

REQUEST FOR QUOTATIONS
Procurement of Goods under RFQ/Shopping Procedures
E-Procurement Notice
(One-Envelope with e-Procurement Bidding Process)

Purchaser: Chief Engineer, Irrigation and Water Resources Department,
Government of Mizoram
Contract title: Supply of DGPS
RFQ No: NHP-2020-2021-MZ-786415
AWPID: 13028 of 2020-21
Date: 6th October, 2020

Applicable Procurement Guidelines:

World Bank's "Guidelines - Procurement of Goods, Works and Non-Consulting Services under IBRD Loans and IDA Credits and Grants by World Bank's Borrowers", January 2011, Revised July 2014

1. The Government of India has received financing from the World Bank towards the cost of the **National Hydrology Project** and intends to apply part of the proceeds towards eligible payments under the contract for which this request for quotations is issued. The **State Project Management Unit-Mizoram, National Hydrology Project** invites quotations electronically from eligible bidders for the following goods.

S. No.	Brief Description of the Goods	Specifications	Unit & Quantity	Delivery Period	Place of Delivery	Installation , Testing Requirement if any
1	DGPS (Base) complete as per technical specifications with 3 years warranty period	Specified in Purchaser's Requirements of RFQ Document	1 No.	30 days from the date of award of contract	Aizawl, Mizoram, India	2 different on site installation and testing is required.
2	DGPS (Rover) as per technical specifications with 3 years warranty period	Specified in Purchaser's Requirements of RFQ Document	2 Nos	30 days from the date of award of contract	Aizawl, Mizoram, India	2 different on site installation and testing is required.
3	Controller as per technical specifications with 3 years warranty period	Specified in Purchaser's Requirements of RFQ Document	2 Nos	30 days from the date of award of contract	Aizawl, Mizoram, India	2 different on site installation and testing is required.

2. The Bidders shall submit Quotations for all items together.
3. This e-Procurement notice includes the terms and conditions applicable to submission of quotations; criteria for qualification, evaluation, and for award of supply order(s); and relevant forms to be filled by the bidders. Implementing Agency has not issued a separate RFQ document for this purchase. The e-Procurement notice including the terms and

conditions etc. can be downloaded free of cost by logging on to the website <https://mizoramtenders.gov.in>. The bidders would be required to register in the website which is free of cost.

4. For submission of Quotation, the Bidder is required to have Digital Signature Certificate (DSC) from one of the Certifying Authorities authorized by Government of India for issuing DSC. Bidders can see the list of licensed CA's from the link (www.cca.gov.in). Bidders who have not obtained the user ID and password for participating in e-procurement in this Project, may obtain the same from the website: <https://mizoramtenders.gov.in>.
5. Quotations shall be submitted on <https://mizoramtenders.gov.in> on or before 12:00 hours on 20th October.2020 [system server time]. Any quotation or modifications to quotation received outside e-procurement system will not be considered. The electronic bidding system would not allow late submission of quotations. The Quotations will be opened online on 20th October.2020 at 12:30 hours [system server time], this can also be viewed by the bidders online. The electronic summary of quotation opening will be generated and uploaded online.
6. If the Purchaser's office happens to be closed on the date of opening of the Quotations as specified, the Quotations will be opened on the next working day at the same time.
7. Other details can be seen in the RFQ document. The Purchaser shall not be held liable for any delays due to system failure beyond its control. A Bidder requiring any clarification of the RFQ Document may notify the Purchaser online or may visit the office of the Purchaser at the address given below.



(LALROTLUANGA)

Chief Engineer, Irrigation & Water Resources Department
Mizoram New Capital Complex, Khatla, Aizawl, PIN: 796001
Mizoram, India.

Tel. No: 03892336138
Email: mizorammid@gmail.com

Request for Quotation Document

RFQ No: NHP-2020-2021-MZ-786415

Date: 6thOctober,2020

Terms and Conditions

1. **Eligibility:** A Bidder (a) shall not participate in more than one Quotation; (b) shall not have conflict of interest as defined in the Bank's Procurement Guidelines; and (c) should not have been (i) temporarily suspended or debarred by the World Bank Group in compliance with the Bank's Anti-Corruption Guidelines and its Sanctions Framework; or (ii) blacklisted or suspended by government department/semi-government/public sector organization in India.
2. **Clarifications & Amendments:** If the Purchaser receives any request for clarification of this RFQ Document, it will upload its response together with any amendment to this document, on the e-procurement portal for information of all Bidders. Bidders should check on the e-procurement system, for any amendments to the terms and conditions.
3. **The Quotation shall comprise the following:**
 - (a) Letter of Quotation;
 - (b) Delivery Period Offered: List of Goods & Related Services indicating Bidder's offered delivery period in the prescribed Form;
 - (c) Technical Specifications: confirmation that the offered Goods and Related Services conform to the required specifications;
 - (d) Evidence in accordance with Clause 6 establishing Bidder's qualifications to perform the contract, if its quotations accepted;
 - (e) Authorization of a person to sign Quotation document on behalf of the Bidder; The written confirmation of authorization to sign on behalf of the Bidder shall consist of an organizational document, board resolution or its equivalent, or power of attorney specifying the representative's authority to sign the Quotation on behalf of the Bidder.
 - (f) Performance Statement of supplies of similar goods made during the last 3 (three) years, in the prescribed Format;
 - (g) Photocopy of License/Certificate from government organization regarding being in business for the last 3 (three) years and the current year;
 - (h) Photocopy of GST Registration Certificate, if required to register;
 - (i) Photocopy of PAN Card, if required to obtain.
 - (j) Reports on financial standing of the bidder such as profit and loss statements, balance sheets and auditor's report for the past 3 (three) years, bankers certificate, etc.
 - (k) Complete address and contact details of the Bidder having the following information:

Name of Firm
Address for communication
Telephone No(s): Office
Mobile No.
Facsimile (FAX) No.
Electronic Mail Identification (E-mail ID)
 - (l) Price Schedule (using the Schedule uploaded with the RFQ document) wherein the rates shall be entered online.

