

**Azad Government of the State of Jammu and Kashmir
Board of Revenue, Muzaffarabad**

INVITATION TO BID

In pursuance of the decision in principle of the Government of AJK regarding land measurement / preparation of cadastral maps using GIS technology for the purposes of land settlement, AJK Board of Revenue invites sealed bids under **Single Stage - Two envelops procedure** from the original manufacturers / authorized distributors / dealers / suppliers / contractors etc., registered with Income Tax & Sales Tax Departments for supply of following items:

Sr. #	Equipment	Qty.	Closing Date
1.	GNSS-Triple Frequency-RTK (01 base+3 rovers)	01 Set	15-06-2021
2.	Total Station-5" accuracy	01 Set	
3.	Computer Core I-7 Branded	02 Sets	
4.	Laptop Core I-7 Branded	01	
5.	Digital Plotter > or = 30" size	01	
6.	Colour Printer A-3 size (Inkjet)	01	
7.	Printer - HP LaserJet M404DN	02	
8.	VHF Base Station Branded	01	
9.	VHF Walkie Talkie Branded	06	

2). Bidding documents, containing detailed terms and conditions, technical specifications, method of procurement, procedure for submission of bids, bid security, bid validity, opening of bid, evaluation criteria, performance guarantee etc., are available for the interested bidders at website of AJK Public Procurement Regulatory Authority (ajkppra.gov.pk.), which can be downloaded free of cost.

3). The firm/supplier interested in more than one item shall furnish separate tender for each item.

4). The bids, prepared in accordance with the instructions in the bidding documents, must reach at Office of the Member (Monitoring and Coordination) Board of Revenue, New Secretariat, Muzaffarabad (AJK) duly addressed to the Chairman Purchase Committee on or before **15.06.2021 at 1100 hrs** and must be accompanied by a Bid Security @ 5% of Bid value in favour of DDO AJ&K Board of Revenue. Bids will be opened on the same day at **1200 hrs** in the presence of bidders or their authorized representatives who choose to attend (alongwith authority letter). This advertisement / Biding Documents are available on AJK PPRA's website at ajkppra.gov.pk.

(CH. MUKHTAR HUSSAIN)
Member (M&C), BoR,
Chairman Purchase Committee
05822-921640

TERMS & CONDITIONS

1. Applications on prescribed form (attached) along with technical specifications (compliance sheet) and contract, which can be downloaded from the website of AJK-PPRA, should reach the **Chairman Purchase Committee, Member (Monitoring & Coordination) Board of Revenue, New Secretariat, Muzaffarabad Azad Jammu & Kashmir**, by registered post/courier latest by **15.06.2021 at 1100 hrs**. These will be opened at **1200 hours** on the same day in the presence of bidders or their authorized representatives.
2. The method of procurement is **single stage – two envelopes** as per AJK-PPRA's **Rule-36(b)**.
3. The Bidders will send their proposals in two sealed envelopes, marked as "FINANCIAL PROPOSAL" & "TECHNICAL PROPOSAL" in bold and legible letters to avoid confusion. Initially, only envelopes marked as **Technical Proposal** shall be opened and envelopes marked as Financial Proposal shall be retained in the custody of Chairman Purchase Committee. After the **evaluation & recommendations by the Committee**, Financial Proposals of only technically qualified bids will be opened. The Financial Proposals of bids found technically non-responsive shall be returned un-opened to the respective bidders.
4. **5%** earnest money in shape of pay order/bank draft in the name of Drawing and Disbursing Officer / Assistant Secretary (Legal) Board of Revenue at **New Secretariat, Muzaffarabad** should be enclosed in the envelope containing Financial Bid. However, the certificate for attachment be indicated in technical bid, otherwise, the same will be rejected at the opening stage of technical bids.
5. Bidder will provide compliance sheet of each item of the equipment against specifications. Bidder response should be explicit for each component. Any ambiguous and implicit words in quotations (such as yes, ok, offered, available, provided, etc.) will be treated as 'non-responsive'.
6. Bidder shall not submit any document after due date except in response to any clarification sought by **Chairman Purchase Committee** and in response to clarifications no change shall be made.
7. The firm/supplier interested in more than one item may furnish separate tender for each item.
8. Procuring agency may reject any or all bids subject to the relevant provisions of **AJK PPRA Rules-33**.
9. **Quantity of items can be increased or decreased.**
10. Only registered suppliers who are on Active Tax Payers List (ATL) of **FBR** are eligible to supply goods. The supplier should attach a proof that he is on ATL of FBR Data Base.

11. In Financial Proposal, the prices should be inclusive of all leviable taxes. The bidders should also provide the detail price analysis of the items/accessories in their Financial Proposal alongwith net quoted unit rate with GST and without GST showing complete pen picture of their quoted prices. Prices should be mentioned both in words & figures. In case of difference the amount given in words will be accepted.
12. Bids will be valid for 120 days from the date of opening of bid.
13. Display of the items/equipment & Software must be in English Version.
14. The bidders have to give demo of their offered model during Technical Evaluation.
15. Successful bidder(s) will be required to execute agreement governing the terms & conditions of the contract.
16. The successful bidder shall be liable to give full/justifiable training of their approved model.
17. **Liquidation Damages:** The firm has to pay liquidation damages for the period of delays in supply of deliverables upto rate of 2% of the contract price per month or part of a month exceeding the original delivery period subject to the provision that total liquidation damages thus levied will not exceed 10% of the total contract price.
18. **Performance Guarantee:** The bidder shall provide to AJK **Board of Revenue (BoR)**, a Performance Guarantee issued by **A-Plus Pakistani Scheduled Bank**, having a value of **5%** of the contract price and which is valid for 12 months beyond the expected date of delivery of the items/equipments. **BoR** shall confirm the authenticity / genuineness of the Bank Guarantee from the concerned Bank. Performance Guarantee shall be submitted just after successful submission of deliverables and after obtaining Acceptance letter from **BoR**. **5%** performance guarantee will remain held with **BoR** and be released on expiry of Support Period.
 - a. Bank Guarantee furnished against this contract is un-conditional and en-cashable at the will of the firm. Firm will undertake not to hinder/restrain its encashment through court, extra judicial or any other way (including administrative process)
 - b. If the firm fails to produce the Bank Guarantee within specifies period, **BoR** reserves the right of cancelling the contract at the risk and expense of the firm. In the event of un-satisfactory performance or of any breach of terms of the contract, the bank guarantee shall be forfeited to the govt at the discretion of the firm.
19. **Confidentiality:** The firm shall not, during the process of execution or after expiration of this contract, disclose any proprietary or data without the prior written consent of **BoR**.
20. **Force Majeure:** Both the parties shall not be held responsible for any delay occurring in the **procurement process** due to event of Force Majeure such as acts of God, War, Civil commotion, Strike, Lockouts, Act of Foreign

Government and its agencies and disturbance directly affecting the parties over the events or circumstances where both the parties have no control. In such an event both parties will inform each other within 15 days of the happening and within the same timeframe about the discontinuation of such circumstances / happening in writing.

21. The bidder shall be responsible for provision of all accessories to make the items operational.
22. Every page of the original proposal documents should be signed and stamped by the bidder and proposal to be submitted in bound form otherwise bid will not be accepted.
23. Any firm, which furnishes wrong information, will be liable for legal proceeding. Any contract awarded in such case when find out, will be cancelled.
24. The bidder/lead should have not been blacklisted by any of its clients. An affidavit to this affect must be submitted by the bidder.
25. **Litigation:** In case any dispute, only court of law at **Muzaffarabad** have jurisdiction to decide the matter.

EVALUATION CRITERIA

1. **Technical Evaluation:** Technical Evaluation Reports of the Technical Proposals will be made as per tender specifications without the reference to the price as per **AJK PPRA Rule 36 (b)(v)**. The Technical proposal evaluation committee will evaluate the technical proposals and qualifications.
 - i. Evaluation Criteria for Technical Evaluation of GNSS RTK, Total Station and IT Equipments (Digital Tablets, Computers, Laptop, Plotter and Printers).
 - 100% Compliance of each sub-item of Tender Specifications as mentioned in **Form-A** will be required.
 - If the firm qualifies 100% compliance on the basis of **Form-A** (attached with tender document), the firm has to demonstrate the performance to evaluate the user interface, quality, OEM/ Authorized Agent Experience of the firm, Availability of after sale services/workshop and performance of the equipment.
 - On the basis of **form-B** (attached), the bidder obtaining 70 or more marks will be technically qualified.
 - iii. Performa A & B for technical evaluation of each item are attached.**
2. **Evaluation of Financial Proposals / Bids**
 - a. Only the Financial Proposals of those bidders will be opened publically who's Technical Proposals and qualifications have been recommended by the Technical Evaluation Committee of the department as per **AJK**

PPRA Rules. For financial evaluation, the total cost indicated in the Financial Proposal will be considered.

