

*100 years and beyond..*



Government of India  
Ministry of Jal Shakti  
Department of Water Resources, River Development and Ganga Rejuvenation  
**Central Water & Power Research Station**  
**Khadakwasla, Pune – 411 024**

TENDER DOCUMENT  
(E-PROCUREMENT MODE)

FOR

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**Supply, Installation, Testing and Commissioning of Fully  
Automated Table Top Static Tri-axial Soil Test System for  
CWPRS, Pune**

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*[Two Envelope with e-Bidding]*

**September 2020**

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Government of India  
Ministry of Jal Shakti  
Department of Water Resources, River Development and Ganga Rejuvenation  
**Central Water & Power Research Station**  
Khadakwasla, Pune-411024

Telephones: 020-24103220

Email: cpc.cwprs-pune@gov.in

web: [www.cwprs.gov.in](http://www.cwprs.gov.in)

**e- Notice Invite Tender**

File No. CWPRS/CPC/AAO(P)/NIT-25/2020/

Dated: 04.09.2020

The Scientist-C, Construction and Procurement Cell, CWPRS, Pune, India on behalf of President of India invites online e-tenders through the website <http://eprocure.gov.in/eprocure/app> under **Two bids** system from eligible and qualified bidders for the supply of following goods:

NIT No.	<b>25/2020-21</b>
Name of goods	<b>Supply, Installation, Testing and Commissioning of Fully Automated Table Top Static Tri-axial Soil Test System for CWPRS, Pune</b>
Earnest Money Deposit (EMD)/Bid Security	Amount: Rs. 2,00,000/- Validity : 120 days + 45 days
Date of publishing Tender through e-procurement Portal (CPP Portal) <a href="http://eprocure.gov.in/eprocure/app">http://eprocure.gov.in/eprocure/app</a>	<b>04.09.2020 at 18:00 hrs</b>
Start date for downloading Bid document from e-portal	<b>05.09.2020 at 11:00 hrs onwards</b>
Pre- Bid Meeting date, time & venue	<b>14.09.2020 at 14:30 Hrs</b> O/o The Scientist "C", CPC, CWPRS, Pune –24
Last date for seeking clarification if any. (online only i.e through e-mail)	<b>14.09.2020 up to 14:00 hrs</b>
Start date and time for submission of bids online (Both Technical and Financial)	<b>18.09.2020 from 11:00 hrs onwards</b>
End date & time for submission of bids online (Both Technical and Financial)	<b>07.10.2020 up to 15.00 hrs. Server Time in IST</b>
Time & date of opening of Technical parts of bid through online.	<b>08.10.2020 at 15.00 hrs. Server Time in IST</b>
Time & date of opening of Financial parts of bid online	Financial bids of those firms who are evaluated to be technically qualified will be opened online immediately
Validity period of Bid	<b>120 days from last date of bid submission</b>
Delivery Period of goods	<b>60 Days</b> including rainy season & festival season after award of the Contract
Officer inviting bids	Scientist C , CPC, CWPRS, Pune

1. Bid Documents can be downloaded from CWPRS website <http://www.cwprs.gov.in> or from the Central Public Procurement Portal <http://eprocure.gov.in/eprocure/app> free of cost.
2. Bidders should enroll/register in the e-procurement module of Central Public Procurement Portal through the website <http://eprocure.gov.in/eprocure/app> for participating in the bidding process.
3. Bidders should also possess a valid Digital Signature Certificate (DSC) of Class III for online submission of bids.
4. Bids received on CPP portal (<http://eprocure.gov.in/eprocure/app>) only will be considered. Bids in any other form sent through sealed cover/email/post/fax etc. will be rejected.
5. Any change/corrigendum/extension of opening date in respect of this tender shall be issued through **CPP Portal** only and no press notification will be issued in this regard. Bidders are therefore requested to regularly visit our **CPP Portal** for updates.
6. The amount of Earnest Money Deposit (EMD)/Bid Security of **Rs. 2,00,000/-** in the form of Demand Draft/Fixed Deposit Receipts (FDR) of any Nationalized/ Scheduled Bank in favour of **"Pay and Account Officer, CWPRS, Pune"**. The bidder should upload the scanned copy (.pdf) of the EMD along with Technical bid document.
7. **The original copies of documents as mentioned in clause 15.7 of ITB and EMD / Bid Security or a copy of exemption certificate of EMD, valid up to the bid validity period (NSIC/MSME) for the items tendered should be submitted to the office of Scientist-C, CPC, CWPRS, Pune on or before 08.10.2020 at 15:00 hrs by personally or through post or courier. The bid will be opened of those documents received by office within stipulated date and time. Other bids will not open and it will be treated as rejected.**
8. On opening date, the bidder can login and see the bid opening process. After opening the bids, he/she will receive the competitor bid sheets.
9. The bidders should upload the scanned copy of duly signed full bid documents (.pdf) along with compliance report/statement.
10. The intending bidder, in case of Prime Equipment Manufacturers shall upload a self-declaration on their letter-head as PDF file in Cover-I (Technical bid) of e-tender, along with the tender documents, confirming that they are regularly manufacturing, supplying, installing, testing & commissioning of the similar equipment for the last **3 years**.
11. The intending bidder, in case of Authorized Distributor/ Authorized Dealer shall possess valid authorized Distributorship /Dealership license from Original Equipment Manufacturers. The bidder shall enclose the copy of the same as PDF file in Cover-I of the e-tender while submitting the bid.
12. The bidder must ensure to quote his/her item rate / percentage rate /Lump-sum bid in the attached Bill of Quantity (**BoQ**) (Financial Bid) in Excel Format only.
13. All the tender documents (Technical & Financial bid) to be uploaded as per this tender are to be digitally or duly signed by the bidder.
14. All the communications with respect to the tender shall be addressed to:

**The Scientist -C  
Construction and Procurement Cell  
Room No. 201, OCL Building  
Central Water & Power Research Station (CWPRS)**

**Pune - Sinhadgad Road, Khadakwasla**  
**Pune – 411024, Maharashtra**  
**Email : cpc.cwprs-pune@gov.in**

The following documents shall be scanned and uploaded **mandatorily** on or before the last date for online submission of bids failing which the bid will be treated as non-responsive and shall be rejected.

**COVER – I (Technical Bid)**

- i. A scanned copy of Demand Draft/FDR of any Schedule Bank against EMD/Bid security. Bidders claiming exemption of EMD/Bid security, should provide documentary proof of their being registered as NSIC/MSE (indicating the terminal validity date of their registration) for the **items tendered** and the same shall be scanned and uploaded. If such a certificate is not submitted before date of opening of technical bids, for the items tendered, the bid will be treated as non-responsive and shall be rejected.
- ii. Certificate of Registration for GST.
- iii. OEM certificate/ Authorized Distributor/ Authorized Dealer shall possess valid authorized Distributorship /Dealership license from Original Equipment Manufacturers
- iv. Performance certificate for supply of similar goods during the **last 3 years** preceding the deadline for Bid submission, using the Proforma for Performance Statement included in Section 3 along with documentary evidence (End User's certificate).
- v. Duly signed full tender documents (.pdf) along with compliance report/statement.
- vi. Scanned documents as per clause 5.2 & 15.3 of ITB

**COVER – II (Financial Bid)**

- i. Bill of Quantities (BoQ)

Scientist-C  
Construction and Procurement Cell

Copy to :

1. Smt J S Edlabadkar, Sc 'B', through Dr. R G Patil, Sc 'E' for Kind information
2. Notice board, CPC

**GOVERNMENT OF INDIA  
INVITATION FOR BIDS (IFB)**

Date: 04/09/2020  
NIT No.: 25/2020-21

1. Bidders are advised to note the minimum qualification criteria specified in the Bidding Documents in order to qualify for the award of the Contract.
2. The **Scientist –C, Construction and Procurement Cell, Central Water and Power Research Station, Pune-24** invites bids electronically from eligible bidders for **Supply, Installation, Testing and Commissioning of Fully Automated Table Top Static Tri-axial Soil Test System for CWPRS, Pune**. The Bidders may submit Bids for all of the goods and services.

Sl. No	Description of goods	Quantity	Locations of Supply and Testing	Delivery Period
Supply, Installation, Testing and Commissioning of				
1	<b>Fully Automated Table Top Static Tri-axial Soil Test System for CWPRS, Pune as per technical specifications of Bid</b>	<b>3.0 Sets</b>	<b>CWPRS, Pune – 24</b>	<b>60 days</b>

3. The Bidding Document is available online and can be downloaded free of cost by logging on to the website <http://eprocure.gov.in/eprocure/app> or <http://www.cwprs.gov.in>. The bids are to be submitted online through the e-procurement portal only (<http://eprocure.gov.in/eprocure/app>). Bids submitted manually will not be accepted. The bidders would be required to register in the website which is free of cost.
4. For submission of the Bid, the Bidder is required to have Digital Signature Certificate (DSC) from one of the Certifying Authorities authorized by Government of India for issuing DSC. Aspiring 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: <http://eprocure.gov.in/eprocure/app>
5. Bids must be accompanied by Bid Security/EMD for the amount and in the form specified in the Bidding Document. Bid security shall have to be valid for **45 days** beyond the validity of the bid. Bids should be valid for **120 days** after the deadline date specified for submission. Procedure for submission of Bid Security is described in Para 7 below.
6. Bids must be submitted on <http://eprocure.gov.in/eprocure/app> on or before **15:00 hrs** on **07.10.2020** and will be opened online on **08.10.2020** at **15:00 hrs**. Record of bid opening will be electronically shared with bidders. If the office happens to be closed on the date of opening of the Bids as specified, the Bids will be opened on the next working day at the same time and venue. Any bid or modifications to bid (including discount) received outside e-Procurement System will not be considered. The electronic bidding system would not allow late submission of bids.
7. The Bidders are required to submit specified **original documents as per clause 15.7 of ITB including original Bid Security in approved form** to Scientist – C, Construction & Procurement Cell (CPC), Central Water & Power Research Station, Khadakwasla, Pune-411024 at the address given below before the date and time specified for opening of the

Bids on **08.10.2020** at **15:00 hrs** by registered post/speed post/courier or by hand, failing which the Bids will be declared non-responsive and will not be opened.

8. Other details can be seen in the bidding documents. The Purchaser shall not be held liable for any delays due to system failure beyond its control. Even though the system will attempt to notify the bidders of any bid updates, the Purchaser shall not be liable for any information not received by the bidder. It is the Bidder's responsibility to verify the website for the latest information related to the Bid.