4. Quotation Prices

- (a) The contract shall be for the full quantity for all items, as specified in the Price Quotation Form. Corrections, if any, can be carried out by editing the information before electronic submission.
- (b) All duties, taxes and other levies payable on the raw materials and components shall be shown in the quotation.
- (c) GST and any other taxes, which will be payable on the goods at the time of invoicing in connection with the sale, shall be shown separately. If these are only stated to be extra, such quotations are liable to be rejected. Wherever these taxes are not shown, these will be assumed to have been included in the quoted price.
- (d) The rates quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
- (e) The Prices shall be quoted in Indian Rupees only.

5. **Conformity of Goods:** The Bidder shall furnish as part of Quotation, documentary evidence that the Goods conform to the technical specifications and standards, as relevant for example catalogue, on site warranty/ guarantee etc. of the manufacturer

6. Qualification Criteria of the Bidder:-

- 6.1 The documentary evidence of the bidder's qualifications to perform the contract, if its bid is accepted, shall be submitted as part of its Bid, to establish to the Purchaser's satisfaction:
 - a) i) that if a Bidder that does not manufacture or produce the Goods it offers to supply, it shall submit with its Bid the Manufacturer's Authorization and confirmation to provide Manufacturer's warranty/guarantee for the goods along with the supply, on the form included. The Bidder has the option to furnish the said Authorization from the Authorized Dealer or Distributor in which case the form provide may be modified by the Bidder suitably. However, if the Bidder itself is an Authorized Dealer or Distributor, it may be submit Certificate evidencing this position - in lieu of manufacturer's Authorization.
 - ii) that supplies for any particular item in each schedule of the bid should be from one manufacturer only. Bids from agents offering supplies from different manufacturer for the same items of the schedule in the bid will be treated as non-responsive.
- b) The bidder should have supplied goods similar to the type (& capacity) specified in the schedule of Requirements up to at least 100% of the quantity in any one of last 3 years.
- 6.2 Bidders shall also submit with its Bid, details of supplies of similar goods made during the last 3 years preceding the deadline for submission, using the Proforma for Performance Statement included in section 2. Bidders shall invariable furnish documentary evidence (End User's Certificate) in support of the satisfactory operation of the goods as specified above.
- 6.3 Bids from Joint Ventures are not acceptable.
- 6.4 Financial Capability

The Bidders should have average annual sales turnover of minimum of INR56.00Lakhs in the past 3 years. The Bidder shall furnish documentary evidence that its meets the Financial Capability.

7. **Validity of Quotation:** Quotation shall remain valid for a period not less than 60 days after the deadline date specified for submission.
8. **Signing of Quotations:** The name and position held by each person signing the quotation and related documents must be typed or printed below the signature.
9. **Quotation Submission:** The Letter of Quotation shall be filled, signed and scanned copies shall be uploaded along with the Price Schedules that shall be furnished using the Forms available online without any alterations. All blank spaces shall be filled in with the information requested. Scanned copies of all other documents shall also be uploaded on this website.
10. **Online Opening and Evaluation of Quotations:** The Quotations will be opened online on the specified date and time. This can also be viewed by the bidders online, and electronic summary of quotation opening will be generated and uploaded online.
 - (a) The Purchaser shall examine the quotation to determine whether the quotation (a) has been properly signed (Clause 8); (b) meets the eligibility criteria (Clause 1); (c) conforms to all terms, conditions, technical specifications, on site warranty/guarantee etc.; (d) the bidder has accepted the delivery schedule (Purchaser's Requirement Form 1); and (e) Price Schedules are in accordance with the requirements specified in the RFQ document.
 - (b) Only Quotations that are both substantially responsive to the RFQ document, and meet all Qualification Criteria shall qualify for financial evaluation.
 - (c) The Quotations would be evaluated for all the items together.
 - (d) The evaluation shall be based on the total price of Goods and Related services at project site excluding GST and any other taxes.
11. **Award of contract:** The Purchaser will award the contract to the bidder whose quotation has been determined to be substantially responsive and who has offered the lowest evaluated quotation price.
 - (a) Notwithstanding the above, the Purchaser reserves the right to accept or reject any quotations and to cancel the bidding process and reject all quotations at any time prior to the award of contract.
 - (b) The bidder whose quotation is accepted will be notified of the award of contract by the Purchaser prior to expiration of the quotation validity period. The terms of the accepted offer shall be incorporated in the supply order (sample form attached).
 - (c) 60 % Payment shall be made within 25 days after delivery of the goods and successful installation. Payment of GST and other taxes payable for the goods at the time of invoicing, although already included in the total cost, will be at actual or the rate/amount of these taxes specified in the supply order, whichever is lower. The payment details are as follows:
 - (i) 60% on delivery.
 - (ii) 25% on final acceptance and training.
 - (iii) 5% after first year of warranty.
 - (iv) 5% after second year of warranty.
 - (v) 5 % after third year of warranty.