- b. The Purchase Committee will determine whether the Financial Proposals are complete. The cost indicated in the Financial Proposal shall be deemed as final and reflecting the total cost of the equipment. Omissions, if any, in costing any item shall not entitle the firm to be compensated and the liability to fulfill its obligations within the total quoted price shall be that of the Vendor. The lowest Financial Proposal will be considered as the most advantageous bid.
- c. According to **AJK PPRA Rule 38-A**, the bidder may offer un-conditional discount, in percentage of their quoted price or bids, before opening of the financial proposal. The discount bid price shall be considered as original bid for evaluation being an integral part of the bid. No offer of discount shall be considered after the bids are opened. The bidder will offer discount in term of percentage of financial bid in writing on Firm letterhead. **The bidder may not forget to bring Firm letterhead on the day and time of opening of Financial Bid.**

RESPONSIBILITY AGAINST DAMAGES/OWNERSHIP OF EQUIPMENT

The bidder shall be responsible for whole/any damage caused to the item(s)/equipment by accident / improper handling / loading, un-loading, before handed over to / taking charge by **BoR**. The bidder shall replace the same.

PAYMENT:

- i. Payment shall not be made in advance and against partial deliveries.
- ii. The bidder shall provide necessary and supporting documents alongwith invoice.
- iii. The bidder shall submit an application for payment to the **Drawing and Disbursing Officer of AJK Board of Revenue at Muzaffarabad**. The application shall be accompanied by such invoices, receipt or other documentary evidences as **BoR** require, state the amount claimed and particulars of items supplied / equipment up to the date of application for payment.
- iv. **BoR** shall get verified the details of items delivered. Payment shall be made on complete delivery of items/services after issuance of satisfactory certificate by concerned committee.
- v. **BoR** shall make payment for items supplied / services provided to the bidder as per Govt. policy in Pak Rupees through crossed Cheque.
- vi. All payment shall be subject to any and all taxes, duties and levies applicable under the laws of **AJK** for the whole period starting from issuance of Supply Order till delivery of the items / services.

SUPPLY PERIOD:

- i. The firm will provide items within a period of **two months** of the tender.
- ii. The most advantageous bidding firm / vendor shall be responsible to deliver goods / services within due time as given in Supply Order / Tender document.

AGREEMENT DEED

After receiving work order / supply order the firm has to sign a formal agreement deed on a stamp paper of appropriate value as per attached sample.

CONTRACT AGREEMENT

AZAD GOVERNMENT OF THE STATE OF
JAMMU AND KASHMIR
BOARD OF REVENUE
MUZAFFARABAD

Contract No. _____ , **dated:** _____ - _____ -2021

Refers Supplier's Tender No.

An agreement made the _____ day of ----- Two Thousand Twenty one between the President of Azad Jammu and Kashmir (herein after called the "PURCHASER" on the one part and M/s. -----, "SUPPLIER" on the other part.

Whereby it is agreed that the Purchaser shall purchase and the Supplier shall sell the stores as described in the schedule given hereunder at the price mentioned therein already transmitted through letter of intent subject to the special conditions as follow:

SUPPLY SCHEDULE

Description of Stores	Qty/ (Units)	Bill in name of	Rate per unit (Rs.)	Total Cost (Rs.)	Delivery Date
		Drawing and Disbursing Officer AJK Board of Revenue			On or before
Total:					

WARNING: Any information about the sale/purchase of the stores under this contract shall not be communicated to any person, other than the manufacturer of the stores or to any press or agency not authorized by the Azad Government of the State of Jammu and Kashmir / Board of Revenue to receive it. The breach of the undertaking shall be punishable under the Official Secrets Act, 1923

CONTRACT CONDITIONS/CLAUSES:

- 1). **Name of consignee:** **Member Board of Revenue (M&C)
Chairman Purchase Committee,
Board of Revenue New Secretariat
Muzaffarabad**
- 2). **Cost Dubitable to Head:** **A09601-Purchase of Equipments**
- 3). **Supplier's Name an Address:** M/s.
- 4). **Supplier's NTN No.**
- 5). **Supplier's Sales Tax Reg. No:**
- 6). **Date of Delivery:**
- 7). **Maker's Name & Brand:**
- 8). **Dispatch Instructions:**

The stores will be dispatched to the consignee under firm's own arrangements.
No part supply will be allowed in any case.
- 9). **Packing & Marking Instructions:**

Each item will be packed / marked as per relevant paper's particulars governing the supply of store / standard / trade marking worthy of transportation by Rail / Road / Air within Pakistan so as to ensure their safe arrival at ultimate destination without any loss or damaging.
- 10). **Inspection:**
 - a) **Inspection Authority:** **Technical Evaluation Committees (TECs)**
 - b) **Inspection Officer:** **Chairman Technical Evaluation Committees**
 - c) **Place of Inspection:** **Consignee's Premises**

The Inspecting Officer will be informed 02 working days in advance about the time for inspection
- 11). **Checking of Stores at Consignee's End:** All stores will be checked at consignee's premises in the presence of supplier's representatives. If, for the reasons of economy or other the supplier decides not to nominate his representative for such checking, then advance written notice to this effect will be given by the supplier to the **Chairman Purchase Committee, AJK Board of Revenue** prior to or immediately on delivering stores. In such an event, the supplier will clearly under take the decision of consignee with regard to

quantities and description of a consignment, which will be taken as final and if any discrepancy found will according be made up by the supplier.

12). **Terms of Payment:**

- a) 100% payment of value of the stores supplied will be paid to M/s. -----
-----,
-----, through Cheque by submission of bills
duly supported by the **NOC** from concerned **TEC**
- b) Bill will be furnished to the **DDO, AJK BoR, Muzaffarabad**, which will subsequently be submitted to **Accountant General of the State of Jammu and Kashmir, Muzaffarabad**.

13). **Taxes & Duties:**

- a) **Duties & Taxes Applicable:** The prices quoted are inclusive of all kinds of duties and taxes. The purchaser shall not be liable for reimbursement of duties and taxes on the contracted goods other than those given in the quoted rates. The payment of element of taxes and duties, which are included in quoted rates, will be made to the supplier only after production of duly authenticated documentary proof of its payment to the respective department. In case fresh taxes and duties are levied by the government after opening of the tender will signing of the contract and during the currency of the contract (i.e. within the original delivery period) or if the existing rates of taxes are increased after opening of the tender and during the currency of the contract, liability shall be of the purchaser and the same shall be reimbursed by the **AG, Muzaffarabad** to the supplier at actual, on production of documentary proof of his payment duly authenticated. In case of any subsequent decrease in existing or future duty or taxes by the Govt. after opening of tender and during the currency of the contract the liability shall be of the supplier and the supplier shall reimburse the same to **AG, Muzaffarabad** under intimation to purchaser.
- b) For release of payment, the supplier would be required to furnish the following documents to **DDO AJK BoR, Muzaffarabad**
- i. Proof of registration with Sales Tax Department (Copy of Registration Certificate).
 - ii. Sales Tax Invoice in original showing description/quantity/value of good and current amount of Sales Tax leviable thereon.

14). **Bank Guarantee Clause:**

- a) To ensure timely and correct supply of stores and smooth execution of warrantee conditions the firm will furnish a bank guarantee / draft from a schedule bank for an amount of **5%** of the total value of the contracted stores amounting to **Rs. -----** to **DDO AJK BoR, Muzaffarabad**. After completion of warrantee period i.e. 01 years from the date of signing of NOC by **PC** the supplier will request the **DDO** through **Member (M&C) / CPC** for the withdrawal of bank guarantee / draft. The bank draft will be deposited in **BoR's bank account**. The bank draft shall be produced by the supplier within **07 days** from the date of issue of letter of intent / signing of contract deed and shall

remain in force till completion of the warrantee period beyond the date of inspection.

- b) If the supplier fails to produce the bank guarantee / draft within the specified period, the CPC reserves the right of canceling the contract at the risk and expense of the supplier. In the event of un-satisfactory performance or of any breach of terms of the contract, the bank guarantee / draft shall be forfeited to the government at the discretion of the purchaser. On satisfactory performance of the contract the bank guarantee / draft will be returned to the supplier by **DDO**, on receipt of clearance from the Consignee.

Bank guarantee/draft furnished against this contract is un-conditional and encashable at the will of purchaser. Supplier undertakes not to c) hinder/restrain its encashment through court, extra judicial or any other way (including administrative process).

15). Supplier Warranty/Guarantee:

- a) The supplier shall furnish warranty for the stores under supply against defects in material workmanship, and satisfactory performance for one year with parts and one year free service. The stores will be of the high test grade and consistent with general expectable standard for the stores of type ordered in full conformity with governing specifications and performance of stores with the liability of replacing defective / unacceptable part free of cost within **07 days** by the supplier on receiving the discrepancy report, failing which the purchaser shall have the right to purchase the stores (against the stores declared defective) at the suppliers risk and expense. The supplier also undertakes to make good the deficiency in supply, if any.
- b) Supplier's warranty shall be provided to the consignee along with the store.

- 16). **Inspection after Expiry of Delivery Period:** Unless informed and directed to the contrary during the currency of the contract, the Inspection Officer will continue the inspection of the stores at firm's risk even after expiry of delivery period. Such acceptance will not prejudice the purchaser's right to cancel the contract or to extend the delivery period with or without liquidated damages.