**Name and address of Purchaser**

***The Scientist 'C'  
Construction and Procurement Cell  
Room no.201, OCL Building  
Central Water and Power Research Station  
Pune – Sinhagad Road  
Khadakwasla, Pune-411024***

Tel. No: +91-20-24103220  
Fax No. +91-20-24381004  
Email : cpc.cwprs-pune@gov.in

## Invitation for Bids for Goods

1. The **Scientist 'C', Construction and Procurement Cell, CWPRS, Khadakwasla, Pune-24** invites Bids which shall be submitted in the e-Procurement Portal for the following Goods and services:

Sl. No	Description of goods	Quantity	Location of Supply and Testing	Delivery Period
<b>Supply, Installation, Testing and Commissioning of</b>				
1	<b>Fully Automated Table Top Static Tri-axial Soil Test System for CWPRS, Pune as per technical specifications of Bid</b>	<b>3.0 Sets</b>	<b>CWPRS, Pune</b>	<b>60 days</b>

2. Detailed Invitation for Bid is available on <http://eprocure.gov.in/eprocure/app>. The Bidding Document is also available online and can be downloaded free of cost by logging on to the <http://eprocure.gov.in/eprocure/app> or <http://www.cwprs.gov.in>
3. The deadline for submission of Bids is **07.10.2020 at 15:00 hrs**. Bids will be opened on **08.10.2020 at 15:00 hrs**.
4. Bidders are advised to note the minimum qualification criteria specified in the bidding documents. Interested Bidders may participate in the bidding process as per instructions given in the Bidding Documents.

### Name and address of Purchaser

*The Scientist 'C'*  
*Construction and Procurement Cell*  
*Room no.201, OCL Building*  
*Central Water and Power Research Station*  
*Pune – Sinhagad Road*  
*Khadakwasla, Pune-411024*  
Tel. No: +91-20-24103220  
Fax No. +91-20-24381004  
E-mail: [cpc.cwprs-pune@gov.in](mailto:cpc.cwprs-pune@gov.in)

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## **SECTION 1 - INSTRUCTIONS TO BIDDERS**

# Section 1 - Instructions to Bidders (ITB)

## A. General

### 1. Scope of Bid

- 1.1 The Purchaser, namely **Scientist 'C', Construction and Procurement Cell, CWPRS, Khadakwasla, Pune - 24** issues these Bidding Documents for the supply of Goods and Related Services as specified in **Section 5** Schedule of Requirements. The name and identification number of this procurement is **25/2020-21**

### 2. Source of Funds

- 2.1 The expenditure to be incurred for this intended purchase will be met from the funds available with the purchaser named in the Schedule of Quantities, hereinafter referred to as "the purchaser"

### 3. Eligible Bidders

- 3.1 A Bidder shall not have a conflict of interest. All bidders found to have conflict of interest shall be disqualified. This invitation for online bids is open to all suppliers, who fulfill the eligibility criteria as well as the Qualification criteria, incorporated in this document.

### 4. Amendment of online bidding documents

- 4..1. At any time prior to the deadline for submission of online bids, the purchaser may, for reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the online bidding documents by amendment.
- 4..2. The Amendment will be notified on the CPP portal as corrigendum. Bidders may check the CPP portal for corrigendum, if any. No separate notification will be sent to Bidders by email /Fax / Phone etc. in this regard.
- 4.3 In order to provide the prospective bidders with reasonable time in which to take the amendment into account in preparing their online bids, the purchaser may, at its discretion, extend the deadline for the submission of online bids and other allied time frame having linkage with that deadline

## B. Preparation of Bids

### 5. Documents Comprising the Bid

- 5.1 The Bid shall comprise Two Parts, namely the **Technical Part** and the **Financial Part**. These two Parts shall be submitted simultaneously

- 5.2 The **Technical Part of Bid** shall comprise the following:
- (a) Letter of Bid – Technical Part in accordance with ITB Clause 6;
  - (b) Bid Security in accordance with ITB 13;
  - (c) Written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB 14.2;
  - (d) Documentary evidence in accordance with ITB Clause 10 that the Goods and Related Services conform to the Bidding Documents;
  - (e) Documentary evidence in accordance with ITB Clause 11 establishing the Bidder's qualifications to perform the contract if its bid is accepted;
  - (f) Manufacturer's Authorization in accordance with ITB Clause 11.1 (a), on the form provided in Section 3;
  - (g) Performance Statement of supplies of similar goods made during the last 3 years, in accordance with ITB 11.2;
  - (h) List of Goods & Related Services indicating Bidder's offered delivery period, on the form given in Section 5.
  - (i) Affidavit confirming correctness of information and documents submitted with the Bid, as per format given in Section 3;
- 5.3 The **Financial Part of Bid** shall comprise the following:
- (a) **Bill of Quantities (BoQ)** (using the Schedule uploaded with the bidding documents) wherein the rates shall be entered online.

## 6. Letter of Bid and Bill of Quantities

- 6.1 The Bidder shall submit the **Letter of Bid – Technical Part**, and **Bill of Quantities (BoQ)** using the forms furnished in Section 3, Bidding Forms. The forms must be completed without any alterations to the text. All blank spaces shall be filled in with the information requested.

## 7. Alternative/Conditional Bids

- 7.1 Alternative/Conditional bids shall not be considered and treated as non-responsive.

## 8. Bid Prices and Discounts

- 8.1 Price Schedules shall conform to the requirements specified below.
- 8.2 All lots (Contracts) and items must be listed and priced separately in the Price Schedules.
- 8.3 The price to be quoted in the Financial Part (Bill of Quantities) shall be the total price of the Bid, including any discounts offered.
- 8.4 Prices quoted by the Bidder shall be fixed during the Bidder's performance of the Contract and not subject to variation on any account. A Bid submitted with an adjustable price quotation shall be treated as non-responsive and shall be rejected.
- 8.5 If so specified in ITB 1, bids are being invited for individual lots (contracts) or for any combination of lots (packages). Prices quoted shall correspond to 100 % of the items specified for each lot and to 100% of the quantities specified for each item of a lot.
- 8.6 Prices shall be quoted as specified in the Price Schedule included in Section 3, Bidding Forms as stated below:

- (a) **For domestic goods:** The price of the Goods quoted shall comprise of base price EXW (**excluding GST**), Charges for transportation, Insurance, fixing (civil works etc) and other charges up to the final destination i.e. **at CWPRS, Pune - 24 (as per BoQ)**.
- (b) **For imported goods:** The price of the Goods quoted shall comprise of base price EXW (**excluding GST**), customs duty and any other taxes as applicable and Charges for transportation, Insurance and other charges up to the final destination i.e. CWPRS, Pune (as per BoQ). Customs duty exemption certificate (refer Govt. notification No.51/96-customs dated 23.07.1996 and No. 10/96-Central Excise dated 01.03.1997) shall be provided by CWPRS.
- (ii) Other taxes which will be payable on the Goods if the contract is awarded to the Bidder; and
- (iii) The price for inland transportation, insurance, installation (including civil works, if applicable) and other local services required to convey the Goods to their Final Destinations (Project Sites), namely **at CWPRS, Pune - 24 (as per BoQ)**
- (iv) Price for Related Services, if any.
- (v) **The Goods and Services Tax (GST) will be reimbursed to the bidder as per prevailing government of India rates along with bill.**

## 9. Currencies of Bid

- 9.1 The Bidder shall quote in **Indian Rupees** only **in BoQ**.

## 10. Documents Establishing the Conformity of the Goods and Related Services

- 10.1 To establish the conformity of the Goods to the Bidding Documents, the Bidder shall furnish as part of its Technical Part of Bid, the documentary evidence that the Goods conform to the technical specifications and standards specified in Section 5, Schedule of Requirements

## 11. Qualifications of the Bidder and Documentary Evidence

- 11.1 The documentary evidence of the Bidder's qualifications to perform the contract, if its bid is accepted, shall be submitted as part of its Technical Part of 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 in Section 3. The Bidder has the option to furnish the said Authorization from the Authorized Dealer or Distributor in which case, the Form provided in Section 2 may be modified by the Bidder suitably. However, if the Bidder itself is an Authorized Dealer or Distributor, it may 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 manufacturers for the same item of the schedule in the bid will be treated as non-responsive.

(b) that the Bidder meets the following qualification criterion otherwise bid will be treated as non-responsive:

(i) **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. The equipment offered for supply should have been in successful operation on date of bid opening**

(ii) **The supplier shall have supplied at least 3 similar systems within India. Complete user list with address, phone number and email ID, Name of the contact person shall be submitted along with the technical bid.**

(iii) **Quotation should be submitted by Original Equipment Manufacturer (OEM) or its authorized dealer / supplier. Authorization letter in this regard must be submitted along with the bid document.**

11.2 The Bidder shall also submit with its Bid, details of supplies of similar goods made during the **last 3 years** preceding the deadline for Bid submission, using the Proforma for Performance Statement included in Section 3. Bidders shall invariably furnish documentary evidence (End User's certificate) in support of the satisfactory operation of the goods as specified above.

11.3 Bids from Joint Ventures are not acceptable

#### 11.4 **Financial Capability:**

The bidders should have annual sales turnover of minimum of **Rs. 100.00 Lakh in the past 3 years**. The Bidder shall furnish documentary evidence that it meets the financial capability

### 12. **Period of Validity of Bids**

12.1 Bids shall remain valid for the period of **120 days** after the bid submission deadline date prescribed by the Purchaser. A bid valid for a shorter period shall be rejected by the Purchaser as non-responsive

### 13. **Bid Security**

13.1 The Bidder shall furnish as part of its Technical Part of Bid, a Bid Security/EMD, in original for an amount of **INR 2,00,000/-** in favour of "**Pay and Account Officer, CWPRS, Pune**"

Bid Security/EMD should be in one of the following forms:

(i) Demand Draft (DD) issued by a nationalized/scheduled bank; or

(ii) Fixed Deposit Receipt (FDR) certificates issued by a nationalized/scheduled bank for equivalent or higher values are acceptable provided these are pledged in favour of the "**Pay and Account Officer, CWPRS, Pune**" and such pledging has been noted and suitably endorsed by the bank issuing the deposit certificates.

**The Bid Security / EMD shall be valid for forty-five (45) days beyond the original validity period of the Bid**

- 13.2 If a Bid is not accompanied by a substantially responsive Bid Security / EMD, it shall be rejected by the Purchaser as non-responsive.
- 13.3 Bid Security / EMD of unsuccessful Bidders shall be returned as promptly as possible upon the successful Bidder's signing the contract and furnishing the Performance Security pursuant to ITB 33.
- 13.4 The Bid Security / EMD of the un-successful Bidder shall be returned as promptly as possible once the successful Bidder has signed the contract and furnished the required performance security.
- 13.5 The Bid Security / EMD may be forfeited:
  - (a) if a Bidder withdraws its Bid during the period of bid validity specified by the Bidder on the Letter of Bid, or any extension thereto provided by the Bidder;  
or
  - (b) if the successful Bidder fails to:
    - (i) sign the Contract in accordance with ITB 32; or
    - (ii) Furnish a performance security in accordance with ITB 33.