(d) on site Comprehensive warranty/ guarantee shall be applicable to the supplied goods.

12. Training : Two days training (One day each for theory and practical) for the selected members of the departmental Officer to be given by the supplier. Routine maintenance to be provided during the warranty period. As per the training schedule.

13. Corrupt and Fraudulent Practices: The World Bank requires compliance with its policy in regard to corrupt and fraudulent practices as set forth in Para 1.16 of “Guidelines - Procurement of Goods, Works and Non-Consulting Services under IBRD Loans and IDA Credits and Grants by World Bank’s Borrowers, January 2011, Revised July 2014”. (**Appendix 1**). In further pursuance of this policy, Bidders shall permit and shall cause its agents (whether declared or not), sub-contractors, sub-consultants, service providers, or suppliers and any personnel thereof, to permit the Bank to inspect all accounts, records and other documents relating to any prequalification process, bid submission, and contract performance (in the case of award), and to have them audited by auditors appointed by the Bank.

Bank Policy - Corrupt and Fraudulent Practices

Guidelines for Procurement of Goods, Works, and Non-Consulting Services under IBRD Loans and IDA Credits & Grants by World Bank Borrowers, January 2011, Revised July 2014:

“Fraud and Corruption:

1.16 It is the Bank’s policy to require that Borrowers (including beneficiaries of Bank loans), bidders, suppliers, contractors and their agents (whether declared or not), sub-contractors, sub-consultants, service providers or suppliers, and any personnel thereof, observe the highest standard of ethics during the procurement and execution of Bank-financed contracts.¹ In pursuance of this policy, the Bank:

- (a) defines, for the purposes of this provision, the terms set forth below as follows:
 - (i) “corrupt practice” is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;²
 - (ii) “fraudulent practice” is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;³
 - (iii) “collusive practice” is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;⁴
 - (iv) “coercive practice” is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;⁵
 - (v) “obstructive practice” is
 - (aa) deliberately destroying, falsifying, altering, or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or
 - (bb) acts intended to materially impede the exercise of the Bank’s inspection and audit rights provided for under paragraph 1.16(e) below.

¹ In this context, any action to influence the procurement process or contract execution for undue advantage is improper.

² For the purpose of this sub-paragraph, “another party” refers to a public official acting in relation to the procurement process or contract execution. In this context, “public official” includes World Bank staff and employees of other organizations taking or reviewing procurement decisions.

³ For the purpose of this sub-paragraph, “party” refers to a public official; the terms “benefit” and “obligation” relate to the procurement process or contract execution; and the “act or omission” is intended to influence the procurement process or contract execution.

⁴ For the purpose of this sub-paragraph, “parties” refers to participants in the procurement process (including public officials) attempting either themselves, or through another person or entity not participating in the procurement or selection process, to simulate competition or to establish bid prices at artificial, non-competitive levels, or are privy to each other’s bid prices or other conditions.

⁵ For the purpose of this sub-paragraph, “party” refers to a participant in the procurement process or contract execution.

- (b) will reject a proposal for award if it determines that the bidder recommended for award, or any of its personnel, or its agents, or its sub-consultants, sub-contractors, service providers, suppliers and/or their employees, has, directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;
- (c) will declare misprocurement and cancel the portion of the loan allocated to a contract if it determines at any time that representatives of the Borrower or of a recipient of any part of the proceeds of the loan engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices during the procurement or the implementation of the contract in question, without the Borrower having taken timely and appropriate action satisfactory to the Bank to address such practices when they occur, including by failing to inform the Bank in a timely manner at the time they knew of the practices;
- (d) will sanction a firm or individual, at any time, in accordance with the prevailing Bank's sanctions procedures,⁶ including by publicly declaring such firm or individual ineligible, either indefinitely or for a stated period of time: (i) to be awarded a Bank-financed contract; and (ii) to be a nominated⁷;
- (e) will require that a clause be included in bidding documents and in contracts financed by a Bank loan, requiring bidders, suppliers and contractors, and their sub-contractors, agents, personnel, consultants, service providers, or suppliers, to permit the Bank to inspect all accounts, records, and other documents relating to the submission of bids and contract performance, and to have them audited by auditors appointed by the Bank.”

⁶ A firm or individual may be declared ineligible to be awarded a Bank financed contract upon: (i) completion of the Bank's sanctions proceedings as per its sanctions procedures, including, inter alia, cross-debarment as agreed with other International Financial Institutions, including Multilateral Development Banks, and through the application the World Bank Group corporate administrative procurement sanctions procedures for fraud and corruption; and (ii) as a result of temporary suspension or early temporary suspension in connection with an ongoing sanctions proceeding. See footnote 14 and paragraph 8 of Appendix 1 of these Guidelines.

⁷ A nominated sub-contractor, consultant, manufacturer or supplier, or service provider (different names are used depending on the particular bidding document) is one which has either been: (i) included by the bidder in its pre-qualification application or bid because it brings specific and critical experience and know-how that allow the bidder to meet the qualification requirements for the particular bid; or (ii) appointed by the Borrower.

