राष्ट्रीय प्रौद्योगिकी संस्थान सिक्किम
NATIONAL INSTITUTE OF TECHNOLOGY SIKKIM
(An Institution of National Importance Under MHRD, Govt. of India)

INVITATION LETTER

Package Code: TEQIP-III/2019/ntst/95

Package Name: NITS/TEQIP-III/CE/02

Current Date: 25-Apr-2019

Method: Shopping Goods

Sub: INVITATION LETTER FOR NITS/TEQIP-III/CE/02

Dear Sir,

1. You are invited to submit your most competitive quotation for the following goods with item wise detailed specifications given at Annexure-I:

S. No.	Item Name	Quantity	Place of Delivery	Installation Requirement (if any)
1	Equipment for Geo-technical Engineering Lab	1	NIT Sikkim	YES

2. Government of India has received a credit from the International Development Association (IDA) towards the cost of the **Technical Education Quality Improvement Programme [TEQIP]-Phase III** Project and intends to apply part of the proceeds of this credit to eligible payments under the contract for which this invitation for quotations is issued.

3. **Quotation:**

   3.1. The contract shall be for the full quantity as described above.

   3.2. Corrections, if any, shall be made by crossing out, initialling, dating and re writing.

   3.3. All duties and other levies payable by the supplier under the contract shall be included in the unit Price.

   3.4. Applicable taxes shall be quoted separately for all items.

   3.5. The prices quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.

   3.6. The Prices should be quoted in Indian Rupees only.

4. Each bidder shall submit only one quotation.

5. Quotation shall remain valid for a period not less than **45** days after the last date of quotation submission.

6. Evaluation of Quotations: The Purchaser will evaluate and compare the quotations determined to be Substantially responsive i.e. which:

   6.1. are properly signed; and

   6.2. Confirm to the terms and conditions, and specifications.

7. The Quotations would be evaluated for all items together.

8. Award of contract The Purchaser will award the contract to the bidder whose quotation has been determined to be substantially responsive and who has offered the lowest evaluated quotation price.

   8.1. Notwithstanding the above, the Purchaser reserves the right to accept or reject any quotations and to cancel the bidding process and reject all quotations at any time prior to the award of Contract.

   8.2. The bidder whose bid is accepted will be notified of the award of contract by the Purchaser prior to expiration of the quotation validity period. The terms of the accepted offer shall be Incorporated in the purchase order.

9. Payment shall be made in Indian Rupees as follows:

   Satisfactory Delivery & Installation - 10% of total cost
   Satisfactory Acceptance - 90% of total cost

10. Liquidated Damages will be applied as per the below:

    Liquidated Damages Per Day Min % : 0
    Liquidated Damages Max % : 10

11. All supplied items are under warranty of **24 Months** from the date of successful acceptance of items and AMC/Others is **NA.**

12. You are requested to provide your offer latest by **17:30** hours on **31-May-2019.**

13. Detailed specifications of the items are at **Annexure-I**.

14. Training Clause (if any) **YES**

15. Testing/Installation Clause (if any) **YES**

16. Performance Security shall be applicable**: 0%**

17. Information brochures/ Product catalogue, if any must be accompanied with the quotation clearly indicating the model quoted for.

18. Sealed quotation to be submitted/ delivered at the address mentioned below:

    National Institute of Technology Sikkim,
    Barfung Block, Ravangla, South Sikkim
    Pin Code-737139.

