested to upload the complete bid well advance in time so as to avoid 11th hour issues like slow speed; choking of web site due to heavy load or any other unforeseen problems.

8. Training for the bidders on the usage of e-Tendering System is also being arranged by RISL / DoIT&C on regular basis. Bidders interested for training may contact e-procurement cell RISL/ DoIT&C for booking the training slot.

Contract No. 0141-4022688 (From 10 AM to 6 PM on all working Days)

E-mail : eproc.rajasthan.gov.in

Address : eprocurement Cell, , RISL, Yojana Bhawan, Tilak Marg, C-scheme, Jaipur

9. Bidders are also advised to refer "Bidders Manual Kit" available at eProc website for further details about the e-Tendering process.

10-All other conditions shall be prevailing as detailed out in bid document in the respective sections.

11- The Bidder should not be blacklisted/debarred/banned by any procuring entity at the time of filing this bid.

12-No contractual obligation whatsoever shall arise from the bidding document/bidding process unless and until a formal contract singed and executed between the procuring entity and successful Bidder.

13-Procurement entity disclaims any factual/ or other errors in the bidding document (the onus is purely on the individual bidders to verify such information) and the information provided therein are intended only to help the bidders to prepare a logical bid-proposal.

14. The provisions of RTPP Act, 2012 and rules there shall be applicable for this procurement.

Sd/ Registrar Revenue Board Raj.Ajmer

Bid Data Sheet

A. Introduction

1	The number of the Invitation for Bids: BOR/LR/_ Services/17.5cr/OCB/2015/1 The Procuring Entity :The Registrar Board of Revenue for Rajasthan, Ajmer Name of the Works : "Digitization of Cadastral Maps / Revenue Maps And Integration with Revenue Records across the State of Rajasthan"
2	No Joint Ventures / Consortiums are permitted.

B. Bidding Documents

	(For clarification purposes only)
	The Procuring Entity's address :
1	The Registrar Board of Revenue for Rajasthan, Ajmer Tel.No. 0145 2627891 Fax No. 0145 2427072 E- Mail- BOR-rj@nic.in
2	A Pre-Bid conference had already held on 11/09/2015 at 11:00 AM, BOR, Ajmer
3.	Name and address of the project officer In-charge : Sh. Bhoj Kumar Dy. Registrar (LR) BOR, Ajmer

C. Preparation of Bids

1	The language of the bid shall be in English.
2	The Bidder shall submit the documents with its properly bound Technical Bid : As according to this Bid document
3	The prices quoted by the Bidder shall be fixed.
4	The bid validity period shall be 120 days from deadline for submission of bids.
5	A Bid Security /Bid- Securing Declaration shall be required the amount and currency of the bid security shall be Rs. 8,00,000 Pin Indian Rupees only Respectively.
6	In addition to the original of the bid, the number of copies required shall be: one.
7	The written confirmation of authorization to sign on behalf of the Bidder shall be required.

D. Submission and Opening of Bids

1	Address (For bid submission purposes only) Board of Revenue for Rajasthan, Ajmer Tel.No. 0145 2627891
2	Bids are required to be submitted in Electronic Format only, it shall be submitted on the e-procurement portal : http://eproc.raj.gov.in
3	The deadline for bid submission is: Date: 29/10/2015 Time: 6:00 PM
4	The bid opening shall take place at: The Registrar Board of Revenue for Rajasthan, Ajmer Tel.No. 0145 2627891 Fax No. 0145 2427072 E- Mail- BOR-rj@nic.in

E. Evaluation and Comparison of Bids would be according to mention in this document.

F. Award of Contract

1	The period within which the performance security shall be submitted by the successful Bidder and an Agreement shall be signed is: 15 Days
2	Performance Security at the rate of 5 percentage of the contract value shall be required. The currency of performance security shall be Indian Rupees only.

G. Redressal of Grievances:-

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The Designation and Address of the first Appellate Authority is:
Chairman, Board of Revenue for Rajasthan, Ajmer.
The Designation and Address of the Second Appellate Authority is:
Revenue Department, GOR, Jaipur.

Abbreviations Used

ОСВ	Open competitive Bid
RoR	Record of Right (JamaBandhi)
BEE	Bureau of Energy Efficiency
BIS	Bureau of Indian Standards
BS	British Standards
BOR	Board of Revenue
COTS	Financially Off-The-Shelf
DIN	Deutsches Institut for Normung
DMS	Document Management System
HRD	Human Resources Department
IEEE	Institute of Electrical and Electronics Engineers
ISO	International Organization for Standardization
IT	Information Technology
NA	Not Applicable
NDA	Non Disclosure Agreement
OEM	Original Equipment manufacture
BID DOCUMENT	Request For Proposal
UPS	Uninterrupted Power Supply
LAN	Local Area Network
DPI	Dots per inch
BDS	Bid Data sheet
BS	Bid Security
WGS 84	World Geodetic System 1984
GIS	Geographical Information System
ITB	Instruction To Bidders



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Introduction

1. Preface

Rajasthan is located in Western part of India between 26.5727° North Latitude and 73.8390° East Longitude. It is boarded by Pakistan in the West, Punjab and Haryana in the North and Uttar Pradesh and Madhya Pradesh in the East and Gujarat in South. The state is divided into 33 districts. Total area of the state is 342,239 km². The State have hot temperature summer, cold winter and average to heavy rains in the season. The capital of the State is Jaipur which is connected with all three Air, Train and Bus with most parts the country.

Revenue Administration is perhaps the oldest wing of the Government, directly related with issues and matters that concern agricultural land. This wing of the Government touches the lives, directly or indirectly, of the majority of people living in the country, as India continues to be predominantly an agricultural economy and about 60% of its population is still dependent on this sector for employment. Revenue Administration is also complex and encompasses a large number of related subjects. These include management of Land Records, crop survey, determination of land rent, Settlement operations and resolution of land disputes through the mechanism of Revenue laws which are adjudicated by Revenue Courts. Land management and agriculture fall within the State List and are, therefore, the responsibility of the State Government.

1.1 BOARD OF REVENUE

The Board of Revenue for Rajasthan was constituted and established on November 1, 1949 under the authority of The Board of Revenue Ordinance, 1949 promulgated by His Highness the Raj Pramukh of the Government of the United State of Rajasthan on August 13, 1949. Its main objectives are as follows:-

- 1.1.1 The Board of Revenue for Rajasthan, Ajmer is the Chief Controlling Revenue Authority under all enactments in force. In 1949 after formation of United State of Rajasthan "The Rajasthan Board of Revenue Ordinance,1949" was promulgated under which the Board of Revenue for Rajasthan was constituted. Later on after enacting of the Land Revenue Act 1956 the above mentioned ordinance was repealed and now the Board of Revenue is the creation of the Rajasthan Land Revenue Act.
- **1.1.2** The Board of Revenue is the highest Revenue Court of appeal, revision and reference in Rajasthan, having wide powers of general superintendence and control over all suBORdinate courts. The control of all judicial matters and all matters connected with settlement is exercised by the Board.
- **1.1.3** Being Chief Controlling Revenue Authority, it acts as a limb of State Government, exercising powers conferred on it under various enactments.
- **1.1.4** acts as a "Persona designata" in several matters under various enactments. It also acts as delegate of the State Government.

- **1.1.5** Beside the above, the Board of Revenue also has administrative rights regarding Land Revenue and Land Record related matters.
- **1.1.6** The Board of Revenue also having administrative powers officers/officials working at Subordinate revenue courts and these revenue courts also under BOR. The BOR also monitoring these revenue courts work in-terms of disposal of revenue cases and also made inspection of these courts time to time.
- **1.1.7** The BOR also act as an implementing agency for Computerization of Land Record in the State under **NLRMP** which includes the following components : –
- **1.1.7.1** Data entry/re-entry/data conversion of all textual records including mutation records and other land attributes
- **1.1.7.2** Digitization of cadastral maps
- 1.1.7.3 Integration of textual and spatial data
- **1.1.7.4** Establishment of Tehsil, Sub-division/district computer centres
- 1.1.7.5 State-level data centre
- **1.1.7.6** Inter-connectivity among revenue offices
- 1.1.7.7 Establishment of Modern Record rooms at tehsils
- **1.1.8** Beside above BOR is a controlling department for budget allotment and monitoring to the revenue offices of Rajasthan. Board of Revenue for Rajasthan, Ajmer is entrusted with the responsibility of creation and maintenance of land records (Cadastral Maps, RoRs, etc.). As part of its initiatives for converting the current activities of the departments in to an e-System, Board of Revenue for Rajasthan, Ajmer wishes to outsource the work of "Digitization of Cadastral maps and integrating it with Record-of-Right(RoR) i.e. textual data of land record in the State.

1.2 Objectives of the Project

Broad Scope of the project is as follows:

Digitization of village Cadastral (revenue) maps and its linkage with textual data i.e. RoR (Records of Rights) etc is envisaged to provide the services related to land records and monitor revenue administration across the state in order to improve the administrative processes.

The objective behind the **DIGITIZATION OF CADASTRAL MAPS** is to digitize cadastral maps in the State and linking of the same with textual data (RoR) and more services will be extended to the citizens. As of now, e-Dharti (ApnaKhata) is being used in Rajasthan for maintaining the RoR (Record-of-Right). The proposed system would create the database of cadastral maps in digitized form and thesame would be linked into the existing land records software. This would streamline the land revenue administration as the system would be temper proof with high availability of data in the Tehsils/ Sub-Divisions/ Districts/ State/ Common Service Centre (CSC) after linking

of digitized cadastral maps with the textual data.

- I. For every village, there are cadastral maps having parcels of land (popularly known as Khasra numbers), which form the basic record of revenue administration.
- II. After linking of the cadastral map with textual data, the citizen can be provided with the services e.g. RoR with plot map (parcel map), showing dimensions of each side, area and the adjoining plots and Textual RoR data updation in sync with spatial data updation.

Note:- The detailed scope is given in the Section - "Scope of Work"

Qualification of the Bidder

2. Eligibility and Pre-qualification Criteria

2.1 Pre-qualification Criteria

The Service Provider (SP) should meet the following criteria as on the date of submission of the bid:

Sr. No.	Pre-qualification Criteria	Documents to be attached
1	The Bidder should be registered under the Companies Act, 1956, or Partnership Act 1932 or registered under LLP Act 2008 should be in existence in India for at least 5 years (as on 31st March 2015). I The Bid can be submitted by an individual company i. Bidder should have been in the IT related business for a period of at least 5 years (as on 31st March 2015).	i. A copy of "Certificate of Incorporation" of the company ii. Work Orders confirming year and area of activity.
2	Bidder must have valid enterprise level ISO 9001:2008 certification. Note: In case the certificate is due for renewal, the Bidder should ensure that the renewed certificate is made available at the time of signing of contract. In case the same is not provided, the department may consider negotiating the award of contract with the next eligible Bidder.	A copy of the valid ISO certificate.
3	The Bidder should not be under a Declaration of Ineligibility for corrupt or fraudulent practices or should not be blacklisted. Details in this regard are mentioned in terms & Conditions of the contract of this bid document.	Declaration duly notarized in this regard by the authorized signatory of the Bidder.
5	The Bidder should have for the each of the last three consecutive financial years i.e. FY: 2012- 2013, FY: 2013-2014 FY: 2014-2015. i. A minimum average turnover over INR 5 Crores for the last 3 years ending 31st March 2015. ii. Positive Net Worth of at least 2 Crores as on 31st March 2015.	 i. Copy of the audited Balance Sheet & Profit and Loss statement of the company showing turnover of the company for last three years. ii. Certificate from the Company Secretary/Statutory Auditor's ascertaining a positive net worth during each of the last 3 years

Sr. No.	Pre-qualification Criteria	Documents to be attached
6	The Bidder must have an overall IT related staff strength of at least 100 personnel with prior experience of more than two years on their payroll as on 31st March 2015. Bidder should submit HR head Certificate.	i. Certificate from Bidder's HR Department
7	The Bidder must have experience of having successfully completed the supply, installation and support of digitization of cadastral maps and GIS oriented work in Government department during last 5 years ending last day of month previous to the one in which applications are invited should be either of the following:- i) Three similar work of value not less than Rs 0.75 Crore each OR ii) Two similar work of value not less than Rs 1 Crore each OR iii) One similar work of value not less than Rs 2 Crore <i>The scope of such project includes Software/System integration/ operational and Maintenance services.</i>	Work Completion Certificates from the client; OR Work Order + Self Certificate of Completion (CA Certificate with CA's Registration Number and Seal); OR Work Order + Phase Completion Certificate from the client showing acceptance of completion of supply and installation
8	The Bidder must have experience in successfully completing at least one project for Revenue Department/NLRMP/Other project of similar nature with any state Government in last 5 years as on 31st March 2015. The project must include digitization of cadastral maps and GIS oriented work.	Work Completion Certificates from the client; OR Work Order + Self Certificate of Completion (CA Certificate with CA's Registration Number and Seal); OR Work Order + Phase Completion Certificate from the client showing acceptance of completion of supply and installation
9	The Bidder should furnish, as part of its bid, a BID SECURITY of Rs 8 Lacs.	The BID SECURITY should be denominated in Indian Rupees only, and should be in the form of as stated in this document.
10	Bidder must have VAT/TAN/PAN registration & Applicable Tax Clearance Certificate from the Competent Authority upto March 2015.	Documentary evidence to be provided

Sr. No.	Pre-qualification Criteria	Documents to be attached
11	The Bidder must have an office in Rajasthan OR The Bidder has to give an undertaking to do so within 1 months of award of contract with strength of IT professionals that are required for proper implementation of the project.	i. Self declaration from the Bidder.

Note: -

(i) The criteria mentioned above will constitute the preliminary scrutiny and only those Bidders complying with them will be eligible for technical evaluation.

(ii) All the document should be placed only in this (as listed in this clause) order and an index be provided separately.

(iii) First envelope shall be marked as envelop No.1 "Bid, RISL,Bid Security" and shall contain DDs/Bankers Cheque etc. of Bid Document Fee, RISL Fee and Bid Security. The Bid document fee and Bid Security shall be in favour of "Registrar, Board of Revenue" payable at Ajmer and RISL tender processing fee shall be in favour of "MD, RISL" payable at Jaipur.

(iv) Second envelope shall be marked as envelope No.2 "Technical Bid" which contains technical requirements as required in the Bid and hardcopies of the documents uploaded online by the bidder on eproc.rajasthan.gov.in portal.

(v) The bid will be summarily rejected if all the documents mentioned above are not enclosed in technical bid.

(vi) All supporting documents must be clearly visible, readable.

2.2 Bid Security

- (i) The Bidder shall furnish as part of its Bid, a Bid Security in original form and in the amount and currency specified in the BDS.
- (ii) Bid Security shall be Rs. 8 lacs. The bid security shall be in Indian Rupees only.
- (iii) The Bid Security may be given in the form of cash, a banker's Cheque or demand draft or bank guarantee of a Scheduled Bank in India, in specified format, or deposited through eGRAS.
- (iv) In lieu of Bid Security, a Bid Securing Declaration shall be taken from Government Departments and State Government Public Sector Enterprises, Autonomous bodies, Registered Societies, Cooperative Societies which are owned or controlled or managed by the State Government, Public Sector Enterprises of Central Government. For the Bid Securing Declaration the Bidder shall use the form as including in this bid document.
- (v) Bid Security instrument or cash receipt of Bid Security or a Bid securing declaration shall necessarily accompany the sealed Bid. Any Bid not accompanied by Bid Security or Bid Securing Declaration, if not exempted, shall be liable to be rejected.
- (vi) Bid Security of a Bidder lying with the Procuring Entity in respect of other Bids awaiting decision shall not be adjusted towards Bid Security for the this Bid.The Bid Security originally deposited may, however be taken into consideration in case Bids are re-invited.

- (vii) The issuer of the Bid Security and the confirmer, if any, of the Bid Security, as well as the form and terms of the Bid Security, must be acceptable to the Procuring Entity.
- (viii) Prior to presenting a submission, a Bidder may request the Procuring Entity to confirm the acceptability of a proposed issuer of a Bid Security or of a proposed confirmer, if different than as specified in ITB Clause. The Procuring Entity shall respond promptly to such a request.
- (ix) The bank guarantee presented as Bid Security shall be got confirmed from the concerned issuing bank. However, the confirmation of the acceptability of a proposed issuer or of any proposed confirmer does not preclude the Procuring Entity from rejecting the Bid Security on the ground that the issuer or the confirmer, as the case may be, has become insolvent or is under liquidation or has otherwise ceased to be creditworthy.
- (x) The Bid Security of unsuccessful Bidders shall be refunded soon after final acceptance of successful Bid and signing of Contract Agreement and submitting Performance Security by successful Bidder.
- (xi) The Bid Security taken from a Bidder shall be forfeited in the following cases, namely:
 - i. when the Bidder withdraws or modifies his Bid after opening of Bids; or

ii. when the Bidder does not execute the agreement in accordance with Clause of Signing of Contract with in the specified time ; if any, after issue of letter of acceptance/ placement of Work order within the specified period; or

iii when the Bidder fails to commence the Works as per Work order within the time specified; or

iv. when the Bidder does not deposit the Performance Security in accordance with Clause [Performance Security]; in the prescribed time limit after the work order is placed;

v. if the Bidder breaches any provision of the Code of Integrity prescribed for Bidders specified in the Act and Chapter VI of the Rules; or

vi. if the Bidder does not accept the correction of its Bid Price.

(xii) Bidders are required to give an BID SECURITY for Rs. 8 lacs in the form of Demand Draft/Pay Order/Bank Guarantee of a Nationalized/ Scheduled Bank payable at Ajmer drawn in favor of Registrar The Board of Revenue for Rajasthan Ajmer valid for a period of 90 days from the last date of Bid Submission of the Bid. If the BID SECURITY instrument is Bank Guarantee, it should conform to the format given in this document.

(xiii) The BID SECURITY shall be refundable to unsuccessful Bidders and shall be discharged after signing contract with successful Bidder.

(xiv) The successful Bidder's BID SECURITY shall be adjusted in the performance security.

Instructions to the Bidder

INSTRUCTIONS TO BIDDERS

- 1. Digitization of Cadastral Maps / Revenue Maps and Integration with Revenue Records across the State of Rajasthan is the main purpose of this bid.
- 2. The estimated total cost of project is Rs. 17.5 cr. (rupees Seventeen Crores and fifty lacs)approx.
- 3. This BID Document is not transferable.
- 4. This project is to be provided as turnkey solution, therefore the bid for the whole project, within the cluster, is only acceptable. Various works of the project shall not be given in piece mill for separate components to the bidders.
- 5. The bid value quoted by bidders is for ready to use solution and for final functional solution as per the bid document and NLRMP guidelines.
- 6. Board of Revenue for Rajasthan, Ajmer shall not be responsible for any delay in submission or non delivery of proposal due to any reasons.
- 7. Instruction to Bidders for online tendering (e-tendering)
- i- The bidders who are interested in bidding can download bid documents from <u>https://eproc.rajasthan.gov.in</u>.
- Bidders who wish to participate in this bid will have to register on thttp://eproc.rajasthan.gov.in (bidders registered on eproc.rajasthan.gov.in before 30-09-2011 ineeds to registered again). To participate in online tenders, Bidders will have to procure Digital | Signature Certificate (type II or type III) as per Information Technology Act-2000 using which , they can sign their electronic bids. Bidders can procure the same from any CCA approved if certifying agency, i.e. TCS, safecrypt, Ncode etc. or they may contact e-Procurement Cell, Department of IT & C, Government of Rajasthan for further assistance. Bidders who already ! have a valid Digital Certificate need not procure a new Digital Certificate. Contact No. 0141-4022688(help desk 10 am to 6 pm on all working days.) e-mail: eproc@rajasthan.gov.in Address: e-Procurement Cell, RISL, Yojana Bhawan, Tilak Marg, C-Scheme, Jaipur
- iii- Bidder shall submit their offer on-line in Electronic formats both for technical and financial proposal, however D.D.for Tender Fees, Processing Fees and bid security should be submitted manually at the Board of Revenue for Rajasthan, Ajmer on or before 02/11/2015 at 11.00 AM and scanned copy of D.D. should also be uploaded along with the online bid.
- iv- Before electronically submitting the bid, it should be ensured that all the bid papers including conditions of contract are digitally signed by the bidder.
- 8. Cost of Bidding

The Bidder shall bear all the cost incurred for preparing the proposal including expenses of travel and lodging that may be required including collecting information from the department and other communication required with the department regardless of the outcome of the bidding process.

- 9. The Bid process shall follow the single stage two envelope method for procurement of work.
- 10. Packaging the Bid

The offer should be enclosed in a duly sealed envelope super scribed with bid reference number, work name, due date and bidder name. The envelope should contain two separate envelopes, the details of them are written below.

- (i) Envelope-I Bid Document Fees, RISL Processing Fees, Bid Security etc.
- (ii) Envelope-II Technical Bid

The technical bid should contain all technical information on the solutions proposed. In II envelope technical Bid should be submitted with supporting documents as mentioned in the qualification criteria. The technical offer should be as per the format given in "Formats for Technical Bid". The Technical Bid should not contain any financial offer. If any financial offer is found in the technical bid, the whole offer shall be rejected outright.

(iii) The financial Bid should contain the bill of quantity - BoQ (Exactly in the excel format given on the eproc portal) and should be submitted online. Only the financial offers should be complete in all respects and it should not contradict with the Technical Offer in any manner.

11. Number of copies of the bid

The Bidder is required to submit one copy of the Technical Bid through eproc.rajasthan.gov.in by uploading all required and relevant documents. In addition to this all those document should also be submitted physically in sealed envelope, clearly marking envelope as "Technical Bid". The bid should be duly signed with seal on all pages, serially numbered and properly bound. In the event of any discrepancy between the hard copies and/or the softcopies uploaded, the information submitted in hard copy shall prevail.

12. Authentication of Bid

The original and all copies of the Bid Document shall be computer laser printouts and shall be signed by a person or persons duly authorized to bind the Bidder to the Contract. A duly stamped Power-of-Attorney accompanying the Bid Document shall support the letter of authorization. The person or persons signing the Bid Document shall initial all pages of the Bid Document.

13. Last date and time for receiving sealed offers

The sealed offers should reach the address mentioned in the Bid data sheet on or before 29/10/2015 at 11.00 AM.

14. Pre-bid Meeting (PBM)

Board of Revenue for Rajasthan, Ajmer shall make best efforts to respond to any request for clarification for the Bid Document to the prospective Bidders. Such requests are to be made in writing and are to be received by Board of Revenue for Rajasthan, Ajmer well in advance before the Pre-Bid Meeting as per the date and time mentioned in the data sheet. The clarification shall be made in writing to the extent possible. The format for request for clarification is given below.

Bidder Name and			
Address			
Date:	L	Bid Reference No:	
Sr. No.	Section Reference Number (SRN) and		Clarification
	Description		Sought
	SRN	Description	
1	2	3	4

Queries not adhering to the format above or queries not received within the mentioned deadline shall not be taken up at the Pre Bid Meeting. Board of Revenue for Rajasthan, Ajmer shall not be responsible for any delay in receiving the clarification document including but not limited to any delays like postal delays.

15 Amendment of BID DOCUMENT

- (i) Amendment of Bidding Document-- Any amendment issued shall be part of the Bidding Document and shall be communicated in writing to all Bidders who have obtained the Bidding Document directly from the Procuring Entity. It shall also be uploaded on the State Public Procurement Portal(eproc) and the Procuring Entity's web site for prospective Bidders to download.
- (ii) To give prospective Bidders reasonable time in which to take an amendment into account in preparing their Bids ,the Procuring Entity may, at its discretion, extend the deadline for the submission of the Bids, under due intimation to the Bidders who have procured the Bidding Document from the Procuring Entity and also by uploading it on the State Public Procurement Portal (eproc) and its official website.

16 Evaluation of proposal

Bid Evaluation Committee

(i) The evaluation of both technical and financial proposals shall be done by a "Bid Evaluation Committee" duly constituted of BOR according to GF & AR, RTPP act 2012, RTPP rules 2013. The Bid Evaluation Committee may choose to request for clarification from the Bidder related to their products / services offering, approach, methodology or any other information as part of the technical evaluation.

(ii) The decision of the Evaluation Committee in the evaluation of the Technical and Financial bids shall be final and binding on all the parties. No correspondence will be entertained outside the process of negotiation/ discussion with the Bid Evaluation Committee.

(iii) Any effort by a Bidder to influence the Bid Evaluation Committee's processing of Bids or

award decisions may result in the rejection of the Bid.

(iv) Technical Evaluation

Detailed evaluation of the technical offers shall be performed only after scrutinizing whether each bid is complete in all respects as per the format given Formats for Technical Bid.

(v) Accompanied by the BID SECURITY as mentioned "Bid Security". Those bids failing to clear the above criteria shall be rejected and will not be scrutinized further. Bidders adhering to the completeness of the technical proposal shall be given chance to give a technical presentation before the Evaluation Committee.