- 17). **Failure and Termination:** Should the supplier fail to deliver the stores within stipulated period of supply, on the expiry; the purchaser shall be entitled at his option to take either of the following actions:

- a) To cancel the contract or purchase from elsewhere the stores not delivered, at risk and expense of the supplier and without notice to him. The supplier shall also be liable to any loss which purchaser sustains on this account but shall not be entitled to any gain of repurchase.
- b) To make the supplier pay liquidation damages for the period of delays in supply up to the rate of **2%** of the contract value un-supplied stores per month or part of a month for the period exceeding the original delivery period subject to the provision that total liquidation damages thus levied will not exceed **10%** of the total contract value.

- c) If contract of the firm is cancelled at 'Risk and Expense' then the latest equivalent of their cancelled stores will be purchased at 'Risk and Expense' of the concerned firm if the cancelled type / category is not available in the market. Similarly an item of contract on FOR (indigenous) basis may be produced at risk and expenses of the firm on FOR (Imported) basis and vice-versa in the interest of the State.
- 18). **Force Majeure:** Force Majeure shall mean any event, act or other circumstances, not being an event, act or circumstance, under the control of the purchaser or of the supplier. Non-availability of raw material from the manufacturer of stores, or of export permit for the export of the contracted stores from the country of its origin, shall not constitute Force Majeure.
- 19). **Special Instructions:**
Warranty/Guarantee:
- a) The supplier has to provide warranty/guarantee of the stores supplied for a period of 01 year standard warrantee including repair, servicing and replacement of parts from the date of issuance of NOC by the **CPC**. The supplier shall replace the defective stores free of cost. Warranty/Guarantee Certificate with regards to all items being supplied would be provided to the consignee along-with the stores.
- b) Trade mark of all items should be quoted clearly. On receipt, if any stores are found to be otherwise it will be changed / replaced free of cost.
- c) The Supplier will be strictly bound to supply the contracted stores as per tendered specifications, and fulfill all responsibilities in this regard.
- 20). **Litigation:** In case of any dispute, only court of jurisdiction at **Muzaffarabad** shall have the jurisdiction to decide the matter.

SIGNATURES

PURCHASER

Designation	Chairman Purchase Committee
Name	
Signature	
For and on behalf of the President of Azad Jammu and Kashmir.	

SUPPLIER

Name	
Designation	
Signature	

PRESCRIBED APPLICATION FORM FOR TENDERING OF PROCUREMENT OF EQUIPMENT

(To be printed on firm/supplier's letter head duly signed by the authorized representative)

The Chairman Purchase Committee,
Member (Monitoring and Coordination),
Board of Revenue, New Secretariat,
Muzaffarabad.

In response to press advertisement dated: - -2021 appeared in the daily We M/s. have downloaded Tender Documents consisting of Contract Proforma for Tendering under Purchase of stores including the detail and specifications from AJK PPRA's website.

We have gone through all the terms and conditions contained in above mentioned documents and those, which are the part of tender.

We fully agree to abide by the terms and conditions contained in the said documents and therefore hereby submit Technical as well as Financial Proposals for the following:

**AUTHORISED SIGNATURE
NAME & SEAL OF FIRM/SUPPLIER**

TECHNICAL SPECIFICATIONS FOR GNSS-RTK EQUIPMENT

GNSS Set (01 BASE & 03 ROVERS COMBINATION) Latest Model /

Version / Edition

LIST OF ITEMS

1. Base receiver	01
2. Rovers receiver	03
3. Rugged Digital Tablet Controllers	04
4. Post Processing Software (Full package)	01
5. 35W external Radio+ High Gain 5 DB Antenna	01
6. Tribrach with removable optical plummet	04
7. Imported heavy duty branded wooden/Fibre glass Tripods	04
8. Heavy duty branded receiver poles (2.0 m)with canvas cover/ bags	04
9. Extension rods	04
10. Bipod / pole catcher	04
11. External Dry Battery	01
12. Spare Batteries for tablet	04
13. All other standard accessories with article number of same brand (i.e batteries, chargers, set of cables , measuring taps and carrying cases etc)	

Note: Each Base and Rover Receiver must be compatible to be used both as base and rover

SPECIFICATIONS OF BASE & ROVER RECEIVER

- Triple Frequency GNSS
- Fast Acquisition
- Strong Signal
- Low noise and excellent tracking to low satellite and in adverse conditions
- Fully Independent measurement
- L- Band
- Operation Mode : Each receiver must be capable to operate as base, rover & log static data
- Multi Constellation: Satellite Tracked: GPS, GLONASS, BEIDOU, GALILEO, QZSS, SBAS
- WEB UI Control
- Intelligent Batteries
- Rugged RTK
- Channels more than 440
- Internal Memory: 6GB-8GB

- Initialization Time: less than 10 sec

- **Accuracy**
 - Static and Fast Static mode
 - Horizontal: 3.0 mm +0.1 ppm
 - Vertical: 3.5 mm + 0.4 ppm
- Real Time Kinematics
 - Horizontal: 8.0 mm+1.0ppm
 - Vertical: 15.0 mm+1.0ppm
- Data Update/ Output Rate>10 Hz (20 Hz will be preferred)
- Accuracy with TILT Compensation: RTK, TILT Compensated 15o IMU + E Compass
- **Advance communication**
 - Radio accessories must be approved by PTA.
 - Cellular GSM (NTRIP CASTER), 4G
 - Communication: 7 pins and 5 pins interfaces, USB Interface
 - Bluetooth Technology
 - Wi-Fi
 - GSM Network (PTA Approved)
- **Internal UHF Radio**
 - **Internal Radio: 1.0-2.0 watt, TX- RX Type**
 - Frequency Range: 410-470 Mhz
 - Band: GSM/GPRS/EDGE/LETE/UMTS/WCDMA
 - Battery :3400 mAh (at least 8hrs backup)
 - Operating Temperature -40 to +65 C
 - Water Proof / Dust Proof
 - Shock Resistance

ADDITIONAL ACCESSORIES FOR BASE

- a. One set of all cables of base Receiver.
- b. One Battery set of Base Receiver.
- c. One set of Base UHF Antenna.

ADDITIONAL ACCESSORIES FOR ROVER

- a. One set of all cables of rover receiver.
- b. One battery set of rover receiver.
- c. One set of rover UHF antenna.

SPECIFICATION OF CONTROLLER WITH FIELD SURVEY SOFTWARE

- Rugged Digital Tablet / Controller
- Interactive CAD function which can do simple Draw, Edit, Manage field data without the needs to use office CAD software.
- Able to work with 4x different view mode: Classic 2D, 3D with Elevation, Map View (i.e Google Map as background), Augmented Reality (AR) view.
- Can Import directly the following format into field controller : DXF/DWG file, ASCII file, ESRI Shapefile, LandXML format, Raster Image, Google KML/KMZ format export
- Can Export directly the following format to PC: DXF/DWG file, ASCII file, ESRI Shapefile, LandXML format, GSI format, Google KML/KMZ format
- Generate Stakeout report directly from the field software
- Generate DEM/DTM directly with surface module
- Online data sharing capability : WhatsApp, Dropbox, Google Drive, Email, Skype etc (no physical hard drive needed for data transfer)
- Faster QC and checking purpose between field and office to avoid error and repetitive work
- RTK Correction
- Gyroscope, Accelerometer, Electronic Bubble, GSM, Bluetooth, Wi-Fi
- Digital Compass
- Not less than 8 MP Embedded Camera
- Operating Software : Windows & Andriod
- Radio configuration : Add, Delete and Edit of Radio frequencies in field via Field controller
- Transformation Calculator: Field software capability to compute new transformation parameters, traverse and topo.
- Processor: Quad Core
- RAM: ≥ 8 GB
- ROM: ≥ 64 GB
- Interface: TF Slot, USB 3.0, GSM
- Display: ≥ 7 " capacitive touch panel, sunlight-viewable, removable battery.

FEATURES OF SOFTWARE

- **Data processing software**
Latest version user friendly full module comprehensive software with permanent license.
- **Specifications**
 - a. Having utility for post processing data.

- b. Import & export all GNSS data.
- c. Import and export RINEX, ASCII, CAD (DWG, DXF), GIS (.ShpFile).
- d. Data error and accuracy reporting.
- e. Datum shift calculation.
- f. Downloading and processing adjustment
- g. Software must be capable of GNSS, Total Station and level data processing and adjustment and all functions should be operational with complete license.
- h. Use normal GNSS office processing options with support to view online Google earth, tiff images as back drop and imagery.
- i. The results are fully integrated into the main applications enabling to create final drawings, maps and surfaces.
- j. Specific drawing utilities such as the Solid Orthophoto view and the possibility to select the coordinates in the original photos, ensure to get the most out of the calculated results.