19. We look forward to receiving your quotation and thank you for your interest in this project.

26/04/19

Dr. Achintesh N. Biswas
Nodal Officer (Procurement)

Nodal Officer (Procurement)
TEQIP-III
National Institute of Technology Sikkim

ANNEXURE-I

S. No.	Name of the Item	Quantity	Specification
1	**Unconfined Compression Tester for load measurement**	1	• Ref Standard: IS: 2720 (Part 10), ASHTO T208 • Should consist of Load Frame, Motorized three speed 50 kN. • Supplied complete with Plain Platen with Adapter and Steel Ball • Load measurement should be by means of a high sensitivity proving ring capacity 2kN • Displacement to measured with Dial Gauge 25 mm travel, 0.01 mm least count • Split Mould 38mm dia. × 76mm long • Rubber Sheath for 38mm dia. Specimen
2.	**Universal Penetrometer**		Ref. Standards - IS:1448 (Part 60), IS:1203, IS: 2720 (Part 5), ASTM D 5, IP 49,ASTM D1321, ASTM D 2884, ASTM D1403, IP 310, BS:1377, BS:2000- (Part 49), BS:4691, BS:4698, ASTM D 937, ISO 2137, IP 50, IP 179, ASTM D 217, AASHTO T49, EN DDENV 1991-2/unit is compact with in-built timer to control duration of penetration preset in factory to 5 seconds. The instrument is provided leveling screws.
3	**Direct Shear Outfit, Electronic, 2kN, complete with Data Aquisition System**	1	Ref. Standards IS:2720 (Part 13), IS:11229/ • Digital readout minimises operator error. • Reduces operator time and involvement. • Direct reading in engineering units. • Pre-calibrated before despatch. • Plug-in transducer module system/ **Type of Shear :** Direct / Residual Measurement **Operation** : Motorised **Rates of Strain :** 1.25, 0.625, 0.25, 0.125, 0.05, 0.025, (mm/min) 0.01, 0.005, 0.002, 0.001, 0.0004, 0.0002 **Specimen Size** : 60 x 60 x 25 mm **Shear Box Assembly** This assembly comprises of : ✓ Halves of the Shear Box 2 Nos. ✓ Plane Gripper Plate 2 Nos. ✓ Perforated Gripper Plate 2 Nos. ✓ Porous Stone 2 Nos. • Top Loading Pad 1 No. • Base Plate 1 No. • Shear Box Housing with two linear bearing case with steer 1 No. • Specimen Cutter 1 No. • Surcharge Weights to attain normal stress of 3 kg/cm2 1 Set surcharge weight set comprises of following weights : ✓ 0.05 kg/cm^2: 4 Nos. ✓ 0.10 kg/cm^2: 1 No. ✓ 0.20 kg/cm^2: 1 No. ✓ 0.50 kg/cm^2: 3 Nos. ✓ 1.00 kg/cm^2: 1 No • Direct/Residual Shear • Electronic Conversion Kit with Digital Indicator:- 1 No • Mode of Display : Micro controller multi line • alpha numeric VFD display for all simultaneous

			channel (No need for channel selection) • load cell:- 1No Capacity : 2 kN Universal Type, TCPR with 3 meter long cable without hooks. • Max. overload : 110% of the rated capacity. • Sensing element : Strain Gauges in full bridge configuration. • Displacement Sensor 2 Nos. • Range : ± 20 mm. Displacement sensor with 3 meter long cable • Sensing element : LVDT • Data Acquisition through Data Logger:- • Dual Channel Isolation Technology/Up to 6 Analog (± 50V) sensor inputs/ 8 flexible digital terminals/1 Serial 'Smart Sensor' port/SDI-12 (multiple networks)/programmable Analogue Output/Modbus for SCADA connection/ Web & FTP client / server/USB memory for easy data and program transfer/Analog channels: 2 analog input channels, each channel is independent and supports: one isolated 3-wire or 4-wire input, or two isolated 2-wire inputs, or three common reference 2-wire inputs. • The following maximums apply./2-wire with common reference terminal: 6 • 2-wire isolated: 4 • 3- and 4-wire isolated: 2 Integrates over 50/60Hz line period for accuracy and noise rejection • Maximum sample speed: 40Hz • Effective resolution: 18 bits • Linearity: 0.01% • Common mode rejection: >90dB • Line series mode rejection: >35dB • Low Speed Counters • 4 counters shared with digital inputs. • Low speed counters do not function in sleep mode. • Size: 32 bit Max Count rate: 10 Hz • Dedicated Counter Inputs • 4 high speed inputs • Size: 32 bit Max Count rate: 100 kHz • Input type: 2 logic level inputs (max ±30V), 2 sensitive inputs (100mV) for magnetic pickups (max ±10V) • Data Storage: Internal Store: ✓ Capacity: 128MB (approx 10,000,000 data points) ✓ Larger storage available refers to technical support. ✓ Removable USB store device (optional accessory) ✓ Types: compatible with USB 1.1 or USB 2.0 drives, e.g. Flash drive. ✓ Capacity: approx. 90,000 data points per