17 Evaluation Framework

The following framework shall be used as a guideline for the evaluation of bids. The department reserves the right to introduce any other evaluation method or make enhancements in the existing framework as per the requirement.

S.	Particulars	Maxim
IN.		Marks
	Total Score	100
1	The Bidder having average annual turnover for three consecutive	30
	financial years	
	(FY: 2012-2013, FY: 2013-2014, FY: 2014- 2015) will be awarded marks	
	as below:	
	>= 20 Crores = 30	
	>= 17 crore but <20 crore = 25 marks	
	>=14 crore but <17 crore = 20 marks	
	>=11 crore but <14 crore = 15 marks	
	>=8 crore but <11 crore = 10 marks	
	>=5 crore but < 8 crore = 5 marks	
	<5 crore = 0	
2	The Bidder having IT professionals (ITPs) with prior experience of more	10
	than 2 years in Digitisation / CAD / ArchInfo and related software	
	handling as on 31st March 2015, will be awarded marks as below	
	>=200 ITPs = 10 marks	
	>=150 ITPs but < 200 ITPs = 8 marks	
	>=100 ITPs but < 150 ITPs = 6 marks	
	<100 = 0 marks	
3	The Bidder with experience of having successfully completed similar	10
	work during the last 5 year ending last day of month previous to the	
	one in which applications are invited will be awarded marks as below	
	1) Three (3) similar (Turnkey project of Digitisation of Cadastral/Other	

S. N.	Particulars	Maxim um Marks
	Maps and Integration with Textual Data) completed projects or more,	
	Costing not less than Rs. 0.75 crore in any government/PSUs in	
	India/Abroad.	
	5 projects or more = 10 marks	
	4 projects= 8 marks	
	3 projects = 6 marks.	
	OR	
	2) Two (2) similar (Turnkey project of Digitisation of Cadastral/Other	
	Maps and Integration with Textual Data)) completed projects, costing	
	not less than Rs. 1 crore in any government/PSUs in India/Abroad	
	4 projects or more = 10 marks	
	3 projects= 8 marks.	
	2 project= 6 marks.	
	OR	
	3) One (1) similar (Turnkey project of Digitisation of Cadastral/Other	
	Maps and Integration with Textual Data)) completed projects, costing	
	not less than Rs. 2 crore in any government/PSUs in India/Abroad	
	2 projects or more = 10 marks	
	1 projects= 8 marks.	
4	The Bidder must have experience in successfully completing at least	20
	one project for Revenue Department / under NLRMP/ project of similar	
	nature with any State Government/Central Government in last 5 years as	
	on 31st March 2015. The project must include at least the following	
	services.	
	i) Scanning & Digitisation of Cadastral Maps at-least 15,000 maps	
	ii) GIS development	
	iii) Integration with Record of Right(RoR) textual data	
	iii) Training on similar system	
	below:-	
	No of Projects > 3 projects = 20 marks	
	No of Projects = 2 projects = 15 mark	
	No of Projects = 1 projects = 10 mark	
5	Proposed Solution Design presentation (In the 3 rd week of November,	30
	2015 by only those bidders who fulfill the requirements pertains to the	
	pre qualifications of the BID)	
	Test: One Village (revenue) maps will have to be scanned and	
	digitized and integrated with RoR:	

S. N.	Particulars	Maxim um Marks
	Map of One village along with attributes data on khasra number(RoR), shall be provided to the pre-qualified bidder within 7 days after opening of technical bids. The Service Providers are required to demonstrate following activities on the date of presentation :-	
	I. Demonstration of extracting map and attribute database on khasra no. including printing of plot / map on A4 size sheet, show area from RoR data and line/ length of polygon as per Village (revenue) maps.	
	II. Show mosaic of village (raster as well as vector).	
	III. Division of one selected plot based on :	
No te	 Drag and drop throughmouse. IV. Provide Shape files for Integration with RoR (integration would be done by NIC and the bidder needs to extend support, if needed) V. Power point presentation of project execution plan & strategy. 100 1) The Bidder should submit copy of work order and completion certificate from the client/client certificates mentioning the progress of the project as a proof of the projects they mention in the bid response the Bidder should provide certificates as mentioned in the Pre-Qualifications for the technical evaluation requirements. 2) The Bidder must also submit all the documents in support of claim for technical bid evaluation. 3) All the bids scoring 60 marks and above will be qualified for financial bid opening. However, the bidder should get at-least 18 marks in the Proposed Solution Design 	
	presentation to get qualified technically.	

18. Coverage area on Technical Presentation

The Technical Presentation by the Bidders shall be conducted at BOR Office, Ajmer in front of the Bid Evaluation Committee. The Bidders are required to cover the following aspects of their proposal, but not limited to, in their Technical presentation:

- (i) Proposed Technical solution for the project, its advantages and limitations.
- (ii) Security provisions for Data and Access Control systems in the proposed solution.
- (iii) Plan for executing project simultaneously at multiple remote locations in a time bound schedule. Technical and Financial Capability of the Bidder in executing similar large projects in a time bound schedule in any State of India along with project details and completion certificate.

19. Sequence of Technical Bids Evaluation.

(i) The Bidders technical solutions proposed in the bid document and quality of the samples submitted will be evaluated as per the scope of the work and requirements of the BOR by the Bid committee.

(ii) The technically qualified Bidders will be considered for opening of financial bid. Criteria for technical qualification is as described above.

20. Bidders must score at least 60 Marks out of 100 in the technical scores in order to be considered for technical qualification.

21. Financial Bid Criteria

The financial bids of only those Bidders, who have scored at least 60 marks in the technical evaluation process, will be opened. The Financial Bids will be opened, in the presence of Bidders' representatives who choose to attend the Financial Bid opening on date and time to be communicated to all the technically qualified Bidders. The Bidder's representatives who are present shall sign a register evidencing their attendance. The name of Bidder and Bid Prices will be announced at the meeting.

If the Bid, which results in the lowest evaluated Bid Price, is considered to be seriously unbalanced, or front loaded, in the opinion of the Procuring Entity, the Procuring Entity may require the Bidder to produce detailed rate analysis for any or all items of the Bill of Quantities, to demonstrate the internal consistency of those rates with the construction methods and schedule proposed. After evaluation of the rate analysis, taking into consideration, the schedule of estimated Contract payments, the Procuring Entity may require that the amount of the Performance security be increased at the cost of the Bidder to a level sufficient to protect the Procuring Entity against financial loss in the event of default of the successful Bidder under the Contract.

22. Award of project

The Financial Bids of technically qualified Bidders will be opened on the prescribed date in the presence of Bidder representatives.

23. For the purpose of QCBS evaluation

(i) The Bidder with highest qualifying technical score (T1) will be awarded 100% score Technical Scores for other than T1 Bidders will be evaluated using the following formula:

(ii) Technical Score of a Bidder (Tn) = {(Technical Score of the Bidder / Technical Score of T1) X 100}% (Adjusted upto two decimal places)

(iii) The Bidder with lowest qualifying financial bid (L1) will be awarded 100% score. Financial Scores for technically qualified Bidders other than L1 Bidders will be evaluated using the following formula: (iv) Financial Score of a Bidder (Fn) = {(Financial Bid of L1/Financial Bid of the Bidder) X 100}%

(Adjusted upto two decimal places)

(v) Only fixed price financial bids indicating total price for all the deliverables and services specified

in this bid document will be considered.

(vi) The bid price will include all taxes and levies and shall be in Indian Rupees and mentioned separately also.

(vii) Any conditional bid would be summarily rejected.

(viii) Errors & Rectification: Arithmetical errors will be rectified on the following basis: "If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected. If there is a discrepancy between words and figures, the amount in words will prevail".

24. Combined and Financial Evaluation

- (i) Technical and financial scores secured by each Bidder will be added using weightage of 60% and 40% respectively to compute a Composite Bid Score.
- (ii) The Bidder securing the highest Composite Bid Score will be adjudicated as the most responsive Bidder for award of the Project. The overall score will be calculated as follows:-

Where Bn = overall score of Bidder

Tn = Technical score of the Bidder (out of maximum of 100 marks)

Fn = Normalized financial score of the Bidder

(iii) In the event the bid composite bid scores are 'tied', the Bidder securing the highest technical score will be adjudicated as the Best Value Bidder for award of the Project.

25. Award of work Cluster (Group of districts) -

For the purpose of award of work, the districts are grouped into various clusters (Detail of clusters is given in the execution framework section). The work shall be awarded to the successful bidders for maximum two clusters only. However, based on bidders capabilities, the procuring entity at its discretion, may assign additional clusters, if needed.

26. Site Visit

It is recommended that the interested Bidders visit the sites (Tehsil/District) where cadastral maps are available and the digitization work is to undertaken. It is the responsibility of the Bidder to visit the proposed sites at their own cost and assessing the existing infrastructure and existing maps/data before submitting his offer to get a clear idea about the work and preparation of requirement across the locations. Department will facilitate Bidders to get access to the site upon prior intimation.

Scope of Work

1. Standards required for Digitisation of Cadastral/Revenue Maps -

Background :-

Rajasthan has a revenue village maps showing plots (land parcels) in the re-survey of scale 1:4000 metric and traditional map 16 " = 1 mile which is equivalent to 1:3960. or 20" =1 mile which is equivalent to 1:3168 and In densely populated areas such maps are prepared on bigger scales i.e. 32"=1 mile (1:1980) 40"=1 mile (1:6336) There are approx. 100000 such map sheets in A0/A1 size paper (other sizes may also be there) covering all the 45493 village of Rajasthan, prepared by well established detailed cadastral survey Tringulation lateral and Trawersing techniques. Each Revenue village map contains 200 to 600 plots (land parcel boundaries) on the average surveyed true to scale by Theodolite traverse and chain survey. Later on, the length of each side of the plot and plot area are extracted from the paper map using bigha biswa comb.

Each Revenue village map has the following features-

- 1. Sheet heading (Revenue village, tehshil, district Name & North Direction.)
- 2. Scale of the map
- 3. Plot boundaries with Plot numbers
- 4. Legends
- 5. Conventional signs (Alamats), Bata Plot nos. & Missing Plot nos.
- 6. Contents of the certificate block i.e. contents of the rectangle bearing the signature of the Revenue Officer certifying the contents of the map
- 2 Scope of work

In order to prepare GIS-ready digitized cadastral Revenue village maps, these are required to be digitized in 3 layers i.e. area layers, line layers and point layers, so as to facilitate digital capturing of all the features on the existing paper map. Maps, digitized in this way, provide flexibility required for future corrections. Each plot of land is viewed as a closed polygon and digitized in area layer to provide the area of the plot. A 5 digit number, which is written within the paper map itself, is used for unique identification of the digital polygon. Maps should be scanned to their true scale, vectorized and converted into shape file format consisting of three files i.e. the shape file (*.shp), the index of the shape file (*.shx) and the data associated with the shape file (*.dbf) [item 2 & 3 above], .gif (graphic interchange format) formats [item 1,4, 5 & 6] along with the data in .dbf format [item 5] as detailed in the scope and methodology of the work.

The digitization of village (revenue) maps will help State Government to create database of the revenue maps/ mother-maps in digitized form and will get linked up with the existing database of Land Records Management Software e-Dharti (ApnaKhata) developed and maintained by National Informatics Centre, Rajasthan. Average no. of map sheet is 100000 (approx) sheet and parcel no of per sheet 200-600 (average) , however, the Khasra nos. may increase after updation.

The Service provider is supposed to provide turnkey solution which includes existing cadastral maps to be digitized and linking the same with existing textual data i.e. Jamabandi. For digitization of Cadastral maps, Mother-map should be used as the base-maps . In case Cadastral Maps are not in a position to be scanned then regeneration of Mother-maps will be carried out by the department. Thereafter, the digitized data will be updated to current stage by the Service Provider selected for this

project. The Service Provider would support the project for three months after its successful implementation and impart satisfactory necessary training to revenue officers/ officials across the State for smooth transition of project. Detailed scope of work covered by this bid document includes, but is not limited to:

I. Prepare detailed scope of work and prepare system design document within 4 weeks from the award of contract. System Design document must include the following along with the details of the proposed Project:

- a. Methodology of creating index for village sheets, missing sheets, sheets to be retraced.
- Methodology to be adopted for scanning and digitization of cadastral maps (Mothermaps) and linking of the same with textual data (available in ISCII character set) i.e. RoR which uses web-enabled platform Dot.Net as front end and Microsoft SQL Server as back end.
- c. Satisfactory training to the departmental officials.
- d. Security and authentication policies.
- e. Requirements if any from the Government level.
- f. The vender has to provide the deliverable as per technical specifications.
- II. Get the design document approved from the Registrar, Board of Revenue, Ajmer.
- III. The work of scanning & digitization and updation has to be done by the service provider, only at space provided at district headquarter. The Service Provider will give an undertaking that integrity, secrecy and security of data shall be maintained. All the necessary hardware, LAN establishment, UPS wiring along with earthing in at District headquarter, if required, would be installed by the service provider for performing scanning, digitization etc. work.

I. It is required to convert the existing paper maps into GIS-ready digital form in order to facilitateupdating of cadastral maps in sync with the changes made in the RoR.

RoRs provide information on the plots held by individual or joint owners, indicating ownership of land, its classification, land use, source of irrigation etc. Detailed maps of individual pieces of land, called—parcels or —plots, are prepared accurately for each revenue village. A plot of land may have been further sub-divided into two or more sub-plots and transferred to other persons by way of deed of gift or sale or inheritance, or conversion of classification of land use etc. The needfor indicating these changes in the map arises every time a change as mentioned above takes place so as to depict the ground reality. The cutoff date for updation of Mother-maps (Maps prepared by settlement department after settlement operations) will be mentioned in SLA (Service level agreement). However, one original copy of Mother-maps in digitized form will be preserved and the changes will be made in another copy of the original maps.

II. Completion of work in defined time-lines.

III. GIS-ready digitization of cadastral maps and their integration with RoRs involve the following steps:

a. Scanning of the cadastral map or part of the village map and feeding this scanned map into the computer to create a computer image of the map which is known as a raster map.

b. Every scanned output will be printed on 90 GSM Paper for checking.

c. The updation of raster map shall be done by means of providing parcel updation (Tarmeem) map on butter paper by the tehsil officials. The same shall be used by the service provider for scanning and overlapping with scanned raster map to create an updated village map.

d. Final printout of updated raster map on 100 Micron polyester matt films.

- e. The next step involves going over the outline of the village boundary on the raster image of the map with the mouse and marking the outlines of each plot. This process, known as digitization / vectorization.
- IV. A printout of these Digitized/Vector maps would be given to the Tehsil Office by the service provider need to mention the quality of paper to be used for thorough checking with the original cadastral maps. The Tehsil Office would table check the hard copy of digitized map on a glass table with the original map placed below it. Every line and point on the two maps has to match. The correctness of the digitized map would be then certified by the Tehsil office. If any error is detected, the same has to be rectified by the Service Provider/digitizing agency. Necessary arrangement for this testing will be done by the Service Provider.

V. Integration of spatial database with textual RoR data would involve the following process:

- a. Each plot of land is represented on the digital map as a closed polygon. Each polygon is identified by a unique plot number and each plot is also referenced by this unique plot number. This provides a basis for integration of digital map data with the textual RoR data.
- b. The basic textual RoR database consists of several tables which provide information on ownership, land classification, etc. The e-Dharti (ApnaKhata) software developed by NIC is being used in Rajasthan for the maintenance of land records.
- c. After integration of the textual and spatial RoR data, the digitized map shown on the computer, which indicates through colour codes depicting the plots which do not have a corresponding textual detail or plot number, or where the textual and spatial data (area) do not match each other. The corrections will have to be carried out by the Service Provider with the help of revenue official/officer.
- VI. The software used in the digitization process creates a number of files. Each of these files pertains to a GIS-based layer and each layer consists of three files. The GIS data are

organized in layers. Each layer contains a subset of information that would be present on a regular map. All the necessary files created are put in a storage device (e.g., a CD) and given to the Tehsil Office for checking. If any error is detected, the same has to be rectified by the Service Provider.

- VII. Once the Tehsil Office has approved the vectorized map and the files, the Service Provider proceeds to add each of the handwritten information on the original map except the signature at the bottom given out neatly typed. Distances (line lengths) as per Mother-maps to be fed for each arm/side of polygon in such a way that these dimensions are retrievable against any plot/Khasra. During updation of Khasras into smaller plots as a result of mutation/transaction these line lengths will also change. So it will be stored as attribute against each line segment.
- VIII. Printout of the vector map on 100 Micron polyester matt film will be updated to current stage by the Service Provider along with the authorized official and the same will be verified by the revenue officer. Then the same will be fed in to the computer by the Service Provider. Final printout will be handed over to Department for its approval. Verification process of digitized data will be elaborated in SLA (Service Level Agreement) to be signed with the successful Service Provider.
- IX. To establish scanning/digitization lab at centralized location at each allotted District, with required infrastructure such as Software's, Desktops/PCs, Scanners, Printers / Plotters, UPS and Networking and other hardware etc. No map or data can be taken out of center by the service provider. The district administration shall only provide space, electricity and water facility, rest all required infrastructure has to be managed / arranged / established by the service provider.
- X. Maintain registers for receiving the cadastral maps, scanning, checking, returned, digitizing, indexing and returning the same to the department.
- XI. While scanning adjustment of various parameters like contrast, brightness and density of imagesshould be made to optimal level so that all the contents written on the village map are captured in readable format.
- XII. Maps should be properly digitized as per the specifications provided by the department in the contract. The project will cover all the fields mentioned in framework above. However, these fields are illustrative only.
- XIII. The Agency (or Service Provider) can suggest changes in the scope of the work mentioned in thisdocument on detailed system analysis and design as per the requirement of Land Records. However, the acceptance of the same is solely at the discretion of the Registrar, Board of Revenue for Rajasthan, Ajmer.
- XIV. Service provider will get the digitization of cadastral maps updated to current stage and

linking of the same with existing database of e-Dharti software approved from the Registrar, BoR mentioned in the Service Level Agreement (SLA) signed between State Government and the successful bidder for implementation of the project later on.

XV. Indexing and storing of the village map should be done, as guided by the department. Scanned, digitised and hardcopy of maps must also be handed over to the concerned office.

3. Technical Specifications

Creation of GIS ready digitized Cadastral Maps :- Creation of spatial data in GIS Layer with integrated ROR data. All textual data will be posted on map and create a database table. Coordinate will be stored in WGS 84 in Metric Unit and 43 Zone(North hemisphere)

4. Criteria for Digitization of Cadastral Maps:

4.1 Reproduce map

The map in tear & wear, not clear map condition or missing maps will be traced and given by the respective district.

Such village maps provided by the district authority for each tehsil, wherever required, before scanning. The maps will have to be traced in case:

- a. The quality of map is such that they can't be directly scanned and need to be scrubbed;
- b. the information content is not legible; and
- c. The information content is such that it would hinder heads- up digitization after scanning.

4.2 Scanning:

Source document will be mother map bound cadastral, map sheets normally in A0/A1 size on the traditional scale of revenue village. This source document will be scanned at notified locations. The Service Provider has to scan it at 300 dpi and 400 dpi where clarity is not as per requirement and format must be in 24 bit color tiff format (*.tiff) or any other suitable format prescribed in the work order. The Registrar, Board of Revenue reserves the right to change the format as andwhen needed. This format will be assigned in job order. After scanning (upon accomplishment of scanning), one copy of map on 90 GSM Paper will be printed and cross-checked with the original input map given by officials as notified. The Service Provider has to make sure that original document and printed document are 100% matching. Output will be submitted asscanned image, image sister word file and scan Metadata report on CD and hardcopy as mentioned above.

4.2.1 Scanning and dimensional accuracy

The original map is scanned to produce it in raster form. For cadastral maps,

scanning may be done in 300 or 400 dpi (dots per inch). Special attention should be given to see that the map is not deformed dimensionally. For this purpose, —X (cross) marks are placed at corners of the original map before scanning. In the next step, the lengths between the —X marks of the original map are compared with those of the scanned map to check whether any differences exist. Finally, raster editing is done for the elimination of unwanted patches in order to enhance vectorisation of the raster data. Dimensional accuracy of the raster data implies total correspondence between the raster data and the original map. The following procedures are used to achieve dimensional accuracy:

- 1. Checking for expansion.
- 2. Checking for contraction.
- 3. Checking for translation.
- 4. Checking for rotation.

Raster form of the map may appear to be expanded or contracted as compared to the original map, which in turn affects the vector data. The checking for expansion and contraction is based on the principle that _area is invariant⁴. The Board of Revenue has Jurisdiction List (JL) in which the total Revenue village area is defined and the land records information contains each plot area of an owner. These two are compared with the vector data of the map to check for the expansion or contraction of the map with respect to the original map.

- **4.2.2** Scanning Specification
 - <u>All the maps needs to be indexed and list of inventory prepared. The codification used in e-Dharti(ApnaKhata</u>) District (2 digit) Tehsil (2 digit) Revenue Village (3 digit) and sheet number (2 digit). For e.g.; 010100101 for 01-District, 01-Tehsil, 001-Revenue Village and 01-1st sheet (This coding is indicative the final structure shall be given after award of contract).
 - b. The maps to be scanned at 300 dpi Colour (as per requirement) mode for normal cases, 400 dpi on 24 bit colour for damaged or destroyed Mother-maps whose boundaries are not clear
 - c. Images should be stored in tiff <u>uncompressed format.</u>
 - d. Image should be scanned in CCD technologies(CCD based scanner)
 - e. The image orientation should be upright.

- f. The image should be cleaned and de-speckled to remove noise.
- g. Legibility features should be good.
- h. Measured length and width within the bounding box of map should be +/-0.1% of the original maps. <u>Not Exceed 0.25 mm(.25mm=in ground 1 meter or as per map scale)</u>
- i. The image should not be skewed or wrapped.
- j. Scanned image will be approved by officer/ official designated by the Government of RAJASTHAN.

4.2.3 Raster Editing and Registered Village Raster Map

- i. After getting the scanned maps in tiff format, the map is cleaned for unwanted entities.Before starting digitization, it is desired that the map should be cleaned from the unwantedspeckles, noise, etc. To each of the scanned image the metadata is to be tagged to the format as given by BOR.
- ii. Brightness and Contrast Adjustment.
 - (a) colour Balance.
 - (b) Resize and Cut.
 - (c) Flip/Rotate
 - Displaying Images
 - Grid rectification of village sheet in permissable rms (root mean squire) error with minimum five tie ponts.(four point corner & one point center).
 - Displaying Multiple Images and Map Features
 - Controlling Image Display And Appearance
 - After grid rectification mosaicing the multi sheet village map from maching line
 - And a new raster image file is to be generated for whole village as a unit
 - Registered raster images and create an attached sister word file of image
 - Using new image file village boundary is to be digitized and total area is to be determined and compared with whole area of village RoR.
 - Metadata report of the raster image along with "word" sister file is to be generated.
 - Print of Raster image so prepared on appropriate scale is to be submitted for QC-I after which it will be registered in CAD workspace
 - Creating a Legend in .gif(Graphic interchange format) file
 - Generate a legend, add a Sheet Title and non spatial data

4.3 Vectorizing, topology building and data integration:

- 4.3.1 Digitization of scanned cadastral maps Activities GIS-ready digitized cadastral Village maps may be created in separate data base and they should be digitized in <u>multi layers i.e. area</u>, line and point <u>features so as to facilitate digital capturing of all the features type & style of</u> <u>the existing paper map (GIS environment).</u>
 - i. Identification of relevant features.
 - ii. Association of feature codes.
 - iii. Ggrouping in layer/ coverage as required. Separate layer of village as per map legend (template will be provided)
 - iv.Attaching polygon No./plot/ Khasra no. to each and every polygon.
 - v. Digitized maps should match **1:1** with existing Mother-maps.
 - vi. Standard symbology (Alamaats) should be codified and used and has to be first approved by the State Govt. for entire State. Such symbols may be incorporated in the point layer/ Line / Polygon.
- 4.3.2 New ragistered scan approved map to be digitized in classified layer .
- 4.3.3 Editing/Cleaning of vectorized data Relocation of misplaced features. Adding missing features. Removing undershoots and overshoots. Center line of image line, line type, line style, line bands Deleting extra features.
- 4.3.4 Digitization Specification Service Provider is supposed to provide vector digital data with complete clean/edit/topology building processing in specified formats, confirming all accuracy and completion requirements, along with associated feature codes. Requirements are:
 - a. The Service Provider will submit a check plot for accuracy and completion check. Exactspecifications will be provided in the design document, along with agreement.
 - b. Digital data would be submitted in the required format for checking of topologicalcorrectness.
- c. Service Provider shall incorporate all omissions and rectify all identified errors usingcheck plot and digital data.
- d. Final data set and ink plot on polyester paper for one to one check of 100% data plots with original manuscript, would be provided after all corrections have been carried out.