#### **14. Preparation and Signing of Bid**

- 14.1 The Bidder shall prepare the Bid as per details given in ITB 15.
- 14.2 The Bid shall be signed by a person duly authorized to sign on behalf of the Bidder. This authorization shall consist of Power of Attorney and shall be submitted with the Bid. The name and position held by each person signing the authorization must be typed or printed below the signature.
- 14.3 Corrections, if any, in the bid can be carried out by editing the information before electronic submission on CPP Portal <http://eprocure.gov.in/eprocure/app>)

### **C. Submission and Opening of Bids**

#### **15. Electronic Submission of Bids, and Submission of Original Documents**

- 15.1 Bids, both Technical and Financial Parts, shall be submitted online on the e-Procurement Portal (**CPP Portal**). Detailed guidelines for viewing Bids and submission of online Bids are given in the **CPP Portal**. Any Bidder can log on to this **CPP Portal** and view the IFB and details of Works/Goods for which Bids are invited. However, every Bidder has to enrol/ register in the **CPP Portal**, and should have valid Digital Signature Certificate (DSC) in the form of smart card/e-token obtained from any Authorized Certifying Agency. The Bidder should register in the **CPP Portal** using the relevant option available. Then the Digital Signature registration has to be done with the e-token, after logging onto the website. The Bidder can then log in the **CPP Portal** through the secure login by entering the password of the e-token & the user id/ password chosen during registration.

The Bidder should go through the Bidding Document carefully and submit the specified documents, along with the Bid otherwise the Bid may get rejected.

- 15.2 The Bidder shall submit Bid in two separate online folders **simultaneously**, i.e. Folder 1, for the **Technical Part** and Folder 2 - for the **Financial Part**.

15.3 **The 'Technical Part of Bid'** submitted online by the Bidder shall comprise the following documents and the Bidder shall upload scanned copies of these documents with the Bid.

- (i) **Letter of Bid – Technical Part** as per format given in Section 3;
- (ii) **Bid Security** in accordance with ITB 13;
- (iii) **Delivery Period Offered:** List of Goods & Related Services indicating Bidder's offered delivery period, on the form given in Section 5;
- (iv) **Authorization:** Power of Attorney of signatory of Bid in accordance with ITB 14.2; (if applicable)
- (v) **Manufacturer's Authorization** in accordance with ITB 11.1 (a), on the form provided in Section 3;
- ~~(vi) **Affidavit** confirming correctness of information and documents submitted with the Bid in accordance with ITB Clause 5, on the form provided in Section 3;~~
- (vii) **Performance Statement** of supplies of similar goods made during the last 3 years, in accordance with ITB 11.2;
- (viii) **Compliance of Goods and Related Services with Technical Specifications and Standards:** Documentary evidence in accordance with ITB Clause 10;
- (ix) **Qualifications of the Bidder:** Documentary evidence of Bidder's qualifications to perform the Contract in accordance with ITB 11.1; and
- (x) **Authorized 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)

15.4 The Technical Part of Bid shall not include any financial information related to the Bid price. Where material financial information related to the Bid price is contained in the Technical Part of Bid, the Bid shall be declared non-responsive.

15.5 **The Financial Part of Bid** submitted online by the Bidder shall comprise the following:

- (a) Bill of Quantities (BoQ) (using the Schedule uploaded with the bidding documents) **wherein the rates shall be entered online.** Upon entry of unit rates for all the items, total Bid Price would be calculated automatically by the System and displayed.

15.6 All documents are required to be signed digitally by the Bidder. The System generates a Unique Bid Identification Number, time stamped as per server time, as an acknowledgement for Bid submission.

### 15.7 **Submission of Original Documents**

Bidders are required to submit the following documents in original to the Purchaser's office.

- (i) **Original Bid Security / EMD in approved form or a copy of exemption certificate of EMD, valid up to the bid validity period (NSIC/MSME) for the items tendered**
- (ii) ~~Affidavit confirming correctness of information and documents submitted with the Bid, using the Format given in Section 3~~

These original documents should be received by the Purchaser **before the date and time fixed for opening of Technical Part of Bids (08/10/2020 at 15:00 hrs)** either by registered/speed post/courier or by hand, failing which the Bid will be declared non-responsive, and will not be opened. Hard copies of Bids or any other documents are not required to be submitted.

- 15.8 Any Bid or modifications to Bid (including discount) received outside the e-Procurement System (**CPP Portal**) shall not be considered.
- 15.9 **Bids submitted manually or by Telex, or Cable or by Fax will be rejected as non-responsive**

## 16. Deadline for Submission of Bids

- 16.1 Bids must be uploaded online no later than the **07.10.2020 at 15:00 hrs** . A Bidder may modify its Bid any number of times by using the appropriate option for Bid modification on the e-Procurement Portal, before the deadline for submission of Bids. For Bid modification and consequential re-submission, the Bidder is not required to withdraw its Bid submitted earlier. The last modified Bid submitted by the Bidder within the deadline for bid submission shall be considered as the Bid. The modification and consequential re-submission of Bids is allowed any number of times.
- 16.2 A Bidder may withdraw its Bid by using the appropriate option for Bid withdrawal, before the deadline for submission of Bids. However, if a bid is withdrawn, re-submission of the Bid is allowed

## 17. Late Bids

- 17.1 The electronic bidding system would not allow any late submission of Bids after due date and time as per server time

## 18. Public Opening of Technical Parts of Bids

- 18.1 The Purchaser shall open Technical Parts of all Bids online in the Purchaser's office, on **08.10.2020 at 15:00 hrs**, and this can also be viewed by the Bidders online. The Financial Parts of the Bids shall remain unopened in the e-Procurement System, until the evaluation of the Technical Parts of the Bids.

In the event of the specified date of Bid opening being declared a holiday for the Purchaser, the Bids will be opened at the appointed time and location on the next working day.

- 18.2 In all cases, original documents submitted as specified in ITB 15.7 shall be first scrutinized, and Bids that do not comply with the provisions of ITB 15.7 will be declared non-responsive and will not be opened.
- 18.3 The Purchaser shall prepare a record of the Technical Part Bid opening that shall include, as a minimum: the name of the Bidder and whether there is a withdrawal, substitution, or modification.

The Technical Part Bid opening summary will be uploaded on the e-Procurement Portal (**CPP Portal**).



- 18.4 Only Technical Parts of Bids that are opened at Bid opening shall be considered further for evaluation.

## **D. Evaluation of Bids**

### **19. Confidentiality**

- 19.1 Any effort by a Bidder to influence the Purchaser in the examination, evaluation, comparison, and post qualification of the bids or contract award decisions may result in the rejection of its Bid.
- 19.2 From the time of bid opening to the time of Contract Award, if any Bidder wishes to contact the Purchaser on any matter related to the bidding process, it should do so in writing

### **20. Clarification of Bids**

- 20.1 To assist in the examination, evaluation, comparison and post-qualification of the bids, the Purchaser may, at its discretion, ask any Bidder for a clarification of its Bid. Any clarification submitted by a Bidder in respect to its Bid and that is not in response to a request by the Purchaser shall not be considered. The Purchaser's request for clarification and the response shall be in writing.

## **E. Evaluation of Technical Parts of Bids**

### **21. Evaluation**

- 21.1 The Purchaser's determination of a bid's responsiveness is to be based on the contents of the bid itself.
- 21.2 A substantially responsive Bid is one that conforms to all the terms, conditions, and specifications of the Bidding Documents without material deviation, reservation, or omission.
- 21.3 Evaluation of Technical Parts of Bid with respect to documents and information furnished in the Bid pursuant to ITB Clause 15.3 shall be taken up. The Purchaser will determine whether each Bid (a) has been properly signed and supported by the Power of Attorney in favour of the signatory of the Bid; (b) is accompanied by the Bid Security/EMD of requisite amount and validity in the approved form; (c) meets the eligibility criteria defined in ITB Clause 3; (d) Delivery Period offered meets the specified requirements; and (e) has furnished details of compliance with Technical Specifications.
- 21.4 Bids from Agents, without proper authorization from the Manufacturer and without proper agreement to furnish the manufacturer's guarantee/warranty, shall be treated as non-responsive.
- 21.5 Bids offering delivery beyond the stipulated delivery will be treated as non-responsive.
- 21.6 General conditions of Contract stipulate payment schedule offered by Purchaser. If the Bid deviates from that schedule the Bid will be treated as non-responsive.
- 21.7 If a bid is not substantially responsive to the Bidding Documents, it shall be rejected by the Purchaser and may not subsequently be made responsive by the Bidder by correction of the material deviation, reservation, or omission.

- 21.8 The Purchaser shall determine, to its satisfaction, whether all eligible Bidders, whose Bids have been determined to be substantially responsive to the bidding document, meet the Qualification Criteria specified in ITB Clause 11.1.
- 21.9 **The bidders those who are technically qualified, technical demonstration (at CWPRS, Pune or nearest Pune) by the bidders is compulsory to verify the technical competency of the goods before opening of their financial bids, as per terms and conditions of the bid document. The information will be communicated by this office to the technically qualified bidders for their technical competency for demonstration of the goods. (It is applicable for a given type of goods and the same will be decided by the Purchaser)**

## **22. Notification of Result of Evaluation of Technical Parts**

- 22.1 Only Bids that are both substantially responsive to the bidding document, and meet all Qualification Criteria shall qualify for opening of the Financial Parts of their Bids.
- 22.2 Evaluation of Technical Parts of Bid will be completed by the Purchaser, and a list will be drawn up of the qualified bidders whose Financial Part of Bids will be eligible for opening.
- 22.3 Purchaser shall notify, online, the summary of technical evaluation giving details of those Bidders who have failed to meet the Qualification Criteria and/or whose Bids were considered non-responsive to the requirements in the bidding document, advising them as under:
- (a) That their Technical Part of Bid failed to meet the requirements of the bidding document; and
  - (b) That their Financial Part of the Bid shall not be opened.
- 22.4 The result of evaluation of the Technical Parts of Bid shall also be made public on e-Procurement Portal.
- 22.5 The Purchaser shall notify in writing those Bidders whose Technical Parts of Bids have been evaluated as substantially responsive as under:
- (a) their Bid has been evaluated as substantially responsive to the bidding document and met the Qualification Criteria;
  - (b) their Financial Part of Bid will be opened online; and
  - (c) notify them of the date and time of the online opening of the Financial Parts of the Bids

## **F. Online Opening and Evaluation of Financial Parts of Bids**

### **23. Opening of Financial Parts of Bids**

- 23.1 The financial bids shall be opened online on the CPP portal on the notified date. All the bidder's names, the Bid prices, the total amount of each bid, including any other details can be viewed online at the time of financial bid opening.
- 23.2 The electronic summary of the bid opening will be generated by online. The Purchaser will also prepare minutes of the Bid opening, including the information disclosed and upload the same for viewing online

## 24. Correction of Arithmetical Errors

- 24.1 The e-Procurement System automatically calculates the total amount from unit rates and quantities. The System also automatically populates the amount in words from the amount in figures and therefore there is no scope of discrepancy and need for arithmetic correction

## 25. Evaluation of Financial Parts of Bids

- 25.1 During the detailed evaluation of Financial Parts of Bid, the substantial responsiveness of the Bids will be further determined with respect to those bid conditions i.e. Bill of Quantities (BoQ). The Purchaser shall confirm that the following documents are in accordance with the requirements specified in the bidding document. If any of these documents or information is missing, the offer shall be rejected.