Processing GNSS	Multi frequency data processing of GNSS static and kinematic observation
Functionality	GNSS data analysis tools for viewing cycle slips, SNR, and residual plots with statistics Reference networks connectivity for direct RINEX download
Adjustments	Network adjustments – free or constrained network computations of all observations Full 3D, 2D and 1D computations and ability to combine GNSS, Total Station and Level data Compare / manage network runs before storing the best possible set of consistent coordinates
Reports	Automated generation of GNSS Observation Report, GNSS Interval report, Coordinate System Report, Data Quality Report, GNSS Field data reports, processing result Report, Adjustment Report, Loops and Misclosure Report
Data Formats	GNSS Raw Data, ASCII, XML, DWG, DXF, BIM ICF, Esri SHP, SP3, ION, GSI, LAS, PTS, PTX, XYZ, LAZ, PLY, e57, RINEX, SDB and Georeferenced Images (JPG, PNG)
Google Earth Support	Support for data export to Google earth with point, lines, polygon, with point observation quality info, time info and baseline diagram.
Data editing feature	Update of station setups / base setup support for auto correction of target / rover points
Data Import	ASCII, XML, RINEX, DXF/DWG, SHP, PTS/PTX, PLY, e57, LAS/LAZ, IFC, IFCZIP, ifcXML
Data Export	ASCII, XML, RINEX, DXF/DWG, SHP, KML/KMZ, PTS, e57, LAS/LAZ

Traverse
Adjustment

Build or edit field generated results and automatically
update connected measurements

▪ **Training**

Training for operation and preventive maintenance of equipment (Hardware and software) for 02 weeks free of charge.

▪ **Warranty**

One year after commission on site, defective parts/assemblies will be replaced by the bidder free of charge within warranty period.

▪ **Terms & Conditions**

1. Authorization letter from the original manufacturer (OEM) of the GNSS RTK sets for this tender will be considered for technical evaluation.
2. Bidder must confirm for delivery of equipment in case of export approvals required, this will be responsibility of vendor to manage delivery within delivery period as per contract.
3. OEM (Original Equipment Manufacturer) and its representative must have reasonable experience of manufacturing GNSS instrument. Any sale contract / document to be provided as proof. Preference will be given on basis of more experience.
4. Workshop and after sale service in Pakistan must be present to ensure in time availability of spares and after sale technical support to **Board of Revenue / Land Settlement Organization**. E-mail, telephone, fax No. and address of workshop to be provided with technical bid for confirmation during technical evaluation. Evaluation team may inspect workshop.
5. The bidder must provide OEM certificate of main equipment, technical specifications, brochures and drawings of each item in schedule of requirement of quoted model in English.
6. All bidders are advised to comply strictly with the tender specifications and no deviation shall be allowed.
7. **The system must be based on latest design (Hardware & Software), model and technology.**
8. Before opening of financial tender, responsive bidder will be responsible for on ground practical demonstration of the quoted instruments along with all accessories in **AJK Board of Revenue, Muzaffarabad**. The performance and quality will be technically evaluated by technical committee of **Board of Revenue** as per tender specifications.

Note:

Evaluation criteria is given in attached

- i. Proforma GNSS A-1.
- ii. Proforma B-1.
- iii. 100% compliance of each sub item of Tender Specifications as mentioned in Proforma - GNSS A-1 will be required.
- iv. If the firm qualifies 100% compliance on the basis of Proforma-GNSS A-1, the firm has to demonstrate the performance to evaluate the user

interface, quality, OEM/ Authorize Agent Experience of the firm, Availability of after sale services/workshop and performance of the equipment.

- v. On the basis of Evaluation Criteria Proforma B-1, the bidder obtaining 70 or more marks will be technically qualified.

Note:

Proforma A & B for Evaluation are attached

TECHNICAL SPECIFICATIONS FOR TOTAL STATION
(LATEST MODEL / VERSION / EDITION)

TENDER SPECIFICATIONS

TELESCOPE

a. Image	Erect
b. Magnification	30X
c. Field of View	1° 30'-1° 25'
d. Focusing Range	2.0 m to infinity
e. Resolving Power	≤ 3"

ANGLE MEASUREMENT

a. Tilt compensation method	dual axis
b. Tilt compensation range	≥3"
c. Angle accuracy	≤5"
d. Displayed resolution	less than 1"

DISTANCE MEASUREMENT

a. Range with reflector	≥5000m with 1 prism
B. Range without reflector	600-800m
c. EDM accuracy	≤ (2mm+ 2ppm) of distance
d. Measuring time	Fine:≤ 1.0s (initial 1.5s) Rapid:≤ 0.6s (Initial 1.3s) Tracking:≤ 0.4s (Initial 1.3s)

OPTICAL PLUMMET

a. Magnification	≥2.2x
b. Focusing Range	0.5m to infinity
c. Level	Plate/tubular Bubble Vial 30 seconds per division/(2 mm) Circular Bubble Vial 10 minutes per division/(2 mm)
d. Laser	Red laser Diode, Beam Accuracy ≤ 1.0mm @ 1.3m

KEYBOARD AND DISPLAY

a. Control Panel Location	On Dual face
b. Display	Dual Coloured Touch Screen display
c. Graphics	320x240 pixels (Q VGA)
d. Interface	windows
e. Key and display illumination	

f. 5 Brightness level

APPLICATION PROGRAM

- a. Topographic Observations
- b. Route Surveying
- c. Resection
- d. Offset Measurement
- e. Missing Line/RDM
- f. Surface Area Calculation
- g. Point to Line
- h. 3D Coordinate measurement
- i. Remote Elevation Measurement
- j. Stake Out
- k. Intersection

SPECIAL REQUIREMENTS

Certificate of origin from manufacturer with every equipment in box

Certificate from chamber of commerce Certificate from Chamber of Commerce with serial Number of Total Stations shipped against this order from place of shipment

ACCESSORIES

- a. Original/Branded Accessories with strong carrying case
- b. Data transfer cable 01
- c. Data transfer/Processing Software with complete features license
- d. Rechargeable Batteries 02
- e. Battery charger 01
- f. CD containing instruction manual 01
- g. Prism with target plate 03
- h. Prism Pole 2.5 meter 3 with each Total Station
- i. Display 02
- j. Detachable tribrach 02
- k. lens cover set 01
- l. cleaning brush 01
- m. cover of durable plastic
- n. Shock absorbing carrying case with shoulder strap etc in complete
- o. Heavy duty wooden tripod/Fibre glass 01
- p. Bipod/Catcher for prism pole Aluminium 02
- q. Canvas Covers / **Bags** For Total Station Box, Tripod, Prism, Prism pole, Bipod

DATA STORAGE

- a. Capacity ≥50,000 points on board

- b. Data formats GSI/DXF/LANXML/CSV/user definable ASCII formats
- c. Interface USB, Serial

FOCUSING MODE

Manual focus mode

PHYSICAL

- a. Weight ≤10 kg
- b. Temperature range -20 to +60 C fully operational
- c. Humidity 0 to ≥90% RH
- d. Protection splash waterproof dustproof
- e. IP rating should be minimum 65

POWER

- a. Batteries LI-ion rechargeable Dual battery slots for protecting memory during changing of batteries
- b. Capacity Continuous angle-only measurement: 12 h
Distance / angle measurement / AF every 30 s
- c. Recharge time 6 hours

TRAINING

Training for operation and preventive maintenance of equipment (Hardware and software) for 02 weeks free of charge.

WARRANTY

One year after commission on site, defective parts/assemblies will be replaced by the bidder free of charge within warranty period. After sales & services guaranty of 02 years.

Terms & Conditions

1. Bid from the original manufacturer (OEM) or his Authorize Agent of the Total Station will be considered for technical evaluation.
2. OEM (Original Equipment Manufacturer) must have reasonable experience of manufacturing Total Station instrument. Any sale contract / document to be provided as proof. Preference will be given on basis of more experience.
3. Workshop and after sale service in Pakistan must be present to ensure in time availability of spares and after sale technical support to **AJK Board of Revenue**, Muzaffarabad. E-mail, telephone, fax No. and address of workshop to be provided with technical bid for confirmation during technical evaluation. Evaluation team may inspect workshop.

4. The bidder must provide OEM certificate of main equipment, technical specifications, brochures and drawings of each item in schedule of requirement of quoted model in English.
5. All bidders are advised to comply strictly with the tender specifications and no deviation shall be allowed.
6. The system must be based on latest design (Hardware & Software), model and technology.
7. Before opening of financial tender, responsive bidder will be responsible for on ground practical demonstration of the quoted instruments along with all accessories in AJK Board of Revenue, Muzaffarabad. The performance and quality will be technically evaluated by technical committee of BoR as per tender specifications.
8. Evaluation criteria for Technical Evaluation of Total Station Level is based on
 - 100% compliance of each sub-item of Tender Specifications as mentioned in Proforma-A-2 will be required.
 - If the firm qualifies 100% compliance on the basis of Proforma A-2, the firm has to demonstrate the performance to evaluate the user interface, quality, OEM/ authorized Agent Experience of the firm. Availability of after sale services /workshop and performance of the equipment.
 - On the basis of Proforma B-2 the bidder obtaining 70 or more marks will be technically qualified.

Note:

Evaluation criteria is given in attached

- I. **Proforma A-2.**
- II. **Proforma B-2.**

TECHNICAL SPECIFICATIONS FOR COMPUTER (BRANDED)

S #	Functions / Peripherals	Specifications	Compliance
1.	Brand	HP/DELL/Lenovo/IBM etc.	
2.	Processor	Intel Core i7 / i9 10 th Generation or above	
3.	Chipset	Intel H470 Chipset or above	
4.	Memory	64GB, DDR4-3200, Dual Channel Capable with four DIMM slots upgradable to 128GB	
5.	Storage Option	256GB NVME SSD & 1TB 7200rpm SATA Hard Disk Drive	
6.	Graphics	4GB Graphics (NVIDIA Quadro or equivalent)	
7.	Keyboard	USB Keyboard	
8.	Mouse	USB Optical Mouse.	
9.	Communications	Intel Gigabit Ethernet controllers with Intel Remote Wake UP, PXE and Jumbo frames support	
10.	Casing	Branded Tower / Mini Tower type with trolley	
11.	Warranty	03 years on site comprehensive	
12.	Dealership	Authorized Dealership Gold / Higher	
13.	Operating System	Windows 10 Pro (64bit) English	

Note: Faulty Hard drives will not be return during warranty period.