			megabyte. • Display and Keypad Type: LCD, 2 line by 16 characters, backlight. • Display Functions: channel data, alarms, system status. • Keypad: 6 keys for scrolling and function execution. • Status LEDs: 4 for sample, disk, attention and power. • Firmware Upgrade Via: RS232, Ethernet, or USB memory. • Real Time Clock Normal resolution: 200s • Accuracy: ±1 min/year (0°C to 40°C), ±4 min/year (-40°C to 70°C) • Power Supply • External voltage range: 10 to 30Vdc • Peak Power: 12W (12Vdc 1A) • Average power Consumption • Using 12Vdc external power source • PC with 8 GB Ram, i5 7th gen or upgraded version with windows 10 professional, 1 TB hard drive
4	**Laboratory Vane Shear Apparatus, Motorized**	2	Ref. Standard IS: 2720 (Part 30) Consists of a special motor, adjustable in height by means of a lead screw rotated by a drive wheel to enable the vane to be lowered into the specimen. Rotation of the vane is by means of an electric motor turns the upper end of a calibrated torsion spring to give a rotation of 0.10/sec. The vane shaft is attached through the hollow upper shaft to a resettable pointer which indicates the angle of torque on a dial graduated in degrees. The dial reading multiplied by spring factor gives the torque Rate of rotation: 1/60 rpm Suitable for operation on 220 V, 50 Hz, Single Phase, AC supply.
5	**Universal Automatic Compactor with Mild Steel compaction mould as per IS:2720**	1	• The electrically operated mechanical compaction process eliminates the tedious hand compaction process and results in a considerable saving of time. • Two rammers with two different stroke lengths are provided. This makes the apparatus suitable to carry out all the normal compaction operations required in soil testing laboratories including the CBR tests. • This is a new design motor driven mechanical compactor, useful for soil compaction in 100 mm or 150 mm dia. moulds. • The rammer travels across the mould and the table rotates the mould in equal steps on a stable base. • The number of blows per layer can be set at the beginning of the test. • **Rammer –** ✓ Circular faced 50mm dia. ✓ Adjustable to 2.6kg or 4.9kg weight. ✓ Drop - Adjustable to 310mm or 450mm. ✓ Supplied with Mould, 100mm dia x 127.3mm height 1,000 ml volume and 150 mm ID, 127.3 mm height 2,250 ml