(a) Bill of Quantities (BoQ) in accordance with ITB Clauses 6, 8 & 9.

- 25.2 If a Bid is not substantially responsive, it will be rejected by the Purchaser, and may not subsequently be made responsive by correction or withdrawal of the non-conforming deviation or reservation

## 26. Determination of Evaluated Bid prices

- 26.1 The Purchaser shall evaluate each Bid that has been determined, up to this stage, to be substantially responsive.

- 26.2 To evaluate a Bid, the Purchaser shall only use all the factors, methodologies and criteria defined in ITB Clause 26.3. No other criteria or methodology shall be permitted.

- 26.3 To evaluate a Bid, the Purchaser shall consider the following:

- (a) **Bids will be evaluated for the combined cost of all the items mentioned in BoQ and the Contract will be awarded to the lowest evaluated (L1) Bidder.**
- (b) **An item not listed in the Price Schedule shall be assumed to be not included in the Bid, and provided that the Bid is substantially responsive, the average price of the item quoted by substantially responsive Bidders will be added to the Bid price and the equivalent total cost of the Bid so determined will be used for price comparison.**
- (c) **The lowest evaluated Price shall be arrived at up to Final Destination (i.e. CWPRS, Pune) by adding (i) price of Goods quoted EXW (ii) other taxes (customs etc), if any, payable on the Goods (iii) price for inland transportation, insurance, and other local services required to convey the Goods to their Final Destination and (iv) price for Related Services (AMC etc), if any (as per BoQ).**

## 27. Comparison of Bids

- 27.1 The Purchaser shall compare all substantially responsive bids evaluated in accordance with ITB Clause 26.3 to determine the lowest evaluated Bid.

## 28. Purchaser's Right to Accept Any Bid, and to Reject Any or All Bids

- 28.1 The Purchaser reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to Bidders

## G. Award of Contract

### 29. Award Criteria

- 29.1 The Purchaser shall award the Contract to the Bidder whose offer has been determined to be the lowest evaluated bid and is substantially responsive to the Bidding Documents, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily.

### 30. Purchaser's Right to Vary Quantities at Time of Award

- 30.1 At the time the Contract is awarded, the Purchaser reserves the right to increase or decrease the quantity of Goods and Related Services originally specified in Section 5, Schedule of Requirements, provided the variation does not exceed **100%** and without any change in the unit prices or other terms and conditions of the Bid and the Bidding Documents.

### 31. Notification of Award; Publication of Award & Recourse to unsuccessful Bidders

- 31.1 Prior to the expiration of the period of bid validity, the Purchaser shall notify the successful Bidder, in writing, that its Bid has been accepted. The Purchaser shall enclose with Notification of Award, the Contract Agreement Form duly filled in for getting it signed by the selected Bidder.
- 31.2 Until the formal Contract is prepared and executed, the notification of award shall constitute a binding Contract.
- 31.3 The Purchaser shall publish on its website. <http://eprocure.gov.in/eprocure/app> or [www.cwprs.gov.in](http://www.cwprs.gov.in) the results identifying the Bid and lot numbers and the following information: (i) name of each Bidder who submitted a Bid; (ii) bid prices; (iii) name and evaluated prices of each Bid that was evaluated; (iv) name of Bidders whose bids were rejected and the reasons for their rejection; and (v) name of the winning Bidder, and the price it offered, as well as the duration and summary scope of the contract awarded.
- 31.4 Upon the successful Bidder's furnishing of the Performance Security in accordance with ITB Clause 33 and signing the Contract Agreement Form pursuant to ITB Clause 32, the Purchaser will promptly notify each unsuccessful Bidder through CPP portal.

### 32. Signing of Contract

- 32.1 The successful Bidder shall sign with date, the Contract Agreement Form sent by the Purchaser pursuant to ITB 31.1, and return it to the Purchaser within 15 days of the date of receipt of the Notification of Award.

### 33. Performance Security

- 33.1 Within **fifteen (15) days** of the receipt of Notification of Award from the Purchaser, the successful Bidder shall furnish the Performance Security in the form specified in the GCC in favour of "**PAO, CWPRS, Pune**". The bidders may see the name of the winning Bidder and the names of unsuccessful bidders on CPP Portal.

33.2 Failure of the successful Bidder to submit the above-mentioned Performance Security or sign the Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security in accordance with ITB 13.5. In that event the Purchaser may award the Contract to the next lowest evaluated Bidder, whose offer is substantially responsive and is determined by the Purchaser to be qualified to perform the Contract satisfactorily.

## Section 2 - General Conditions of Contract

## Section 2 - General Conditions of Contract

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## Section 2 - General Conditions of Contract

### 1. Definitions

The following words and expressions shall have the meanings hereby assigned to them:

- (a) "Contract" means the Contract Agreement entered into between the Purchaser and the Supplier, together with the Contract Documents referred to therein, including all attachments, appendices, and all documents incorporated by reference therein.
- (b) "Contract Documents" means the documents listed in the Contract Agreement, including any amendments thereto.
- (c) "Contract Price" means the price payable to the Supplier as specified in the Contract Agreement, subject to such additions and adjustments thereto or deductions there from, as may be made pursuant to the Contract.
- (d) "Day" means calendar day.
- (e) "Completion" means the fulfillment of the Related Services by the Supplier in accordance with the terms and conditions set forth in the Contract.
- (f) "GCC" mean the General Conditions of Contract.
- (g) "Goods" means all of the commodities, raw material, machinery and equipment, and/or other materials that the Supplier is required to supply to the Purchaser under the Contract.
- (h) "Purchaser's Country" is India.
- (i) "Purchaser" means the entity purchasing the Goods and Related Services, as specified in the Contract Agreement.
- (j) "Related Services" means the services incidental to the supply of the goods, such as insurance, installation, start-up, training and initial maintenance and other such obligations of the Supplier under the Contract.
- (k) "Subcontractor" means any natural person, private or government entity, or a combination of the above, to whom any part of the Goods to be supplied or execution of any part of the Related Services is subcontracted by the Supplier.
- (l) "Supplier" means the natural person, private or government entity, or a combination of the above, whose bid to perform the Contract has been accepted by the Purchaser and is named as such in the Contract Agreement.
- (m) "The Project Site," where applicable, means the place named in the Contract Agreement.



## **2. Fraud and Corruption**

- 2.1 If the Purchaser determines that the Supplier has engaged in corrupt, fraudulent, collusive, coercive or obstructive practices, in competing for or in executing the Contract, then the Purchaser may, after giving 14 days' notice to the Supplier, terminate the Supplier's employment under the Contract and cancel the contract without prejudice to the other sanctions established in law.

## **3. Governing Law**

- 3.1 The Contract shall be governed by and interpreted in accordance with the laws of the Union of India.

## **4. Settlement of Disputes**

- 4.1. The Purchaser and the Supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract
- 4.2. If, after twenty-eight (28) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the Purchaser or the Supplier may give notice to the other party of its intention to commence arbitration, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given. Any dispute or difference in respect of which a notice of intention to commence arbitration has been given in accordance with this Clause shall be finally settled by arbitration by a sole arbitrator not below the level of retired Chief Engineer /Superintending Engineer (not connected in part or whole with this project in his service) to be appointed by Purchaser. Arbitration may be commenced prior to or after delivery of the Goods under the Contract. Arbitration proceedings shall be conducted in accordance with the rules of procedure specified in Arbitration and Conciliation Act 1996.
- 4.3. Notwithstanding any reference to arbitration herein, the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; and the Purchaser shall pay the Supplier any monies due the Supplier.

## **5. Scope of Supply**

- 5.1 The Goods and Related Services to be supplied shall be as specified in the Contract Agreement.

## **6. Delivery**

- 6.1 The Delivery of the Goods and Completion of the Related Services shall be in accordance with the Delivery and Completion Schedule specified in the Schedule of Requirements

## **7. Supplier's Responsibilities**

- 7.1 The Supplier shall supply all the Goods and Related Services included in the Scope of Supply in accordance with GCC Clause 5, and the Delivery and Completion Schedule, as per GCC Clause 6.

## 8. Contract Price

- 8.1 Prices charged by the Supplier for the Goods supplied and the Related Services performed under the Contract shall not vary from the prices quoted by the Supplier in its bid.

## 9. Terms of Payment

- 9.1 The Contract Price shall be paid as specified in the Contract Agreement as under:
- (a) ~~The contract price (100%) shall be paid to the supplier within thirty (30) days from the date of successful supply, installation, testing and commissioning of goods in all respect or the Acceptance Certificate issued by the Purchaser's representative whichever is later.~~
  - (b) The Supplier's request for payment shall be made to the Purchaser in writing, accompanied by invoices describing, as appropriate, the Goods delivered and Related Services performed, and by the dispatch documents, packing list, Manufacturer's/Supplier's warranty certificate, and upon fulfillment of all other obligations stipulated in the Contract.
  - (c) Payments shall be made promptly by the Purchaser, within thirty (30) days after submission of an invoice or request for payment by the Supplier, and after the Purchaser has accepted it.
  - (d) **The payments shall be made in Indian Rupees to the Supplier under this Contract.**
- 9.2 ~~Cost of AMC shall be paid on yearly basis, after expiry of 2 years of onsite manufacturer warranty period along with GST as per actuals on production of receipt/challan along with bill for AMC.~~

## 10. Taxes and Duties

- 10.1 The Supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted Goods to the Purchaser **(i.e CWPRS, Khadakwasala, Pune – 411 024 )**.

## 11. Performance Security

- 11.1 **The Supplier shall, within Fifteen (15) days of the notification of contract award, provide a performance security for the performance of the Contract for an amount of 10 % of the contract value, valid up to 60 days beyond the date of completion of all contractual obligations of the supplier including warranty period.**
- 11.2 The Performance Security shall be in the form of a Bank Guarantee or FDR or crossed demand draft drawn in favour of **"Pay and Account Officer, CWPRS, Pune"** payable at Pune, which shall be issued by any Nationalized/Scheduled bank in India.
- 11.3 The Performance Security shall be discharged by the Purchaser and returned to the Supplier not later than twenty-eight (28) days following the date of Completion of the Supplier's performance obligations under the Contract, including any **warranty period**.