MONITOR

S #	Functions	Specifications	Compliance
1.	Brand	ASUS / View Sonic or equivalent	
2.	Size	27" HDMI	
3.	Refresh rate	120 Hz or more	

TECHNICAL SPECIFICATIONS FOR LAPTOP

SI #	Peripherals	Specifications	Compliance
1	Brand	DELL/HP/Lenovo/IBM or equivalent	
2	Processor	Core i7/i9 10th Gen Intel 1.80GHz up to 4.90GHz with Turbo Boost, 4 Cores, 8MB Cache or above all	
3	Memory	8GB DDR4 2666MHz SODIMM single slot	
4	Graphic Card	Integrated Graphics	
5	Hard Drive	256GB SSD for OS & SW + 512GB SSD or higher	
6	Display	14" FHD (1920x1080), IPS, 250nits, Anti-glare, No Touch	
7	connectivity	Wi-Fi and Bluetooth	
8	Ports	USB, USB type C, Audio in out, LAN 01Gbps, SD card Reader, DVI, VGA, etc.	
9	Sensors	Fingerprint Reader	
10	Web Cam	HD resolution	
11	Battery	6 Cell Li-Cylinder Internal Battery, 45Wh	
12	Warranty	03 years on site comprehensive	
13	Accessories	Laptop Bag, Charger	
14	Dealership	Authorized Dealership Gold / Higher	
15	Operating System	Windows 10 Professional English	

Note: Faulty Hard drives will not be return during warranty period.

TECHNICAL SPECIFICATIONS FOR DIGITAL PLOTTERS > OR = 30-IN			
S#	Description	Minimum / mandatory requirements	Compliance
1.	Brand	Renowned brand commonly used in Pakistan	
2.	Model Size	210 to > = 762-mm (8.3 to > or = 30-in) wide sheets; 279 to 914-mm (11 to > or = 30-in) rolls	
3.	Print Speed line drawing	180 A1 / hr, 19.3 sec / A1	
4.	Print resolution	Up to 2400 x 1200 optimized dpi	
5.	Nozzle Pitch	1200 dpi 2 lines	
6.	Technology	Thermal / Inkjet	
7.	Ink types	Dye-based (C,G, M, pk, Y); pigment-based (mK)	
8.	Ink Droplet Size	5 pl	
9.	Print Heads	1 Universal Print Head	
10.	Line Accuracy	± 0.1%	
11.	Minimum Line Width	0.02mm (PDF addressed at 1200 dpi);	
12.	Media handling standard/output	Sheet feed, automatic front – loading roll feed, smart roll switching ³ , integrated output sticker, media bin, automatic horizontal cutter,	
13.	Standard Sheets	A4, A3, A2, A1, AD	
14.	E-print capability	Yes	
15.	Media roll outer	170mm	
16.	Grammage	60 to 328 m ²	
17.	Thickness	Upto 31.5 mil	
18.	Memory	128GB	
19.	Hard disk	500 GB Self Encrypting	
20.	Media type	Bond and coated paper (Bond, coated, heavy weight coated, super heavy weight plus matte), Technical Paper (natural tracing, translucent bond), film (clear comma matte), photographic paper (satin, gloss, semi-gloss, matte, high gloss), backlit, self-adhesive (polypropylene, vinyl), blueprint	

21.	Interfaces	Gigabit Ethernet (10/100/1000 Base), Supporting the following standards, TCP/IP, DHCP, SMTP (v1, v2, v3),	
22.	Print languages (standard)	Postscript Printer, adobe PostScript 3, Adobe PDF 1.7, HP GL/2, HP-RTL, TIFF, JPEG, DWG, CAL5 G4; Non-Postscript printer, HP GL/2, HP RTL, TIFF, JPEG, CAL5 G4	
23.	Print Languages (Optional)	Non-PostScript Printer, Adobe PostScript 3, Adobe PDF 1.7	
24.	Printing paths	Direct printing from USB flash drive, print from network share folder, email printing, driver for latest windows	
25.	A0 size drawing print	37 sec	
26.	Non Printable Area (cut-sheet)	3x17x3x3mm	
27.	Drivers	PostScript printer, Raster, PostScript and PDF drivers for windows 10 or later, Non-PostScript Printer, Raster drivers for windows 10 or later	
28.	Environmental	Energy Star, ErP, WEEE, RoHS (EU), REACH, EPEAT	
29.	Power Consumption	<100W(printing), <24W(Ready), <0.3W(Sleep), Power Cable Round Pin Pakistan Compatible	
30.	Warranty	One-Year hardware warranty	
31.	Dealership	Authorized Dealership Gold / Higher	
32.	Cartridges	One set of extra cartridge	

Note:

The document enlists all requirements in left columns. The bidder shall provide his consent in the rightmost column. The response should be explicit in well-defined specification offered for the components against each row. Any ambiguous and implicit words or quotations (such as yes, ok, offered, available and provided etc.) shall be treated as "non-responsive".

TECHNICAL SPECIFICATIONS FOR A3 INKJET COLOR PRINTER			
S#	Description	Minimum / mandatory requirements	Compliance
1	Brand	Renowned brand commonly used in Pakistan	
2	Model Size	A3 (11x17") Size	
3	Scanning Capability	Scan to PC; Scan to Memory Device; Scan to share folder	
4	Print Speed	> or = 20 pages / min Monochrome (A3) > or = 10 pages / min Monochrome (A3)	
5	Colors	Black, Cyan, Yellow, Magenta	
6	Ink types	Dye-based	
7	Technology	Thermal / Inkjet	
8	Minimum Droplet Size	3 pl	
9	Print Heads	1 Universal Print Head	
10	Standard Sheets	A4, A3, Legal, A5, A6, B4, B5, C6	
11	Grammage	70 to 320 m ²	
12	E-print capability	Yes	
13	Memory	8GB	
14	Interface	PC fax send and archive, Gigabit Ethernet (10/100/1000 Base), USB	
15	Print Language	Universal / Global Version	
16	Printing paths	Direct printing from USB flash drive, print from network share folder, email printing, driver for latest windows	
17	Drivers	PostScript printer, Raster, PostScript and PDF drivers for windows 10 or later, Non-PostScript Printer, Raster drivers for windows 10 or later	
18	Fax	Color fax; auto reduction; auto redial; speed dial; group speed dial; junk barrier; poll to receive; forwarding (black only); distinctive ring; delayed send (black only); scan and fax; PC fax send and receive	
19	Support	Windows 10 (32-bit & 64-bit), Windows 8.1 (32-bit & 64-bit), Windows 8, (32-bit & 64-bit), Windows 7, (32-bit & 64-bit), Windows Vista, (32-bit & 64-bit), Windows XP, (32-bit) SP3 or greater, Mac OS X v10.6, OS X Lion, OS X	

		Mountain Lion, Linux	
20	Environmental	Energy Star	
21	Warranty	One-Year hardware warranty	
22	Dealership	Authorized Dealership Gold / Higher	
23	Cartridges	One set of extra cartridge	

Note:

The document enlists all requirements in left columns. The bidder shall provide his consent in the rightmost column. The response should be explicit in well-defined specification offered for the components against each row. Any ambiguous and implicit words or quotations (such as yes, ok, offered, available and provided etc.) shall be treated as "non-responsive".

TECHNICAL SPECIFICATIONS FOR VHF BASE STATION

The base radio transceiver offered should meet the following technical specifications. VHF base set analog 50 watt with following accessories with each set only authorized can offer the bid:

S#	Specifications
1	Frequency coverage: 136 – 174 MHz
2	Number of Channels: Max 512 Ch / 128 Zones
3	Operating temperature - 30°C ~ + 60°C
4	Operating voltage 30.6 VDC \pm 15%
5	Compatibility with digital 6.25 kHz NXDN™ protocol abundant digital functions
6	Dot matrix, multi-function LCD
7	Large capacity Lithium-Ion battery pack
8	Dust-protection and waterjet resistance equivalent to IP55
9	MIL-STD rugged construction
10	5W RF output power
11	Loud speaker audio with BTL amplifier and audio compander
12	Built-in 2-Tone/5-Tone/CTCSS/DTCS/MDC 1200 signalling (For analog FM Mode)
13	Program software cable, Program Software CD & Technical manual

TECHNICAL EVALUATION TABLE FOR VHF BASE STATION

S#	Specifications	Compliance			Remarks
1	Frequency coverage: 136 – 174 MHz				
2	Number of Channels: Max 512 Ch / 128 Zones				
3	Operating temperature - 30°C ~ + 60°C				
4	Operating voltage 30.6 VDC \pm 15%				
5	Compatibility with digital 6.25 kHz NXDN™ protocol abundant digital functions				
6	Dot matrix, multi-function LCD				
7	Large capacity Lithium-Ion battery pack				
8	Dust-protection and waterjet resistance equivalent to IP55				
9	MIL-STD rugged construction				
10	5W RF output power				
11	Loud speaker audio with BTL amplifier and audio compander				
12	Built-in 2-Tone/5-Tone/CTCSS/DTCS/MDC 1200 signalling (For analog FM Mode)				
13	Program software cable, Program Software CD & Technical manual				