MANUFACTURER'S AUTHORIZATION

[The Bidder shall require the Manufacturer to fill in this Form in accordance with the instructions indicated. This letter of authorization should be on the letterhead of the Manufacturer and should be signed by a person with the proper authority to sign documents that are legally binding on the Manufacturer. The Bidder shall include it in its bid, if so indicated in the RFQ.]

Date: *[insert date (as day, month and year) of Bid Submission]*
RFQ No.: *[insert number of bidding process]*

To:

WHEREAS

We *[insert complete name of Manufacturer]*, who are official manufacturers of *[insert type of goods manufactured]*, having factories at *[insert full address of Manufacturer's factories]*, do hereby authorize *[insert complete name of Bidder]* to submit a bid the purpose of which is to provide the following Goods, manufactured by us *[insert name and or brief description of the Goods]*, and to subsequently negotiate and sign the Contract against the above RFQ.

We hereby extend our full guarantee and 3years on site warranty comprehensive in accordance RFQ, with respect to the Goods offered by the above firm against this RFQ.

We as a manufacturer of *[insert type of goods manufactured]* confirm to provide the spare & service support for a minimum period of 10 years after commissioning

Signed: *[insert signature(s) of authorized representative(s) of the Manufacturer]*

Name: *[insert complete name(s) of authorized representative(s) of the Manufacturer]*

Title: *[insert title]*

Duly authorized to sign this Authorization on behalf of: *[insert complete name of Bidder]*

Dated on _____ day of _____, _____ *[insert date of signing]*

Note – Modify this format suitably in cases where manufacturer's warranty and guarantee are not applicable for the items for which bids are invited. If the supply consists of number of items, indicate the specific item (s) for which alone the above authorization is required.

Quotation Forms

Letter of Quotation

The Bidder must prepare the Letter of Quotation on stationery with its letterhead clearly showing the Bidder's complete name and address. The italicized text is for Bidder's guidance in preparing these forms and shall be deleted from the final products.

RFQ No.: **NHP-2020-2021-MZ-786415**
Our Reference: No..... Dated.....

To:
Mr. Lalrotluanga,
Chief Engineer, Irrigation & Water Resources Department
New Capital Complex, Khatla, Aizawl, PIN: 796001
Mizoram, India

Subject: **Supply of DGPS**

Sir,

1. We, the undersigned, hereby submit our Quotation.
2. In submitting our Quotation, we make the following declarations:
 - (a) **No reservations:** We have examined and have no reservations to the RFQ Document;
 - (b) **Conformity:** We offer to supply in conformity with the RFQ Document and in accordance with the Delivery Schedules specified in the Schedule of Requirements the following Goods and Related Services *[insert a brief description of the Goods and Related Services];*
 - (c) **Quotation Validity Period:** Our Quotation shall be valid for the period of 60 days, from the deadline fixed for the Quotation submission;
 - (d) **Eligibility:** We meet the eligibility requirements and have no conflict of interest, we are not participating in more than one quotation in this bidding process, and we have not been temporarily suspended or debarred by the World Bank or blacklisted or suspended the government department/semi-government/public sector organization in India;
 - (e) **Fraud and Corruption:** We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in any type of corrupt, fraudulent, collusive, coercive, or obstructive practices; and we will strictly observe the laws against fraud and corruption in force in India namely, "Prevention of Corruption Act 1988."
 - (f) **Commissions, gratuities and fees:** We have paid, or will pay the following commissions, gratuities, or fees with respect to the Bidding process or execution of the Contract: *[insert complete name of each Recipient, its full address, the reason for which each commission or gratuity was paid and the amount and currency of each such commission or gratuity. If none has been paid or is to be paid, indicate "none."]*
 - (g) **We are not participating as a Joint Venture in this bidding process.**
 - (h) The total price of our Quotation, including any unconditional discounts offered is:
Total price of the Quotation *[insert the total price of the quotation excluding GST and any other taxes, which will be payable on the finished goods, in words and figures];*

Yours faithfully,

Authorized Signature*

Name & Title of Signatory _____

In the capacity of *[insert legal capacity of person signing the Letter of Quotation]*

Name of Bidder _____

Address _____

Dated on _____ day of _____, _____ *[insert date of signing]*

*Authorization of a person to sign on behalf of the Bidder:

The written confirmation of authorization to sign on behalf of the Bidder shall consist of an organizational document, board resolution or its equivalent, or power of attorney specifying the representative's authority to sign the Quotation on behalf of the Bidder.

FORMAT OF QUOTATION

S. No.	Description of Goods	Specifications	Quantity	Unit	Quoted Unit Rate at destination excluding GST and including any other taxes in INR	Total Price per line item at Destination - including of discounts, excluding of GST, and including any other taxes in INR		*GST applicable on finished Goods/ Services in INR	
						In Figures	In Words	%	Amount
1	DGPS(Base) complete as per technical specifications with 3 years warranty period	Specified in Purchaser's Requirements of RFQ Document	1	No.					
2	DGPS (Rover) as per technical specifications with 3 years warranty period	Specified in Purchaser's Requirements of RFQ Document	2	Nos.					
3	Controller as per technical specifications with 3 years warranty period	Specified in Purchaser's Requirements of RFQ Document	2	Nos.					
4	Training	Training of the purchaser's personnel at the site in assembly, startup & operation of DGPS which includes installation, testing, operation at minimum 2 different locations, retrieval of data, procedure for	1	No					

	generating rating curve and maintenance & requirements equipment configuration, necessary training manuals, Complete as per technical specifications.								
	Total Price including discounts, excluding GST and any other taxes								
	Total Price including discounts, GST and any other taxes								

Note: Evaluation shall be done for all item together

*GST to be quoted item wise as per HSN Code.