## 12. Specifications and Standards

### 12.1 Technical Specifications and Drawings

- (a) The Goods and Related Services supplied under this Contract shall conform to the technical specifications and standards mentioned in Section 5, Schedule of Requirements and, when no applicable standard is mentioned, the standard shall be equivalent or superior to the official standards whose application is appropriate to the Goods' country of origin.

## 13. Inspections and Tests

- 13.1 The inspections and tests shall be conducted by the Purchaser at the Goods final destination.
- 13.2 The Purchaser may reject any Goods or any part thereof that fail to pass any test and/or inspection or do not conform to the specifications. The Supplier shall either rectify or replace such rejected Goods or parts thereof or make alterations necessary to meet the specifications at no cost to the Purchaser.

## 14. Liquidated Damages

- 14.1 If the Supplier fails to deliver any or all of the Goods by the Date(s) of delivery or perform the Related Services within the period specified in the Contract, the Purchaser may deduct from the Contract Price, as liquidated damages, a sum equivalent to **0.5%** of the price of the delayed Goods or unperformed Services for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of **10%** of the Contract value.

## 15. Warranty

- 15.1 The Supplier warrants that the Goods shall be free from defects arising from any act or omission of the Supplier or arising from design, materials, and workmanship, under normal use in the conditions prevailing in the country of final destination.
- 15.2 The warranty shall remain valid for **Two years** after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination/ Project site indicated in the Contract Agreement.
- 15.3 Upon receipt of such notice, the Supplier shall, within 30 days, expeditiously repair or replace the defective Goods or parts thereof, at no cost to the Purchaser.
- 15.4 **Two year** Warranty from the date of satisfactory installation and commissioning. Periodical maintenance of the equipment at CWPRS, Pune in every six months should be provided within warranty period.
- 15.5 The software should have Perpetual License and should work even after warranty period or without AMC / license renewal.

## 16. Extensions of Time

- 16.1 If at any time during performance of the Contract, the Supplier or its subcontractors should encounter conditions impeding timely delivery of the Goods or completion of Related Services, the Supplier shall promptly notify the Purchaser in writing of the delay, its likely duration, and its cause. As soon as practicable after receipt of the

Supplier's notice, the Purchaser shall evaluate the situation and may at its discretion extend the Supplier's time for performance, in which case the extension shall be ratified by the parties by amendment of the Contract.

- 16.2 Any delay by the Supplier in the performance of its Delivery and Completion obligations shall render the Supplier liable to the imposition of liquidated damages pursuant to GCC Clause 14, unless an extension of time is agreed upon, pursuant to GCC Sub-Clause 16.1.

## **17. Termination**

### **17.1 Termination for Default**

- (a) The Purchaser, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Supplier, may terminate the Contract in whole or in part:
- (i) if the Supplier fails to deliver any or all of the Goods within the period specified in the Contract, or within any extension thereof granted by the Purchaser pursuant to GCC Clause 16;
  - (ii) if the Supplier fails to perform any other obligation under the Contract; or
  - (iii) if the Supplier, in the judgment of the Purchaser has engaged in fraud and corruption, as defined in GCC Clause 3, in competing for or in executing the Contract
- (b) In the event the Purchaser terminates the Contract in whole or in part, pursuant to GCC Clause 17.1(a), the Purchaser may procure, upon such terms and in such manner as it deems appropriate, Goods or Related Services similar to those undelivered or not performed, and the Supplier shall be liable to the Purchaser for any additional costs for such similar Goods or Related Services. However, the Supplier shall continue performance of the Contract to the extent not terminated.

## **18. Assignment**

- 18.1 Neither the Purchaser nor the Supplier shall assign, in whole or in part, their obligations under this Contract, except with prior written consent of the other party.

**Section 3 – Bidding Forms**

## **Section 3 – Bidding Forms**

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# Letter of Bid –Technical Part

*INSTRUCTIONS TO BIDDERS: PLEASE DELETE THIS BOX ONCE THE DOCUMENT HAS BEEN COMPLETED.*

*The Bidder must prepare the Letter of Bid on stationery with its letterhead clearly showing the Bidder's complete name and address.*

*Note: All italicized text is for Bidder's guidance in preparing these forms and shall be deleted from the final products.*

Our Reference: No..... Dated.....

To:

**The Scientist 'C'  
Construction and Procurement Cell  
Central Water and Power Research Station  
Khadakwasla, Pune-411024**

Sub: **Supply, Installation, Testing and Commissioning of Fully Automated Table Top Static Tri-axial Soil Test System for CWPRS, Pune**

**Ref : NIT No. 25/2020-21**

Sir,

1. We, the undersigned, hereby submit our Bid, in two parts, namely:

- (a) Technical Part; and
- (b) Financial Part

2. In submitting our Bid, we make the following declarations:

- (a) **No reservations:** We have examined and have no reservations to the Bidding Documents;
- (b) **Conformity:** We offer to supply in conformity with the Bidding Documents and in accordance with the Delivery Schedules specified in the Schedule of Requirements the following Goods and Related Services
- (c) **Bid Validity Period:** Our bid shall be valid for the period of **120 days**, from the deadline fixed for the bid submission, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (d) **Performance Security:** If our bid is accepted, we commit to obtain a performance security in accordance with ITB Clause 33 and GCC Clause 11 for the due performance of the Contract;
- (e) **Eligibility:** We meet the eligibility requirements and have no conflict of interest;

- (f) **One Bid Per Bidder:** We are not participating in more than one bid in this bidding process;
- (g) **Government owned entity:** We are not a government owned entity/ We are a government owned entity but meet the requirements specified in the World Bank's Guidelines referred to in ITB 3.1
- (h) **Ineligibility:** Our firm, its affiliates or subsidiaries—including any subcontractors or suppliers for any part of the contract - has not been declared under Indian laws or official regulations;
- (i) **Binding Contract:** We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed.
- (j) **Not Bound to Accept:** We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.
- (k) **Suspension and Debarment:** We have not been debarred from participation in bidding/removed from approved list (dealings suspended) by the Central or any State Government.
- (l) **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 Collusion, Fraud and Corruption.
- (m) **Prevention of Corruption Act:** We undertake that, in competing for (and, if the award is made to us, in executing) the above contract, we will strictly observe the laws against fraud and corruption in force in India namely, "Prevention of Corruption Act 1988."

Yours faithfully,

Authorized Signature

Name & Title of Signatory \_\_\_\_\_

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

Name of Bidder \_\_\_\_\_

Address \_\_\_\_\_

Dated on \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ *[insert date of signing]*



## BoQ for Acoustic Doppler Current Profiler for Marine Environment

Tender Inviting Authority: Scientist C CPC CWPRS Pune

Name of Procurement: **Supply, Installation, Testing and Commissioning of Fully Automated Table Top Static Tri-axial Soil Test System for CWPRS, Pune -24.**

NIT No: **25/2020-21**

Name of the Bidder/  
Bidding Firm /  
Company :

<b>PRICE SCHEDULE</b>										
<b>(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevant columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only )</b>										
NUMBER #	TEXT #	NUMBER #	TEXT #	TEXT	TEXT	NUMBER #	NUMBER	NUMBER #	NUMBER #	TEXT #
Sl. No.	Description of work/Goods	Quantity	Units	installation and testing in all respects (Time limit) at site	Country of Origin	Rate per Unit <b>(Excluding GST)</b>	Customs, (if any) and Price for Equipment transportation, charges for handling, insurance, and other services required to convey the goods to their final destination. <b>(Excluding GST)</b>	Total price (Col. 3×7) Rs. P	Grand Total item in Col. (8+9) Rs. P	GRAND TOTAL In Words
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>
1	<b>For Goods: supply Installation Testing and commissioning of</b>									
1.01	<b>Fully Automated Table Top Static Tri-axial Soil Test System for CWPRS, Pune</b> as per Specifications of Bid	<b>3.0</b>	<b>Set</b>	<b>60 days</b>						
<b>Total in Figures</b>										
<b>Quoted Rate in Words</b>		<b>INR Zero Only</b>								

**Note: Goods and Services Tax shall be paid as per government prevailing rates**

## 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 binding on the Manufacturer. The Bidder shall include it in its bid in accordance with ITB Section.]*

Date: *[insert date (as day, month and year) of Bid Submission]*

NIT No.: **25/2020-21**

To:

***The Scientist 'C'  
Construction and Procurement Cell  
Room no.201, OCL Building  
Central Water and Power Research Station  
Khadakwasla, Pune-411024***

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.

We hereby extend our full guarantee and warranty in accordance with Clause 15 of the General Conditions of Contract, with respect to the Goods offered by the above firm.

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]*

Dated on \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ *[insert date of signing]*

# PROFORMA FOR PERFORMANCE STATEMENT

[Reference: ITB 11.2]

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

NIT No. **25/2020-21**

Date of opening. **08.10.2020**

Time **15:00 Hours**

Name of the Bidder \_\_\_\_\_

<u>Order placed by (full address of Purchaser)</u>	<u>Order No. and date</u>	<u>Description and quantity of ordered equipment</u>	<u>Value of order</u>	<u>Date of completion of delivery</u>		<u>Remarks indicating reasons for late delivery, if any</u>	<u>Has the equipment been satisfactorily functioning? (Attach a certificate from the Purchaser/Consignee)</u>
				As per contract	Actual		
1	2	3	4	5	6	7	8

**Signature and seal of the Bidder**

**FORM OF AFFIDAVIT FOR CORRECTNESS OF  
INFORMATION AND DOCUMENTS SUBMITTED WITH BID**

*[Reference ITB 5]*

*[This affidavit should be on a non-judicial stamp paper of Rs.10/- and shall be attested by Magistrate/ Sub-Judge/ Notary Public]*

I, ..... (name of the authorised representative of the Bidder) solemnly affirm and state as under:

- a. I hereby certify that all the information and documents furnished with the Bid submitted online in response to NIT No. 25/2020-21 date 03/09/2020 issued by **The Scientist – C, CPC, CWPRS, Pune - 24** for **Supply, Installation, Testing and Commissioning of Fully Automated Table Top Static Tri-axial Soil Test System for CWPRS, Pune** are true and correct.
  
- b. \*I hereby certify that I have been authorised by .....  
..... (the Bidder) to sign on their behalf, the Bid mentioned in paragraph 1 above.

Deponent

Place: .....

Date: .....