4.3.5 Digitization:

- **a.** Digitized vector data is supposed to be in planner form i.e. all intersections of lines and significant features on a line should be marked by nodes.
- **b.** Labels marked on the map should be digitized as point and not as text or annotationincluding line lengths as mentioned on the map.

4.4 Database standards

RDBMS with spatial data support to be used for data storage. The data should be portable to PostgreSQL. SQL-92 (Relational Model) /SQL -1999 (Object Model) may be adopted as standard for relational database management systems (RDBMSs) as per the needs of NIC.

4.5 Feature Coding

All the features digitized, as per the requirement, would be assigned feature codes, as specified in the Design document released with the work order. Service Provider will ensure complete and proper association of the corresponding feature codes for all features.

4.6 Spatial Database

Service Provider is required to group various features in different classes /coverage, as specified in the design document with proper ground control reference points. Service Provider will also provide a comprehensive coverage containing all control points, and similarimportant features.

4.7 Topologically Complete

- a. The final data set should fulfil the following criteria for all classes/coverage: a.Polygons are closed properly. No undershoots or overshoots are acceptable
- b. All linear features should conform to planarity requirement, i.e. all intersections are properly termed as nodes.
- c. All Polygons have individual and unique label.
- d. All polyline will be each segmented line.
- 4.8 Accuracy, Quality, Inspection and Completeness Service Provider will ensure that the digital vector data is accurate and complete, as per therequirement detailed out in the work order.

Completion of the work is defined as accomplishment of all intended features and the logical grouping, as specified in the design document. Accuracy is defined in terms of positional correctness, digital vector data and topological completeness, subject to various tolerance limits, as specified in design document.

The following criteria for testing digital vector data for completion and accuracy may include, but not limit the number:

- a. Physical Verification of test plot on tracing paper on random sample basis.
- b. Random checking of features, during which, not more than 10% of points tested should be +/- 0.1% of the original maps.
- c. Verification of topological correctness by actually constructing the topology.

5. Verification of job requirements reflected in design document.

The digital data failing to conform these tests will not be accepted. Service Provider shall be given an opportunity to rectify errors to the satisfaction of STATE GOVT. within a stipulated time, failing which the work order shall stand terminated. In such a case, STATE GOVT.reserves the right to get the work executed by another Service Provider at the cost of defaulting party. However, NLRMP guidelines may be referred.

6. Output Format

Maps should be scanned and made available in .tiff format to their true scale, vectorized and converted into shape file format consisting of three files i.e. the shape file (*.shp), the index of the shape file (*.shx) and the data associated with the shape file (*.dbf). The Service Providermay supply the digital data in *.shp format or in suitable format as per the directions of Registrar, Board of Revenue and the data should be clean and built. The following three database tables should be developed from the data available in the paper map. This is done by carefully observing each plot in the map sheet. The other component of the original map which are non-map features i.e.

- a. Sheet heading
- b. Plot Numbers (Distance of each arm forming the polygon of plots or Khasra nos.)
- c.Legends
- d. List of Conventional Signs
- e. List of Bta Plot Numbers
- f. Contents of the Certificate Block

7. User's Manual

The User Manual for operation and complete indexing should also be provided in CD media as well as hard copy in two sets. The User Manual should be in Hindi and also in English with complete indexing of the villages with respective details. 2 Copies each to be provided.

8. Capacity building & Training

As part of project requirement all the concerned Revenue officers / officials of the District viz. Tehsildar/Naib Tehsildar/Kanungo/Patwari etc. needs to be trained by ServiceProvider. Training to minimum 5 persons of tehsil and 2 Master Trainers in each District and preparation of user manual is the responsibility of the service provider.

9. Cleaning & Creating Topology

- A) Polygon Topology: A map layer of closed two-dimensional figures that share boundaries and other characteristics form a polygon topology.
- Centroids: A centroid is a point feature that serves as an "anchor point" for a topological area.
- Boundaries: A boundary is a linear element that represents a portion of the extent of a topological area. A boundary has two endpoints and zero or more interior vertices.
- Area: An area is comprised of a centroid and two or more boundaries that form a closed network. An area can also be bounded by a single closed shape element, rather than a series of linear boundaries, although this is usually not preferable in a GIS project.
- B) Linear Networks: A network is an interconnected set of edges and nodes representing geographic features through which resources are moved.
- Edges: An edge is linear element such as a line, linestring, curve, or arc that is topologically linked to nodes.
- Nodes: A node is the endpoint of an edge, topologically linked to all edges that intersect at the same point.

Polygons to be topologically valid, they must confirm to the following criteria.

- All polygon boundaries must be properly segmented.
- The boundaries of a polygon must form a closed circuit.
- Duplicate boundaries are not allowed.
- Each polygon must have exactly one centroid.

Topology cleanup and creation: visualizing topology with rainbow view.

Topology Cleanup:

- Removing duplicate line work.
- Resolving similar line work.
- Removing fragmented line work.
- Removing redundant vertices.
- Resolving overshoots.

Topology creation:

- Combine line work (connect linear element).
- Creating centroids
- Creating area
- Associate linkage
- Validate topology
- Find slivers
- Attributes masking

10. Creating Features and populating database tables

Features are linked to attributes database records.

Spatial data linked to textual data.

a) Designating map elements as features

- 10.1. Attaching feature linkage to individual element
- 10.2. Attaching feature linkage to element with in fence contents.
- 10.3. Attaching feature linkage to automatically by category.
- 10.4. Verifying features with attribute masking.

b) Creating new database records

Interact with text elements and database attributes.

c) Populating database records

Sql update Statement to populate Records Populate Easting and Northing columns Populate Records using Area/Perimeter Update

- d) Placing features with automatic attribution
- 10.5 Create a new record in the associated table.
- 10.6 Assign a suitable MS link value and link the record to the new map feature.
- 10.7 Populate the map ID column of the new record.
- 10.8 Open a database form for the new records.
- 10.9 SPATIAL ANALYSIS

- 1. Creating topology layers.
 - (a) Creating a point topology layer using an SQL query.
 - (b) Creating area topology layers from buffer zones.
 - (c) Creating topology layers with selected map features.
- 2. Overlay topology layers.
 - (a) Area to area overlay.
 - (b) Point to area overlay.
- 3. Outputting results of spatial analysis.
 - (a) The database record for the jamabandi can be retrieved and displayed.
 - (b) The corresponding map features can be located and displayed.
 - (c) A listing of khatedar (land owner) information can be created by saving the records to a text file.
 - (d) The Khatedar records can be flagged in the database so other GIS and database tools can be used to further process them.
 - (e) A special map that emphasizes the jamabandi (condidule properties) can be prepared.
 - (f) Mailing labels can be generated for the khatedar.
 - (g) A custom macro can be used to produce a report or to satisfy other needs.
- 4. Performing a spatial analysis.
- 5. Building and using a linear network.

11. Creation of Data Attribute

1. Division :- Division Cod. Division Name , Division area, Perimeter District count, Tehshil count, ILR , Ptwar, village count , Minimum Bounding Rectangular (MBR) Coordinate.

2. District:- Division Cod. District Cod, District Name, District Area, Perimeter, Tehshil count, ILR, Ptwar village count, MBR

3. Tehshil:- District Cod, Tehshil Cod, Tehsil Name , Tehshil Area, perimeter ILR , Patwar Village Count , MBR.

4. ILR circle:- Tehshil Cod, ILR Name, ILR cod, ILR Area, PERi, Ptwar, village count, MBR **5. Patwar Circle:-** ILR cod, Ptwr name, Ptwar cod, Ptwr Area, perimeter Village count, MBR

6. Village:- Ptwr cod, Village cod, village name , Village Area, perimeter, MBR

7. Base Map village cod, Map sheet cod, map version, scale, sheet name,

8. Raster File Meta data,

9. Point Feature UTM Projection Coordinate, Geodetic Coordinate, Point ID, Point Name, Point Style, Point Type

10. Line Feature Starting Coordinate, Ending Coordinate, Length, Bearing, Line Cod, Line Style, Line Type, Line Name, MBR

11. Area Feature Enclosed Area, Perimeter, Center-id, center-id –coordinate, kasara no, Area Style, MBR, Point Count, Line Count, Khata no, Khewat No, Soil Cod, soil Name, Rent, Irrigation Source, land type, Owner Name & Address, Tenant type, Location Geometry

- 12. Kasara ID
- 13. Kewat,
- 14. khatouni,
- 15. Owner & Address ,
- 16. Rent Rate
- 17. Land Use,
- 18. Soil class

19. Tenancy Type

20. Legend,

12. Note:

(a)

- **i.** First printout of scanned map on 90 GSM for checking of source map Scale with matadata report of raster image.
- **ii.** The final scanned map printout is to be approved by the revenue officers/staff and thereafter service provider shall provide final scanned map printouts on 100 Micron polyester matt films. Print of overlay of colour vector data *on* raster image is to be submitted for QC-II.
- **iii.** If any error/mismatch is found in first printout another printouts shall be provided after correction.
- iv. Service Provider shall provide '...n' number of printouts till final corrections
- (b) Digitized maps (Mother-maps) of every village along with symbol library on point/ Line/ Polygon layer on CD/DVD media as .tiff ,.tfw, .gif, .shp, .prj, .xyz file and .pdf file. However, additional file formats (i.g..dwg,.dgn .dxf etc) may be mentioned in the design document.
- (c) Digitized maps (Mother-maps updated to current stage) features (point,line,area) on CD/DVD media as three mandatory Esri format (.shp,.shx, .dbf, .prj file for III of soft data for builtup topology.
- (d) Feature geometry store in Data base of digitized maps as .dbf database file.
- (e) The printouts to be given in the required manner on appropriat scale in the following manner:
 - i. Final digital map for signed approved print on scale 1:4000 in WGS 84 datum over layed by grid difference in 100 meter. Grid coordinate label display in print media.
 - ii. One copy of hard copy in saved .pdf format and Digital map copy of spatial and texual data in .XYZ format will be saved.
- First printout of final scanned map on **100 Micron polyester matt film**. Second printout of draft digitized map (Service Provider may have to provide more printouts till final corrections), Third printout of final digitized map in Four copies on 100 **Micron polyester matt film**.

Note:

- i. Service provider shall provide copy of the digitized check print on 90 GSM Paper alongwith final scan map printout on 100 Micron polyester matt film.
- ii. In case of more than 10 errors in digitized check printouts, service provider shall providemore number of prints till final corrections are made.
- iii. The check printout map has to be approved by the revenue officers/staff. and the

serviceprovider shall provide four copies of final digitized printouts.

- iv. Four copies of digitized printouts after updation on 100 Micron polyester matt film.
- v. Digitized maps should be linked with RoR (attribute) which is already computerised and available in Microsoft SQL Server.
- User Manual.
 - Bidders shall follow the rules, regulations, laws and policies / guidelines of Governmentrelated to Land Records and Settlements and NLRMP. The missing or extra Khasra numbers will be provided to the Service Provider for correction.

13. Other Requirements

- i. The survey map of village is available in several sheets (sub-maps). The first submaps wouldbe scanned to get a raster image and it would be vectorised to generate vector digital data. These digitised Mother-maps will then be integrated to generate a map of the village using software tools. Thereafter, the digital maps of different villages of tehsil will be merged (mosaiced) together through software to construct the map of tehsil. Similarly, the digital maps of tehsils would be merged together to form a map of the district. About 57 files are generated for a typical GIS-ready Revenue village map, namely:
 - 1. JINo.shp Shape file for Revenue village Map Sheet
 - 2. JINo.shx Shx file for Revenue village Map Sheet
 - 3. JINo.dbf Dbf file for Revenue village Map Sheet
 - 4. Alml. shp Shape for Alamat in line layer
 - 5. Alml. shx Shx file for Alamat in line layer
 - 6. Alml.dbf Dbf file for Alamat in line layer
 - 7. Almp.shp Shape file for Alamat in Point layer
 - 8. Almp.shx Shx file for Alamat in Point layer
 - 9. Almp.dbf Dbf file for Alamat in Point layer
 - 10. Bnd.shp Shape file for Sheet Boundary, it denotes the extent of the sheet.
 - 11. Bnd.shx Shx file for Sheet Boundary
 - 12. Bnd.dbf Dbf file for Sheet Boundary
 - 13. Centroid.shp Shape file for the points where to place the Plot Numbers
 - 14. Centroid.shx Shx file for the points where to place the Plot Numbers
 - 15. Centroid.dbf Dbf file for the points where to place the Plot Numbers
 - 16. Img.shp Shape file for the points where to insert the GIF files
 - 17. Img.shx Shx file for the points where to insert the GIF files
 - 18. Img.dbf Dbf file for the points where to insert the GIF files
 - 19. Mbnd.shp Shape file for Revenue village Boundary
 - 20. Mbnd.shx Shx file for Revenue village Boundary

- 21. Mbnd.dbf Dbf file for Revenue village Boundary
- 22. Scale.shp Shape file for Scale of the Revenue village Sheet
- 23. Scale.shx Shx file for Scale of the Revenue village Sheet
- 24. Scale.dbf Dbf file for Scale of the Revenue village Sheet
- 25. Text.shp Shape file for Texts of the Revenue village Sheet
- 26. Text.shx Shx file for Texts of the Revenue village Sheet
- 27. Text.dbf Dbf file for Texts of the Revenue village Sheet
- 28. sign.gif Gif file for Certificate book
- 29. alm_bata.dbf Dbf file for conventional signs or alamats along with the reference of bata plot no.
- 30. missp.dbf Dbf file for Missing Plots in Revenue village Sheet
- 31. first_last.dbf Dbf file for First & Last Plot Number for Revenue village Sheet
- 32. lege.gif Gif file for legends
- 33. name.gif Gif file for Map Heading, i.e. it contains the District name, Revenue village name, Idn etc.
- 34. bata.gif Gif file for list of bata
- 35. Idn.tif TIF image file for Revenue village Map Sheet (raster image)
- 36. Lshp for land parcel boundary
- 37. L.shx for land parcel boundary
- 38. L.dbf for land parcel boundary
- 39. P.shx for land parcel boundary
- 40. P.shp for land parcel boundar
- 41. P.dbf for land parcel boundary
- 42. A.shx for land parcel boundary
- 43. A.shp for land parcel boundary
- 44. A.dbf for land parcel boundary
- 45. text file.txt or .csv .xyz
- 46 Area statements of ROR and Graphical area

Government land ,charagah, Irigated & non Irigated are separate shap file and All layer shoud be converted in esri formate (.shp,.shx,.dbf)

Sometimes, the legend is broken into more than one file. These files are named lege1.gif, lege2.gif, lege3.gif and lege4.gif. Accordingly, the total number of files varies from 57.

The output format of the digitized cadastral map should be .shp file subject to change to some another format if decided by the Government of Rajasthan later on.

- ii. The BOR will issue the certificate to service provider about successful implementation of project after receiving the satisfactory report from the authorities at District level
- iii. Maintenance/ Technical Support will have to be provided for a period of 2 (Two) years after the successful completion of project and 1(One) Technical Support person will have to be deployed at central location in every district.

- iv. After successful implementation of project, service provider will handover Technical document as well as user manual for the database of digitized cadastral maps and Intellectual Property Rights (IPR) to The Registrar, Board of Revenue. A copy of the user manual would also be provided to authorities at District/ Tehsil/ Subdivision levels. All the deliverables mentioned in this document would become the property of Registrar, Board of Revenue who reserves the right to replicate the digitization process also in other tehsils etc. in the District.
- v. Space for setting up of scanning centre and updation would be provided by GOR
- vi. Open standard may be used for creation of database/ application etc. As for the encodingstandards are concerned, the UNICODE should be used for data storage and local language display and support.
- vii. The Integration of Spatial data (Map data) with RoR shall be done by NIC on their BhuNaksha Software. The service provider is to provide only required files as specified for such an integration and support, if needed.

Important Note : For any further requirement / clarification in the scope of work and methodology, the details should be referred from Chapter No. 1 of model -1 (Based on the system followed in West Bengal) of technical manual of digitization of cadastral maps of NLRMP (Made available as an annexure to this bid document).

10. ROLES AND REPONSIBILITY

Roles and Responsibilities of the Service Provider (SP):

- a. SP will provide necessary Hardware (Laptop or PC, Scanner, Printing, Stationery) and Software Tools. All expenditure for operating the aforementioned equipment shall be borne by the SP.
- b. Service Provider will ensure that the digital vector data is accurate and complete, as perthe requirement detailed out in the bid document.
- c. Liaise with Revenue Officials at District/Tehsil levels to study the whole system related to cadastral maps and Jamabandies etc. and submit design document to Board of Revenue within 4 weeks from the date of award of contract.
- d. Identification of requirements across Land Records at District/Tehsil levels to help to digitise the cadastral maps in generic manner so that the same can be used by all the concerned offices across the state.
- e. Satisfactory training to users will be provided by Service provider after implementing the software. All necessary changes and suggestion during training and implementation will be incorporated in the project.
- f. Service Providers will prepare Technical Document as well as User Manual for digitisation of cadastral maps and its linking with textual data i.e. Jamabandi.
- g. Project will be deemed to be completed after establishing the completeness of the work inall respects along with accuracy.
- i. Completion of the work is defined as accomplishment of all intended features and the logical grouping, as specified in the bid/ design document.
- ii. Accuracy is defined in terms of positional correctness, digital vector data and topological completeness, subject to various tolerance limits, as specified in designdocument
- After successful implementation of project, service provider will handover Technicaldocument as well as user manual for the scanned images and digitised maps and all their copyrights shall be the sole property of the Board of Revenue.
- *i.* Even, if an error is detected at later stage after the project period and during the operational period, the SP will carry out the correction in the digitized data.

- j. Board Of Revenue will form one technical team at the level of Registrar, Board of Revenue for monitoring the project activity and its implementation. A similar technical team will be established at the level of District Collectors' in the concerned Districts.
- k. The technical team will have Technical experts from BOR, Settlement Deptt., NIC and Deptt. of Science and Technology and Domain Experts from any other agency nominated by the Government of Rajasthan. This team will be headed by Registrar, Board of Revenue.
- I. The technical team at the level of concerned districts will have Technical experts from District NIC and Domain Experts from the District Collector's office and Settlement deptt.
- m. Service provider will interact with these teams during the entire project implementation cycle.
- n. Facilitate liaison of service provider with identified offices of the State Government for identification of System Design Document and requirement which will have to be incorporated in the document during implementation of the project.
- o. Regularly reviewing the progress of work carried out by service provider.
- p. Payment processing of the bills submitted by the service provider.
- q. List of the offices to establish scanning/ digitised centre and requisite revenue records for the implementation of the project.

11. Language Interface

All options and functionalities available in application should be in English & Hindi (Unicode).

12. Warranty Services

The scope towards warranty services shall include the following:

- Linkage of RoR (Textual Data) with Map (spatial) which shall be done by NIC on their Bhunaksha software. The Service provider is required to provide technical support to the NIC for the initial linkage and remove anomaly, if any and also provide support as may needed during the service period.
- 2. Tarmeem on digitized map based on updation in the RoR and auto calculation of a polygon area after tarmeem during the service period.
- 3. The service provider shall provide training / handholding to the staff of tehsil during the service period for operations, tarmeem etc.

The warranty services shall be governed by the Service Level Agreements described under the "Service Level Agreements".

The tentative Bill of Material is shown below:

Sr. No.	Item Description	Unit	Approximate Quantity Per Village
1	2	3	5
1.	Final Print of verified scanned map on 100 Micron polyester matt film sheet. (As per the size of source map)	One Copy	One
2.	Printing of each final (after tarmeem) Digitized Village (revenue) maps sheet on 100 Micron polyester matt films on 1:1 Scale output. (In 24X36 inches sheet size and 20X30 inches work area)	One Copy	Four
3.	All shape & other files and Mosaiced Village map fixing in boundaries on DVD along with Shape Files (as per NLRMP guidelines)	One Copy per tehsil	One per tehsil

Note : Guidelines for ensuring Quality is mentioned in the separate section, which is essentially to be followed.

Terms & Conditions of Contract

1. Code of Integrity—

(A) Any person participating in the procurement process shall,-

- i not offer any bribe, reward or gift or any material benefit either directly or indirectly in exchange for an unfair advantage in procurement process or to otherwise influence the procurement process;
- ii. not misrepresent or omit that misleads or attempts to mislead so as to obtain a financial or other benefit or avoid an obligation;
- iii. not indulge in any collusion, Bid rigging or anti-competitive behavior to impair the transparency, fairness and progress of the procurement process;
- iv. not misuse any information shared between the procuring Entity and the Bidders with an intent to gain unfair advantage in the procurement process;
- v. not indulge in any coercion including impairing or harming or threatening to do the same, directly or indirectly, to any party or to its property to influence the procurement process;
- vi. not obstruct any investigation or audit of a procurement process;
- vii. disclose conflict of interest, if any; and
- viii. disclose any previous transgressions with any Entity in India or any other country during the last three years or any debarment by any other procuring Entity.
- **(B)** Conflict of Interest: A conflict of interest is considered to be a situation in which a party has interests that could improperly influence that party's performance of official duties or responsibilities, contractual obligations, or compliance with applicable laws and regulations.

A Bidder may be considered to be in conflict of interest with one or more parties in this bidding process if, including but not limited to:

- i. have controlling partners/ share holders in common; or
- ii. receive or have received any director in direct subsidy from any of them ;or
- iii. have the same legal representative for purposes of this Bid; or
- iv. have a relationship with each other, directly or through common third parties, that puts the mina position to have access to information about or influence on the Bid of another Bidder, or influence the decisions of the Procuring Entity regarding this bidding process; or
- v. the Bidder participates in more than one Bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all Bids in which the Bidder is involved. However, this does not limit the inclusion of the same subcontractor, not otherwise participating as a Bidder, in more than one Bid; or
- vi. the Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the Works that are the subject of the Bid; or

- vii. Bidder or any of its affiliates has been hired (or is proposed to be hired) by the Procuring Entity as Engineer-in- charge/ consultant for the contract.
- **(C)** The Bidder shall have to give a declaration regarding compliance of the Code of Integrity prescribed in the Act, the Rules and stated above in this Clause along with its Bid.
- (D) Breach of Code of Integrity by the Bidder:- Without prejudice to the provisions of Chapter IV of the Rajasthan Transparency in Public Procurement Act, in case of any breach of the Code of Integrity by a Bidder or prospective Bidder, as the case may be, the Procuring Entity may take appropriate action in accordance with the provisions of sub-section (3) of section 11 and section 46 of the Act.

2. Qualification of bidder :- (1) A procuring entity may determine and apply one or more of the requirements specified in sub-section (2) for a bidder to be qualified for participating in a procurement process.

(2) Any bidder participating in the procurement process shall -

(a) posses the necessary professional, technical, financial and managerial resources and competence required by the bidding documents, pre-qualifications documents or bidder registration documents, as the case may be, issued by the procuring entity;

(b) have fulfilled his obligation to pay such of the taxes payable to the Central Government or the State Government or any local authority as may be specified in the bidding documents, pre-qualification documents or bidder registration documents;

(c) not be insolvent, in receivership, bankrupt or being wound up, not have its affairs administered by a court or a judicial officer, not have its business activities suspended and must not be the subject of legal proceedings for any of the foregoing reasons;

(d) not have, and their directors and officers not have, been convicted of any criminal offence related to their professional conduct or the making false statements or misrepresentations as to their qualifications to entire into a procurement contract within a period of three years preceding the commencement of the procurement process, or not have been otherwise disqualified pursuant to debarment proceedings;

(e) not have a conflict of interest as may be prescribed and specified in the prequalification documents, bidder registration documents or bidding document, which materially affects fair competition;

(f) fulfill any other qualifications as may be prescribed.

(3) Subject to the right of bidders to protect their intellectual property or trade secrets the procuring entity may require a bidder to provide any such information or declaration.

(a) the procuring entity shall disqualify a bidder if it finds at any time that ,-

(i) the information submitted, concerning the qualifications of the bidder, was false or constituted a misrepresentation; and

(ii) the information submitted, concerning the qualifications of the bidder, was materially inaccurate or incomplete; or

(b) the procuring entity may require a bidder, who was pre-qualified, to demonstrate its qualifications again in accordance with the same criteria used to prequalify such bidder. The procuring entity shall disqualify any bidder that fails to demonstrate its qualifications again, if requested to do so. The procuring entity shall promptly notify each bidder requested to demonstrate its qualifications again as to whether or not the bidder has done so to the satisfaction of the procuring entity.

3. Eligibility of bidders :- (1) A bidder may be a natural person, private entity, government-owned entity or, where permitted in the bidding documents, any combination of them with a formal intent into an agreement or under an existing agreement in the form of a Joint Venture. In the case of a Joint Venture:-

(a) all parties to the Joint Venture shall sign the bid and they shall be jointly and severally liable; and

(b) a Joint Venture shall nominate a representative who shall have the authority to conduct all business for and on behalf of any or all the parties of the Joint Venture during the bidding process. In the event the bid of Joint Venture is accepted, either they shall form a registered Joint Venture company/ firm or otherwise all the parties to Joint Venture shall sign the Agreement.