*Payment of GST payable for the goods at the time of invoicing, although already included in the total cost, will be at actuals at the time of invoicing.

We agree to supply the above goods in accordance with the technical specifications for a total contract price (including all taxes and duties) of INR.(Amount in figures) (Indian Rupees amount in words) *[insert total price including of discounts, GST and other taxes]* within the period specified in the Request for Quotations.

We also confirm that the Comprehensive warranty/guarantee of **36 months** shall apply to the offered goods.

We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf has engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices (as defined in the prevailing World Bank's sanctions procedures) in competing for or in performing the Contract.

Signature of Bidder

PROFORMA FOR PERFORMANCE STATEMENT*

Proforma for Performance Statement (for a period of last 3 years)

RFQ No. _____

Date of opening _____ Time _____ Hours

Name of the Bidder _____

<u>Order placed by</u> (full address of Purchaser)	<u>Order No. and date</u>	<u>Description and quantity of ordered Goods/ equipment</u>	<u>Value of order</u>	<u>Date of completion of delivery</u>		<u>In case of Equipment, state if the equipment been satisfactorily functioning? (Attach a certificate from the Purchaser/Consignee, Detail Bill of materials,)</u>
				As per contract	Actual	
1	2	3	4	5	6	8

*This proforma shall be deleted if requirement of Performance Statement is deleted in Clause 3.

Signature and seal of Bidder

Purchaser's Requirement

1. LIST OF GOODS & RELATED SERVICES AND DELIVERY PERIOD

Line Item No.	Description of Goods and Related Services	Quantity	Physical unit	Final Destination (Project site)	Desired Delivery Period for completion of supply from the date of the Contract	Bidder's offered Delivery Period [to be provided by the Bidder]
1	2	3	4	5	6	7
1	DGPS (One set) complete as per technical specifications with 3 years warranty period	1	No.	O/o the Chief Engineer, Irrigation & Water Resources Department, New Capital Complex, Khatla, Aizawl, PIN: 796001, Mizoram, India	30 days from the date of Award of Contract	
2	Rover complete as per technical specifications with 3 years warranty period	2	Nos.	O/o the Chief Engineer, Irrigation & Water Resources Department, New Capital Complex, Khatla, Aizawl, PIN: 796001 Mizoram, India	30 days from the date of Award of Contract	
3	Rover complete as per technical specifications with 3 years warranty period	2	Nos.	O/o the Chief Engineer, Irrigation & Water Resources Department, New Capital Complex, Khatla, Aizawl, PIN: 796001, Mizoram, India,	30 days from the date of Award of Contract	

4	<p>Training of the purchaser's personnel at the site in assembly, startup & operation of DGPS which includes installation, testing, operation at minimum 2 different locations, retrieval of data, procedure for generating rating curve and maintenance requirements & equipment configuration, necessary training manuals, Complete as per technical specifications.</p>	1	No	As per training schedules	As per training schedules
---	--	---	----	---------------------------	---------------------------

Note:
 1. Delivery Period offered by the Bidder should be filled in Column 7 by the Bidder.

TECHNICAL SPECIFICATIONS

Detailed Technical Specifications are as follows:

Differential GPS

Specifications:

The supplied system needs to be compatible with international GNSS networks as well as be. The system supplied shall be complete with all usual accessories needed for the purpose defined.

Identical interchangeable Base and Rover complete system including accessories like Antenna receiver, controller, cables, etc.

Receiver Characteristics:	
Antenna :	Identical interchangeable Base and Rover complete system including accessories like Antenna receiver. Controller and Antenna cables etc. or Antenna can be integrated
Tracking :	GPS: L1C/A, L1C, L2C, L2E, L5 GLONASS: L1C/A, L1P, L2C/A, L2P, L3 Galileo: E1, E5A, E5B Bei Dou (COMPASS): B1, B2 SBAS: QZSS, WAAS, EGNOS, GAGAN
Capability of tracking :	Should be GPS L1, L2, L5 and GLONASS L1, L2 (Optional)
Channels :	Should have 400 OR MORE
Tilt Sensor	Must have Tilt Sensor (both Base and Rover) it must be calibration free
Memory :	Internal memory in receiver or SD card in receiver 6 GB or Better
Measurements :	GPS:L1CA, L1/L2P-Code,L2C GLONASS:L1/L2 CA,L1/L2P Code, SBAAS : WAAS,EGNOS,MSAS,
Modes :	Static, Rapid Static, Kinematic, Real Time Kinematic
Multipath :	Inbuilt Multi path Mitigation techniques
Time for measurements :	Time for first measurement less than 30 seconds
Reliability :	Better than 99.9%
LEDs :	Suitable LED's for power, tracking and Bluetooth. Ports: Should have one Bluetooth and one serial port.
External Power :	Should be possible to connect external power supplies like car Battery to power the receiver the same should be offered with the system
Power consumption:	Less than 4W