*\* This sub-paragraph is not applicable if the Bidder is an individual and is signing the Bid on his own behalf.*

## **Section 4 – Contract Forms**

## **Section 4 – Contract Forms**

### **Table of Forms**

<b>1</b>	<b>NOTIFICATION OF AWARD</b>	<b>39</b>
<b>2</b>	<b>CONTRACT AGREEMENT</b>	<b>40</b>
<b>3</b>	<b>Performance Security (Bank Guarantee)</b>	<b>42</b>

# 1. NOTIFICATION OF AWARD

*[On letter head of the Purchaser]*

..... *[Date]*

To:

*[Name and address of the Supplier]*

**Subject: Notification of Award for Contract No. ....**

This is to notify you that your Bid dated ..... *[Insert date]* .....for execution of the . . . . . *[Insert name of the contract and identification number]* .....for the Accepted Contract Amount of ..... *[Insert amount in numbers and words in Rupees]*, as corrected and modified in accordance with the Instructions to Bidders is hereby accepted by the Purchaser.

Contract Agreement to be executed is attached. You are requested to sign it with date and return it to the Purchaser within 15 days of the date of Notification of Award, along with the Performance Security for an amount of INR..... *[Insert amount equivalent to 10% of the Contract value]* valid up to..... *[Insert date]* in one of the forms stipulated in the GCC.

This concludes the Contract.

Authorized Signature: \_\_\_\_\_

Name and Title of Signatory: **B. Suresh Kumar, Scientist 'C', CPC**

Name of Agency: **Central Water and Power Research Station, Pune-24**

**Attachment: Contract Agreement complete with Conditions of Contract**

## 2. CONTRACT AGREEMENT

*[The successful Bidder shall fill in this form in accordance with the instructions indicated]*

THIS CONTRACT AGREEMENT is made

the *[ insert: number ]* day of *[ insert: month ], [ insert: year ]*.

BETWEEN

- (1) **The Scientist 'C' Construction and Procurement Cell, Central and Power and Research Station, Khadakwasla, Pune-24**, an Office under the Ministry of Water Resources, River Development and Ganga Rejuvenation, Government of India and having its principal place of business at Sinhagad Road, Khadakwasla, Pune-24 *[ insert address of Purchaser ]* (hereinafter called "the Purchaser"), and
- (2) *[Insert name of Supplier]*, a corporation incorporated under the laws of *[insert: country of Supplier]* and having its principal place of business at *[insert: address of Supplier]* (hereinafter called "the Supplier").

WHEREAS the Purchaser invited bids for certain Goods and ancillary services, viz Supply, Installation, Testing and Commissioning of **Supply, Installation, Testing and Commissioning of Fully Automated Table Top Static Tri-axial Soil Test System for CWPRS, Pune** and has accepted a Bid by the Supplier for the supply of those Goods and Services at the Project Site(s), namely **CWPRS, Khadakwasla, Pune - 411024**, in the sum of *[insert Contract Price in words and figures, expressed in Indian Rupees]* (hereinafter called "the Contract Price").

*[Purchase should insert a Table here giving complete details of Goods and Related Services, quantities ordered, their prices and the accepted delivery schedule.]*

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
2. The following documents shall constitute the Contract between the Purchaser and the Supplier, and each shall be read and construed as an integral part of the Contract:
  - (a) This Contract Agreement
  - (b) The Purchaser's Notification of Award
  - (c) Letter of Bid and original Price Schedules
  - (d) General Conditions of Contract
  - (e) Technical Requirements (including Schedule of Requirements and Technical Specifications)



3. This Contract shall prevail over all other Contract documents. In the event of any discrepancy or inconsistency within the Contract documents, then the documents shall prevail in the order listed above.
4. In consideration of the payments to be made by the Purchaser to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Purchaser to provide the Goods and Services and to remedy defects therein in conformity in all respects with the provisions of the Contract.
5. The Purchaser hereby covenants to pay the Supplier in consideration of the provision of the Goods and Services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of *[insert the name of the Contract governing law country]* on the day, month and year indicated above.

For and on behalf of the Purchaser

Signed: *[insert signature]*

in the capacity of **Scientist 'C', CPC, CWPRS, Khadakwasla, Pune-24***[insert title or other appropriate designation]*

in the presence of *[insert identification of official witness]*

For and on behalf of the Supplier

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

in the capacity of *[insert title or other appropriate designation]*

in the presence of *[insert identification of official witness]*

**Attachment: Contract Conditions**

*[Purchaser should attach the GCC]*

### 3 Performance Security

#### (Bank Guarantee)

*[The bank, as requested by the successful Bidder, shall fill in this form in accordance with the instructions indicated]*

*[Guarantor letterhead or SWIFT identifier code]*

**Beneficiary: "Pay and Account Officer, CWPRS, Pune"** *[insert name and Address of Purchaser]*

**Date:** *\_ [Insert date of issue]*

**PERFORMANCE GUARANTEE No.:** *[Insert guarantee reference number]*

**Guarantor:** *[Insert name and address of place of issue, unless indicated in the letterhead]*

We have been informed that *\_ [insert name of Supplier, which in the case of a joint venture shall be the name of the joint venture]* (hereinafter called "the Applicant") has entered into Contract No. *[insert reference number of the contract]* dated *[insert date]* with the Beneficiary, for the supply of *\_ [insert name of contract and brief description of Goods and related Services]* (hereinafter called "the Contract").

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

At the request of the Applicant, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of *[insert amount in figures]* (\_\_\_\_\_) *[insert amount in words]*,<sup>1</sup> such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Applicant is in breach of its obligation(s) under the Contract, without the Beneficiary needing to prove or to show grounds for your demand or the sum specified therein.

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<sup>1</sup> *The Guarantor shall insert an amount representing the percentage of the Accepted Contract Amount specified in the Letter of Acceptance, and denominated either in the currency(ies) of the Contract or a freely convertible currency acceptable to the Beneficiary.*

This guarantee shall expire, no later than the .... Day of ....., 2...<sup>2</sup>, and any demand for payment under it must be received by us at this office indicated above on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded.

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*[signature(s)]*

***Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.***

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<sup>2</sup> *Insert the date sixty days after the Completion Date of the Supply or Completion of Warranty in case Warranty is applicable. The Purchaser should note that in the event of an extension of this date for completion of the Contract or the Warrant obligations, the Purchaser would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Purchaser might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months]/[one year], in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."*

## Section 5 – Schedule of Requirements

## **SECTION 5 – SCHEDULE OF REQUIREMENTS**

<b>1</b>	<b>LIST OF GOODS &amp; RELATED SERVICES AND DELIVERY PERIOD</b>	<b>46</b>
<b>2</b>	<b>TECHNICAL SPECIFICATIONS</b>	<b>47</b>
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## 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 <i>[to be provided by the Bidder]</i>
1	2	3	4	5	6	7
<i>[insert item No]</i>	<i>[insert description of Goods/Related Services]</i>	<i>[insert quantity of item to be supplied]</i>	<i>[insert physical unit for the quantity]</i>	<i>[insert place of Delivery]</i>	<i>[insert the number of days from the date of the Contract]</i>	<i>[insert the number of days from the date of the Contract]</i>
Supply, Installation, Testing and Commissioning of						
1	<b>Fully Automated Table Top Static Tri-axial Soil Test System for CWPRS, Pune as per technical specifications of Bid</b>	<b>3.0</b>	<b>Set</b>	<b>CWPRS, PUNE</b>	<b>60 days</b>	

Note:

1. All details should be filled in by Purchaser except for Colum 7.
2. Delivery Period offered by the Bidder should be filled in Column 7 by the Bidder.

## **2. TECHNICAL SPECIFICATIONS**

### **Specifications for**

### **“Fully Automated Tabletop Static Triaxial Test Equipments (3 sets) with PC based control and data acquisition”**

#### **PURPOSE:**

*Purpose of the system is to determine:*

- 1) Shear strength parameters of soil samples viz. Cohesion (c) and Angle of internal friction ( $\phi$ ) under different conditions viz. undrained / drained, unconsolidated / consolidated, etc
- 2) Stress – strain behavior of soil samples including stress paths and Elastic Modulus
- 3) Buildup of pore pressure in saturated soil samples under static deviatoric and confining stress conditions

The system should be fully automatic, tabletop and digital with closed loop servo controlled for conducting Static Triaxial Shear tests on soil samples. It should be possible to perform strain controlled tests and to apply axial loads to saturated soil specimens under various confining pressures. Control of Test as well as data acquisition of test parameters such as axial load, axial deformation, cell pressure, back pressure and pore water pressure are required to be achieved through PC / laptop. Initial settings of test parameters as well as data acquisition during the test and final presentation of results in graphical and tabular formats has to be through computer software. After installation of samples and initial settings of test parameters in software; all steps of the experiment including saturation ('B' parameter check), consolidation and shearing are to be executed automatically without any manual intervention and data should be recorded in PC. Detailed specifications of each of the machine components are given below.

#### **1.0 LOAD FRAME – TABLETOP AND DIGITAL WITH CLOSED LOOP SERVO CONTROLLED (3 SETS)**

1A	Capacity	50 kN
1B	Load frame type	Tabletop and digital with closed loop servo controlled
1C	Type of operation	Computer controlled
1D	Rate of strain	User Selectable, 0.00001 mm/min to Min. 10 mm/min, Stepper motor controlled
1E	Control	Test parameters that are to be controlled through closed loop servo controller and Personal Computer are 1. Axial load and displacement

		2. Cell pressure 3. Back pressure
1F	Computer connectivity	All 3 load frames should be connected to a single PC directly or through data acquisition system for control of test and real time display of parameters including storage of data in PC for future processing through software
1G	Power supply	Single Phase, 220 V, 50 Hz or, Three Phase 400 V

## 2.0 TRIAXIAL CELLS (TOTAL 4 NOS.)

2A	Cell size and type	Accommodate test specimen of diameter : i. 38 mm & 50 mm, 'Length to Diameter ratio' of 2.0, Single cell should accommodate specimen sizes of 38 mm and 50 mm, Non banded type – 3 Nos. ii. 50 mm & 70 mm, 'Length to Diameter ratio' of 2.0, Single cell should accommodate specimen sizes of 50 mm and 70 mm, Banded type and should be upgradable for on-specimen local strain measurement – 1 No.
2B	Maximum Working Pressure capacity	1000 kPa or higher
2C	'No-volume change ' valves	At least 4 nos. of 'No volume change valves' at bottom and at least 2 bleed ports at top of the cell
2D	Upgrade option	At least 1 cell should be upgradable (by feed through port to connect internal instrument) for on-specimen local strain measurement
2E	Test Pedestal	Top and Base pedestal for 38mm size of specimen - 3 sets Top and Base pedestal for 50 mm size specimen - 3 sets Top and Base pedestal for 70 mm size specimen - 1 set
2F	Specimen Preparation accessories	For 38 mm Specimens – 3 sets, For 50 mm specimens – 3 sets, For 70 mm specimens – 1 set of the following accessories: Acrylic Base Disk, 2-Part Compaction Mould, Rubber Membranes (pack of 50), 2-Part Vacuum Split Mould, Membrane Stretcher, Split Miter Box, O-Rings (12-pack), Filter Paper (100-pack), O-Ring Placing Tool, Filter Strips,