			volume The equipment is suitable for operation on 220 V, 50 Hz, Single Phase, AC supply.
6	**Relative Density Apparatus**	1	• Relates the dry density of cohesionless soil to the maximum and minimum densities. • The degree of compaction of cohesionless soil can be stated in terms of relative density. • Suitable for operation on 220 V, 50 Hz, single phase,AC supply. Ref Standard IS: 2720 (Pt XIV):- **Consisting of :-** ✓ Vibrating Table ✓ Cylindrical Metal Unit Weight Mould, 3000ml capacity 1 No. ✓ Guide Sleeve with clamp assembly:-1 No. ✓ Surcharge base plate Handle ✓ Surcharge Weight ✓ The total weight together with is equivalent to 140g/cm2 for the mould being used ✓ Cylindrical Metal Unit Weight Mould 15000 ml capacity 1 No ✓ Guide Sleeve with clamp Assembly:-1 No. ✓ Surcharge base plate ✓ Surcharge weight the total weight together is equivalent to 140g/cm2 for the mould being used. ✓ Dial Gauge Holder 1 No. ✓ Calibration Bar, 75x300x3 mm 1 No ✓ Dial Gauge 25 mm travel, 0.01 mm least count, with an extension piece 1 No. ✓ Weights Handing Equipment
7	**Swell Test Apparatus with Load Frame, Hand operated**	1	• Load Frame, Hand operated, Capacity 5 Kn • Mould 100 mm dia x 127.3 mm height (1,000 ml volume) with base plate and collar. • Proving Ring, 2.5 kN capacity. • Dial Gauge 25 mm travel, 0.01 mm least count. • Perforated Swell Plate 100 mm dia. x 16 mm thick. • Spacer 100 mm dia x 12.7 mm thick. • Pair of Porous Stones 100 mm dia x 12.7 mm thick • Load Transfer Bar • Steel Ball • Soaking Tank, 250 mm dia. x 210 mm high
8	**Standard Penetration Test (SPT)**	1	• Ref. Standards IS:2131, IS:9640/Resistance is measured as the number of blows 'N' required to drive a split spoon sampler to a depth of 300 mm using a 65 kg weight falling freely through a height of 750 mm/ Split Spoon Sampler 50.8 mm OD and 38 mm ID. 1 No. • Body split lengthwise./ Shoe hardened with an inside cutting edge./ Head fitted with a ball check valve and adapter to connect 'A' type drill rod/Drive Weight Cast Iron, 63.5 kg, 78 mm bore ID approx. 1 No. • Guide Pipe Assembly Bore 73 mm OD approx. 1 No. • Tripod with Pulley and built-in Ladder. 1 No.

			• 'A' Type Drill Rods 0.5m. 2 Nos and 1 m 10 Nos. • Manila Rope 19mm dia. 10 m 1 No.
9	**Tri axial Test Apparatus, Digital with microprocessor based loading unit**	1	• Tri axial Test Apparatus, Digital with microprocessor based loading unit consists of Microprocessor Bases Load frame having Large on-board LED screen display Direct entry via a touch sensitive keyboard ✓ Rapid approach and return to datum of platen ✓ Fully variable speed, 0.00001 to 9.99999 mm/min ✓ Suitable for operation on 220 V, 50 Hz, single phase, AC supply. • Capacity : 50kN • Drive Mechanism : Stepper Motor • Drive Microprocessor controlled • Platen Speed range: 0.0001 to 9.99999 mm/minute. • Fast Forward & Reverse : 10mm / minute • Rapid Approach Speed : 25mm / minute • Horizontal clearance : 364mm • Max. vertical clearance : 910mm • Max. Platen travel : 100mm • Specimen dia : 38mm to 100 mm • Dimensions (L×W×H) : 600 × 500 × 1440 mm • Weight : 85 kg. (Approx.) • Display : 3 1/2 digit DPM,for read, load pressure and vertical displacement • Load Cell : Universal type load cell,10kN capacity, 1 No. • Displacement : LVDT 0-20mm travel 1 No. • Pore Pressure Transducer : 0-20 bar capacity 1 No. • Constant pressure system oil water type Use of Mercury is eliminated • Maintains Constant Pressure continuously • Pressure Capacity, 10 bar (10kg/cm) • Range : 10 kg/cm2 • Resolution : 0.1 kg/ cm2 • Accuracy : ± 1%of the indicated pressure • Supplied complete with Pressure Gauge, Flow Valves, connecting Pressure Hose. • Suitable for operation on 220 V, 50 Hz, Single Phase, • AC supply and Digital indicator:- Mode of Display : Micro controller multi line alpha numeric VFD display for all simultaneous channel (No need for channel selection) • Power supply Voltage: 220V, 50Hz, Single Phase. • Load cell having Capacity: 10kN • Max. overload capacity : 10% of the rated • Load Cell excitation: 5 V, DC • Resolution: 0.01kN • Sensing element: Strain gauges in full bridge configuration