TECHNICAL SPECIFICATIONS FOR VHF WALKIE TALKIE SETS

S#	Specifications
1	Frequency coverage: 136 – 174 MHz
2	Number of Channels: Max 512 Ch / 128 Zones
3	Compatibility with digital 6.25 kHz NXDN™ protocol abundant digital functions
4	512 memory channels with 128 zones
5	Dot matrix, multi-function LCD
6	Large capacity Lithium-Ion battery pack
7	Dust-protection and waterjet resistance equivalent to IP55
8	MIL-STD rugged construction
9	5W RF output power
10	Operating time: 14 hours* (approx. With DP-232N battery pack) *Tx: Rx: standby=5:5:90. Power save on. (at 20°C)

11	Loud speaker audio with BTL amplifier and audio compander
12	Built-in 2-Tone/5-Tone/CTCSS/DTCS/MDC 1200 signalling (For analog FM Mode)
13	Operating temperature - 30°C ~ + 60°C
14	Operating voltage 30.6 VDC \pm 15%
15	Program software cable, Program Software CD & Technical manual

TECHNICAL EVALUATION TABLE FOR VHF WALKIE TALKIE SETS

S#	Specifications	Compliance			Remarks
1	Frequency coverage: 136 – 174 MHz				
2	Number of Channels: Max 512 Ch / 128 Zones				
3	Compatibility with digital 6.25 kHz NXDN™ protocol abundant digital functions				
4	512 memory channels with 128 zones				
5	Dot matrix, multi-function LCD				
6	Large capacity Lithium-Ion battery pack				
7	Dust-protection and waterjet resistance equivalent to IP55				
8	MIL-STD rugged construction				
9	5W RF output power				
10	Operating time: 14 hours* (approx. With DP-232N battery pack) *Tx: Rx: standby=5:5:90. Power save on. (at 20°C)				
11	Loud speaker audio with BTL amplifier and audio compander				
12	Built-in 2-Tone/5-Tone/CTCSS/DTCS/MDC 1200 signalling (For analog FM Mode)				
13	Operating temperature - 30°C ~ + 60°C				
14	Operating voltage 30.6 VDC \pm 15%				
15	Program software cable, Program Software CD & Technical manual				

TECHNICAL EVALUATION QUALIFICATION CRITERIA FOR SURVEYING INSTRUMENT (GNSS)

S. No.	TENDER SPECIFICATIONS	Bidder	Bidder	REMARKS
		Model	Model	
1	SPECIFICATIONS OF BASE & ROVER RECEIVER	Compliance	Compliance	
	<ul style="list-style-type: none"> a. Triple Frequency GNSS b. Fast Acquisition c. Strong Signal d. Low noise and excellent tracking to low satellite and in adverse conditions e. Fully Independent measurement f. L- Band g. Operation Mode : Each receiver must be capable to operate as base, rover & log static data h. WEB UI Control i. Intelligent Batteries j. Rugged RTK k. Data Update/ Output Rate >10 Hz (20 Hz will be preferred) l. Accuracy with TILT Compensation: RTK, TILT Compensated 15o IMU + E Compass 	<ul style="list-style-type: none"> a. b. c. d. e. f. g. h. i. j. k. l. 	<ul style="list-style-type: none"> a. b. c. d. e. f. g. h. i. j. k. l. 	
	CHANNELS			
	<ul style="list-style-type: none"> a. Channels more than 440 b. Multi Constellation: Satellite Tracked: GPS, GLONASS, BEIDOU, GALILEO, QZSS, SBAS 	<ul style="list-style-type: none"> a. b. 	<ul style="list-style-type: none"> a. b. 	
	MEMORY			
	<ul style="list-style-type: none"> a. Internal Memory: 6GB-8GB b. Initialization Time: less than 10 sec 	<ul style="list-style-type: none"> a. b. 	<ul style="list-style-type: none"> a. b. 	
	ACCURACY			
	<p>Accuracy</p> <p>Static and Fast Static mode Horizontal: 3.0 mm +0.1 ppm Vertical: 3.5 mm + 0.4 ppm</p> <p>Real Time Kinematics Horizontal: 8.0 mm+1.0 ppm Vertical: 15.0 mm+1.0 ppm</p>			

	ADVANCED COMMUNICATIONS			
	<ul style="list-style-type: none"> a. Radio accessories must be approved by PTA. b. Cellular GSM (NTRIP CASTER), 4G c. Communication: 7 pins and 5 pins interfaces, USB Interface d. Bluetooth Technology e. Wi-Fi f. GSM Network (PTA Approved) g. Internal UHF Radio h. Internal Radio: 1.0-2.0 watt, TX- RX Type i. Battery :3400 mAh j. Operating Temperature -40 to +65 C k. Water Proof / Dust Proof l. Shock Resistance 	<ul style="list-style-type: none"> a. b. c. d. e. f. g. h. i. j. K. l. 	<ul style="list-style-type: none"> a. b. c. d. e. f. g. h. i. j. K. l. 	
	FREQUENCY RANGE			
	<ul style="list-style-type: none"> a. Frequency Range: 410-470 Mhz b. Band: GSM/GPRS/EDGE/LETE/UMTS/WCDMA 	<ul style="list-style-type: none"> a. b. 	<ul style="list-style-type: none"> a. b. 	
	ADDITIONAL ACCESSORIES FOR BASE			
	<ul style="list-style-type: none"> a. One set of all cables of base Receiver. b. One Battery set of Base Receiver. c. One set of Base UHF Antenna. 	<ul style="list-style-type: none"> a. b. c. 	<ul style="list-style-type: none"> a. b. c. 	
	ADDITIONAL ACCESSORIES FOR ROVER			
	<ul style="list-style-type: none"> a. One set of all cables of rover receiver. b. One battery set of rover receiver. c. One set of rover UHF antenna. 	<ul style="list-style-type: none"> a. b. c. 	<ul style="list-style-type: none"> a. b. c. 	
2	SPECIFICATION OF CONTROLLER			

	<p>a. Rugged Digital Tablet/Controller.</p> <p>b. Interactive CAD function which can do simple Draw, Edit, Manage field data without the needs to use office CAD software.</p> <p>c. Able to work with 4x different view mode : Classic 2D, 3D with Elevation, Map View (i.e Google Map as background), Augmented Reality (AR) view.</p> <p>d. Can Import directly the following format into field controller : DXF/DWG file, ASCII file, ESRI Shapefile, LandXML format, Raster Image, Google KML/KMZ format export.</p> <p>e. Can Export directly the following format to PC: DXF/DWG file, ASCII file, ESRI Shapefile, LandXML format, GSI format, Google KML/KMZ format.</p> <p>f. Generate Stakeout report directly from the field software.</p> <p>g. Generate DEM/DTM directly with surface module</p> <p>h. Online data sharing capability : WhatsApp, Dropbox, Google Drive, Email, Skype etc (no physical hard drive needed for data transfer).</p> <p>i. Faster QC and checking purpose between field and office to avoid error and repetitive work</p> <p>j. RTK Correction.</p> <p>k. Gyroscope, Accelerometer, Electronic Bubble, GSM, Bluetooth, Wi-Fi.</p> <p>l. Digital Compass.</p> <p>m. Not less than 8 MP Embedded Camera.</p> <p>n. Operating Software : Windows & Android.</p> <p>o. Radio configuration : Add, Delete and Edit of Radio frequencies in field via Field controller.</p> <p>p. Transformation Calculator: Field software capability to compute new transformation parameters, traverse and topo.</p> <p>q. Processor: Quad Core.</p> <p>r. RAM: ≥ 8GB</p> <p>s. ROM: ≥ 64GB</p> <p>t. Interface: TF Slot, USB 3.0, GSM.</p> <p>u. Display: ≥ 7" capacitive touch panel, sunlight-viewable, removable battery.</p>	<p>a.</p> <p>b.</p> <p>c.</p> <p>d.</p> <p>e.</p> <p>f.</p> <p>g.</p> <p>h.</p> <p>i.</p> <p>j.</p> <p>k.</p> <p>l.</p> <p>m.</p> <p>n.</p> <p>o.</p> <p>p.</p> <p>q.</p> <p>r.</p> <p>s.</p>	<p>a.</p> <p>b.</p> <p>c.</p> <p>d.</p> <p>e.</p> <p>f.</p> <p>g.</p> <p>h.</p> <p>i.</p> <p>j.</p> <p>k.</p> <p>l.</p> <p>m.</p> <p>n.</p> <p>o.</p> <p>p.</p> <p>q.</p> <p>r.</p> <p>s.</p>	
3	FEATURES OF SOFTWARE			
	<p>Data processing software Latest version user friendly full module comprehensive software with permanent license.</p>			