- (2) A bidder should not have a conflict of interest in the procurement in question as stated in rule 81 and the bidding documents. The procuring entity shall take appropriate actions against the bidder in accordance with section 11 and Chapter IV of the act, if it determines that a conflict of interest has flawed the integrity of any procurement process. All bidders found to have a conflict of interest shall be disqualified.
- (3) A bidder debarred under section 46 shall not be eligible to participate in any procurement process undertaken by, -
- (a) any procuring entity, if debarred by the State Government; and
- (b) a procuring entity if debarred by such procuring entity.
- (4) In case of procurement of goods, bidder must be a manufacturer, distributor or bonafide dealer in the goods and it shall furnish necessary proof for the same in the specified format. Where applicable, proof of authorization by the manufacturer of country distributor in India, shall be enclosed.

4. Performance Security

Performance Security shall be solicited from all successful Bidders except State Govt. Departments and undertakings, corporations, autonomous bodies, registered societies, co- operative societies which are owned or controlled or managed by the State Government and undertakings of Central Government. However, a Performance Security Declaration shall be taken from them. The State Government may relax the provision of Performance Security in particular procurement.

- (i) The amount of Performance Security shall be five percent, of specified in the BDS, of the amount of the Work order. The currency of Performance Security shall be Indian Rupees.
- (ii) If the Bid, which results in the lowest evaluated bid price, is seriously unbalanced or front loaded in the opinion of the Procuring Entity, the Procuring Entity may require the Bidder to produce detailed price analysis for any or all items of the Bill of Quantities, to demonstrate the internal consistency of those prices with the construction methods and schedule proposed. After evaluation of the price analysis, taking into consideration, the schedule of estimated Contract payments, the Procuring Entity may require that the amount of the performance security be increased (to a maximum of 20% of the bid value of such items) at the expanse of the Bidder to a level sufficient to protect the Procuring Entity against financial loss in the event of default of the successful Bidder under the Contract.
- (iii) Performance Security shall be furnished in one of the following forms as applicable-
- (a) Deposit through eGRAS; or
- (b) Bank Draft or Banker's Cheque of a Scheduled Bank in India; or
- (c) National Savings Certificates and any other script/ instrument under National Savings Schemes for promotion of small savings issued by a Post Office in Rajasthan, if the same can be pledged under the relevant rules. They shall be accepted at their surrender value at the time of Bid and formally transferred in the name of the Procuring Entity with the approval of Head Post Master; or
- (d) Bank guarantee. It shall be got verified from the issuing bank. Other conditions regarding bank guarantee shall be same as specified in ITB Clause 3.10 [Bid Security]; or
- (e) Fixed Deposit Receipt (FDR) of a Scheduled Bank. It shall be in the name of the Procuring Entity on account of Bidder and discharged by the Bidder in advance. The Procuring Entity shall ensure before accepting the Fixed Deposit Receipt that the Bidder furnishes an undertaking from the bank to make payment/ premature payment of the Fixed Deposit Receipt on demand to the Procuring Entity without requirement of consent of the Bidder concerned. In the event of forfeiture of the Performance Security, the Fixed Deposit shall be forfeited along with interest earned on such Fixed Deposit.

(iv) Performance Security furnished shall remain valid for a period of sixty days beyond the date of completion of all contractual obligations of the Bidder, including operation and / or maintenance and defect liability period, if any.

(v) Failure of the successful Bidder to submit the above-mentioned Performance Security or sign the Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security. In that event the Procuring Entity may award the Contract at the rates of the lowest Bidder to the next lowest evaluated Bidder whose offer is substantially responsive and is determined by the Procuring Entity to be qualified to perform the Contract satisfactorily. (vi) Forfeiture of Performance Security: Amount of Performance Security in full or part may be forfeited in the following cases:-

- (a) when the Bidder does not execute the agreement in accordance with provisions of award of contract within the specified time after issue of letter of acceptance; or
- (b) when the Bidder fails to commence the Works as per Work order within the time specified; or
- (c) when Bid fails to complete Contracted Works satisfactorily within the time specified; or
- (d) when any terms and conditions of the contract is breached; or
- (e) to adjust any established dues against the Bidder from any other contract with the Procuring Entity; or
- (f) if the Bidder breaches any provision of the Code of Integrity prescribed for Bidders specified in the Act and Chapter VI of the Rules
- (g) Notice of reason able time will be given in case off or feiture of Performance Security. The decision of the Procuring Entity in this regard shall be final.

5 Warranty Services

(i) Warranty services are required to be carried out as per section - "Warranty Services" under Section- "Scope of Work".

(ii) The warranty services shall be governed by the Service Level Agreements described under the section -"Service Level Agreements".

6 Conditional offers by the Bidders

Any bid containing conditional offers shall be summarily rejected outright.

7 Late Bid offers

Any proposal received after the last date and time mentioned in the data sheet for receipt of proposal shall be rejected outright.

8 All bids shall remain valid for a period of 120 days from the deadline for last submission of Bid). Board of Revenue for Rajasthan, Ajmer reserves the right to reject a bid having the bid validity shorter than 120 days considering as non-responsive without any correspondence.

9 In special circumstances, BOARD OF REVENUE FOR RAJASTHAN, AJMER may solicit extension of the period of validity from a Bidder. The request and the response thereto shall be made in writing. Extension of validity period by the Bidder shall be unconditional. The BID SECURITY provided shall also be sufficiently extended. However, a Bidder may refuse the request without forfeiting the BID SECURITY. A Bidder granting extension of validity will not be permitted to modify its technical or financial bid.

10 Negotiations:-

To the extent possible, no negotiations shall be conducted after the pre-Bid stage. All clarifications needed to be sought shall be sought in the pre-Bid stage itself. Negotiations may, however, be undertaken only with the lowest Bidder under the following circumstances-

i. When ring prices have been quoted by the Bidders for the subject matter of procurement; or

ii. When the rates quoted vary considerably and considered much higher than the prevailing market rates.

iii. The Bid evaluation committee shall have full powers to undertake negotiations. Detailed reasons and results of negotiations shall be recorded in the proceedings.

iv. The lowest Bidder shall be informed about negotiations in writing either through messenger or by registered letter and e-mail (if available). A minimum time of seven days shall be given for calling negotiations. In case of urgency the Bid evaluation committee, after recording reasons, may reduce the time, provided the lowest Bidder has received the intimation and consented to holding of negotiations.

v Negotiations shall not make the original offer made by the Bidder inoperative. The Bid evaluation committee shall have option to consider the original offer in case the Bidder decides to increase rates originally quoted or imposes any new terms or conditions.

vi In case of non-satisfactory achievement of rates from lowest Bidder, the Bid evaluation committee may choose to make a written counter offer to the lowest Bidder and if this is not accepted by him, the committee may decide to reject and re-invite Bids or to make the same counter-offer first to the second lowest Bidder, then to the third lowest Bidder and so on in the order of their initial standing in the bid evaluation and work order be awarded to the Bidder who accepts the counter-offer.

vii In case the rates even after the negotiations are considered very high, fresh Bids shall be invited.

11 Bid Currency

All prices shall be quoted in Indian Rupees.

12 Intellectual Property Rights

All intellectual property rights for the work performed under this Bid as far as data is concerned shall lie with Board of Revenue for Rajasthan, Ajmer,. This clause is applicable to all data in any form or format procured, processed, scanned or produced under this Bid by the Bidder. The Bidder shall not use such data for any other purpose during and after the term of contract. In no cases, any document provided by the department is taken out of the space provided brand new, including all components and accessories.

13 Indemnity

Bidder shall indemnify, protect and save Board of Revenue for Rajasthan, Ajmer, against all claims, proceeding, liabilities, losses, costs (including legal costs), damages, expenses and action suits, resulting from brand new, including all components and accessories. All hardware and infringement of any patent, trademarks, copyrights, any other statutory infringements in respect of all the hardware/software supplied by him or expenses whatsoever arising out of or resulting from any loss or damage to the property or personnel of Board of Revenue for Rajasthan, Ajmer, relating to the performance of the Project whether or not such loss or damage is caused or contributed to by negligence or other default of Bidder or their Authorized User.

14 Publicity

Any publicity by the Bidder in which the name of board of Revenue for Rajasthan, Ajmer, is to be used should be done only with and after the explicit written permission of the board of Revenue for Rajasthan, Ajmer.

15 Debarment from bidding :- (1) A bidder shall be debarred by the State Government if he has been convicted of an offence –

(a) under the Prevention of Corruption Act, 1988(Central Act No.49 of 1988); or

(b) under the Indian Penal Code, 1860 (Central Act No. 45 of 1860) or any other law for the time being in force, for causing any loss of life or property or causing a threat to public health as part of execution of a public procurement contract.

(2) A bidder debarred under sub-section(1) shall not be eligible to participate in a procurement process of any procuring entity for a period not exceeding three years commencing from the date on which he was debarred.

(3) If a procuring entity finds that a bidder has breached the code of integrity prescribed it terms of section 11, it may debar the bidder for period not exceeding three years.

(4) Where the entire bid security or the entire performance security or any substitute thereof, as the case may be, of a bidder has been forfeited by a procuring entity in respect of any procurement process or contract, the bidder may be debarred from participating in any procurement process undertaken by the procuring entity for a period not exceeding three years.

(5) The State Government or a procuring entity, as the case may be, shall not debar a bidder under this section unless such bidder has been given a reasonable opportunity of being heard.

16 Force Majeure

A. Definition of Force Majeure--

In this Sub-Clause, "Force Majeure" means an exceptional event or circumstance:

- i. which is beyond a Party's control,
- ii. which such Party could not reasonably have provided against before entering into the Contract,
- iii. which, having arisen, such Party could not reasonably have avoided or overcome, and
- iv. which is not substantially attributable to the other Party.
- **B**. Force Majeure may include, but is not limited to, exceptional events or circumstances of the kind listed below, so long as conditions (i) to (iv) above are satisfied:
- a. war, hostilities (whether war be declared or not), invasion, act of foreign enemies,
- b. rebellion, terrorism, sabotage by persons other than the Contractor's Personnel, revolution, insurrection, military or usurped power, or civil war,
- c. riot, commotion, disorder, strike or lockout by personsother than the Contractor's Personnel,
- **d.** munitions of war, explosive Materials, ionizing radiation or contamination by radio-activity, except as may be attributable to the Contractor's use of such munitions, explosives, radiation or

radio-activity, and

e. natural catastrophes such as earthquake, hurricane, typhoon or volcanic activity.

C. If a Party is or will be prevented from performing its substantial obligations under the Contract by Force Majeure, then it shall give notice to the other Party of the event or circumstances constituting the Force Majeure and shall specify the obligations, the performance of which is or will be prevented. The notice shall be given within 14 Days after the Party became aware, or should have become aware, of the relevant event or circumstance constituting Force Majeure.

D. The Party shall, having given notice, be excused performance of its obligations for so long as such Force Majeure prevents it from performing them.

E. Notwithstanding any other provision of this Sub-Clause, Force Majeure shall not apply to obligations of either Party to make payments to the other Party under the Contract.

F. Notwithstanding the provisions of the Bid, the Bidder shall not be liable forfeiture of his performance guarantee, liquidated damages or termination for default, if and to the extent that, it's delay in performance or other failure to perform its obligations under the contract is

the result of an event of Force Majeure.

17 Resolutions of Disputes

- Any and all disputes or differences between the Parties arising out of or in connection with this Contract or its performance shall, so far as it is possible, be settled amicably through direct informal negotiation between the Parties.
- If after 30 (thirty) days of consultation or before, the department and the successful Bidder have failed to reach an amicable settlement, on any or all disputes or differences arising out of or in connection with this Contract or its performance, It shall be referred to The Chairman, Revenue Board, Rajasthan, Ajmer, who shall be the sole arbitrator.
 - In case of non acceptance of the Board of Revenue for Rajasthan, Ajmer, decision, either party may request that the dispute to be referred to arbitrator(s) in accordance with the Arbitration and Conciliation Act, 1996. All Arbitration proceedings shall be held at Ajmer, Rajasthan and the language of the arbitration proceedings and that of all documents and communications between the parties shall be in English.
 - In case the issues are not resolved in the arbitration proceedings then further legal action by the parties shall be referred and restricted to the jurisdiction of the Court in Ajmer, Rajasthan.

18 Redressal of Grievances during Procurement Process (Appeals)

Any grievance of a Bidder pertaining to the procurement process shall be by way of filing an appeal to the First or Second Appellate Authority, as the case may be, as specified in the BDS, in accordance with the provisions of chapter III of the Act and chapter VII of the Rules and as given in Appendix "A" of this section.

19 Right to Accept Any Offer and to Reject Any or All Offers

Board of Revenue for Rajasthan, Ajmer, reserves the right to accept or reject any offer, and to declare the Biding process invalid, and to reject all Bids at any time prior to award of contract, without thereby incurring any liability to the participated Bidder(s) or any obligation to inform the Bidder(s) regarding the decision.

20 Risk Purchase Clause

In the event of the successful Bidder fails to execute the project as stipulated under-Work Completion Requirements" and- Review and Monitoring System" in the required qualities and/or functionalities, Board of Revenue for Rajasthan, Ajmer, reserves the right to procure similar services in whole or in part from any alternate sources at the risk, cost and responsibility of the successful Bidder.

21 Termination for convenience

Board of Revenue Rajasthan, Ajmer, reserves the right to terminate the contract in whole or in part and convenience if required. Prior written notice shall be issued to the Bidder stating the reason for termination. The extent to which the contract is terminated and date, on which such termination becomes effective, shall also be mentioned. Board of Revenue for Rajasthan, Ajmer, shall also have the right to enter into an agreement with any other third party Bidder for taking the project forward or for maintenance of the project and shall in no way be answerable to the Bidder for such decision. For such termination the Exit Management given in the bid document shall be referred.

22 Ownership of resources supplied

At any time during or after this project, all resources supplied as part of this project shall belong to the department. This includes all hardware supplied, if any, all software supplied (custom and COTS), data/information built during the project, all infrastructure developed/supplied including all networking.

23 Work Completion Requirements

(i) The Bidders are required to complete the work at a location within One year computed starting from the date of issue of work order for the corresponding location.

(ii) The Bidder is also required to submit a Project Plan for the execution of the project within four weeks of the receipt of work order. Upon acceptance of the project plan from Board of Revenue for Rajasthan, Ajmer, the Bidder need to execute the project as per the schedules and milestones stated in the project plan.

(iii) Any delay from Bidder's part in execution of work shall attract penalties as per section -"Service Level Agreements".

If the Procuring Entity does not procure any subject matter of procurement or procures less than the quantity specified in the Bidding Document due to change in circumstances, the Bidder shall not be entitled for any claim or compensation except otherwise provided in the Bidding Document.

24 Acceptance of the successful Bid and award of contract

(i) The Procuring Entity after considering the recommendations of the Bid Evaluation Committee and the conditions of Bid, if any, financial implications, samples, test reports, etc., shall accept or reject the successful Bid.

(ii) Before award of the Contract, the Procuring Entity shall ensure that the price of successful Bid is reasonable and consistent with the required specifications.

(iii) A Bid shall be treated as successful only after the competent authority has

approved the procurement in terms of that Bid.

(iv) The Procuring Entity shall award the contract to the Bidder whose offer has been determined to be the lowest in accordance with the evaluation criteria set out in the Bidding Document if the Bidder has been determined to be qualified to perform the contract satisfactorily on the basis of qualification criteria fixed for the Bidders in the Bidding Document for the subject matter of procurement.

(v) Prior to the expiration of the period of validity of Bid, the Procuring Entity shall inform the successful Bidder in writing, by registered post or email, that its Bid has been accepted.

(vi) If the issuance of formal letter of acceptance (LOA) is likely to take time, in the meanwhile a Letter of Intent (LOI) may be sent to the Bidder. The acceptance of an offer is complete as soon as the letter of acceptance or letter of intent is posted and/ or sent by email (if available) to the address of the Bidder given in the Bidding Document.

(vii) In the written intimation of acceptance of its Bid sent to the successful Bidder, it shall also be requested to execute an agreement in the format given in the Bidding Document on a non-judicial stamp of requisite value at his cost and deposit the Performance Security or a Performance Security Declaration, if applicable, within fifteen days from the date on which the LOA or LOI is dispatched to the Bidder. In case the successful Bidder is a JV still to be legally constituted , all parties to the JV shall sign the Agreement.

(Viii) If the Bidder, whose Bid has been accepted, fails to sign a written procurement contract or fails to furnish the required Performance Security or Performance Security Declaration within the specified time period, the Procuring Entity shall forefeet the Bid security of the successful Bidder / execute the Bid Securing Declaration and take required action against the it as per the provisions of the Act and the Rules. The Procuring Entity may, in such case, cancel the procurement process or if it deems fit, offer for acceptance on the rates of lowest Bidder to the next lowest responsive Bidder.

ix The Bid Security, if any, of the Bidders whose Bids could not be accepted shall be refunded soon after the contract with the successful Bidder is signed and his Performance Security is obtained. Until a formal contract is executed, LOA or LOI shall constitute a binding contract.

25. As a general rule all the quantities of the subject matter of procurement shall be procured from the bidder, whose bid is accepted. However, when it is considered that the quantity of the subject matter of procurement to be procured is very large and it may not be in the capacity of the bidder, whose bid is accepted, to deliver the entire quantity or when it is considered that the subject matter of procurement to be procured is of critical and vital nature, in such cases, the quantity may be devided between the bidder, whose bid is accepted and the second lowest bidder or even more bidders in that order, in a fair, transparent and equitable manner at the

rates of the bidder, whose bid is accepted, Counter offer to first lowest bidder (L1), in order to arrive at an acceptable price, shall amount to negotiation. However, any counter offer thereafter to second lowest bidder(L2), third lowest bidder(L3) etc.,(at the rates accepted by L1) in case of splitting of quantities, as pre-disclosed in the bidding documents, shall not be deemed to be a negotiation.

26 Acceptability Module:- Each and every stage of work will be monitored, checked and verified by the concerned district verification committee as soon as possible to ensure the required quality of work. If any job/work is not performed as per the norm of this bid / upto the satisfaction of committee, the bidder is require to make correction/Redo the work.

27 Payment Terms - The payment shall be made only after successful completion of an individual stage as defined in execution framework section of the bid. The work will be carried out by successful bidder/ bidders at various district locations simultaneously and payment for a particular work stage of a tehsil shall be made by the respective district Collectors only after ensuring that work of that stage in a tehsil is completed with required quality, checked by the district verification committee (to be formed as per the directions of the BOR). However the BOR shall also sent team of officers for quality check time to time on random basis,

28 Exit Management

a) Preamble

i. The word 'parties' include the BOR and the selected sole bidder bidder.

ii. This Schedule sets out the provisions, which will apply on expiry or termination of the Project Implementation and Operations and Management of SLA.

iii. In the case of termination of the Project Implementation and/ or Operation and Management SLA due to illegality, the Parties shall agree at that time whether, and if so during what period, the provisions of this Schedule shall apply.

iv. The Parties shall ensure that their respective associated entities carry out their respective obligations set out in this Exit Management Schedule.

b) Transfer of Assets

i. The selected sole bidder bidder may continue work on the assets for the duration of the exit management period which may be a 30 days period from the date of expiry or termination of the agreement, if required by BOR to do so. During this period, the selected sole bidder bidder will transfer all the assets in good working condition and as per the specifications of the bidding document including the ones being upgraded to the department/ designated agency. The performance security submitted by selected sole bidder/lead bidder

will only be returned after the successful transfer of the entire project including its infrastructure.

The selected sole bidder bidder, if not already done, will transfer all the Software Licenses under the name of the BOR during the exit management period.

iii. BOR during the project implementation phase and the operation and management phase shall be entitled to serve notice in writing to the selected sole bidder/lead bidder at any time during the exit management period requiring the selected sole bidder/lead bidder to provide BOR or its nominated agencies with a complete and up-to-date list of the assets within 30 days of such notice.

iv. Upon service of a notice, as mentioned above, the following provisions shall spply:

a. In the event, if the assets which to be transferred to BOR mortgaged to any financial institutions by the selected sole bidder/lead bidder, the selected sole bidder/lead bidder shall ensure that all such liens and liabilities have been cleared beyond any doubt, prior to such transfer. All documents regarding the discharge of such lien and liabilities shall be furnished to BOR or its nominated agencies.

b. All title of the assets to be transferred to BOR or its nominated agencies pursuant to clause(s) above shall be transferred on the last day of the exit management period. All expenses occurred during transfer of assets shall be BORne by the selected sole bidder/lead bidder.

c. That on the expiry of this clause, the selected sole bidder/lead bidder and any individual assigned for the performance of the services under this clause shall handover or cause to be handed over all confidential information and all other related material in its possession, including the entire established infrastructure supplied by selected sole bidder/lead bidder to BOR.

d. That the products and technology delivered to BOR during the contract term or on expiry of the contract duration should not be sold or re-used or copied or transferred by selected sole bidder/lead bidder to other locations apart from the locations mentioned in the this bidding document without prior written notice and approval of BOR. Supplied hardware, software & documents etc., used by selected sole bidder/lead bidder for BOR shall be the legal properties of BOR or its nominated agencies.

c) Cooperation and Provision of Information during the exit management period

i. The selected sole bidder/lead bidder will allow BOR or its nominated agencies access to the information reasonably required to define the current mode of operation associated with the provision of the services to enable BOR or its nominated agencies to assess the existing services being delivered.

ii The selected sole bidder/lead bidder shall provide access to copies of all information held or controlled by them which they have prepared or maintained in accordance with the Project Implementation, the Operation and Management SLA and SOWs relating to any material aspect of the services provided by the selected sole bidder/lead bidder. BOR or its nominated agencies shall be entitled to copy all such information comprising of details pertaining to the services rendered and other performance data. The selected sole bidder/lead bidder shall permit BOR or its nominated agencies and/ or any replacement operator to have reasonable access to its employees and facilities as reasonably required by BOR or its nominated agencies to understand the methods of delivery of the services employed by the selected sole bidder/lead bidder and to assist appropriate knowledge transfer.

d) Confidential Information, Security and Data

The selected sole bidder/lead bidder will promptly on the commencement of the exit management period supply to BOR or its nominated agencies the following:

Documentation relating to Intellectual Property Rights;

Project related data and confidential information;

All current and updated data as is reasonably required for purposes of BOR or its nominated agencies transitioning the services to its replacement selected sole bidder/lead bidder in a readily available format nominated by BOR or its nominated agencies; and

All other information (including but not limited to documents, records and agreements) relating to the services reasonably necessary to enable BOR or its nominated agencies, or its replacement operator to carry out due diligence in order to transition the provision of the services to BOR or its nominated agencies, or its replacement operator (as the case may be).

Before the expiry of the exit management period, the selected sole bidder/lead bidder shall deliver to BOR or its nominated agencies all new or up-dated materials from the categories set out above and shall not retain any copies thereof, except that the selected sole bidder/lead bidder shall be permitted to retain one copy of such materials for archival purposes only.

e) Transfer of certain agreements

i. On request by Procuring entity or its nominated agencies, the selected sole bidder/ bidder shall effect such assignments, transfers, innovations, licenses and sub-licenses as Procuring entity or its nominated agencies may require in favour of procuring entity or its nominated agencies, or its replacement operator in relation to any equipment lease, maintenance or service provision agreement between selected sole bidder/lead bidder and third party leasers, operators, or operator, and which are related to the services and reasonably necessary for carrying out of the replacement services by BOR or its nominated agencies, or its replacement operator.

ii. Right of Access to Premises: At any time during the exit management period and for such period of time following termination or expiry of the SLA, where assets are located at the selected sole bidder/lead bidder's premises, the selected sole bidder/lead bidder will be obliged to give reasonable rights of access to (or, in the case of assets located on a third party's premises, procure reasonable rights of access to BOR or its nominated agencies, and/ or any replacement operator in order to inventory the assets.

f) General Obligations of the selected sole bidder/lead bidder

i. The selected sole bidder/lead bidder shall provide all such information as may reasonably be necessary to effect as seamless during handover as practicable in the circumstances to BOR or its nominated agencies or its replacement operator and which the operator has in its possession or control at any time during the exit management period.

ii. The selected sole bidder/lead bidder shall commit adequate resources to comply with its obligations under this Exit Management Clause.

g) Exit Management Plan

i. The selected sole bidder/lead bidder shall provide BOR or its nominated agencies with a recommended exit management plan ("Exit Management Plan") which shall deal with at least the following aspects of exit management in relation to the SLA as a whole and in relation to the Project Implementation, the Operation and Management SLA and SOWs.