		Set of Porous Stones, Pair of Perspex Disc, High Vacuum Grease, Membrane Tester
2G	Triaxial Installation Kit	Complete set of fittings, connectors, tubing and tools to complete triaxial set up installation
2H	Conforming to	IS:2720 (Part 11 & 12) or BS 1377 (Part 7 & 8) or ASTM D2850, ASTMD4767, ASTM D7181

**3.0 FULLY AUTOMATED PRESSURE APPLICATION SYSTEM (PNEUMATIC OR ELECTRO-MECHANICAL TYPE) WITH CLOSED LOOP PRESSURE VOLUME CONTROLLER (INCLUDING NECESSARY ACCESSORIES)**

3A	Automatic Pressure application system with closed-loop control (with automatic on-off valve) and volume change gauge	<ul style="list-style-type: none"> <li>To apply and control Cell pressure &amp; Back pressure</li> <li>To measure volume change</li> </ul>	<p><b>Separate 3 sets for 3 triaxial cells or 1 panel containing 3 sets working for 3 triaxial cells simultaneously</b></p>
3B	Pressure sensor	Range 0-1000 kPa or higher Resolution 1 kPa or better Accuracy 0.25% of measured value or better	
3C	Volume change sensor	Maximum Volumetric Capacity 150cc to 250cc Resolution 0.01cc or better Accuracy 0.5% of measured value or better	
3D	Display	Show live readings of cell pressure, back pressure and volume change on PC	
<p>Note : The pneumatic or electromechanical Pressure system should be able to apply and control pressure to triaxial cell and back pressure line automatically. The necessary components such as Silent Air compressor (noise level less than 60 dB), Pressure gauges / transducers, Valves, Pressure tubing, Bladder Air / Water Pressure cylinders etc. are to be supplied (wherever applicable) to make the system complete.</p>			

**4.0 LOAD CELL (6 NOS.)**

4A i)	Capacity	2 kN, External	<b>3 Nos.</b>
ii)	Resolution	1 N or better	
iii)	Accuracy	0.2% of measured value or better	
iv)	Overload capacity	110% of rated capacity or better	
v)	Sensing element	Strain gauge	
4B i)	Capacity	10 kN, External	<b>3 Nos.</b>
ii)	Resolution	5 N or better	
iii)	Accuracy	0.2% of measured value or better	
iv)	Overload capacity	110% of rated capacity or better	
v)	Sensing element	Strain gauge	

#### 5.0 DISPLACEMENT TRANSDUCER

i)	Range	± 25 mm (50 mm travel)	<b>3 Nos.</b>
ii)	Resolution	0.01 mm or better	
iii)	Accuracy	0.2% of measured value or better	
iv)	Sensing element	LVDT	

#### 6.0 PORE PRESSURE TRANSDUCER

i)	Capacity	1000 kPa or higher	<b>3 Nos.</b>
ii)	Resolution	1 kPa or better	
iii)	Accuracy	0.1% of measured value or better	
iv)	Max. Overload	125 % of rated capacity	

#### 7. CALIBRATION CERTIFICATE

Load, axial displacement and pressure measuring devices shall meet the minimum performance criteria prescribed in international standards. For all sensors, the supplier should provide

calibration certificates with traceability and accuracy certificate from NABL or internationally accredited laboratory.

**8.0 WATER DE-AIRING SYSTEM INCLUDING NECESSARY ACCESSORIES - 1 No.**

**9.0 DATA ACQUISITION AND CONTROL UNIT (TOTAL 3 NOS. FOR 3 INDIVIDUAL LOAD FRAMES)**

Microprocessor based digital servo controlled data acquisition unit separate or in-built with triaxial frame with minimum 16-bit resolution, 850 MHz micro-processor or better, 64 MB RAM and 128 MB solid state disk. It should be configurable to read up to 8 transducers or inputs and control up to 4 outputs. All three data acquisition units should be able to connect to a single PC for control of test and real time display of test parameters. Sampling rate should be minimum 40 readings per sec.

**10.0 DATA RETRIEVAL SYSTEM AND SOFTWARE**

i)	Data Retrieval System (1 No.)	<p>Data Retrieval System should consist of PC having configuration:</p> <ul style="list-style-type: none"> <li>• Processor – Intel i7 (6<sup>th</sup> generation) or better,</li> <li>• RAM – 8 GB DDR4 or better,</li> <li>• HDD – 1 TB 7200 rpm SATA or better;</li> <li>• LED Display Unit : 19.5” wide LED 16:9 (1600 x 900 resolution) or better Digital Colour Monitor</li> <li>• Ports: At least 6 USB ports (2 USB 3.0, 4 USB 2.0) or better, 1 Display port/HDMI port/VGA port, 1 Ethernet port</li> <li>• CD ROM: 16X DVD R/W or higher</li> <li>• Graphic display card : Add on or in-built graphic display card with minimum 2GB RAM or better,</li> <li>• LAN: Wired integrated Gigabit Ethernet LAN</li> <li>• Operating System: Windows 10 or higher OS (Licensed), preloaded with MS Office 10 or better (Licensed) and software for carrying out static triaxial tests.</li> <li>• Preloaded Antivirus (Licensed) – Minimum 1 year validity</li> <li>• Keyboard: 104 keys or higher OEM USB keyboard or</li> </ul>
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		<p>better</p> <ul style="list-style-type: none"> <li>• Mouse: Optical Scroll with USB or better</li> <li>• Operating voltage: 220 V, 50 Hz</li> <li>• Battery backup: UPS 700 VA or better with min 30 mins. back up.</li> </ul>
ii)	Printing system ( <b>1 No.</b> )	<p>Color Laser Printer having following specifications:-</p> <p>Paper Size : A4 size prints</p> <p>Resolution (Black/colour): 600×600 dpi or better</p> <p>Cartridge Number: 4 (1 each Black, Cyan, Magenta, Yellow)</p> <p>Cartridge yield: Min 900-1000 pages for both black and 3 colour cartridges</p> <p>Print paper speed Black/Colour: 16/16 ppm or better</p> <p>Duty Cycle (Monthly, A4): 30000 pages or better</p> <p>Control Panel: Button and LED/touchscreen display</p> <p>Capacity of input tray: 150 sheets or better</p> <p>Maximum output capacity: 100 sheets or better</p> <p>Duplex printing: Yes</p> <p>Connectivity: Hi-speed USB 2.0 port, Network capabilities through built-in Ethernet network port</p> <p>Processor speed: 800 MHz or better</p> <p>Memory: 128 MB DDR or better</p> <p>Paper type: Plain, bond, glossy, letterhead</p> <p>Compatible operating system: Windows 7, 8, 10 (32 bit or 64 bit) operating system</p> <p>Warranty: 1 year warranty</p>
iii)	<p>Software Package</p> <p><b>(1 No.)</b></p> <p>(All 3 sets of triaxial system should be operated and controlled by a single software package)</p>	<p>Software to carry out following test programs :</p> <ol style="list-style-type: none"> <li>Saturation and consolidation (isotropic and anisotropic) of test specimen (for automatic saturation, B-value check and consolidation)</li> <li>Triaxial tests such as UU, CU and CD</li> <li>All initial test set-up through software</li> <li>Display of test parameters viz. load, displacement, confining pressure, Pore pressure and volume change on</li> </ol>

		<p>PC continuously during the test.</p> <p>e) Capable of graphical and numerical monitoring with real time data display and curves</p> <p>f) Preinstalled standard test programs for soil triaxial testing</p> <p>g) Add on <math>K_0</math> test module</p> <p>h) Stress path</p> <p>i) Presentation of results in following graphical forms.</p> <ul style="list-style-type: none"> <li>• Load vs. deformation</li> <li>• Deviatoric stress vs. %strain</li> <li>• Excess pore pressure vs %strain</li> <li>• Plot of Mohr Circle to calculate cohesion and friction angle</li> <li>• p-q plot and calculation of cohesion and friction angle</li> <li>• Plot of Stress Path</li> </ul> <p>j) Downloading data to Data Acquisition System with facility to export raw data to excel and plots to image format</p> <p>k) Auto data backup to secure location</p> <p>l) User Customizable report format and screen layout with full flexibility of adding and removing of items</p> <p>m) Software should be user-friendly with features to perform the tests in all control modes.</p> <p>n) The software should have Inbuilt tutorials and user manuals</p> <p>o) Advanced windows style password security to manage and secure data</p> <p>p) Software up-gradation should be free of cost during warranty period</p>
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**Bidder's Signature**

### 3. COMPLIANCE STATEMENT

Item	Technical Specifications		Specification offered by bidder with brand and Model No	Complied/ Not Complied
<b>General description</b>		Fully Automated Tabletop Static Tri-axial Test Equipments (3 sets) with PC based control and data acquisition”	Manufacturer Name: Model no. Place: Tel: Fax: Email:	
<b>1.0</b>	<b>LOAD FRAME – TABLETOP AND DIGITAL WITH CLOSED LOOP SERVO CONTROLLED --- (3 SETS)</b>			
1A	Capacity	50 kN		
1B	Load frame type	Tabletop and digital with closed loop servo controlled		
1C	Type of operation	Computer controlled		
1D	Rate of strain	User Selectable, 0.00001 mm/min to Min. 10 mm/min, Stepper motor controlled		
1E	Control	Test parameters that are to be controlled through closed loop servo controller and Personal Computer are  1. Axial load and displacement 2. Cell pressure 3. Back pressure		
1F	Computer connectivity	All 3 load frames should be connected to a single PC directly or through data acquisition system for control of test and real time display of parameters including storage of data in PC for future processing through software		
1G	Power supply	Single Phase, 220 V, 50 Hz or, Three Phase 400 V		