Operating temperature	-40to+65°C
Humidity	100% , condensing
Position Update:	20Hz or better
Drop	With stands drop of 2-meter or more on hard surface
Antenna Characteristics:	
Type:	Combined Antenna and receiver or integrated
Tracking:	GPS and GLONASS L1 and L2 Signals
Battery Slot:	There should be internal battery slot in Antenna
Bluetooth:	There should be a Bluetooth port in antenna and suitable port for connecting to controller over cable
Operation Temperature	-40°C to +65°C
Storage Temperature	-40°C to +75°C
Controller Characteristics:	
Type : Colour	Touch Screen controller with complete graphical display 4 inches or Better with display pixel of 600 X 480 or Better and high visibility backlit LCD
Operating System:	Microsoft Windows Embedded Hand Held 6.5
Keyboard :	Full QWERTY key pad Hard with Numeric Keyboard for numbering & function short keys.
Memory :	256MB RAM or better with 4GB internal memory
Operation :	-30°C to +60°C or Better
Dust & Water Protection :	IP67 or better
Wireless Connection :	Bluetooth Class 2
Power Supply .:	Li-ion rechargeable battery/operation time 08 hrs or Better
DISPLAY	4" or better VGA LCD with High visibility backlit LCD with 640 x 480 pixel or better
Radio Characteristics	
Type :	License Free Radio of 1 W or better or more for Use in India
Range approx.:	3km or more
Accuracy Specifications:	
Static Accuracy in PP mode	
Horizontal:	3mm + 0.1 ppm or better
Vertical	3.5 mm +0.4 ppm or better
Kinematic Accuracy in PP mode	
Horizontal	8mm + 1ppm or better
Vertical	15mm + 1ppm or better

Real Time Kinematic (RTK) :	
Horizontal	8 mm +1ppm or better
Vertical	15mm +1ppm or better
Field Software :	
Ellipsoids	All common ellipsoids, User-definable ellipsoids
Map projections	Mercator, Transverse Mercator, User definable UTM, and country specific Oblique Mercator, Lambert (1and2 standard parallels), Soldner Cassini, Polar Stereographic, Double Stereographic
	RSO (rectified skewed orthomorphic projection)
	Other country-specific projections"
	Geoidal model Upload geoidal model to system
Transformation in controller	Classical 7-parameter3-D HelmertOne step and two step (direct WGS84togrid).The transformation approach should also allow the determining of transformation with only one common for a small survey field. There siduals hauls also be distributed onboard.
Graphics:	Graphical Representation of Points
Icons:	Icons indicating the current status of measure modes, settings, battery, etc. It should be possible to configure or see status of the iconed devices by touching on the screen.
Configuration sets:	Ability to store and transfer all instrument and application configuration settings for different operators, survey tasks, etc.
Free Coding:	Recording codes with optional attributes in between of measurements
Manual Coding:	Code entry or selection from a user defined code list"
Thematical Coding:	Coding points, lines and areas with optional attributes when measuring
Quick Coding:	Recording a measurement with a point code or free code by entering a numerical quick code from user defined code list
Averaging of multiple points:	within user defined averaging limit
On Board Programmes:	Surveying, Staking, COGO, Area, Two Point Distance, Automatic Recording Points with user defined time or distance, Hidden Point Measurements.
Office Software:	
Processing:	Capable of Processing data logged from all constellations
Adjustment:	Capable of adjusting the GNSS data
Import:	Capable of Importing the RINEX and RAW Data logged from GPS with maps created in the field to be downloaded as such.

Export:	Capable of Exporting directly to CAD with the code lists enabling the symbolic to be attached without manual editing.
Reporting:	Software should be capable of generating HTML style reports directly for the surveyed data
Datum:	Transformation Capable of transferring the data from one datum to another for given set of common points with or without the knowledge of datum's
List of Equipment's	
GNSS receiver with accessories	3 Nos (1Base and 2 Rovers)
Controller	2 Nos (One for each Rover antenna)
Internal Rechargeable Battery	8 Nos, (3 receivers-2 each, 2 controllers-1 each)
Charger	5 Nos, 1 for each antenna and 2 for Controllers
Power Cables	3 Nos. One for Base and 2 for Rovers for attaching External Battery / Car Battery for long observation.
Carrying Case	3 Nos, 1 for each receiver.
Tripot setup for Base for PP data collection and RTK base setup.	3 Nos. One for Base and Two for Rovers.
Carbon fibre/Aluminium pole set up for Rover with quick fix tripod/bipod for stable setup for PP data collection.	2 Nos. for 2 Rovers
Field software	2Nos. for Rover Controllers.
Office software for post processing	1 License for Desktop / Laptop
Calibration certificate for all instruments	During each warranty period.
Warranty period	3 years (all inclusive comprehensive warranty with spare parts and all consumable parts)
Scope of Services	One day practical training each year during the warranty period for the departmental officers to be given by the supplier.
Manuals	Operating manuals.

Schedule Showing Frequency of Scheduled Visits for Routine and Preventive Maintenance for three year

S. No.	Station Category	Minimum Preventive Visits yearly	Remarks
1	Maintenance of <u>Differential GPS</u>	2	Each year two visit or on need basis, or some technical firmware upgradation
	Maintenance of <u>Rover</u>	2	Each year two visit or on need basis or some technical firmware upgradation

TRAINING AND DOCUMENTATION:

The Bidder is required to provide an extensive training program for the system. The training set forth in the following paragraphs is a minimum requirement and the bidder should propose any additional training that he considers critical for long term success of the system operations.