If A detailed program of the transfer process that could be used in conjunction with a replacement operator including details of the means to be used to ensure continuing provision of the services throughout the transfer process or until the cessation of the services and of the management structure to be used during the transfer; and

lii Plans for the communication with such of the selected sole bidder/lead bidder's, staff, suppliers, customers and any related third party as are necessary to avoid any material detrimental impact on BOR operations as a result of undertaking the transfer; and

Iv If applicable, proposed arrangements and Plans for provision of contingent support in terms of business continuance and hand holding during the transition period, to RISL or its nominated agencies, and Replacement Operator for a reasonable period, so that the services provided continue and do not come to a halt.

V The Sole bidder/lead bidder shall re-draft the Exit Management Plan annually after signing of contract to ensure that it is kept relevant and up to date.

Vi Each Exit Management Plan shall be presented by the selected sole bidder/lead bidder to and approved by BOR or its nominated agencies.

In the event of termination or expiry of SLA, Project Implementation, Operation and Management SLA or SOWs each party shall comply with the Exit Management Plan.

During the exit management period, the selected sole bidder/lead bidder shall use its best efforts to deliver the services.

ix. Payments during the Exit Management period shall be made in accordance with the Terms of Payment (As per stages defined in execution framework) Clause.

x. It would be the responsibility of the selected sole bidder/lead bidder to support new operator during the transition period.

Appendix A: Grievance Handling Procedure during Procurement Process

(Appeals)

(1) Filing an appeal.- If any Bidder or prospective Bidder is aggrieved that any decision, action or omission of the Procuring Entity is in contravention to the provisions of the Act or the Rules or the Guidelines issued there under, he may file an appeal to First or Second Appellate Authority, as the case may be, as may be designated for the purpose, within a period of ten days or such other period as may be specified in the prequalification documents, Bidder registration documents or Bidding documents, as the case may be, from the date of such decision or action, omission, as the case may be, clearly giving the specific ground or grounds on which he feels aggrieved:

Provided that after the declaration of a Bidder as successful in terms of section 27 of the Act, the appeal may be filed only by a Bidder who has participated in procurement proceedings:

Provided further that in case a Procuring Entity evaluates the technical Bid before the opening of the financial Bid, an appeal related to the matter of financial Bid may be filed only by a Bidder whose technical Bid is found to be acceptable.

(2) Appeal not to lie in certain cases.- No appeal shall lie against any decision of the Procuring Entity relating to the following matters, namely:-

- (a) determination of need of procurement;
- (b) provisions limiting participation of Bidders in the Bid process
- (c) the decision of whether or not to enter into negotiations;
- (d) cancellation of a procurement process;
- (e) applicability of the provisions of confidentiality.

(3) Form of Appeal.-

- (a) An appeal under sub-section (1) or (4) of section 38 shall be in the annexed Form along with as many copies as there are respondents in the appeal.
- (b) Every appeal shall be accompanied by an order appealed against, if any, affidavit verifying the facts stated in the appeal and proof of payment of fee.
- (c) Every appeal may be presented to First Appellate Authority or Second Appellate Authority, as the case may be, in person or through registered post or authorized representative.

(4) Fee for filing appeal.-

(a) Fee for first appeal shall be rupees two thousand five hundred and for second appeal shall be rupees ten thousand, which shall be non-refundable.

(b) The fee shall be paid in the form of bank demand draft or banker's Cheque of a Scheduled Bank payable in the name of Appellate Authority concerned.

(5) Procedure for disposal of appeals.-

(a) The First Appellate Authority or Second Appellate Authority, as the case may be, upon filing of appeal, shall issue notice accompanied by copy of appeal, affidavit and documents, if any, to the respondents and fix date of hearing.

(b) On the date fixed for hearing, the First Appellate Authority or Second Appellate Authority, as the case may be, shall,-

(i) hear all the parties to appeal present before him; and

(ii) peruse or inspect documents, relevant records or copies thereof relating to the matter.

(c) After hearing the parties, perusal or inspection of documents and relevant records or copies thereof relating to the matter, the Appellate Authority concerned shall pass an order in writing and provide the copy of order to the parties to appeal free of cost.

(d) The order passed under sub-clause (c) above shall be placed on the State Public Procurement Portal.

FORM No. 1 [See rule83]

Memorandum of Appeal under the Rajasthan Transparency in Public Procurement

Act, 2012

Appeal Noof

Before the (First / Second Appellate Authority)

• Particulars of appellant:

- (i) Name of the appellant:
- (ii) Official address, if any:
- (iii) Residential address:
- 2. Name and address of the respondent(s):
- (1).

(2).

(3).

3. Number and date of the order appealed against and name and designation of the officer / authority who passed the order (enclose copy), or a statement of a decision, action or omission of the Procuring Entity in contravention to the provisions of the Act by which the appellant is aggrieved:

- 4. If the Appellant proposes to be represented by a representative, the name and postal address of the representative:
- 5. Number of affidavits and documents enclosed with the appeal:
- 6. Grounds of appeal:

7. Prayer:

Appellant's Signature

Execution Framework

Execution Framework

S.No.	No. of District	No of Tehsils	Financial Year in which work is to be done
1.	30 (Tentative)	282 (Tentative)	2015-16 and 2016-17
			(Tentatively)

Stages of work -

- (i) Scanning of Cadastral Maps, Cleaning, Printing, verification etc.
- (ii) Digitisation of 100% verified scanned maps, further tarmeem and verification.
- (iii) Mosicing of verified digitized village maps for GIS map

(iv) Providing Shape Files and Integration of Digitised maps with Textual (RoR) data with the help of NIC.

(v) Training to the revenue staff of tehsil.

Here location stands for each and every tehsils and payment shall be made on successful completion of an individual stage within tehsil

S.No.	Name of Cluster	Name of District Covered
1.	Ajmer	Ajmer, Nagour
2.	Jaipur-1	Dousa, Alwar, Jaipur
3.	Jaipur-2	Sikar, Jhunjhunu
4.	Jodhpur-1	Jaisalmer, Jodhpur, Pali
5.	Jodhpur-2	Barmer, Jalore, Sirohi
6.	Bharatpur	Bharatpur, Dholpur, Swai-madhopur,Karauli
7.	Udaipur-1	Udaipur, Dungarpur, Banswara
8.	Udaipur-2	Chittorgarh, Rajsamand, Pratapgarh
9.	Kota	Kota, Baran, Bundi
10.	Bikaner-1	Bikaner, Churu
11.	Bikaner-2	Hanumangarh, Sri-Gaganagar

District Clusters

Project Milestones, Payment Timelines and Penalty

Project Milestone and Payment Timelines			
S. No	Event/ Stages	Completion Date	Payment % of total contract Values
**K1	Work Methodology / Strategy and Project Plan	*T+ 4 weeks	Nil
К2	Establishment of Scanning Digitization centre including establishment of Hardware, manpower etc	T+8 weeks	Nil
кз	Major Job - Scanning of Cadastral Maps, Cleaning, Printing, Verification etc. for each tehsil	T+12 weeks	
	Scanning of village cadastral Maps Software based cleaning of maps Printing of scanned village maps on 1:1, on 90 GSM paper and submission for verification / checking		10%
	Scanning of tarmeemed maps and printing maps on 1:1, on 90 GSM paper and submission for verification / checking Making Correction/re- scanning and verification of maps and Print		10 %

К4	Major Job - Digitisation of maps, tarmeem and mosaicing	T + 36 Weeks	
	Digitisation 100% verified maps Printing of digitized maps on 1:1 on 90 GSM paper		20 %
	Making Correction/re- digitisation and verification of maps (if required) Final print on polyester matt sheet		25%
K5	Verification and Final User Acceptance and help NIC in linkage RoR with map(spatial) data	T + 40 Weeks	25%
K6	Training to the tehsil revenue officials and Commissioning of Project for entire district as a whole.	T + 52 Weeks	5%
K7	Operational Support for three months	K6+ 3 months	5 %

- a. *T—Date of signing SLA contract with the SP.
- b. Note : At present there are five working days in a week, in the State of Rajasthan.

**K- Key events
Note: The payments will be released only after the approval of deliverables.

Penalty

SP is supposed to achieve the milestones in the specified time frame. Non adherence to the specified time frame will attract penalty @1% of Gross Bid value per week maximum to 10% of the contract value of the work in the form of forfeiture of the amount of Bank Guarantee or Demand Draft duly deposited. Penalty shall also be imposed as follows for inaccuracy/ errors detected during checking of works:

SNo.	Nos. of Errors (in each Map/ Record)	Penalty (in % of the billed amount of that map data)
1.	Less than 10	No penalty
2.	10-20	2.5%
3.	21-30	5%
4.	31-40	7.5%
5.	> 40	10%

Village (revenue) maps should be returned immediately after scanning of the same. In case of damage of the Village (revenue) maps, penalty would be imposed by Government of RAJASTHAN as elaborated in SLA.

Format for Technical Bid

1. All bids should adhere to the formats given below.

Bids not in the format mentioned shall be summarily rejected considering non responsive. The Bidders should expand the sections to the required detail levels. It is expected that Bidders will explain the solution neither too short nor too elaborative. Concise and crisp explanations are welcomed. Details given in red color with angle brackets and underline are instructions to the Bidder and are to be replaced by relevant information/text or document attachment.

2. Bid form and Covering Letter

Date:	<insert date=""></insert>
Ref No:	<insert letter="" no="" reference=""></insert>
Bid Ref. No:	<insert bid="" no="" ref=""></insert>

To,

Board of Revenue for Rajasthan, Ajmer,

Dear Sir,

I <full name in capital letters>, the <Managing Partner/Managing Director/Authorized Signatory>, for the <establishment/firm/registered company> named <Write Full Name of the Company> having its registered office in <Complete Address of Registered Office/Write Complete Address of Bidder> do hereby offer to provide our services for the digitization of cadastral maps. The details of which is mention this Bid Document.

3. Warranty services as mentioned under Section – "Warranty Services".

The BID SECURITY in the form of Fixed Deposit/DD/Bank Guarantee issued by bank <Name of the Bank and Branch> valid till <date in DD/MM/YYYY format> for an amount of Rupees ______ is enclosed.

I have thoroughly examined and understood the terms and conditions and details of the Bid Document, Contract and Project to be undertaken and have carefully noted the conditions of Contract and the specification with all the stipulations, which I agree to comply with. We shall be bound by the terms of these documents. We undertake to complete the Project within the period stipulated after receiving an intimation of the acceptance of our Bid.

I have filled in the accompanying Bid Document with full knowledge of liabilities and therefore, we will not raise any objection or dispute in any manner relating to any action, including forfeiture of Bid Security, and penalties for giving any information, which is found to be incorrect and against the instructions and directions given in this Bid Document.

I further agree and undertake that in the event it is revealed subsequently after the allotment of work/Contract to me/us, that any information given by me/us in this Bid Document is false or incorrect, I/We shall compensate the Board of Revenue for Rajasthan, Ajmer, for any such losses or inconvenience caused to the Board of Revenue for Rajasthan, Ajmer, in any manner and will not resist any claim for such compensation on any ground whatsoever. I/We agree and undertake that I/we shall not claim in such case any amount, by way of damages or compensation for cancellation of the contract given to me/us or any work assigned to me/us or is withdrawn by the Board of Revenue for Rajasthan, Ajmer,.

I/We agree not to withdraw the offer constituted by this Bid Document before the date of communication to me/us notice of non-acceptance. I/We agree that if contrary to the understanding contained in this clause I/we withdraw my/our Bid before the said date the Bid Document deposited by me/us as aforesaid shall be liable to forfeiture of the BID SECURITY. I/We also agree to the forfeiture of the said Bid Security if in the event of your accepting my/our BID, I/We fail to execute the contract or to provide the Performance Guarantee when called upon to do so or fail to complete the Project in the time frame and/or comply with the terms and conditions set out in the Bid Document and/or Contract in full or in part or fail to execute the orders placed on me/us. I/We also agree to all the terms and conditions mentioned in the BID DOCUMENT especially the Signing of Contract Agreement clause.

I/We do hereby agree to pay all costs, charges and expenses in connection with preparation of bid document, expenses during evaluation process and contract including stamp duty, preparation and execution of the contract.

On obtaining the implementation certificate from each location from Board of Revenue for Rajasthan, Ajmer,, we will submit a Performance Guarantee amounting to Rs _____/- per location awarded (Rupees ______only per location awarded) within a period of 7 days from the date of issue of project implementation certificate. On obtaining the implementation certificate for DMS solution from BOR, we will submit a Performance Guarantee amounting to Rs. _____/- (Rupees ______ only) within a period of 7 days from the date of issue

of project implementation certificate.

On acceptance of our bid and on signing the contract, we will submit a performance Security amounting to Rs ______/- per location awarded (Rupees ______only per location awarded) within 15 days of the date of signing the contract. On acceptance of our bid for DMS solution and on signing the contract, we will submit an additional Bid Security amounting to Rs. ______/- (Rupees ______ only) within 7 days of the date of signing the contract.

We also assure that all additional requirements/costs other than those mentioned in the Bid Document that are required for commissioning of the solution (even though not explicitly mentioned in this Bid and/or in our proposed solution) will be provided at no additional cost to Board of Revenue for Rajasthan, Ajmer.

On receipt of the Contract from Board of Revenue for Rajasthan, Ajmer, we will commence phase wise execution as per the timelines mentioned in the work completion and payment conditions of the BID DOCUMENT.

The Bid submitted by us shall be valid for a period of 120 days, from the last date of bid submission from the time of opening of the Bid.

Signature of the Bidder:	<signature></signature>
Date:	<date dd="" format="" in="" mm="" yyyy=""></date>
Full Name:	<full name=""></full>
Designation:	<designation></designation>
Office Seal:	<office bidder="" company="" of="" seal=""></office>
Address:	<complete address="" bidder="" company="" of=""></complete>
Telephone Number(s):	<phone code="" number(s)="" std="" with=""></phone>
Fax:	<fax code="" number="" std="" with=""></fax>
e-mail address:	<e-mail address="" all="" communications="" e-mail="" for="">Bid Security</e-mail>
instrument	

< Bid Security and Bid Security Declaration instrument here>

Bid Security (Bank Guarantee Unconditional) Form of Bid Security

[Insert Bank's Name and Address of Issuing Branch or Office] Beneficiary: [insert Name and Address of Procuring Entity]

Date: [insert date]

BID GUARANTEE No.: [insert number]

We have been informed that *[insert name of the Bidder]* (hereinafter called "the Bidder") has submitted to you its bid dated *[insert date]* (hereinafter called "the Bid") for the execution of *[insert name of contract]* under Notice Inviting Bids No. *[insert NIB number]* ("the NIB").

Furthermore, we understand that, according to your conditions, bids must be supported by a bid guarantee.

At the request of the Bidder, we *[insert name of Bank]* hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of --

------ *[insert amount in figures][insert amount in words]* upon receipt by us of your first demand in writing accompanied by a written statement stating that the Bidder is in breach of its obligation(s) under the bid conditions, because the Bidder:

(a) has withdrawn its Bid during the period of bid validity specified by the Bidder in the Form of Bid; or

(b) having been notified of the acceptance of its Bid by the *Procuring Entity* during the period of bid validity,

(i) fails or refuses to execute the Contract Form,

(ii) fails or refuses to furnish the performance security, in accordance with the Instructions to Bidders.

- (c) has not accepted the correction of errors in accordance with the ITB, or
- (d) has breached a provision of the Code of Integrity specified in ITB;

This guarantee will expire: (a) if the Bidder is the successful Bidder, upon our receipt of copies of the contract signed by the Bidder and the performance security issued to you upon the instruction of the Bidder; and (b) if the Bidder is not the successful Bidder, upon the earlier of (i) our receipt of a copy your notification to the Bidder of the name of the successful Bidder; or (ii) thirty days after the expiration of the Bidder's bid.

Consequently, any demand for payment under this guarantee must be received by us at the office on or before that date.

Signed:			
[insert signature of person whose na	me and cap	acity are shown]	
Name:			
[insert complete name of person sig	ning the Bid	Security]	
In the capacity of:			
[insert legal capacity of person signi	ng the Bid S	Security]	
Duly authorized to sign the Bid Security	for and on b	ehalf of	
[insert name of the Bank] Dated on	day of	, [insert date of signing]	
Bank's Seal			

[affix seal of the Bank]

[Note: In case of a Joint Venture, the Bid-Security must be in the name of all partners to the Joint Venture that submits the bid.]

Bid Securing Declaration

Form of Bid Securing Declaration

Date: [insert date (as day, month and year)]

Unique Bid No.: [insert number of bidding process]

Alternative No.: [insert identification No if this is a Bid for an alternative]

To: [insert complete name of Procuring Entity]

We, the undersigned, declare that:

- We understand that, according to your conditions, bids must be supported by a Bid-Securing Declaration.
- We accept that we will automatically be suspended from being eligible for bidding in any contract with the Procuring Entity for the period of time of *[insert number of months or years]* starting on *[insert date],* if we are in breach of our obligation(s) under the bid conditions, because we:
- (a) have withdrawn our Bid during the period of bid validity specified in the Form of Bid; or
- (b) do not accept the correction of errors in accordance with the Instructions to Bidders (hereinafter "the ITB"); or
- (c) having been notified of the acceptance of our Bid by the Procuring Entity during the period of bid validity, (i) fail or refuse to execute the Contract, if required, or (ii) fail or refuse to furnish the Performance Security Declaration, in accordance with the ITB.
- We understand this Bid-Securing Declaration shall expire if we are not the successful Bidder, upon the earlier of (i) our receipt of your notification to us of the name of the successful Bidder; or (ii) thirty days after the expiration of our Bid.

Signed:

[insert signature of person whose name and capacity are shown]

Name: _____

[insert complete name of person signing the Bid-Securing Declaration]

In the capacity of:

[insert legal capacity of person signing the Bid-Securing Declaration]

Duly authorized to sign the bid for and on behalf of:

[insert complete name of Bidder]

Dated on day of,

[insert date of signing]Corporate Seal _____

[affix corporate seal of the Bidder]

[Note: In case of a Joint Venture, the Bid-Securing Declaration must be in the name of all partners to the Joint Venture that submits the bid.]

Declaration by the Bidder in compliance of Section 7 & 11 of the Act

Declaration by the Bidder

1. I/we possess the necessary professional, technical, financial and managerial resources and competence required by the Bidding Document issued by the Procuring Entity;

2. I/we have fulfilled my/our obligation to pay such of the taxes payable to the Union and the State Government or any local authority as specified in the Bidding Document;

3. I/we are not insolvent, in receivership, bankrupt or being wound up, not have my/our affairs administered by a court or a judicial officer, not have my/our business activities suspended and not the subject of legal proceedings for any of the foregoing reasons;

4. I/we do not have, and our directors and officers not have, been convicted of any criminal offence related to my/our professional conduct or the making of false statements or misrepresentations as to my/our qualifications to enter into a procurement contract within a period of three years preceding the commencement of this procurement process, or not have been otherwise disqualified pursuant to debarment proceedings;

5. I/we do not have a conflict of interest as specified in the Act, Rules and the Bidding Document, which materially affects fair competition;

6. We have complied and shall continue to comply with the Code of Integrity as specified in the Act, the Rules and the bidding documents.

Date:

Signature of Bidder

Place:

Name :

Designation:

Address:

1. Project Experience

<Details to be inserted here>

2. Brief about Work Methodology and Plan

3. Acceptance of Terms & Conditions Contained in BID DOCUMENT

ACCEPTANCE OF TERMS AND CONDITIONS IN BID DOCUMENT DOCUMENTS

To, Registrar, Revenue Board, Rajasthan, Ajmer

Sir,

I have carefully gone through the Terms and conditions contained in the **BID DOCUMENT** Document regarding appointment of Bidder for construction of Modern Record Room and for development of software as mentioned in the BID DOCUMENT.

I declare that all the provisions of this BID DOCUMENT/Bid document are acceptable. I further certify that I am an authorized signatory and therefore, competent to make this declaration.

Signature of witness
Date:
Place:

Signature of Bidder Date: Place:

District	Cluster	Priority
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S.No.	Name of Cluster	Districts Covered in the cluster	Cluster Priority
1.	Ajmer	Ajmer, Nagour	
2.	Jaipur-1	Dousa, Alwar, Jaipur	
3.	Jaipur-2	Sikar, Jhunjhunu	
4.	Jodhpur-1	Jaisalmer, Jodhpur, Pali	
5.	Jodhpur-2	Barmer, Jalore, Sirohi	
6.	Bharatpur	Bharatpur, Dholpur, Swai-madhopur,Karauli	
7.	Udaipur-1	Udaipur, Dungarpur, Banswara	
8.	Udaipur-2	Chittorgarh, Rajsamand, Pratapgarh	
9.	Kota	Kota, Baran, Bundi	
10.	Bikaner-1	Bikaner, Churu	
11.	Bikaner-2	Hanumangarh, Sri-Gaganagar	

Note : Give priority to each cluster starting from 1 to 11 on the basis of choice of the bidder to take up job of digitization of cadastral maps for that cluster. The work shall be assigned to be successful bidders based on their priority and availability of cluster.

Important: It is mandatory to give priority to each cluster. If any cluster is not given priority, the bid shall not be accepted and the bidder shall be disqualified technically.

Commercial Bid Format

S. No	Job Work	Price * per Map / sheet (Village (revenue) maps) in INR
A Scanr	ing:	
١.	Indexing of cadastral map (All sheets to be indexed)	
2.	Scanning of cadastral map in tiff format.	
3.	Check print on 90 GSM paper print with 100% matching on 1:1scale output	
4.	Final Print on 100 Micron polyester matt filmsheet. (As per the size of Source Map)	
B Digiti	zation: (The Vectorization of village maps provided by competent authority	
using sui	table s/w. Digitisation of maps may be done from the output of A)	
١.	Administrative boundaries of a revenue Village boundary	
	with name of village / Tehsil / District .	
2.	Parcel boundaries with Khasra No. as mentioned in the map,	
	(line length of every polygon as available in the map).	
3.	All features in different layers as available in Village (revenue) maps .	
4.	Updation of maps due to transactions.	
5.	Merged village map by mosaicing all village sheets/Village (revenue) maps and provide shape and other required files on DVD and print on A0 size paper.	
6.	Database of digitized data(Shape & Other files as per requirements) in postgreys / SQL	
7.	Help & Support to NIC in Integration of Map Data (Spatial Data) with RoR (Land Record Textual Data) on their software.	
8.	Printing of each Village (revenue) maps sheet on 90 GSM paper print sheet, on I:I Scale output.	
9.	Printing of each final Village (revenue) maps sheet. (4 copies) on 100 Micron Polyester matt film on 1:1 Scale output (In 24X36 inches paper size and 20X30 inches work area)	

* The Rates / Price shall be inclusive of all taxes including service tax.

Note: The format given is just indicative and the bidder is required to provide prices only in the BoQ (In excel format as per the needs of e-bidding). No paper rate submission shall be allowed. If Commercial paper bid is submitted the bid shall be rejected/not accepted.

Guidelines for ensuring Quality

Guidelines for ensuring quality

1. Check for Sliver Polygon

Sliver Polygons are generally but not necessarily triangular features with one or two of the internal angle very near to 0°. They are generally formed due to bad snapping. No sliver polygon should be present.

- 1.1 Sample Cases of Error and Corrected Data
- 1.1.1 Sliver Polygon Error:

The following figure shows a sample case, where a sliver polygon has been formed due to bad snapping.



The following figure shows that the snapping is corrected and the sliver polygon is removed.



2. Check for Overlapping features

Overlapping features are features within a same feature layer those are partially or completely sitting one above another. This can happen with point, polyline and polygon features. No overlapping features should be present.

- 2.1 Sample Cases of Error and Corrected Data
- 2.1.1. Overlapping Polygons:

The following figure shows a sample case, where there is an overlapping of polygon features.



The following figure shows that the overlapping of polygon has been removed.



2.1.2. Overlapping Lines:

The following figure shows a sample case, where there is an overlapping of line features.



The following figure shows that the overlapping of line features has been removed. Similarly, overlapping of point features also should not be present.



3. Check for "No man's land"/ "Holes"

No man's land or holes in a spatial database is an area not covered during the digitization process by mistake. This may occur during edge-matching process between adjacent datasets. No "No man's land" should be present.

- 3.1 Sample Cases of Error and Corrected Data
- 3.1.1 No man's land / missing polygon:

The following figure shows a sample case, where there is missing polygon, which creates a "no man's land".



The following figure shows that the missing polygon has been captured and no man's land has been eliminated.



4. Check for Uniqueness of Khasra Number

Khasra Numbers are parcel identification numbers denoted by the department. This number is expected to be unique within a village. There should not be more than one Khasra number for a single parcel.

- 4.1. Sample Cases of Error and Corrected Data
- 4.1.1. Khasra Number not unique in a village:

The following figure shows a sample case, where the Khasra Number is not unique within a village.



Khasra numbers, which are not unique within a village, are to be notified to CLR in a separate list.

4.1.2. More than one Khasara Number for a single parcel:

The following figure shows a sample case, where two Khasra Numbers are given for a single parcel.