2.0	<b>TRIAXIAL CELLS ---- 4 NOS.</b>			
2A	Cell size and type	Accommodate test specimen of diameter : i. 38 mm & 50 mm, 'Length to Diameter ratio' of 2.0, Single cell should accommodate specimen sizes of 38 mm and 50 mm, Non banded type – 3 Nos. ii. 50 mm & 70 mm, 'Length to Diameter ratio' of 2.0, Single cell should accommodate specimen sizes of 50 mm and 70 mm, Banded type and should be upgradable for on-specimen local strain measurement – 1 No.		
2B	Maximum Working Pressure capacity	1000 kPa or higher		
2C	'No-volume change ' valves	At least 4 nos. of 'No volume change valves' at bottom and at least 2 bleed ports at top of the cell		
2D	Upgrade option	At least 1 cell should be upgradable (by feed through port to connect internal instrument) for on-specimen local strain measurement		
2E	Test Pedestal	Top and Base pedestal for 38mm size of specimen - 3 sets Top and Base pedestal for 50 mm size specimen - 3 sets Top and Base pedestal for 70 mm size specimen - 1 set		
2F	Specimen Preparation accessories	For 38 mm Specimens – 3 sets, For 50 mm specimens – 3 sets, For 70 mm specimens – 1 set of the following accessories:		

		Acrylic Base Disk, 2-Part Compaction Mould, Rubber Membranes (pack of 50), 2-Part Vacuum Split Mould, Membrane Stretcher, Split Miter Box, O-Rings (12-pack), Filter Paper (100-pack), O-Ring Placing Tool, Filter Strips, Set of Porous Stones, Pair of Perspex Disc, High Vacuum Grease, Membrane Tester		
2G	Triaxial Installation Kit	Complete set of fittings, connectors, tubing and tools to complete triaxial set up installation		
2H	Conforming to	IS:2720 (Part 11 & 12) or BS 1377 (Part 7 & 8) or ASTM D2850, ASTM D4767, ASTM D7181		
<b>3.0</b>	<b>FULLY AUTOMATED PRESSURE APPLICATION SYSTEM (PNEUMATIC OR ELECTRO-MECHANICAL TYPE) WITH CLOSED LOOP PRESSURE VOLUME CONTROLLER (INCLUDING NECESSARY ACCESSORIES) --- Separate 3 sets for 3 triaxial cells or 1 panel containing 3 sets working for 3 triaxial cells simultaneously</b>			
3A	Automatic Pressure application system with closed-loop control (with automatic on-off valve) and volume change gauge	<ul style="list-style-type: none"> <li>To apply and control Cell pressure &amp; Back pressure</li> <li>To measure volume change</li> </ul>		
3B	Pressure sensor	Range 0-1000 kPa or higher Resolution 1 kPa or better Accuracy 0.25% of measured value or better		
3C	Volume change sensor	Maximum Volumetric Capacity 150cc to 250cc Resolution 0.01cc or better Accuracy 0.5% of measured value or better		



3D	Display	Show live readings of cell pressure, back pressure and volume change on PC		
<p>Note : The pneumatic or electromechanical Pressure system should be able to apply and control pressure to triaxial cell and back pressure line automatically. The necessary components such as Silent Air compressor (noise level less than 60 dB), Pressure gauges / transducers, Valves, Pressure tubing, Bladder Air / Water Pressure cylinders etc. are to be supplied (wherever applicable) to make the system complete.</p>				
<b>4.0</b>	<b>LOAD CELL ----- 6 NOS</b>			
<b>4A i)</b>	Capacity	2 kN, External	<b>3.0 Nos</b>	
ii)	Resolution	1 N or better		
iii)	Accuracy	0.2% of measured value or better		
iv)	Overload capacity	110% of rated capacity or better		
v)	Sensing element	Strain gauge		
<b>4B i)</b>	Capacity	10 kN, External	<b>3.0 Nos</b>	
ii)	Resolution	5 N or better		
iii)	Accuracy	0.2% of measured value or better		
iv)	Overload capacity	110% of rated capacity or better		
v)	Sensing element	Strain gauge		
<b>5.0</b>	<b>DISPLACEMENT TRANSDUCER</b>			
i)	Range	± 25 mm (50 mm travel)	<b>3.0 Nos</b>	
ii)	Resolution	0.01 mm or better		
iii)	Accuracy	0.2% of measured value or better		
iv)	Sensing element	LVDT		

<b>6.0</b>	<b>PORE PRESSURE TRANSDUCER</b>			
i)	Capacity	1000 kPa or higher	<b>3.0 Nos</b>	
ii)	Resolution	1 kPa or better		
iii)	Accuracy	0.1% of measured value or better		
iv)	Max. Overload	125 % of rated capacity		
<b>7.0</b>	<b>CALIBRATION CERTIFICATE</b>	<b>Load, axial displacement and pressure measuring devices shall meet the minimum performance criteria prescribed in international standards. For all sensors, the supplier should provide calibration certificates with traceability and accuracy certificate from NABL or internationally accredited laboratory.</b>		
<b>8.0</b>	<b>WATER DE-AIRING SYSTEM INCLUDING NECESSARY ACCESSORIES -- 1 No.</b>			
<b>9.0</b>	<b>DATA ACQUISITION AND CONTROL UNIT (TOTAL 3 NOS. FOR 3 INDIVIDUAL LOAD FRAMES)</b>			
i)	Microprocessor based digital servo controlled data acquisition unit separate or in-built with triaxial frame with minimum 16-bit resolution, 850 MHz micro-processor or better, 64 MB RAM and 128 MB solid state disk. It should be configurable to read up to 8 transducers or inputs and control up to 4 outputs. All three data acquisition units should be able to connect to a single PC for control of test and real time display of test parameters. Sampling rate should be minimum 40 readings per sec.			

10.0	DATA RETRIEVAL SYSTEM AND SOFTWARE			
i)	Data Retrieval System (1 No.)	<p>Data Retrieval System should consist of PC having configuration:</p> <ul style="list-style-type: none"> <li>• Processor – Intel i7 (6<sup>th</sup> generation) or better,</li> <li>• RAM – 8 GB DDR4 or better,</li> <li>• HDD – 1 TB 7200 rpm SATA or better;</li> <li>• LED Display Unit : 19.5" wide LED 16:9 (1600 x 900 resolution) or better Digital Colour Monitor</li> <li>• Ports: At least 6 USB ports (2 USB 3.0, 4 USB 2.0) or better, 1 Display port/HDMI port/VGA port, 1 Ethernet port</li> <li>• CD ROM: 16X DVD R/W or higher</li> <li>• Graphic display card : Add on or in-built graphic display card with minimum 2GB RAM or better,</li> <li>• LAN: Wired integrated Gigabit Ethernet LAN</li> <li>• Operating System: Windows 10 or higher OS (Licensed), preloaded with MS Office 10 or better (Licensed) and software for carrying out static triaxial tests.</li> <li>• Preloaded Antivirus (Licensed) – Minimum 1 year validity</li> <li>• Keyboard: 104 keys or higher OEM USB keyboard or better</li> </ul>		

		<ul style="list-style-type: none"> <li>• Mouse: Optical Scroll with USB or better</li> <li>• Operating voltage: 220 V, 50 Hz</li> <li>• Battery backup: UPS 700 VA or better with min 30 mins. back up.</li> </ul>		
ii)	Printing system (1 No.)	<p>Color Laser Printer having following specifications:-</p> <p>Paper Size : A4 size prints</p> <p>Resolution (Black/colour): 600×600 dpi or better</p> <p>Cartridge Number: 4 (1 each Black, Cyan, Magenta, Yellow)</p> <p>Cartridge yield: Min 900-1000 pages for both black and 3 colour cartridges</p> <p>Print paper speed Black/Colour: 16/16 ppm or better</p> <p>Duty Cycle (Monthly, A4): 30000 pages or better</p> <p>Control Panel: Button and LED/touchscreen display</p> <p>Capacity of input tray: 150 sheets or better</p> <p>Maximum output capacity: 100 sheets or better</p> <p>Duplex printing: Yes</p> <p>Connectivity: Hi-speed USB 2.0 port, Network capabilities through built-in Ethernet network port</p> <p>Processor speed: 800 MHz or better</p> <p>Memory: 128 MB DDR or better</p> <p>Paper type: Plain, bond, glossy, letterhead</p> <p>Compatible operating system: Windows 7, 8, 10 (32 bit or</p>		

		64 bit) operating system Warranty: 1 year warranty		
iii)	Software Package ( <b>1 No.</b> ) (All 3 sets of triaxial system should be operated and controlled by a single software package)	Software to carry out following test programs : a) Saturation and consolidation (isotropic and anisotropic) of test specimen (for automatic saturation, B-value check and consolidation) b) Triaxial tests such as UU, CU and CD c) All initial test set-up through software d) Display of test parameters viz. load, displacement, confining pressure, Pore pressure and volume change on PC continuously during the test. e) Capable of graphical and numerical monitoring with real time data display and curves f) Preinstalled standard test programs for soil triaxial testing g) Add on $K_0$ test module h) Stress path i) Presentation of results in following graphical forms. <ul style="list-style-type: none"> <li>• Load vs. deformation</li> <li>• Deviatoric stress vs. %strain</li> <li>• Excess pore pressure vs %strain</li> <li>• Plot of Mohr Circle to calculate cohesion and friction angle</li> <li>• p-q plot and calculation of cohesion and friction</li> </ul>		

		<p>angle</p> <ul style="list-style-type: none"> <li>• Plot of Stress Path</li> </ul> <p>j) Downloading data to Data Acquisition System with facility to export raw data to excel and plots to image format</p> <p>k) Auto data backup to secure location</p> <p>l) User Customizable report format and screen layout with full flexibility of adding and removing of items</p> <p>m) Software should be user-friendly with features to perform the tests in all control modes.</p> <p>n) The software should have Inbuilt tutorials and user manuals</p> <p>o) Advanced windows style password security to manage and secure data</p> <p>p) Software up-gradation should be free of cost during warranty period</p>		
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The bidder should enclose the latest technical literature, detailing specifications, along with the technical bid. The same should also match with that given in the technical literature of the equipment supplied with the bid. In case where the same is not available in the technical literature, the relevant pages of the manual should be highlighted and submitted. The bids not satisfying with the above requirements are liable for rejection without any further correspondence with the bidder concerned.

**Bidder's Signature**

## **4. INSPECTIONS AND TESTS**

- 1) The equipment supplied should be supplied, installed and commissioned at CWPRS, Khadakwasla, Pune. The payment shall be made only after satisfactory installation and demonstration of the equipment.
- 2) Trial tests should be carried out at CWPRS laboratory on samples supplied by CWPRS.
- 3) The test results from the trial tests should be comparable with the reported results in the Literature / accepted values.
- 4) 5 days Detailed Training to about 10 officials on use of the systems should be provided by the Supplier.
- 5) A good and competent onsite technical support must be provided during warranty period within a week's notice when a problem is reported. Also excellent service support must be provided for all supplied instruments and software through factory trained personnel.
- 6) OEM or exclusive distributor shall provide User manual in English with tutorials of machine as well as software and Maintenance manual of the machine - in soft copy and one hard copy.
- 7) OEM or exclusive distributor shall mention about site requirements for installation (e.g. platform, specific water connection etc.) in technical bid.