The training shall include both classroom and field trainings at the purchaser place and will be continued during all three years.

S. No.	Description	Numbers of training	Number of Participants per session
1	User Training Course for department /management. (one day) Operation and Maintenance course	a) 1 st training within one month from delivery of goods. b) 2 nd training after one year of delivery of goods. c) 3 rd training after two years of delivery of goods.	10 to 15

ATTACHMENT

OFFICE OF

PURCHASE/SUPPLY ORDER

To:

M/s

Dear Sirs,

Sub:

Ref : Request for Quotation no..... dated

- Your quotation no.....of(Date) for the supply of has been accepted. You are requested to supply the following goods/equipment at the rates quoted by you and specified against each as per the specifications and terms & conditions specified here under:

S. No	Brief description of goods/ equipment	Specifications	Quantity to be supplied	Unit Rate (INR)	Total Price (INR) excluding GST and similar other taxes	GST* and similar other taxes	
						%	Amount
1							
2							
3							
4							
5							
			Total				

*GST and similar other taxes and duties applicable on finished goods. Indicate each applicable tax separately.

- Delivery Period:days from the date of issue of this supply order.
- Place of delivery
- Consignee Address:
- GST and other taxes and duties, if any will be reimbursed at actual rates paid on the date of supply or the rate/amount shown in 1. above, whichever is lower.

6. Comprehensive on site Warranty/Guarantee shall be..... months from the date of delivery and acceptance.
7. Payment shall be made on delivery or within 25days of delivery; and acceptance of the goods/equipment.
8. Other terms and conditions are as under:
.....
.....

(Purchaser)

Date:

Place:

Name:

Designation:.....

Modify as appropriate for individual cases

TECHNICAL RESPONSIVENESS FORM

Bidder shall furnish clause by clause commentary against the laid down technical specification and standards as per the format given below:

(A) Summary of Instructions

- (i) Particulars of Manufacturer and local agent cum representative are to be given under rows Model and Address.
 - (ii) **All entry boxes in column “Specification and Standards as offered in by Bidder” shall be filled-in accurately and comprehensively. Quantitative fields shall be filled in accurately. It is not acceptable to use ‘Yes’, No, Compliant or similar evading words. Following format is designed to help the Bidder to understand the requirements of the equipment being procured. The Bidder must describe in the format how his bid responds to the technical requirements of the equipment. Bidder to note that one or two-word responses (e.g. “Yes”, “No” “will comply” or similar evading words) are normally not sufficient to confirm the responsiveness with the technical requirements, hence elaborate responses are sought from the bidders. In case deviation on the following technical requirements of equipment is not as per the minimum criteria mentioned, the bids may be declared “non-responsive”**
 - (iii) Requested materials and information shall be enclosed with the bid and be unambiguously associated with instruments as offered in the bid
- (iv) Negligence to comply with the instructions and requirements as stated above makes the bid liable to be rejected.

V) Abbreviations: FSO : Full scale operation, m/s : Meter per sec.

(B) Entries requiring special attention:

- 1) The proposed maintenance interval and the recommended spares as offered in the bid shall be based on instrument deployment history. The training proposal shall be based on experience in similar cases. Moreover, it shall consider the educational level and specialization of the trainees.

(C) Bidder shall provide information in the formats given below:

i) Make/ Model/ Local Agent etc.:

Bidder	Differential GPS Base station make/ model	Differential GPS Rover Station make/ model
Name / Complete Address/Website/E mail	Model: Manufacturer: Authorization: Name: Place: Tel: Fax:	Model: Manufacturer: Authorization: Name: Place: Tel: Fax:

Bidder	Differential GPS Base station make/ model	Differential GPS Rover Station make/ model
	E-mail: Web:	E-mail: Web:

i) Clause by Clause Commentary against laid down technical specifications:
Differential GPS:

Name of Goods-Its Features	Required Specifications and standards as per bidding document	Specification and standard as offered in by Bidder	Remarks
Differential GPS:	Make:		
	Model:		
	Manufacturer Name, address, email, phone, website, fax.		
Receiver Characteristics:			
Antenna :	Identical interchangeable Base and Rover complete system including accessories like Antenna receiver. Controller and Antenna cables etc. or Antenna can be integrated		
Tracking :	GPS: L1C/A, L1C, L2C, L2E, L5 GLONASS: L1C/A, L1P, L2C/A, L2P, L3 Galileo: E1, E5A, E5B Bei Dou (COMPASS): B1, B2 SBAS: QZSS, WAAS, EGNOS, GAGAN		
Capability of tracking :	Should be GPS L1, L2, L5 and GLONASS L1, L2 (Optional)		
Channels :	Should have 400 OR MORE		
Tilt Sensor	Must have Tilt Sensor (both Base and Rover) it must be calibration free		
Memory :	Internal memory in receiver or SD card in receiver 6 GB or Better		
Measurements :	GPS:L1CA, L1/L2P-Code,L2C GLONASS:L1/L2 CA,L1/L2P Code, SBAAS : WAAS,EGNOS,MSAS		
Modes :	Static, Rapid Static, Kinematic, Real Time Kinematic		
Multipath :	Inbuilt Multi path Mitigation techniques		