5. Check for Positional Accuracy of digitization

It is well stated that during digitization, the digital line should pass through the centre of the line visible in the scanned image as correct as possible. The difference shall not exceed 0.5mm in printed map in the original scale.

5.1. Sample Cases of Error and Corrected Data

5.1.1. Inadequate positional accuracy:

The following figure shows a sample case, where the digitized line is beyond the tolerance levels with respect to the centre of the lines in the input image.



The following figure shows that the error with the positional accuracy has been corrected by bringing the lines within the approved tolerance levels.



6. Check for Adequacy of nodes / Absence of clustered nodes

During digitization, nodes should be judiciously inserted to have minimum nodes without disturbing the shape of the shape being followed. Nodes should just be sufficient to ensure positional accuracy for digitization.

- 6.1 Sample Cases of Error and Corrected Data
- 6.1.1 Inadequate Nodes:



The following figure shows a sample case, where the nodes are not adequate to follow the actual shape of the input raster lines.



6.1.2 Clustered Nodes:

The following figure shows a sample case, where there are clustered nodes.



The following figure shows that the clustered nodes have been removed.



6.1.3 Unnecessary Nodes:

The following figure shows a sample case, where there are extra nodes, which are not required. These kinds of extra nodes will unnecessarily increase the data size and then affect the system performance. At the same time, sufficient nodes to hold the shape of the input parcel line is to be present.



The following figure shows that the unnecessary nodes have been removed.



7. Check for Layering

Layering process is the correct identification of feature from the paper maps and placing them in the correct layer defined. Sometimes due to misinterpretation, features may be captured in wrong layers. No features should be present in wrong layers. It is also to be ensured that all layers are given correct properties like correct color, correct line type etc. as per the design document.

7.1 Sample Cases of Error and Corrected Data

7.1.1 Features captured in wrong layers:

The following figure shows a sample case, where the features are digitized in wrong layers.

ROAD PARCEL LINES ARE WRONGLY CAPTURED IN POLY_WATER_PARCEL LAYER	//	
//	A CONTRACTOR POLY_WATER_PARCEL	<u>▶</u> 魯百名*
K		
11.		

The following figure shows that the error has been corrected by transferring the feature to the corresponding correct layer.

	▼●日月

7.1.2 Wrong properties for layers:

The following figure shows a sample case, where the properties of a layer has been wrongly assigned.



The following figure shows that the error has been corrected by giving the layer the corresponding correct properties



8. Check for Feature Type

Even though most of the industry standard GIS software support complex feature types lime multi-lines, multi-parts, complex junctions etc., it is recommended that the spatial database contain only the features types namely point, polyline and polygon. No features should be present with feature types other than point, polyline and polygon.

- 8.1. Sample Cases of Error and Corrected Data
- 8.1.1. Non-approved feature types used:

The following figure shows a non standard feature type has been digitized.



The following figure shows that the error has been corrected by changing the feature type to either point, polyline or polygon feature.



9. Check for Missing/Incomplete/Wrong Attributes

Due to any reason, knowingly or unknowingly, attributes can be missed to type-in or it is typed-in incompletely. No attributes should be missed. List of features whose attributes are not clear or not available in the inputs should be notified to CLR in a separate list.

- 9.1 Sample Cases of Error and Corrected Data
- 9.1.1 Missing attributes:

The following figure shows a case of missing attributes.



The following figure shows that the error has been corrected by feeding the attribute eliminating missing attribute case.



9.1.2 Wrong Attributes:

The following figure shows a case of wrong attributes.



The following figure shows that the error has been corrected by feeding the correct attribute value.



10. Check for absence of garbage data

During the digitization process, it is very likely that digitizers and QC personnel put remarks, reference marks etc. Sometimes, before delivery of final data, these unnecessary features are not completely deleted. No garbage data should be present in the final delivery.

10.1. Sample Cases of Error and Corrected Data

10.1.1. Garbage/QA/Temp data not removed:

The following figure shows a case of some garbage data, not deleted.



References to Custom Routines/Scripts not removed:

The following figure shows a case, where the referenced to custom made routines/programs used for production and/or QA are not removed. The following kind of messages should note come when the file is opened.

The	e drawing you	have opened or refe	erenced contains	~
cus	tom objects c	reated by an unavail	able ObjectARX	-
app	lication. You	do not need the origi	nal application	
to d	isplay proxy r ed in the drav	epresentations of obj	ects that were	
inck	uding Autode	sk, provide object er	ablers that also	
allor	w you to edit	these custom objects	S .	-
Visit	t the AutoCAL	D Object Enabler Ass	istant web	
Visit pag	t the AutoCAL je to locate A ware publishe	D Object Enabler Ass utodesk object enabler ar about object enabl	istant web lers or contact the ers for other	
Visit pag soft	t the AutoCAI te to locate A ware publishe lications.	D Object Enabler Ass utodesk object enabl er about object enabl	istant web lers or contact the ers for other	
Visit pag soft app	t the AutoCAI pe to locate A ware publishe lications.	D Object Enabler Ass utodesk object enabl er about object enabl	istant web lers or contact the ers for other	٨
Visit pag soft app	t the AutoCAI pe to locate A ware publishe lications.	D Object Enabler Ass utodesk object enabl er about object enabl	istant web lers or contact the ers for other	>
Visit pag soft app	t the AutoCAI te to locate A ware published lications.	D Object Enabler Ass utodesk object enabl er about object enabl	istant web lers or contact the ers for other	×
Visit pag soft app Pro	t the AutoCAI te to locate A ware publishe lications.	D Object Enabler Ass utodesk object enabl er about object enabl	istant web lers or contact the ers for other	×
Visit pag soft app Pro	t the AutoCAI pe to locate A ware publishe dications.	D Object Enabler Ass utodesk object enabl ar about object enabl proxy graphics graphics	istant web lers or contact the ers for other	~
Visit pag soft app	the AutoCAI the to locate A ware published lications. Do not show Show proxy Show proxy	D Object Enabler Ass utodesk object enabl er about object enabl v proxy graphics graphics bounding box	istant web lers or contact the ers for other	~

11. Check for Undershoot, Overshoot/Dangles

During the digitization process, mostly but not necessarily due to bad snapping, sometimes the lines are either not long enough to meet the next feature (undershoot) or longer beyond the required length to meet the next feature (Overshoot/dangle). Any feature, less than 0.5cm map units shall be considered as dangle. Further visual revisit and check is required to see whether it is really an error.

11.1 Sample Cases of Error and Corrected Data

11.1.1Undershoot:

The following figure shows a case undershoot.



The following figure shows that the undershoot have been corrected by extending and snapping it.



11.1.2 Overshoot:

The following figure shows a case overshoot / dangle.



The following figure shows that the overshoot has been corrected by trimming it.



12. Check for Unclosed Polygons

During the digitization process, sometimes the polygons are not properly closed may be due to the condition that the polygon is spread across two or more sheets. No unclosed polygon should be present.

12.1 Sample Cases of Error and Corrected Data

12.1.1 Polygons not closed within layer

It is to be noted that, all polygons should be closed within the layer itself. Closing the polygons using features from other layers is not accepted.

In the following example, parcel layers share geometry with road lines. But the parcel layers are not closed within the parcel layer itself.

The following figure is taken with road and parcel layers switched on together.



The following figure is taken with only parcel layer switched on. It is seen that the polygons are not closed within the parcel layer.



The following figure shows the corrected parcel layer shown with the road layer (both switched on)


12.1.2 Missing edge for polygon:

The following figure shows a case of a polygon with missing edge.



The following figure shows that the error has been corrected by adding the missing edge.



12.1.3 Extra Nodes for polygon / Polygons not closed properly:

The following figure shows a case of a polygon not close properly. The polygon in the figure has 5 corners but has 6 nodes.

Features should not have extra nodes, wherever it is not necessary.



The following figure shows that the error has been corrected by eliminating the extra node and closing the polygon.



13. Check for Continuity and Contiguity

Sometimes, longer lines are not captured as continuous lines generally due to the fact that the line is spread across two or more sheets. The same is the case with polygons also contiguous polygons are not captured are contiguous. This issue can arise due to bad edge-matching also. All features should be continuous across the sheets.

13.1 Sample Cases of Error and Corrected Data

13.1.1 Line continuity missing:

The following figure shows a case of a line, which is actually a single feature but digitized as two separate lines.



The following figure shows that the error has been corrected by joining the lines into one single line.



13.1.2 Polygon contiguity missing:

The following figure shows a case of a single polygon, which is spreading across two sheets and has been captured as two polygons.



The following figure shows that the error has been corrected by merging the two polygons in to one single polygon.



14. Check for Nodes at intersection

In order to have proper topology and compatibility in all leading GIS software, it is recommended to have nodes at intersections of features of same layer. All features should have nodes at intersections with other features of the same layer.

14.1 Sample Cases of Error and Corrected Data

14.1.1 Nodes not present at intersections:

The following figure shows a sample case, where the nodes are not present at intersections on the features from same layer.



The following figure shows that the error with the inadequate nodes has been corrected by inserting nodes at intersections.



15. Check for Correct Spatial Reference

All CAD/Shape files should be assigned the projection of UTM with WGS84 datum.

16. Check for Snapping within Layer

Proper snapping of adjacent features at ends/edges is required to ensure proper continuity and contiguity. This also ensures absence of overshoots and undershoots as well as absence of gaps in the data. Snapping should be up to the accuracy level of the software (distance between two adjacent pixels in the software used for digitization).

16.1 Sample Cases of Error and Corrected Data

16.1.1 Snapping errors within layer:

The following figure shows a sample case, where the snapping is not proper.



The following figure shows that the error has been removed by snapping the features properly.



17. Check for Snapping between Layers

Proper snapping of related features at ends/edges is required to ensure proper continuity and contiguity. One major and important example of related feature layers is property boundaries and roads. There should not be any gaps between road polygon and properties on sides of roads. They should be properly snapped. Snapping should be up to the accuracy level of the software (distance between two adjacent pixels in the software used for digitization)

17.1. Sample Cases of Error and Corrected Data

17.1.1. Snapping errors between layers:

The following figure shows a sample case, where the parcel layer and road layer are not properly snapped.



The following figure shows that the error has been removed by snapping the features properly.



18. Check for Correct Scanning Resolution for Images

It is expected that the input maps are to be scanned at 600dpi resolution. Vendors are expected to make sure the same by checking the resolution of each image.

.....

Service level agreements

8.1 Service levels expected from Bidders

Various components and related penalties applicable shall be as follows:

8.1.1 Penalty for delay in project execution

- i. For any delay from Bidder's part in completing the work shall attract a penalty according to applicable rules.
- ii. In case, any deadline is slipped by more than 5 weeks without pre- intimated sufficient reason approved by Board of Revenue for Rajasthan, Ajmer, the contract shall be recommended for termination. Board of Revenue for Rajasthan, Ajmer, and decision on the same shall be final.

8.1.2 Returning the existing hardcopy documents in its original condition

i. All existing hardcopy maps shall be returned to the department in its original condition after converting the maps into digital format. Under no circumstances shall the documents be changed, mutilated, destroyed or replaced by some other documents. Any damages caused to the hard copy maps by the Bidder shall attract minimum penalties as mentioned below:

S. No.	Size of document	Minimum Penalty (Rs. per map page)
1	Each Village maps sheet	20000/-
	(Partial / Full)	

ii. The above mentioned penalties are minimum penalties and the upper limit shall be decided by Board of Revenue for Rajasthan, Ajmer, as per the severity of the damage and importance of the document.

8.1.3 Review and Monitoring system

For efficient work and monitoring of the project and to ensure the completion of the work in the stipulated time, following procedures shall be adopted:

i. Monitoring of progress and work execution shall be carried out by the Board of Revenue for Rajasthan, Ajmer and District level Committee.

ii. The Bidder shall provide the project status on a weekly basis to the BOARD OF REVENUE FOR RAJASTHAN, AJMER and District level Committee, highlighting the tasks executed at the allotted location during the period and the work action plan for the next 2 weeks. The Bidder shall also submit a monthly report to the Board of Revenue for Rajasthan, Ajmer.

iii. Board of Revenue for Rajasthan, Ajmer, shall review the work progress and status report submitted by the Bidder and, if necessary, will issue directions to the Bidders to ensure completion of work in a stipulated time frame.

iv. If any delay on part of department authorities in providing a timely response to the Bidder on any query that can have an impact on the completion time, the Bidder must submit in writing to the Board of Revenue for Rajasthan, Ajmer, stating the facts and impact on the project schedule due to this delay. Board of Revenue for Rajasthan, Ajmer, reserves the right to accept/reject the response letter of the Bidder after due consultation Bidder.

Privacy & Confidentiality

i Information relating to the examination, evaluation, comparison, and post-qualification of Bids, and recommendation of contract award, shall not be disclosed to Bidders or any other persons not officially concerned with such process until information on Contract award is communicated to all Bidders.

ii Any attempt by a Bidder to influence the Procuring Entity in the its examination of qualification, evaluation, comparison of the Bids or Contract award decisions may resulting in the rejection of its Bid, in addition to the legal action which may be taken by the Procuring Entity under the Act and the Rules.

iii from the time of opening the Bid to the time of Contract award, if any Bidder wishes to contact the Procuring Entity on any matter related to the Bidding process, it should do so in writing.

iv In addition to the restrictions specified in section 49 of the Act, the Procuring Entity, while procuring a subject matter of such nature which requires the procuring Entity to maintain confidentiality, may impose condition for protecting confidentiality of such information.

v Strict privacy and confidentiality is required from the Bidder during the entire course of the project. In no occasion, access to any original/digital/scanned data is to be provided to any external parties or the data in any form is taken out of the department premises without written authorization by Board of Revenue for Rajasthan, Ajmer.

vi The Bidder cannot supply / sell partly or fully any data pertaining to the project in any form to any party for any purpose.

vii For default of the above service conditions, a penalty of minimum Rs.5,00,000/- would be charged. The exact amount of penalty to be charged shall be decided by Board of Revenue for Rajasthan, Ajmer, considering the severity of violation. At any instance of violation, the contract shall be terminated at the risk and cost of the Bidder. The Bidder shall be recommended for blacklisting Criminal offense can also be initiated against the Bidder.

8.1.5 Recovery mode of Penalties from the Bidder

i. The penalties during the execution of the project shall be deducted from the payments released to the Bidder.

ii. The penalties during the warranty period shall be deducted from the payments to the Bidder, if the project is in progress in any other location. If the project has completed at all locations, the penalties shall be deducted from the performance security.

Contract Forms

Table of Contents

Letter of Acceptance

Contract Agreement

Performance Security

Performance Security Declaration

1. Letter of Acceptance

Letter of Acceptance

[on letterhead paper of the Procuring Entity]

No		D ated	To:	
name and address of the Con	tractor	. Subject: .		
Notification of Award Contract No.	,			
This is to notify you that your Bid date	ed <i>date</i>	for execution of	the	
name of the contract a	and identificatio	n number, as g	given in the	Contract
Data for the Acc	epted Contract /	Amount of the e	quivalent of .	
.amount in numbers and words a	nd name of curi	rency	, as corre	cted and
modified in negotiations and in ac	cordance with th	ne Instructions	to Bidders h	as been
accepted by designation of	the Procuring	Entity	The	date of
commencement and	completion	shall	be:	

You are requested to furnish the Performance Security as per the form detailed in Contract Forms for the same for an amount equivalent to Rupees

..... within days of notification of award valid up to 60 days after the date of expiry of Defects Liability Period and sign the Contract, failing which action as stated in the Instructions to Bidders shall be taken.

Authorized Signature:	
Name and Title of Signa	atory:
Designation:	

2. Contract Agreement

Contract Agreement

The Procuring Entity and the Contractor agree as follows:

- 1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.
- 2. The following documents shall be deemed to form and be read and construed as part of this Agreement. This Agreement shall prevail over all other Contract documents.
 - a) the Letter of Acceptance;
 - b) the Letter of Bid;
 - c) the Addenda Number. *insert addenda numbers if any*.;
 - d) the Special Conditions of Contract/ Contract Data;
 - e) the General Conditions of Contract;
 - f) the Specifications;
 - g) the Drawings; and
 - h) the completed Schedules.
- 3 In consideration of the payments to be made by the Procuring Entity to the Service Provider as indicated in this Agreement, the Contractor hereby covenants with the Procuring Entity to execute the Works and to remedy defects therein (and maintain the Works for a period of ------) in conformity in all respects with the provisions of the Contract.
- 4. The Procuring Entity hereby covenants to pay the Service Provider in consideration of the execution and completion of the Works and the remedying of defects therein (and maintain the Works for a period of ------), the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of India and Rajasthan on the day, month and year indicated above.

Signed by

Signed by.....

for and on behalf of the Governor/ Procuring Entityfor and on behalf the Service Providerin the presence ofin the presence of

Witness, Name, Signature, Address, Date

Witness, Name, Signature, Address, Date

3 Performance Security

Performance Security

......Bank's Name, and Address of Issuing Branch or Office

.... *name of contract and brief description of Works*.... (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a performance security is required.

At the request of the Contractor, we **name of the Bank**. . . . hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of Rupees^{*} **amount in figures** (.Rupees. **amount in words**.) such sum being payable upon receipt by us of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation(s) under the Contract, without your needing to prove or to show grounds for your demand or the sum specified therein.

This guarantee shall expire, no later than the Day of , **, and any demand for payment under it must be received by us at this office on or before that date.

Seal of Bank and Signature(s)

Note: All italicized text is for guidance on how to prepare this demand guarantee and shall be deleted from the final document.

* The Guarantor shall insert an amount representing the percentage of the Contract Price specified in the Contract

** Insert the date sixty days after the expected completion date.

The Procuring Entity should note that in the event of an extension of the time for completion of the Contract, the Procuring Entity would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Procuring Entity might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months][one year], in response to the Procuring Entity's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."

4. Performance Security Declaration

Form of Performance Security Declaration

Date: _____ [insert date (as day, month and year)]

Contract Name and No.: _____ [insert name and number of Contract]

To: [insert Designation and complete address of Procuring Entity]

We, the undersigned, declare that:

We understand that, according to your conditions, the Contract must be supported by a Performance Security Declaration as a guarantee to ensure fulfillment of our all performance obligations under the Contract *[insert name of subject matter of procurement]*.

We accept that we will automatically be suspended from being eligible for bidding in any contract with you for the period of time of [Procuring Entity to indicate here the period of time for which the Procuring Entity will declare a Bidder ineligible to be awarded a Contract if the performance Security Declaration is to be executed.] starting on the date that we receive a notification from you, the [Procuring Entity] that our Performance Security Declaration is to be available to be awarded a Contract with we receive a notification from you, the [Procuring Entity] that our Performance Security Declaration is to be available to be

conditions of the Contract,

We understand this Performance Security Declaration shall expire after 60 days of completion of our all obligations under the Contract including Defect Liability, warranty/ Guarantee, operation, maintenance, etc. in accordance with the conditions of the Contract.

Signed:

[insert signature of person whose name and capacity are shown]

In the capacity of:

[insert legal capacity of person signing the Performance Security Declaration]

Name:

[insert complete name of person signing the Performance Security Declaration] Duly authorized to sign the Contract for and on behalf of: ______ [insert complete name of Bidder]
Dated on ______day of _____, ____ [insert date of signing]

Corporate Seal

Annexures

ANNEXURE - "A"

S.No.	District Name	Quantity of Cadastral Maps. (Approx)
1	Ajmer	2564
2	Alwer	2520
3	Banswara	4191
4	Baran	1300
5	Barmer	7680
6	Bharatpur	1486
7	Bikaner	2835
8	Bundi	1889
9	Chittorgarh	5586
10	Churu	2736
11	Dousa	1504
12	Dholpur	2514
13	Dungarpur	2907
14	Ganganagar	8331
15	Hanumangarh	6384
16	Jaipur	2394
17	Jaisalmer	4164
18	Jalore	5238
19	Jhunjhunu	776
20	Jodhpur	5637

RFP for Digitization of Revenue Cadastral Maps in the State of Rajasthan

21	Karauli	2709
22	Kota	1740
23	Nagour	1493
24	Pali	1008
25	Pratapgarh	3036
26	Rajsamand	3527
27	S. Madhopur	2484
28	Sikar	1192
29	Sirohi	515
30	Udaipur	7509
	Total	97849

NLRMP Technical Manual

Chapter-1

Digitization of Cadastral Maps and Integration with RoR Data

Model-I

(Based on the system followed in West Bengal)

The following technical details may be helpful to the digitizing agency or the vendor, if the work is outsourced, in GIS-ready digitization of cadastral maps and their integration with the textual RoR data:

2. Mouza Map: West Bengal has geo-referenced Mouza (a revenue village) maps showing plots (land parcels) in the scale 16" = 1 mile which is equivalent to 1:3960. In densely populated areas such maps are prepared on bigger scales i.e. 32"=1 mile (1:1980) or 64"=1mile (1:990). There are 66,348 such map sheets in A0/A1 size paper covering all the 42042 Mouza of West Bengal, prepared by well established detailed cadastral survey techniques. Each Mouza map contains 1200/1500 plots (property parcel boundaries) on the average surveyed true to scale by Theodolite traverse and chain survey. Later on, the length of each side of the plot and plot area are extracted from the paper map using acre comb. No field dimensions of the individual plots are noted on the map. Each Mouza map has the following features-

- 1. Sheet heading (Mouza Name & North Direction.)
- 2. Scale of the map
- 3. Plot boundaries with Plot numbers
- 4. Legends
- 5. Conventional signs (Alamats), Bata Plot nos. & Missing Plot nos.
- Contents of the certificate block i.e. contents of the rectangle bearing the signature of the Revenue Officer certifying the contents of the map

3. Scope of work for digitization: In order to prepare GIS-ready digitized cadastral Mouza maps, they should be digitized in 3 layers i.e. area layers, line layers and point layers so as to facilitate digital capturing of all the features of the existing paper map. Maps, digitized in this way, provide flexibility required for future corrections. Each plot of land is viewed as a closed polygon and digitized in area layer to provide the area of the plot. A 5 digit number, which is written within the

paper map itself, is used for unique identification of the digital polygon. Maps should be scanned to their true scale, vectorized and converted into shape file format consisting of three files i.e. the shape file (*.shp), the index of the shape file (*.shx) and the data associated with the shape file (*.dbf) [item 2 & 3 above], .gif (graphic interchange format) formats [item 1,4, 5 & 6] along with the data in .dbf format [item 5] as detailed in the scope and methodology of the work.

JOB DESCRIPTION

SI.

- No.
- Accurate scanning of original paper-based maps (generation of raster image of the map).
- Digitization of plots (drawing digital line on each plot boundary of the scanned map).
- 3. Topology creation and closed polygon generation in area layer.
- 4. Creation of plot numbers in polygon area layer.
- 5. Creation of rendered plot numbers (RPN) and centroid point of each polygon in point layer. The centroid, which is the geometric centre point of the polygon, is where the plot number is indicated. When the size of the polygon is too small for the number to be written within it, then the last one or two digits are written to represent the original number. This plot number is called **rendered plot number**.
- 6. Creation of in-situ lines, i.e., geographically fixed lines and point alamats (line and point layers).
- 7. Thoka lines of mouza (i.e., boundary lines of the other two neighbouring mouzas) and sheet control points (fixed points on earth used while preparing the maps which are also used for future references), tri-junction pillars (pillars fixed at the meeting point of three neighbouring mouzas), permanent features or marks, old control stations used in earlier surveys, roads, railway tracks, rivers or streams, relay lines of acquisition plans (i.e., demarcation lines of the land proposed to be acquired relevant only in land acquisition cases), etc., in .shp format of line, point and area layers.
- 8. Creation of DBF files for point/area alamats and bata (sub-divided) plots (point and area layers).
- 9. Creation of GIF files of non-map features (sheet heading, north direction, legends, list of conventional signs, contents of certificate block).
- 10. Creation of text files in point layer.

4. Four Database Tables

The following four database tables should be developed from the data available in the paper map. This is done by carefully observing each plot in the map sheet.

Table No. 1 - The conventional signs or alamats have to be codified along with the reference of bata plot number in the following dbf:

Mouza	Sheet	LR/RS	Plot	Alamat	Reference of bata plot numbers
Code	No	(L or R)	No.	Code	
1	2	3	4	5	6

The original plot numbers are to be written in Column 4 and any reference of parent plot number from which the original plot has been created is to be written in Column 6.

Table No. 2 - Data developed with respect to alamats in point layer is master data information and should be developed and maintained centrally, and not developed separately, for each map. It should contain the following information:

Alamat Code	Alamat name	Actual file as OLE (Object linking and embedding) object
1	2	3

Table no. 3 - This table contains the information on the first plot and the last plot number in a sheet of cadastral map for a particular mouza.

Mouza Code	Sheet no.	L or R for LR / RS	First plot no.	Last plot no.
1	2	3	4	5

Table no. 4 - This table will keep track of missing plots and missing plot numbers within the 1st and last plot numbers in a particular sheet of a mouza.