			• Pore pressure transducer: Capacity: 20 bar (20 kg/cm2). • Max. overload capacity : 150% of rated • Pressure Cell Excitation: 5V, DC. • Resolution: 0.01 bar (0.01 kg/cm2). • Sensing element: Strain Gauges in full bridge configuration • Displacement transducer: Range : 0-20 mm • Sensing element : LVDT • Lateral Pressure Assembly capacity 10kg/cm2 (Pressure Chamber with foot pump). • For testing specimens of size 38 mm dia. x 76 mm long and 50 mm dia. x 100 mm long. • Tri-axial cell comprises of a perspex chamber with an anvil and a loading plunger. • The cell is easily split by releasing four tie rods. It is leak proof upto 10 bar (10 kg/cm2) fluid pressure. • An oil plug and air vent are provided for introducing a thin layer of oil over water. This provides an effective sealing at the plunger for long duration tests. The cell is also fitted with four ball valves of no-volume change type, at the base. • Top loading pad, Perspex, 38mm dia. 1No. • Plain Perspex disc 38mm dia. x 6 mm thick 1 pair. • Porous Stone 38mm dia. x 6 mm thick 1 pair. • Sheath stretcher for 38mm dia. specimen 1No. • Sand former for 38 mm dia. 1No. • Rubber sheath for 38mm dia. specimen 12Nos. • Drainage tube (short), 38 mm 4Nos. • Drainage tube (long), 38 mm 4Nos. • 'O' rings for 38mm dia. specimen 8 Nos. • Brass pedestals 38 mm dia. 1No. • Top loading pad, Perspex, 50mm dia. 1No. • Plain Perspex disc 50mm dia. x 6 mm thick 1 pair. • Porous Stone 50mm dia. x 6 mm thick 1 pair. • Sheath stretcher for 50mm dia. specimen 1No. • Sand former for 50 mm dia. 1No. • Rubber sheath for 50 mm dia. 12 Nos. • Drainage tube (short), 50 mm 4 Nos. • Drainage tube (long), 50 mm 4 Nos. • 'O' ring for 50 mm dia.-specimen 8 Nos. • Brass pedestals 50 mm dia. 1No. • Split Mould, 38mm Dia. x 76mm long 1No. • Split Mould, 50mm Dia. x 100mm 1No. • Top loading pad 38mm (plain) 1No. • Top loading pad 50mm (plain) 1No.
10	**Hydrometer**	5	Standard 152 H hydrometer with the calibration chart for each hydrometer to calculate the effective height of fall from the hydrometer reading

11	**Helical Auger**	1	The standard helical hand operated auger having 100 mm diameter with handle. 10 Nos. of extension road of 1 m length. Rod should be connected with each other through threads.
12	**Posthole Auger**	1	The Posthole auger having 100 mm diameter with handle. 10 Nos. of extension road of 1 m length. Rod should be connected with each other through threads.

FORMAT FOR QUOTATION SUBMISSION

(In letterhead of the supplier with seal)

Date: .....

To,

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Sl.No.	Description of goods\ (with full Specifications)	Qty.	Unit	Quoted Unit rate in Rs. (Including Ex-Factory price, excise duty, packing and forwarding, transportation, insurance, other local costs incidental to delivery and warranty/ guaranty commitments)	Total Price (A)	Sales tax and other taxes payable	
						In %	In figures (B)
Total Cost							

Gross Total Cost (A+B): Rs. .....

We agree to supply the above goods in accordance with the technical specifications for a total contract price of Rs. ..... (Amount in figures) (Rupees ..... amount in words) within the period specified in the Invitation for Quotations.

We confirm that the normal commercial warranty/ guarantee of ..... months shall apply to the offered items and we also confirm to agree with terms and conditions as mentioned in the Invitation Letter.

We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in bribery.

Signature of Supplier

Name: .....

Address: .....

Contact No.: .....