	<p>Specifications</p> <p>a. Having utility for post processing data.</p> <p>b. Import & export all GPS data.</p> <p>c. Import and export RINEX, ASCII, CAD (DWG, DXF), GIS (Shp.File).</p> <p>d. Data error and accuracy reporting.</p> <p>e. Datum shift calculation.</p> <p>f. Downloading and processing adjustment</p> <p>g. Software must be capable of GNSS, Total Station and level data processing and adjustment and all functions should be operational with complete license.</p> <p>h. Use normal GNSS office processing options with support to view online Google earth, tiff images and back drop and imagery.</p> <p>i. The results are fully integrated into the main applications enabling to create final drawings, maps and surface.</p> <p>j. Specific drawing utilities such as the Solid Orthophoto view and the possibility to select the coordinates in the original photos, ensure to get the most out of the calculated results.</p>	<p>a.</p> <p>b.</p> <p>c.</p> <p>d.</p> <p>e.</p> <p>f.</p> <p>g.</p> <p>h.</p> <p>i.</p> <p>j.</p>	<p>a.</p> <p>b.</p> <p>c.</p> <p>d.</p> <p>e.</p> <p>f.</p> <p>g.</p> <p>h.</p> <p>i.</p> <p>j.</p>	
4	<p>Training</p> <p>Training for operation and preventive maintenance of equipment (Hardware and software) for 02 weeks free of charge.</p>			
5	<p>Warranty</p> <p>One year after commission on site, defective parts/assemblies will be replaced by the bidder free of charge within warranty period</p>			

PROFORMA FOR TECHNICAL EVALUATION OF GNSS AND FIELD CADASTRAL SURVEY & GIS SOLUTION ON PHYSICAL INSPECTION AND FIELD DEMONSTRATION

Bidder/ Equipment/ Brand	General (25 Marks)				Authorized Agent Experience (Max 10 Marks)			After sale services/ Workshop (20 Marks)			Performance (45 Marks)					Total (100 Marks)	
	Receiver Controller (10 Marks)		Build Quality & Specs of receiver/ Controller (Rugged/Non-Rugged (10 Marks)	Quality Standards of Accessories (05 Marks)	< 5 years (2 Marks)	5-10 years (5 Marks)	10-15 years (10 Marks)	Within Pakistan (10 Marks) Outside Pakistan (05 Marks)	Qualified staff (5 Marks)	Repairing Lab (5 Marks)	H&V Accuracy Static DGNS (5 Marks)	RTK DGNS (3 Marks)	Layout (2 Marks)	Radio Connectivity/R ange/ Coverage (05 Marks)	Software (Max 30 Marks)		Score
	User Interface (5 Marks)	Connectivity with Receiver (5 Marks)													GNSS Data Processing / Adjustment Performance (15 Marks)	Controller / Tablet Field survey software performance (15 Marks)	
A																	
B																	
C																	

TECHNICAL EVALUATION QUALIFICATION CRITERIA FOR SURVEYING INSTRUMENT (TOTAL STATION) HIGH ORDER 2''

S. No.	TENDER SPECIFICATIONS	BIDDER	BIDDER	BIDDER	BIDDER	BIDDER	BIDDER	REMARKS
		Brand	Brand	Brand	Brand	Brand	Brand	
	SPECIFICATIONS OF TOTAL STATION	Compliance	Compliance	Compliance	Compliance	Compliance	Compliance	
1	TELESCOPE							
	a. Image Erect b. Magnification 30X c. Field of View 1° 30'-1° 25' d. Focusing Range 2.0 m to infinity e. Resolving Power ≤ 3"	a. b. c. d. e.	a. b. c. d. e.	a. b. c. d. e.	a. b. c. d. e.	a. b. c. d. e.	a. b. c. d. e.	
2	ANGLE MEASUREMENT							
	a. Tilt compensation method dual axis b. Tilt compensation range ≥3" c. Angle accuracy ≤5" d. Displayed resolution less than 1"	a. b. c. d.	a. b. c. d.	a. b. c. d.	a. b. c. d.	a. b. c. d.	a. b. c. d.	
3	DISTANCE MEASUREMENT							
	a. Range with reflector ≥5000m with 1 prism b. Range without reflector 600-800m c. EDM accuracy ≤ (2mm+ 2ppm) of distance d. Measuring time Fine: ≤ 1.0s (initial 1.5s) Rapid: ≤ 0.6s (Initial 1.3s) Tracking: ≤ 0.4s (Initial 1.3s)	a. b. c. d.	a. b. c. d.	a. b. c. d.	a. b. c. d.	a. b. c. d.	a. b. c. d.	
4	OPTICAL PLUMMET							
	a. Magnification ≥2.2x b. Focusing Range 0.5m to infinity c. Level Plate/tubular Bubble Vial 30 seconds per division/ (2 mm) Circular Bubble Vial 10 minutes per division/ (2 mm) d. Laser Red laser Diode, Beam Accuracy ≤ 1.0mm @ 1.3m	a. b. c. d.	a. b. c. d.	a. b. c. d.	a. b. c. d.	a. b. c. d.	a. b. c. d.	

5	KEYBOARD AND DISPLAY							
	<ul style="list-style-type: none"> a. Control Panel Location On Dual face b. Display Dual Coloured Touch Screen display c. Graphics 320x240 pixels (Q VGA) d. Interface windows e. Key and display illumination f. 5 Brightness level 	<ul style="list-style-type: none"> a. b. c. d. e. f. 	<ul style="list-style-type: none"> a. b. c. d. e. f. 	<ul style="list-style-type: none"> a. b. c. d. e. f. 	<ul style="list-style-type: none"> a. b. c. d. e. f. 	<ul style="list-style-type: none"> a. b. c. d. e. f. 		
6	APPLICATION PROGRAM							
	<ul style="list-style-type: none"> a. Topographic Observations b. Route Surveying c. Resection d. Offset Measurement e. Missing Line/RDM f. Surface Area Calculation g. Point to Line h. 3D Coordinate measurement i. Remote Elevation Measurement j. Stake Out k. Intersection 	<ul style="list-style-type: none"> a. b. c. d. e. f. G. h. i. j. k. 	<ul style="list-style-type: none"> a. b. c. d. e. f. G. h. i. j. k. 	<ul style="list-style-type: none"> a. b. c. d. e. f. G. h. i. j. k. 	<ul style="list-style-type: none"> a. b. c. d. e. f. G. h. i. j. k. 	<ul style="list-style-type: none"> a. b. c. d. e. f. G. h. i. j. k. 		
7	SPECIAL REQUIREMENTS							
	<ul style="list-style-type: none"> a. Certificate of origin: From manufacturer with every equipment in box b. Certificate from chamber of commerce: Certificate from Chamber of Commerce with serial Number of Total Stations shipped against this order from place of shipment 	<ul style="list-style-type: none"> a. b. 	<ul style="list-style-type: none"> a. b. 	<ul style="list-style-type: none"> a. b. 	<ul style="list-style-type: none"> a. b. 	<ul style="list-style-type: none"> a. b. 	<ul style="list-style-type: none"> a. b. 	
8	DATA STORAGE							
	<ul style="list-style-type: none"> a. Capacity ≥50,000 points on board b. Data formats GSI/DXF/LANXML/CSV/user definable ASCII formats c. Interface USB, Serial 	<ul style="list-style-type: none"> a. b. c. 	<ul style="list-style-type: none"> a. b. c. 	<ul style="list-style-type: none"> a. b. c. 	<ul style="list-style-type: none"> a. b. c. 	<ul style="list-style-type: none"> a. b. c. 	<ul style="list-style-type: none"> a. b. c. 	
9	FOCUSING MODE							
	<ul style="list-style-type: none"> a. Manual focus mode 	<ul style="list-style-type: none"> a. 	<ul style="list-style-type: none"> a. 	<ul style="list-style-type: none"> a. 	<ul style="list-style-type: none"> a. 	<ul style="list-style-type: none"> a. 	<ul style="list-style-type: none"> a. 	
10	PHYSICAL							

	<p>a. Weight ≤10 kg</p> <p>b. Temperature range -20° C to +60° C fully operational</p> <p>c. Humidity 0 to ≥90% RH</p> <p>d. Protection splash waterproof dustproof</p> <p>e. IP rating should be minimum 65</p>	a.	a.	a.	a.	a.	a.	
11	POWER							
	<p>a. Batteries LI-ion rechargeable Dual battery slots for protecting memory during changing of batteries</p> <p>b. Capacity Continuous angle-only measurement: 12 h Distance/angle measurement/ AF every 30 s</p> <p>c. Recharge time 6 hours</p>	a.	a.	a.	a.	a.	a.	
12	Training							
	Training for operation and preventive maintenance of equipment (Hardware and software) for 02 weeks free of charge.							
13	Warranty							
	One year after commission on site, defective parts/assemblies will be replaced by the bidder free of charge within warranty period							