Mouza Code	Sheet no.	L or R for LR / RS	Missing plots.
1	2	3	4

5. Stringent accuracy requirement:

The digitized map should exactly match the original map, like a contact print, since the dimensions and area of plots, or the whole village, are to be extracted from the map itself. As such, a difference of 0.25 mm of sheet measurement in 1:3960 scale between the original map and its copy, whether conventional or digitized, gives rise to a difference of about 1 metre on the ground. So, an accuracy of 0.25 mm or higher is desirable and tolerance may be treated as nil to 0.25 mm per metre.

6. Outputs of digitization:

6.1 Vectorised map can be stored in any open GIS format without any loss of freedom, as the conversion from one format to another is built into the software for raster to vector conversion. One of the popular open formats is SHP format, which is essentially a bundle of three formats to store spatial objects in .shp, text data attached to spatial objects in .dbf, and the format for linkage of .dbf and .shp, i.e., .shx. Many popular raster to vector digitization software are available, which can be used, such as R2V or AutoCAD map. These GIS files are to be provided by the digitizing agency/vendor to the Revenue Department in CD media along with a printout of the digitized map.

Serial	File Name	Description
No.		
1.	JINo.shp	Shape file for Mouza Map Sheet
2.	JINo.shx	Shx file for Mouza Map Sheet
3.	JINo.dbf	Dbf file for Mouza Map Sheet
4.	Alml. shp	Shape for Alamat in line layer
5.	Alml. shx	Shx file for Alamat in line layer
6.	Alml.dbf	Dbf file for Alamat in line layer
7.	Almp.shp	Shape file for Alamat in Point layer

6.2 About 35 files are generated for a typical GIS-ready mouza map, namely:

8.	Almp.shx	Shx file for Alamat in Point layer	
9.	Almp.dbf	Dbf file for Alamat in Point layer	
10.	Bnd.shp	Shape file for Sheet Boundary, it denotes the	
		extent of the sheet.	
11.	Bnd.shx	Shx file for Sheet Boundary	
12.	Bnd.dbf	Dbf file for Sheet Boundary	
13.	Centroid.shp	Shape file for the points where to place the Plot	
		Numbers	
14.	Centroid.shx	Shx file for the points where to place the Plot	
		Numbers	
15.	Centroid.dbf	Dbf file for the points where to place the Plot	
		Numbers	
16.	Img.shp	Shape file for the points where to insert the GIF	
		files	
17.	lmg.shx	Shx file for the points where to insert the GIF files	
18.	Img.dbf	Dbf file for the points where to insert the GIF files	
19.	Mbnd.shp	Shape file for Mouza Boundary	
20.	Mbnd.shx	Shx file for Mouza Boundary	
21.	Mbnd.dbf	Dbf file for Mouza Boundary	
22.	Scale.shp	Shape file for Scale of the Mouza Sheet	
23.	Scale.shx	Shx file for Scale of the Mouza Sheet	
24.	Scale.dbf	Dbf file for Scale of the Mouza Sheet	
25.	Text.shp	Shape file for Texts of the Mouza Sheet	
26.	Text.shx	Shx file for Texts of the Mouza Sheet	
27.	Text.dbf	Dbf file for Texts of the Mouza Sheet	
28.	sign.gif	Gif file for Certificate book	
29.	alm_bata.dbf	Dbf file for conventional signs or alamats along	
		with the reference of bata plot no.	
30.	missp.dbf	Dbf file for Missing Plots in Mouza Sheet	
31.	first_last.dbf	Dbf file for First & Last Plot Number for Mouza	
		Sheet	
32.	lege.gif	Gif file for legends	
33.	name.gif	Gif file for Map Heading, i.e. it contains the	
		District name, Mouza name, Idn etc.	
34.	bata.gif	Gif file for list of bata	
35.	ldn.tif	TIF image file for Mouza Map Sheet (raster	

	image)

Sometimes, the legend is broken into more than one file. These files are named lege1.gif, lege2.gif, lege3.gif and lege4.gif. Accordingly, the total number of files varies from 35 to 38.

7. Methodology for digitization:

7.1 The Directorate of Land Records and Survey is the nodal organization under the Govt. of West Bengal. Currently, the organization is involved in digitization of mouza maps from existing manually-prepared maps. The process involves (i) scanning of maps to produce raster data, (ii) checking the dimensional accuracy of the raster data, (iii) garbage cleaning in the raster data, (iv) vectorising the raster data, (v) cleaning the vector data, (vi) topology building, i.e., building each plot polygon as a totally connected entity, to ensure that all the polygons are closed and connected; (vii) data integration, (viii) map composition from different layers, and (ix) integration of regional language script as label.

SI.	JOB DESCRIPTION	Responsibility
1	Putting label of mouza code, whether RS or LR map and the sheet number sticker on the map sheet	Department Employees (DA)
2	Handing over the labeled map to the vendor for digitization	DA
3	Scanning of original paper based maps.	Agency (EA)
4	Study of original paper map for dimension extraction. This is to measure the dimensions of any two points in the horizontal and vertical directions in the original paper map	EA
5	Adjustment of scanned raster map with the measurement as available in SI. No. 2.	EA
6	Digitization of plots using R2V or AutoCAD software	EA
7	Cleaning up of map, topology creation and closed polygon generation using AutoCAD map software	EA
8	Creation of plot numbers and attaching text database with the spatial data	EA
9	Quality checking to account for all plots and plot numbers available in the map	EA
10	Printing for dimensional accuracy-checking of all plots	EA
11	Comparison of print with original for accuracy checking	EA
12	Refinement of digitized map with respect to SI. No. 9 and repeat of SI. Nos. 9 and 10 till desired accuracy is achieved	EA
13	Quality checking for correctness of plot numbers as attached	EA
14	Creation of rendered plot numbers (RPNs) and centroid points	EA
15	Creation of in-situ lines and point alamats	EA
16	Quality checking to ensure that all alamats are considered and coded correctly	EA
17	Creation of DBF files for point/area alamats and bata plots	EA
18	Creation of GIF files	EA

19	Handing over the print copy for checking correctness	EA
20	Checking of print copy with the original	DE
21	Handing over the soft copy	EA
22	Soft copy check (availability of files - 35-38 numbers)	DE
23	Generation of complete map from the files available and also	DE
04	Drinting of composed map in 400 CCM percentice writer	
24	Printing of composed map in 120 GSIVI paper for preservation	DE
25	Software checking of areas extracted digitally with that available in the RoR for each plot. This provides an error report showing plots whose areas in the RoR do not match with the areas extracted digitally.	DE
26	Error report is sent to districts for review and correction	DE
27	Integration of RoR data with spatial data using the software developed by the NIC (explained in detail below)	DE
28	Map and record correction through the software developed by the NIC (explained in detail below)	DE

7.2 Scanning and dimensional accuracy

7.2.1 The original map is scanned to produce the raster form. For cadastral map, scanning may be done in 400 dpi (dots per inch). Special attention should be given to see that the map is not deformed dimensionally. For this purpose, "X" (cross) marks are placed at corners of the original map before scanning. In the next step, the lengths between the "X" marks of the original map are compared with those of the scanned map to check whether any differences exist. Finally, raster editing is done for the elimination of unwanted patches in order to enhance vectorisation of the raster data.

7.2.2 Dimensional accuracy of the raster data implies total correspondence between the raster data and the original map. The following procedures are used to achieve dimensional accuracy:

- 1. Checking for expansion.
- 2. Checking for contraction.
- 3. Checking for translation.
- 4. Checking for rotation.

Raster form of the map may appear to be expanded or contracted as compared to the original map, which in turn affects the vector data. The checking for expansion and contraction is based on the principle that 'area is invariant'. The Land Records Department has Jurisdiction List (JL) in which the total mouza area is defined and the land records information contains each plot area of an owner. These two are compared with the vector data of the map to check for the expansion or contraction of the map with respect to the original map. Using a GIS tool, the NIC West Bengal

State Unit has developed software which can easily integrate the land records data with the digitized data based on the plot numbers. Using the software, one can easily compare the total mouza area (as defined in JL) with digitized mouza data as well as digitized plot area with the individual plot area defined in the land records database.

Translation and rotational error may occur during the scanning process. Checking for this purpose is done using the check point. A calibrated plotter HP 1050C or higher is used to plot a map from the vector data. This map is then compared with the original map to find complete correspondence between the lines of the two maps. Any mismatch between the two reveals the existence of the abovementioned errors. These errors may be removed by accurate scanning of the original map and confirming its correctness with the original.

7.2.3 While digitizing, the scale should be maintained accurately, so that the output corresponds 1:1 with the original. Either flat-bed scanner or roller-type scanner can be used for scanning. For maps that are brittle, flat-bed scanners would be more suitable.

7.3 Vectorizing, topology building and data integration:

7.3.1 The raster data may be converted to vector data using raster-to-vector converting software. This software works in three distinct methods as mentioned below:

- 1. Fully automated method
- 2. Semi-automated method
- 3. Completely manual method

The Semi-automated method is preferable, because traverse lines may have some breaks which can be corrected through this method during the process of vectorisation, but which create problems with the fully automated method.

7.3.2 No plot on the map is isolated; hence one should posses some knowledge about its adjacent plots. That is why topology building is necessary. This is done by treating each intersecting point as a node. Overshoot, undershoot and duplicate lines are the major problems, which are to be eliminated during the process of topology building. The overshooting lines are deleted and the undershooting lines are extended to their nearest node.

7.3.3 Non-spatial data (plot number, area, etc.) are included in the database containing the spatial data for the map, during the process of data integration.

7.4 Testing of correctness of the digitized map:

7.4.1 The printed copy of the digitized map should be thoroughly checked so that all the plot boundaries and other line works match with the original like a contact print. Plot numbers assigned should also match with the original. In-situ alamats should be placed at exactly the same points as they are located in the original map. A glass table, lighted from below, is used to match such accuracy.

7.4.2 Software checking is done through the "Map Management System" software developed by the NIC to find all the files deliverable for a map sheet.

8. Map composition and query retrieval:

8.1 Different layers (point, line, area) are used for map composition. Line layers are required for the map composition part, while area layers are mainly required for both map checking and composition. However, map composition not only involves construction of the map from a particular layer, but also the inclusion of various non-map features such as the legend for the map, the label of the map specifying its identification from the point of view of Police Station Code, Jurisdiction List Number, etc., bata information for the mouza, the authentication seal of the Government, etc. and various geographical features (the alamats) such as the railway lines, the traverse stations, letter boxes, etc., which can be represented by symbols. The NIC West Bengal State Unit has developed software to compose map by integrating different layers and alamats.

8.2 The non-map features are mostly available in the form of images. A point layer is provided for the insertion of these images. The point layer contains the coordinates of the points where the images are to be positioned. During map composition, the images are to be placed on the map (already composed from the line layer) at their appropriate positions. The geographical features (alamats) can be displayed on the map by using the line, area and point layers. Specific symbols are used for this purpose and the layers contain information regarding these symbols. The final output is a completely composed map identical to the original one.

9. Specifications and alamats

9.1 Images

The images (in *.gif format) provided for map composition must be accompanied with a point layer in which each point coordinate would give the **lower-left** corner of the image. The layer must have a separate attribute column, named "**image**" along with the necessary columns (specific to a point layer table). This attribute column will contain the file name of the image files corresponding to each point of the point layer. There is no restriction on the names of the image files, but it must be noted that the file names mentioned in the "**image**" column of the point layer must correspond to the file names of the images provided. The base name of the files for this point layer must be "**img**". Thus, the ".shp" file for the above mentioned point layer must be "**img.shp**". The names of other necessary files (.shx, etc.) for the same point layer must be given accordingly. All the images (*.gif or *.tif) of a particular sheet must be given in the same directory, i.e., the **JL**-No. sub-directory.

Note: i) <u>The scale of the map must not be an image, but must be digitized and provided in the line layer</u>.

ii) Attribute naming: The "image" attribute column must be a character field and have a maximum length of 8 characters.

9.2 Alamats

9.2.1 At point layer

Some of the alamats that can be represented by points should be provided in a point layer. The point layer required for this purpose must contain the attribute field "alamat symbol code" along with other necessary fields. The following Table 1 contains the "alamat symbol code" column for the above mentioned point layer. The other columns are given as descriptions to the "alamat symbol code" column. The column named "SI. No." is the serial number of the various symbols as per the conventions followed by the Directorate of Land Records and Survey. The base name of the files for the point layer for the alamats must be "almp" i.e. the ".shp" file for the point layer must be "almp.shp". The names of other necessary files (.shx, etc.) for the same point layer must be given accordingly.

Note: i) Some alamat notations comprise of a line and several points on the line. In such cases, the points are to be provided in the point layer and the lines are to be provided in the line layer that is described below.

ii) Attribute naming: The "alamat symbol code" attribute column must be a character field and have a maximum length of 4 characters.

<u>Table 1</u>

Item		Alamat symbol code as specified by the NIC	Descriptions	Required features for West Bengal (NR: Not Required, R: Required) (*)
Municipal/Notified Town Boundary		1	 Only the circles on the boundary line should be given in the point layer (the broken line being on the line layer as described in the next table). The center of each circle should lie exactly on the line representing the boundary. 	NR
Wire fencing/railing along property boundary (showing ownership)		2	Only the 'X' marks should be given in the point layer, the line being given in the line layer (as mentioned in the next table).	NR
Village (or plot) boundary cutting across river or road		3	Only the dots on the boundary should be given in the point layer.	R
Village boundary cutting along the length of river/ road		3	Only the dots on the boundary should be given in the point layer.	NR
Village boundary along one bank/ edge of the river/ road not common to two units		3	Only the dots on the boundary should be given in the point layer.	NR
Geodetic Triangulation Station (GTS)		4	 Appropriate name of the GTS should be given as an image. The dot in the middle of the symbol should be at the 'surveyed in situ' position of GTS 	R
Bench Mark with number		5	 The dot in the symbol should be at the position of the Bench Mark as surveyed in situ. The figure indicating height should be the appropriate height of the Bench Mark concerned above the Mean-Sea. 	NR
Tri-junction Pillar		6	Only the dot at the center of the triangle should be given in the point layer.	R
Traverse Station	(i) Present Survey	7a		R

	(ii) Last Survev	7b		R
Boundar y Mark (pillar)	(i) Perman	8a		R
(pindr)	(ii) Iron pillar	8b		R
Swampy Land or Marsh		10	Several points in close proximity should be given such that entire marsh is covered.	NR
Overhead	Tank	11	Only the center of the symbol should be provided in the point layer.	R (.dbf)
Pucca well		12	Only the center of the symbol should be provided in the point layer.	R (.dbf)
Kutcha we	ell	13	Only the center of the symbol should be provided in the point layer.	R (.dbf)
Tube well		14	Only the center of the symbol should be provided in the point layer.	R (.dbf)
Deep Tube well / Shallow tube well		15a 15b	Only the dot at the center of the symbol should be given in the point laver.	R (.dbf)
Hillock with peak of known beight		16	Only the center of the symbol should be provided in the point layer.	NR
Hillock without peak of known height		17	Only the center of the symbol should be provided in the point layer.	NR
Mill / Factory		18	Only the base of the symbol should be provided in the point layer.	R (.dbf)
Coal pit		19	Only the center of the symbol should be provided in the point layer.	R (.dbf)
Temple		20	Only the base of the symbol should be provided in the point layer.	R (.dbf)
Mosque		21	Only the base of the symbol should be provided in the point layer.	R (.dbf)
Church		22	Only the base of the symbol be provided in the point layer.	R (.dbf)
Gurudwar	а	23	Only the base of the symbol should be provided in the point layer.	R (.dbf)
Graveyard		24	 Several points (each point representing one symbol) should be given such that the entire plot is covered. Only the base of each symbol should be given in the point layer. 	R (.dbf)
Pucca building within a plot		25	Only the base of the symbol should be provided in the point layer.	R (.dbf)
Pucca bui within a pl surveyed i	lding ot not in situ	26	Only the base of the symbol should be provided in the point layer.	R (.dbf)
Kutcha ho	use	27	Only the base of the symbol should be provided in the point layer.	R (.dbf)
Tin/tiled sl having pue	hed cca plinth	28	Only the base of the symbol should be provided in the point layer.	R (.dbf)
Daily market with		29	The point must be taken inside the	R (.dbf)

plot boundary		plot and preferably on the lower-left corner of the plot such that the symbol can be fitted completely within the plot.	
Tree	30	Only the base of the symbol should be provided in the point layer.	R (.dbf)
Trees in grove (not surveyed in situ) other than orchard	30	Several points in close proximity should be given such that entire grove is covered.	R (.dbf)
Forest (reserved / protected) with name	31a	 Several points in close proximity should be given such that entire forest is covered. 	R (.dbf)
	30 & 31b	 Only the base of each symbol is to be provided in the point layer. 	R (.dbf)
	30, 31a & 31b		R (.dbf)
Bush jungle	32	Several points in close proximity should be given such that entire bush jungle is covered.	R (.dbf)
High grass	33	Several points in close proximity should be given such that entire High grass is covered.	R (.dbf)
Uncultivable fallow	34	Several points in close proximity should be given such that entire uncultivable fallow is covered.	R (.dbf)
Bamboo clumps	35	Several points in close proximity should be given such that entire bamboo clump is covered.	R (.dbf)
Cluster of palmyra	36	Several points in close proximity should be given such that entire plot containing cluster of palmyra is covered.	R (.dbf)
Cluster of coconut palm	37	Several points in close proximity should be given such that entire plot containing cluster of coconut palm is covered	R (.dbf)
Cluster of date palm	38	Several points in close proximity should be given such that entire plot containing cluster of date palm is covered	R (.dbf)
Cluster of betel palm	39	Several points in close proximity should be given such that entire plot containing cluster of betel palm is covered	R (.dbf)
Orchard (perennial – like mango, litchi, etc.)	40	Several points in close proximity should be given such that entire plot containing the orchard is covered.	R (.dbf)
Flower garden	41	Several points in close proximity should be given such that entire plot containing flower garden is covered.	R (.dbf)
Light house	42	The symbol should be drawn at some convenient space inside the plot concerned.	R (.dbf)
--	-------------------	--	----------
Burning ghat	43	The point must be taken inside the plot and preferably on the lower-left corner of the plot such that the symbol can be fitted completely within the plot.	R (.dbf)
Power house	44	The symbol is to be drawn at some convenient space inside the plot concerned.	R (.dbf)
Electric sub-station	45	The symbol is to be drawn at some convenient space inside the plot concerned.	R (.dbf)
Transmitting/ microwave station	46	The symbol is to be drawn at some convenient space inside the plot concerned.	R (.dbf)
Trestle of ropeway	47	The center of the baseline of the symbol should be provided in the point layer.	R (.dbf)
Pylon/electric/ telegraph/ telephone post with line	48	Only the dots at the center of the symbol should be given in the point layer.	R (.dbf)
Lamp post	49	Only the dot at the center of the symbol should be given in the point layer.	R (.dbf)
Letter box (immovable) of P&T Deptt.	50	Only the dot at the center of the syml given in the point layer.	R (.dbf)
Kilometer post	51	Only the mid-point of the base of the symbol should be given in the point layer.	R (.dbf)
North Direction	52		NR
Text scripts mentioned on the map	53a, 53b, 53c,		NR

(*) These may be customized as per the need of individual states.

9.2.2 At line layer

9.2.2.1 Some of the alamats that can be represented by lines are to be provided in a line layer. The line layer required for this purpose must contain the attribute field "style" along with other necessary fields. The following table contains the "style" column for the above mentioned line layer. The other columns are given as descriptions to the "style" column. The column named "SI. No." is the serial number of the various symbols as per the conventions followed. The base name of the files for the line layer for the alamats must be "alml" i.e. the ".shp" file for the line layer

must be "alml.shp". The names of other necessary files (.shx, etc.) for the same line layer must be given accordingly.

9.2.2.2 In order to define the extent of the total map area, it is essential to have a sheet boundary. This boundary is to be provided in a separate line layer, which must contain similar attribute fields as defined previously for the above mentioned line layer. This layer should contain a single line with thickness of style number 16. The base name of the files for the line layer for sheet boundary must be "bnd", i.e., the ".shp" file for the line layer must be "bnd.shp". The names of other necessary files (.shx, etc.) for the same line layer must be given accordingly.

Note: i) Some alamat notation comprises of a line and several points on the line. In such cases the lines are to be provided in the line layer and the points are to be provided in the point layer that is described in Table 1.

ii) Attribute Naming: The "style" attribute column in the following Table 2 must be a character field having a maximum length of 4 characters.

l t e m	Style (specified by the NIC)	Description	Required features for West Bengal (NR: Not Required, R: Required) (*)
Specific lines on the village boundary	0	The portion of the village boundary drawn with broken lines must be digitized in a continuous fashion as a separate line and provided with the mentioned style no.	R
Village boundary	1	The alignment of the village boundary is along the middle of the thick line.	R
Municipal/Notified Town Boundary	2	Only the broken line of the boundary should be given in the line layer.	NR
Ward (municipal) boundary	2	This is for the broken line denoting the boundary.	NR
	4	This is for the small line segments that are perpendicular to the broken line.	NR
Forest boundary	3	Only the line representing the forest boundary should be given in the line layer. The entire boundary may be divided into different segments such that each	NR

Table 2

		segment is an entity in the line layer, provided all these segments contain the same style no.	
Wire fencing/railing along property boundary (showing ownership)	4	Only the line representing the property boundary should be given in the line layer (the 'X' marks had already been given in the point layer as mentioned in the previous table). The entire boundary may be divided into different segments such that each segment is an entity in the line layer, provided all these segments contain the same style no.	NR
Village boundary cutting along the length of river/road	2	Only the line representing the village boundary should be given in the line layer. The entire boundary may be divided into different segments such that each segment is an entity in the line layer, provided all these segments contain the same style no.	R
Village boundary cutting across a water body	2	Only the line representing the village boundary should be given in the line layer.	R
Plot boundary where there is a water body across it	2	Only the line representing the plot boundary should be given in the line layer.	R (.dbf)
Tram line	5	Only the line representing the Tram line should be given in the line layer. The entire line may be divided into different segments such that each segment is an entity in the line layer, provided all these segments contain the same style no.	NR
Railway	6	Only the line representing the Railway line should be given in the line layer. The entire line may be divided into different segments such that each segment is an entity in the line layer, provided all these segments contain the same style no.	R
hilly areas (too	/	the Trekking should be given	

narrow for both sides of the path to be surveyed separately).		in the line layer. The entire line may be divided into different segments such that each segment is an entity in the line layer, provided all these segments contain the same style no.	
Culvert	4	Only the small line segments representing the culvert should be given in the line layer.	NR
Road (flyover) over Railway	4	1) Style 4 is used for the edges of the Road (flyover) above the	NR
	6	 2) Style 6 is used for the Railway line under the Road (flyover). 3) The Railway line as shown in the figure comprises of two line segments on either side of the road (flyover). 	NR
Railway (flyover) over road	4	1) Style 4 is used for the edges of the railway (flyover) above the road.	NR
	6	2) Style of is used for the road under the railway (flyover).3) The road as shown in the figure comprises of two parts on either side of the railway (flyover).	NR
Railway (flyover) over railway	4	 Style 4 is used for the edges of the flyover. Style 6 is used for the 	NR
	6	railway line passing under the flyover.3) The railway line as shown in the figure comprises of two line segments on either side of the road (flyover).	NR
Subway	2	1) Style 2 is used for the	NR
(underground) under railway	6	broken line denoting the subway under the railway line.2) Style 6 is used for the railway line.	NR
Subway	2	1) Style 2 is used for the	NR
(underground) under road	4	broken line denoting the subway under the road.2) Style 4 is used for the road above the subway.	NR

Road (flyover) over road	4	The road lying below consists of two parts on either sides of the road lying above it	NR
Level crossing	7	It is assumed that the railway line is already present as an item as given in SI. No. 19.	NR
River with, ferry and direction of flow of water	4	1) Style 4 is used to denote the direction of water flow along the river.	NR
	7	 2) The entire arrow showing the direction should be digitized. 3) Style 7 is used denote the ferry. 	NR
Tidal stream	4	The entire arrow is to be digitized.	NR
Jhora (rivulet in hills)	4	1) Style 4 is used to indicate the edges of the	NR
	8	 jhora as surveyed in situ. 2) Style 8 is used to indicate the middle of the deepest courses of the jhora as surveyed in situ. 	NR
Narrow water channel along the plot boundaries with direction of flow of water (having width too small to be surveyed).	9	The arrows on the line (boundaries) must be digitized such that it shows the proper direction of the water flow.	NR
Drain/nala (in basti or town areas) with direction of flow of water.	4	The arrow showing the direction of flow of water should be given in the line layer.	NR
Pylon/electric/ telegraph/telephone post with line	2	Only the broken line is required in the line layer, the dots being provided in the point layer as mentioned in the previous table.	NR
The north-west sides of the water bodies including tank drawn with thick lines in the map	16	Only the thick lines are to be provided with the mentioned style number. Any other lines inside the mouza having a line thickness identical to the north-west side of the water bodies should be allotted the same style.	NR

(*) These may be different for individual States.