Time for measurements :	Time for first measurement less than 30 seconds		
Reliability :	Better than 99.9%		
LEDs :	Suitable LED's for power, tracking and Bluetooth. Ports: Should have one Bluetooth and one serial port.		
External Power :	Should be possible to connect external power supplies like car Battery to power the receiver the same should be offered with the system		
Power consumption:	Less than 4W		
Operating temperature	-40to+65°C		
Humidity	100% , condensing		
Position Update:	20Hz or better		
Drop	With stands drop of 2-meter or more on hard surface		
Antenna Characteristics:			
Type:	Combined Antenna and receiver or integrated		
Tracking:	GPS and GLONASS L1and L2Signals		
Battery Slot:	There should be internal battery slot in Antenna		
Bluetooth:	There should be a Bluetooth port in antenna and suitable port for connecting to controller over cable		
Operation Temperature	-40°Cto+65°C		
Storage Temperature	-40°Cto+75°C		
Controller Characteristics:			
Type : Colour	Touch Screen controller with complete graphical display 4 inches or Better with display pixel of 600 X 480 or Better and high visibility backlit LCD		
Operating System:	Microsoft Windows Embedded Hand Held 6.5		
Keyboard :	Full QWERTY key pad Hard with Numeric Keyboard for numbering & function short keys.		
Memory :	256MB RAM or better with 4GB internal memory		
Operation :	-30°Cto+60°C or Better		
Dust &Water Protection :	IP67 or better		
Wireless Connection :	Bluetooth Class 2		
Power Supply :.	Li-ion rechargeable battery/operation time 08 hrs or Better		
DISPLAY	4" or better VGA LCD with High visibility backlit LCD with 640 x 480 pixel or better		

Radio Characteristics			
Type :	License Free Radio of 1 W or better or more for Use in India		
Range approx.:	3km or more		
Accuracy Specifications:			
Static Accuracy in PP mode			
Horizontal:	3mm + 0.1 ppm or better		
Vertical	3.5 mm +0.4 ppm or better		
Kinematic Accuracy in PP mode			
Horizontal	8mm +1ppm or better		
Vertical	15mm +1ppm or better		
Real Time Kinematic (RTK) :			
Horizontal	8 mm +1ppm or better		
Vertical	15mm +1ppm or better		
Field Software :			
Ellipsoids	All common ellipsoids, User-definable ellipsoids		
Map projections	Mercator, Transverse Mercator, User definable UTM, and country specific Oblique Mercator, Lambert (1and2 standard parallels), Soldner Cassini, Polar Stereographic, Double Stereographic		
	RSO (rectified skewed orthomorphic projection)		
	Other country-specific projections"		
	Geoidal model Upload geoidal model to system		
Transformation in controller	Classical 7-parameter3-D HelmertOne step and two step (direct WGS84togrid).The transformation approach should also allow the determining of transformation with only one common for a small survey field. There siduals hauls also be distributed onboard.		
Graphics:	Graphical Representation of Points		
Icons:	Icons indicating the current status of measure modes, settings, battery, etc. It should be possible to configure or see status of the iconed devices by touching on the screen.		
Configuration sets:	Ability to store and transfer all instrument and application configuration settings for different operators, survey tasks, etc.		
Free Coding:	Recording codes with optional attributes in between		

	of measurements		
Manual Coding:	Code entry or selection from a user defined code list"		
Thematical Coding:	Coding points, lines and areas with optional attributes when measuring		
Quick Coding:	Recording a measurement with a point code or free code by entering a numerical quick code from user defined code list		
Averaging of multiple points:	within user defined averaging limit		
On Board Programmes:	Surveying, Staking, COGO, Area, Two Point Distance, Automatic Recording Points with user defined time or distance, Hidden Point Measurements.		
Office Software:			
Processing:	Capable of Processing data logged from all constellations		
Adjustment:	Capable of adjusting the GNSS data		
Import:	Capable of Importing the RINEX and RAW Data logged from GPS with maps created in the field to be downloaded as such.		
Export:	Capable of Exporting directly to CAD with the code lists enabling the symbolic to be attached without manual editing.		
Reporting:	Software should be capable of generating HTML style reports directly for the surveyed data		
Datum:	Transformation Capable of transferring the data from one datum to another for given set of common points with or without the knowledge of datum's		
List of Equipment's			
GNSS receiver with accessories	3 Nos (1Base and 2 Rovers)		
Controller	2 Nos (One for each Rover antenna)		
Internal Rechargeable Battery	8 Nos, (3 receivers-2 each, 2 controllers-1 each)		
Charger	5 Nos, 1 for each antenna and 2 for Controllers		
Power Cables	3 Nos. One for Base and 2 for Rovers for attaching External Battery / Car Battery for long observation.		
Carrying Case	3 Nos, 1 for each receiver.		
Tripot setup for Base for PP data collection and	3 Nos. One for Base and Two for Rovers.		

RTK base setup.			
Carbon fibre/Aluminium pole set up for Rover with quick fix tripod/bipod for stable setup for PP data collection.	2 Nos. for 2 Rovers		
Field software	2Nos. for Rover Controllers.		
Office software for post processing	1 License for Desktop / Laptop		
Calibration certificate for all instruments	During each warranty period.		
Warranty period	3 years (all inclusive comprehensive warranty with spare parts and all consumable parts)		
Scope of Services	One day practical training each year during the warranty period for the departmental officers to be given by the supplier.		
Manuals	Operating manuals.		