PERFORMA FOR TECHNICAL EVALUATION OF TOTAL STATION ON PHYSICAL INSPECTION AND FIELD DEMONSTRATION

Bidder/ Equipment/ Brand	General (20 Marks)			OEM/Authorized Agent Experience (15 Marks)			After sale services/ Workshop (20 Marks)			Performance (45 Marks)						Total (100 Marks)	
	User Interface (5 Marks)	Build Quality (Rugged/Non- Rugged (5 Marks)	Quality Standards of Accessories (10 Marks)	5-8 years (5 Marks)	9-12 years (10 Marks)	13-15 years (15 Marks)	Within Pakistan (10 Marks) Outside Pakistan (05 Marks)	Qualified staff (5 Marks)	Repairing Lab (5 Marks)	Range with Prism (5 Marks)	Range With Laser (5 Marks)	Stakeout (5 Marks)	H & V Accuracy (10 Marks)	Observation Time (5 Marks)	Processing Software (15 Marks)		Score
															User Interface (5 Marks)	Downloading & Processing (10 Marks)	
A																	
B																	

TECHNICAL EVALUATION GRADING CRITERIA FOR IT EQUIPMENT

S#	SPECIFICATIONS OF COMPUTER BRANDED			
	Functions / Peripherals	Tender Specifications	Compliance	
1	Brand	HP/DELL/Lenovo/IBM etc.		
2	Processor	Intel Core i7 / i9 10th Generation or above		
3	Chipset	Intel H470 Chipset or above		
4	Memory	64GB, DDR4-3200, Dual Channel Capable with four DIMM slots upgradable to 128GB		
5	Storage Option	256GB NVME SSD & 1TB 7200rpm SATA Hard Disk Drive		
6	Graphics	4GB Graphics (NVIDIA Quadro or equivalent)		
7	Keyboard	USB Keyboard		
8	Mouse	USB Optical Mouse.		
9	Communications	Intel Gigabit Ethernet controllers with Intel Remote Wake UP, PXE and Jumbo frames support		
10	Ports	5 slots (5 full length, 1 half length). Two PCIe x16 Gen 3, one PCIe x 16 Gen 3 wired x8 (half length). 2 SATA 6Gb/s (for optical drive(s), Rear:3 USB 2.0,3 USB 3.0, 2 PS2,2 RJ45, 1 Serial, one PCIe x4 Gen 2; one PCIe x1 Gen 2, one 32bit/33MHz		
11	Casing	Branded Tower / Mini Tower type with trolley		
12	Warranty	03 years on site comprehensive		
13	Dealership	Authorized Dealership Gold / Higher		
14	Operating System	Windows 10 Pro (64bit) English		

TECHNICAL EVALUATION GRADING CRITERIA FOR IT Equipment

Sl. No.	SPECIFICATIONS OF LAPTOP			
	Functions / Peripherals	Tender Specifications	Compliance	
1	Brand	DELL/HP/Lenovo/IBM or equivalent		
2	Processor	Core i7/i9 10th Gen Intel 1.80GHz up to 4.90GHz with Turbo Boost, 4 Cores, 8MB Cache or above all		
3	Memory	8GB DDR4 2666MHz SODIMM single slot		
4	Graphic Card	Integrated Graphics		
5	Hard Drive	256GB SSD for OS & SW + 512GB SSD or higher		
6	Display	14" FHD (1920x1080), IPS, 250nits, Anti-glare, No Touch		
7	connectivity	Wi-Fi and Bluetooth		
8	Ports	USB, USB type C, Audio in out, LAN 01Gbps, SD card Reader, DVI, VGA, etc.		
9	Sensors	Fingerprint Reader		
10	Web Cam	HD resolution		
11	Battery	6 Cell Li-Cylinder Internal Battery, 45Wh		
12	Warranty	03 years on site comprehensive		
13	Dealership	Authorized Dealership Gold / Higher		
14	Accessories	Laptop Bag, Charger		
15	Operating System	Windows 10 Professional English		

TECHNICAL SPECIFICATIONS FOR PLOTTERS > OR = 30-IN						
S#	Description	Minimum / mandatory requirements	Compliance			
1.	Brand	Renowned brand commonly used in Pakistan				
2.	Model Size	210 to > = 762-mm (8.3 to > or = 30-in) wide sheets; 279 to 914-mm (11 to > or = 30-in) rolls				
3.	Print Speed line drawing	180 A1 / hr, 19.3 sec / A1				
4.	Print resolution	Up to 2400 x 1200 optimized dpi				
5.	Nozzle Pitch	1200 dpi 2 lines				
6.	Technology	Thermal / Inkjet				
7.	Ink types	Dye-based (C,G, M, pk, Y); pigment-based (mK)				
8.	Ink Droplet Size	5 pl				
9.	Print Heads	1 Universal Print Head				
10.	Line Accuracy	± 0.1%				
11.	Minimum Line Width	0.02mm (PDF addressed at 1200 dpi);				
12.	Media handling standard/output	Sheet feed, automatic front – loading roll feed, smart roll switching ³ , integrated output sticker, media bin, automatic horizontal cutter,				
13.	Standard Sheets	A4, A3, A2, A1, AD				
14.	E-print capability	Yes				
15.	Media roll outer	170mm				
16.	Grammage	60 to 328 m ²				
17.	Thickness	Upto 31.5 mil				
18.	Memory	128GB				
19.	Hard disk	500 GB Self Encrypting				
20.	Media type	Bond and coated paper (Bond, coated, heavy weight coated, super heavy weight plus matte), Technical Paper (natural tracing, translucent bond), film (clear comma matte), photographic paper (satin, gloss, semi-gloss,				

		matte, high gloss), backlit, self-adhesive (polypropylene, vinyl), blueprint				
21.	Interfaces	Gigabit Ethernet (10/100/1000 Base), Supporting the following standards, TCP/IP, DHCP, _____ SMTP (v1, v2, v3),				
22.	Print languages (standard)	Postscript Printer, adobe PostScript, Adobe PDF 1.7, HP-RTL, TIFF, JPEG, DWG, CAL5 G4; Non-Postscript printer, HP, G1/2, HP RTL, TIFF, JPEG				
23.	Print Languages (Optional)	Non-PostScript Printer, Adobe PostScript 3, Adobe PDF 1.7				
24.	Printing paths	Direct printing from USB flash drive, print from network shard folder, email printing, driver for latest windows				
25.	A0 size drawing print	37 sec				
26.	Non Printable Area (cut-sheet)	3x17x3x3mm				
27.	Drivers	PostScript printer, Raster, PostScript and PDF drivers for windows or later, Non-PostScript Printer, Raster drivers for windows or later				
28.	Environmental	Energy Star, ErP, WEEE, RPHS (EU), REACH, EPEAT				
29.	Power Consumption	<100W(printing), <24W(Ready), <0.3W(Sleep), Power Cable Round Pin Pakistan Compatible				
30.	Warranty	One-Year hardware warranty				
31.	Dealership	Authorized Dealership Gold / Higher				
32.	Cartridges	One set of extra cartridge				

TECHNICAL SPECIFICATIONS FOR A3 INKJET COLOR PRINTER						
S#	Description	Minimum / mandatory requirements	Compliance			
1	Brand	Renowned brand commonly used in Pakistan				
2	Model Size	A3 (11x17") Size				
3	Scanning Capability	Scan to PC; Scan to Memory Device; Scan to share folder				
4	Print Speed	> or = 20 pages / min Monochrome (A3) > or = 10 pages / min Monochrome (A3)				
5	Colors	Black, Cyan, Yellow, Magenta				
6	Ink types	Dye-based				
7	Technology	Thermal / Inkjet				
8	Minimum Droplet Size	3 pl				
9	Print Heads	1 Universal Print Head				
10	Standard Sheets	A4, A3, Legal, A5, A6, B4, B5, C6				
11	Grammage	70 to 320 m ²				
12	E-print capability	Yes				
13	Memory	8GB				
14	Interface	PC fax send and archive, Gigabit Ethernet (10/100/1000 Base), USB				
15	Print Language	Universal / Global Version				
16	Printing paths	Direct printing from USB flash drive, print from network share folder, email printing, driver for latest windows				
17	Drivers	PostScript printer, Raster, PostScript and PDF drivers for windows 10 or later, Non-PostScript Printer, Raster drivers for windows 10 or later				
18	Fax	Color fax; auto reduction; auto redial; speed dial; group speed dial; junk barrier; poll to receive; forwarding (black only); distinctive ring; delayed				

		send (black only); scan and fax; PC fax send and receive				
19	Support	Windows 10 (32-bit & 64-bit), Windows 8.1 (32-bit & 64-bit), Windows 8, (32-bit & 64-bit), Windows 7, (32-bit & 64-bit), Windows Vista, (32-bit & 64-bit), Windows XP, (32-bit) SP3 or greater, Mac OS X v10.6, OS X Lion, OS X Mountain Lion, Linux				
20	Environmental	Energy Star				
21	Warranty	One-Year hardware warranty				
22	Dealership	Authorized Dealership Gold / Higher				
23	Cartridges	One set of extra cartridge				

PROFORMA FOR TECHNICAL EVALUATION OF IT EQUIPMENT								
BRANDED COMPUTERS / LAPTOP / PLOTTER / PRINTERS								
Bidder/Firms	OEM/Authorized Agent Experience (30 Marks)			After sale services/ Workshop (30 Marks)			Brand performance marks (40)	Total (100 Marks)
	5-8 years (5 Marks)	9-12 years (10 Marks)	13-15 years (15 Marks)	Within Pakistan (10 Marks) Outside Pakistan (05 Marks)	Qualified staff (5 Marks)	Repairing Lab (5 Marks)		Score
A								
B								
C								
D								