9.2.3 At area layer

Some of the alamats (in-situ) that are to be represented by areas must be provided in an area layer. The area layer required for this purpose must contain the attribute field "shade" along with other necessary fields. The following table contains the "shade" column for the above mentioned area layer. The other columns are given as descriptions to the "shade" column. The column named "SI. No." is the serial number of the various symbols as per the conventions followed by the Directorate of Land Records and Survey. The base name of the files for the area layer for the alamats must be "alma" i.e. the ". shp" file for the line layer must be "alma.shp". The names of other necessary files (.shx, etc.) for the same line layer must be given accordingly. Note: i) Some alamat notation comprises of a line and several points on the line. In such cases the lines are to be provided in the line layer and the points are to be provided in the point layer that is described in Table 1.

ii) Attribute Naming: The "shade" attribute column must be a character field having a maximum length of 4 characters.

l t e m	Shade (specifie d by the NIC)	Description	Required features for West Bengal (NR: Not Required, R: Required)
Pucca buildings (in situ)	1	Specific to State	NR
Pan baroz	2	Specific to State	NR
Sand char	3	Specific to State	R (.dbf)

Table 3

Note: IMPORTANT

1. The ".shp", ".shx" and the ".dbf" files for the mouza containing the area and the line layer should be named as "<JLNo>.shp", "JL.shx" and "JL.dbf" respectively. Thus, if the JL No. of a mouza is 100, then the three abovementioned files should be "100.shp", "100.shx" and "100.dbf" respectively. The files are to be placed in the "JL No." subdirectory under the corresponding "PS Code" directory in the following format:

<PS Code> \ <JL No.> \ <JL No>.shp <PS Code> \ <JL No.> \ <JL No>.shx <PS Code> \ <JL No.> \ <JL No>.dbf

Thus, if for a particular mouza, the PS Code is 50 and the JL No. is 100, then the files corresponding to the layers of that mouza should be organized as follows:

50 \ 100 \ 100.shp 50 \ 100 \ 100.shx 50 \ 100 \ 100.dbf

2. If the mouza map comprises of more than 1 sheet, then the files for all the sheets are to be given the same names and as per the convention mentioned in point 1 above. However, in order to avoid controversy, the files must be kept in different subdirectories denoting the sheet number under the "JL No" directory, which itself is kept under the "PS Code" directory. Thus, if the mouza map with JL No. 100 (see the example in point 1) comprises of 2 sheets then the file should be organized as follows:

For sheet no. 1	For sheet no. 2
50 \ 100 \ 1 \ 100.shp	50 \ 100 \ 2 \ 100.shp
50 \ 100 \ 1 \ 100.shx	50 \ 100 \ 2 \ 100.shx
50 \ 100 \ 1 \ 100.dbf	50 \ 100 \ 2 \ 100.dbf

3. The layers for the images and the alamats need not be qualified with their corresponding JL Nos., but they must be kept in the same directory along with the layer files mentioned in the above two points. The files will be named as centroid.shp, almp.shp, alml.shp, scale.shp, bnd.shp, mbnd.shp, img.shp, alm_bata.dbf, first_last.dbf, missp.dbf, name.gif, lege.gif, bata.gif, sign.gif, etc.

4. The attribute field giving the plot number of each plot of the mouza is a compulsory field. It must be a 5-character field and have the name "plotno".

5. The list of conventional symbols for the alamats as followed by the department should be referred whenever required.

6. For symbols, which are not "in-situ", the points of insertion of the symbol are to be given at the approximate center of the symbol in the point layer for alamats.

7. The scale for each map should be digitized and provided as a separate line layer along with the other layers for the mouza. The base name of the files for the line layer for the alamats must be "scale", i.e., the ".shp" file for the line layer must be "scale.shp". The names of other necessary files (.shx, etc.) for the same line layer must be given accordingly.

8. The values in the different attribute fields in the various layers should be left justified.

10. Integration of map with RoR

10.1 Each plot of land is represented on the digital map as a closed polygon. Such polygons are identified by a unique 5 digit number, that is, its plot number. In the RoR database, such plot numbers are referenced. This provides a basis for integration of digital map with the digital RoR data. The RoR database consists of several related tables (7 main tables and several master tables) of information that provide ownership, land classification, etc. information which are essentially text data types. All the tables are connected by two common data fields. These are:

Idn: a seven digit code to identify a Mouza (2-digit for District, 2-digit from Block & 3-digit for the Mouza)

Plot No.: a five digit Plot number

10.2 For digital map, data (contained in more or less 36 files) are distributed in three tables under various columns having the above two common fields (Idn. and Plot No). Shape files (.shp, .shx and .dbf) are binary files, and are stored in BLOB data format -- a facility available in the MS-SQL Server 2005 DBMS. The existing RoR database is added along with the above three tables containing map information to form an extended database of RoR.

10.3 Data, both spatial and textual, are used by the application software "BHUCHITRA" (developed by the NIC, West Bengal State Unit) to provide the necessary integration of data. Such integration provides all the flexibility to manipulate textual data and spatial data without any constraint and provides a platform for various improved citizen-centric services and MIS reports. Some of them are given as follows:

- 1) Providing plot map (parcel map), showing dimensions of each side and area along with the RoR.
- 2) Generating various derivative maps based on possessions, classifications, legal sections applicable, size of the plot, etc.
- 3) Generating analytical reports on area in the RoR with respect to the digital map so as to help in data correction, both text as well as map.
- 4) Integrating the RoR updation with its map updation.

11. Map updation

11.1 Problem definition and purpose

Every digitized map needs to be updated every time when classification of a portion of the plot changes or ownership of a portion changes. Such plot divisions are effected on the digital map based on field measurements data.

11.2 Scope

It aims to realize the following processes and database requirements:

- Divide the mentioned plots as per requirement with the help of field measurements.
- Calculate the areas for newly-generated plots along with their mother plots and update the RoR data in the database.

11.3 Techniques

Digital map looks like the following:



Figure 1: Composed Digitized Mouza Map

11.3.1 Updating the digitized map with the help of the field measurements

There are mainly four types of processes following which updation may happen. Those are:

- 1. Division by straight-line having end points at boundary.
- 2. Division by poly-lines.
- 3. Division by parallel lines.
- 4. Division by perpendicular lines.

These sub-processes with their graphical representation are discussed below.

11.3.1.1. Division by straight-line having end points at boundary

This is the simplest and easiest amongst all other techniques. The user just needs to supply the distances. For example, one has to supply the distance from vertex D along the line DA to get new vertex E. As well as, one has to give the distance from vertex B along the line BC to get new vertex F. MUS will need to create a poly-line (EF) between those new vertexes to split the old polygon (as given in Figure 2b). Then, one has to provide new plot number for the newly-created child plot (closed polygon, CDEF). The information (ownership details, area, etc.) of the newly-created polygon will be added into the database (RoR and DBF) and the information of the older one (closed polygon, ABFE) will be edited in same database (RoR and DBF).



301 Е F 1204 10 ft D С

Figure 2b: After

updating 11.3.1.2. Division by poly-lines

This technique is applicable when multi-segmented division is required (as given in Figure 3a). According to the picture given below, the polygon ABCD needs to be segmented in several subparts. Such as AEGF, HIJB, MNDC.



Figure 3a: After Updating ABCD with poly-lines

To find out the actual points, one needs to apply the bisecting radius method (as given in Figure 3b). Suppose the user wants to split a polygon AEGF from ABCD polygon. To get the point G, two circles will be drawn taking E and F as their corresponding centers. The bisecting point of these two circles will be the new vertex G (as shown in the figure). After getting the point G, one needs to join GE and GF to get the resultant polygon (AEGF).



Figure 3b: Getting the bisecting point

11.3.1.3. Division by parallel lines

This technique is very useful when users require a parallel division with respect to any side of the older polygon (as shown in Figure 4). According to the figure, ABCD is the parent polygon and EFCB is the child one. MUS will need to calculate two different points E and F along the line BA and CD respectively. MUS will also need to join the points E and F to get the line EF for the resultant polygon (EFCB).



Figure 4: After updating ABCD with parallel line

11.3.1.4 Division by perpendicular lines

This technique is applicable when perpendicular deviation is required (as shown in Figure 5). As shown in the figure given below, the point E is 8 ft. far from the point D along the line DA and the point G is 12 ft. far from the point C along with CD. Then, one will draw a perpendicular EF at the point E on the line DA. The line EF is 6 ft. long. FG will be joined. Now, one gets the resultant polygon EFGD.



Figure 5: After updating ABCD with Perpendicular line

12. Some screen shots

a) Comparison the Composed mouza map with the ROR data:



b Extraction of a single plot:

📾 Choose Plot No.				
Select Plot No., 230 Set 220 220 230 230 230 230 230 230	00			CITERS CTERS PT DS
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থাটো পাপা - ২৭০০/১ ২৭৪২ / ৪০০০১৬ - ১৮ ২৫৫২ / ৪০০১৬ - ১৮ ২৫৫২ / ৪৫১৬ - ১৯ ২৫১৯/০৭২৪ - ১৯ ২৫১৯/০৭২৪ - ১৯	2866, 2925/2000, 2926/20000, 2926/20000, 2926/2000, 2926/20000, 2926/20000000000000000000000000000000000	. 2426/2555 . 2425/2552.00 6/6002 . 2406/0004 . 2425/002 556 . 2450/0004 0 . 2525/0015 . 2425 . 2500/0010 0 . 2505/0012 2426 . 2505/0010 . 2555/0012 2427 . 2505/0010 . 2555/0010 2427 . 2505/0010 . 2555/0010	9. 5554200-50. 2-09.	
	Zoom In Zoom Out M	love Plot Extraction RC	R Checking Print Se	lect

c Single Extracted Plot:



d. Updating a Plot in the Mouza map:



e Integration of Map with RoR text data

ভূমি লেখ্য ও পরিমাপ অধিকার, পশ্চিমবচ্চা সরকার			
-: প্রধান মেনু :-			
প্রশাসন			
সার্টিফায়েড ক পি			
দাগের তথ্য			
মৌজ্ঞা সম্বলিত তথ্য			
হাল - সাবেক দাগের তথ্য			
খতিয়ান সংশোধন			
স্বলক সম্বলিত তথ্য			
খাজনার / শধ্যের তথ্য			
মৌজা ম্যাপের তথ্য			
বাহির			
Developed By: National Informatics Centre, West Bengal State Centre Ver. 3.0, Rel. 2 11/06/2008	L:50 PM		

জেলা- হুগলী	স্ল্লক- মগরা-চূঁচ্ডা
	মৌজা ম্যাপের তথ্য
	সৌজা: ১১৪ কবিরহাটী
NIC	আলের মেনু পরবর্তী

- _ 8 × BHUCHITRA View Iheme Window Help Land Information Eile ¥X₽ X \odot 0 87 282 দাস নাং মৌজা কবিরহাঁটী শালি শ্রেনী: পরিমান(এ কর): 0.00 2 রায়তে র সংখ্যা রায়তের তথ্য বাহির 🐂 Details অংশ পরিমান(এ) খতি য়ান নং দাস ন রায়তে র শাম অংশ জাকের আলী .6848 .0080. 66 285 <u>0</u>]~ থোদেজা বিবি .0030 2200 • বাহির 🏽 🕄 🧭 🗊 🎆 🌐 le
- f. Displaying ROR text data within the composed mouza map:

g. A complete digitized map showing alamats, also called "Composed map"





h. Service of Plot map along with certified copy of ROR:

Corrigendum

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Office of the Registrar, Board of Revenue for Rajasthan, Ajmer Tel. No.: 0145-2627

Corrigendum for NIB No.BOR/LR/NLRMP/F-122/2015/10658/1 Dated : 01.09.2015 Due Date extension notice for e-bidding:

Particulars	Previous Date	Amended Date
Bid Submission End Date	29-10-2015 at 06:00 PM	30-11-2015 at 6:00 PM
Bid Opening Date	02-11-2015 at 12:00 NOON	01-12-2015 at 12:00 NOON

no de

(Bhoj Kumar) Dy.Registrar Board of Revenue for Rajasthan, Ajmer

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Board of Revenue for Rajasthan, Ajmer

No.BR/NLRMP/F-122/NIB/2015/ 12-264

Date 12/10/15

Corrigendum in

Bid Document For Digitization of Cadastral Maps / Revenue Maps And Integration with Revenue Records across the State of Rajasthan

RefNo. Written in the RFP To Be read And Page No. 3. Eligibility of bidders :-Eligibility of bidders :-Pg. 52 (1) A bidder may be a natural (1) A bidder may be a natural person, private entity, governmentprivate person, entity. owned entity or, where permitted in government-owned entity the bidding documents, any combination of them with a formal intent into an agreement or under an existing agreement in the form of a Joint Venture. In the case of a Joint Venture:-(a) all parties to the Joint Venture shall sign the bid and they shall be jointly and severally liable; and (b) a Joint Venture shall nominate a representative who shall have the authority to conduct all business for and on behalf of any or all the parties of the Joint Venture during the bidding process. In the event the bid of Joint Venture is accepted, either they shall form a registered Joint Venture company/ firm or otherwise all the parties to Joint Venture shall sign the Agreement.

	· · · · · · · · · · · · · · · · · · ·		
RefNo.	Written in the RFP	21 . sc	To Be read
And			
Page	с		
No.			
17.1	Evaluation Framework	30	Evaluation Framework 20
Pg - 23			
	The Bidder having average annual		The Bidder having
	turnover for three consecutive	3	average annual turnover
	financial years		for three consecutive
	(FY: 2012-2013, FY: 2013-2014,		financial years
	FY: 2014- 2015) will be awarded		(FY: 2012-2013, FY:
	marks as below:		2013-2014, FY: 2014-
	>= 20 Crores = 30		2015) will be awarded
	>= 17 crore but <20 crore = 25		marks as below:
	marks		>= 20 Crores = 20

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123	* 21
>=14 crore but <17 crore = 20	>=10 crore but <20 crore
marks	= 15 marks
>=11 crore but <14 crore = 15	>=5 crore but < 10 crore
marks	= 10 marks
>=8 crore but <11 crore = 10	<5 crore = 0
marks	
>=5 crore but < 8 crore = 5 marks	
<5 crore = 0	
17.3 The Bidder with experience of	10 The Bidder with 2
Pg – having successfully completed	experience of having
23 - 24 similar work during the last 5	successfully completed
year ending last day of month	similar work during the
previous to the one in which	last 5 year ending last
applications are invited will be	day of month previous to
awarded marks as below	the one in which
1) Three (3) similar (Turnkey	applications are invited
project of Digitisation of	will be ewerded merily
Cadastral/Other Maps and	will be awarded marks
Integration with Textual Data)	
completed projects or more	Three (3) similar
Costing not loss than Do. 0.75	(Turnkey project of
	Digitisation of
in India (Abased	Cadastral/Other Maps
In India/Abroad.	and Integration with
5 projects or more = 10 marks	Textual Data) completed
4 projects= 8 marks	projects or more,
3 projects = 6 marks.	Costing not less than
OR	Rs. 0.75 crore in any
2) Two (2) similar (Turnkey project	government/PSUs in
of Digitisation of	India/Abroad.
Cadastral/Other Maps and	5 projects or more = 20
Integration with Textual Data))	marks
completed projects, costing not	4 projects= 15 marks
less than Rs. 1 crore in any	3 projects = 10 marks.
government/PSUs in	OR
India/Abroad	Two (2) similar (Turnkey
4 projects or more = 10 marks	project of Digitisation of
3 projects= 8 marks.	Cadastral/Othor Mono
2 project= 6 marks.	and Integration with
OR	
One (1) similar (Turnkey project of	Data))
Digitisation of Cadastral/Other	completed projects,
Maps and Integration with Toxtual	costing not less than Rs.
Data)) completed projects	crore in any
pata) completed projects, costing	government/PSUs in
not less than Rs. 2 crore in any	India/Abroad

government/PSUs in India/Abroad	00
governmenter obs in mula Abroad 4 projects of more -	20
2 projects or more = 10 marks marks	
1 projects= 8 marks. 3 projects= 15 marks.	
2 project= 10 mar	ks.
OR	
One (1) similar (Turnk project of Digitisation Cadastral/Other Ma and Integration w Textual Dat completed project costing not less than F 2 crore in a government/PSUs India/Abroad	tey of ips ith a)) its, Rs. iny in
2 projects or more = marks 1 projects = 15 marks	20

(सी0आर0 मीना) निबन्धक,

राजस्व मण्डल राजस्थान, अजमेर।

GOVERNMENT OF RAJASRHAN BOARD OF REVENUE FOR RAJASTHAN

BR/LR/NLRMP/F-122/NIB/

Date 26/10/12

				and the second sec
Ref.No. and Page No		Writen in the RPF	~	To be Read
Pg.No.23 &24		The Bidder with experience		The Bidder with experience of
		of having successfully		having successfully completed
		completed similar work		similar work during the last 5 year
		during the last 5 year		ending last day of month previous
		ending last day of month		to the one in which applications are
		previous to the one in		invited will be awarded marks as
		which applications are		below
		invited will be awarded	3)	Three (3) similar (Turnkey project
		marks as below		of Digitisation of Cadastral/Other
	1)	Three (3) similar (Turnkey		Maps and Integration with Textual
		project of Digitisation of		Data) completed projects or more,
		Cadastral/Other Maps and		Costing not less than Rs. 0.75
		Integration with Textual		crore in any government/PSUs in
		Data) completed projects or		India.
		more, Costing not less than		5 projects or more = 10 marks
		Rs. 0.75 crore in any		4 projects= 8 marks
		government/PSUs in		3 projects = 6 marks.
		India/Abroad.		OR
		5 projects or more = 10	4)	Two (2) similar (Turnkey project of
		marks		Digitisation of Cadastral#Other
		4 projects= 8 marks	25	Maps and Integration with Textual
		3 projects = 6 marks.		Data)) completed projects, costing
		OR		not less than Rs. 1 crore in any
	2)	Two (2) similar (Turnkey		government/PSUs in India
		project of Digitisation of		4 projects or more = 10 marks
		Cadastral/Other Maps and		3 projects= 8 marks.
		Integration with Textual		2 project= 6 marks.
		Data)) completed projects,		OR
		costing not less than Rs. 1	On	e (1) similar (Turnkey project of utisation of Cadastral/Other Maps and

GOVERNMENT OF RAJASRHAN BOARD OF REVENUE FOR RAJASTHAN

BR/LR/NLRMP/F-122/NIB/ 12545

Date _ 26/10/15

	ororo in anu	
	Crore in any	Integration with Textual Data)) completed
	government/PSUs In	in any government/PSUs in India
		2 projects or more = 10 marks
	4 projects or more = 10	i projecis- o marks.
	marks	
	3 projects= 8 marks.	
	2 project= 6 marks.	
	OR	-
	One (1) similar (Turnkey project of Digitisation of Cadastral/Other Maps and Integration with Textual Data)) completed projects, costing not less than Rs. 2 crore in any government/PSUs in India/Abroad 2 projects or more = 10 marks 1 projects= 8 marks	-
Ref.No. and Page No.	Description	Clarification
Page 3 Bid	In on-line PortalEMD is	FMD is Rs. 8 Lacs in the form as
Security	mentioned as RS. 37 Lacs.	stated in bid document
Section 4.2.3 Page 35 Point No. 5	After grid rectification mosaicing the map from matching line And a new raster image file is to be generated for whole village as a unit	Raster Mosaicking can be done using grids in any projection system . Arcinfo or CAD softwares have facility for it. If the tie points are marked correctly, fare accuracy is achieved. Digitisation is part of NLRMP.
		•
Updation of parcel boundries Pg.No. 30 Point No.1	The cut off date for updation of Mother maps will be mentioned in SLA (Service Level Agreement)	The cut off date shall be communicated to the successful bidder later.
4.6 Spatial Database Pg. No. 37	Service Provider is required to group various features in different classes /coverage, as specified in the design document with proper ground control reference points. Service Provider will also	Any method can be employed.

GOVERNMENT OF RAJASRHAN BOARD OF REVENUE FOR RAJASTHAN

BR/LR/NLRMP/F-122/NIB/ 12545

Date 26/10/15

provide a comprehensive	
coverage containing all control	
points, and similar important	
features.	

(C.R MEENA) Registrar,

Board Of Revenue for Rajasthan

Board of Revenue for Rajasthan, Ajmer

Tender Ref. No . BID No: BOR/LR/Services/17.5cr/ OCB/2015/1/13169 Dated : 5/11/15

Ref. No. &	Presently Mentioned As	To be Read As	
Page No.			
82	I have carefully gone through	I have carefully gone through the	
	the Terms and conditions	terms and conditions contained in	
	contained in the BID	appointment of Bidder for	
	DOCUMENT Document	Digitization of Cadastral Maps /	
	regarding appointment of	Revenue Maps	
	Bidder for construction of	Records as mentioned in the bid	
	Modern Record Room and for	document.	
	development of software as		
	mentioned in the BID	· · · · · · · · · · · · · · · · · · ·	
	DOCUMENT.	-	
BOQ Excel File	Total Amount Without taxes	Total Amount inclusive of all taxes	
BOQ Excel	Name of Work	Name of Work - Digitization of	
File	Name of	Cadastral Maps / Revenue Maps	
		And Integration with Revenue	
	ROOMS AT " 278	Records across the State of Rajasthan	
	tehsils Hq (fully) and 36		
	tehsils Hq (partially) across Raiasthan"		
BOQ Excel	BOR/LR/Works/78.5Crore/OCB/2015/1	BID No: BOR/LR/Services/17.5cr/	
File		OCB/2015/1	
Pg.No.23 &24 and	The Bidder with experience of	The Bidder with experience of	
corr Dt.	having successfully completed	having successfully	
26.10.15	similar work during the last 5	completed similar work	
	year ending last day of month	during the last 5 year ending	
	previous to the one in which	last day of month previous to	
	applications are invited will be	the one in which applications	
	awarded marks as below	are invited will be awarded	
	1. Three (3) similar (Turnkey	marks as below	
	project of Digitisation of	1. Three (3) similar (Turnkey	
	Cadastral/Other Maps and	project of Digitisation of	

Corrigendum

*			
		Integration with Textual Data)	Cadastral/Other Maps and
		completed projects or more,	Integration with Textual Data)
		Costing not less than Rs. 0.75	completed projects or more,
		crore in any	Costing not less than Rs.
		government/PSUs in India.	0.75 crore in any
		5 projects or more = 10 marks	government/PSUs in
		4 projects= 8 marks	India/abroad.
		3 projects = 6 marks.	5 projects or more = 20
		OR	marks
	2.	Two (2) similar (Turnkey	4 projects= 15 marks
		project of Digitisation of	3 projects = 10 marks.
		Cadastral/Other Maps and	OR
		Integration with Textual Data))	2. Two (2) similar (Turnkey
		completed projects, costing	project of Digitisation of
		not less than Rs. 1 crore in	Cadastral/Other Maps and
		any government/PSUs in	Integration with Textual
		India	Data)) completed projects,
		4 projects or more = 10 marks	costing not less than Rs. 1
		3 projects= 8 marks.	crore in any
		2 project= 6 marks.	government/PSUs in
	OR		India/abroad.
	3.	One (1) similar (Turnkey project of	4 projects or more = 20
		Digitisation of Cadastral/Other	marks
		Maps and Integration with Textual	3 projects= 15 marks.
		not less than Rs. 2 crore in any	2 project= 10 marks.
		government/PSUs in India	OR 👘
	2 projects or more = 10 marks 1 projects= 8 marks.		3. One (1) similar (Turnkey project of Digitisation of Cadastral/Other Maps and Integration with Textual Data)) completed projects, costing not less than Rs. 2 crore in any government/PSUs in India/abroad.
Page No	Fo	or the nurnose of OCRS	2 projects or more = 20 marks 1 projects= 15 marks.
26-27		aluation & Combined and	Instead of QCBS, the method
Point 23,24	evaluation & Combined and		for big evaluation shall be

	financial evaluation	based on LCS (Least Cost
* ***		Selection) method.
		Each bidder has to get
		minimum 60 marks in the
		technical evaluation in order
		to qualify technically.
		The commercial bids of only
		those bidders who are
		technically qualified shall be
		opened and Lowest quoted
		commercial bid shall be used
		for finalization of successful
55		bidder.
Page No.	Bill of Material	For serial Number – 2 –
48		Quantity per village – Two (2)
		prints
		For serial Number – 3 –
		Quantity per tehsil – Three(3)
		CDs.
Page No.		In addition to experience of
16 Point No. 7		work in India, the respective
& 8		work experience of abroad
		shall also be accepted.

(C R Meena) Registrar Board of Revenue for Rajasthan Ajmer

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