No.IIITS/WORKS/PMC/202407001 Dated: 1st July 2024

REQUEST FOR PROPOSALS

Indian Institute of Information Technology, Sri City, Chittoor situated in Sri City, Tirupathi District, Andhra Pradesh is in the process of constructing Hostel block- 5,Academic block, Student Activity center and Main entrance Gate in their campus at Sri City, A.P.

It is proposed to invite consultants for soil investigations at Hostel block, Academic Block, Student Activity center, Main Entrance Gate location as per specification and approved BOQ.

IIIT Sri City, Chittoor now invites Request for Proposals (RFP) from reputed consultants for Soil Investigation services.

The estimated value of the works is Rs. 2.15 Lakhs and time of completion is 15 days from the date of award.

Applicants who have successfully executed projects of similar nature only shall furnish all relevant information such as experience and constitution of the firm, works executed and works on hand with value, necessary certificates regarding satisfactory completion, registration etc along with your priced BOQ. The priced BOQ shall be submitted along with other document in a sealed envelope duly signed and mentioning RFQ Number and date of submission. Sealed envelope shall be submitted to Office of Registrar, IIITS.

Proposal in sealed envelope shall be submitted to office of the Registrar, IIIT Sri City, 630, Gnan Marg,Sri City, Satyavedu Mandal, Tirupathi District, A.P-517 646 on or before 3rd July 2024.

IIIT Sri City, Chittoor reserves the right to cancel / reject all / any applications without assigning any reason.

For further details, contact: PMC, IIIT Sri City tenders.2024@iiits.in

Receipt of this Letter of Intent may please be acknowledged.

Thanking you.

Yours truly,

For **IIIT Sri City, Chittoor**

Indian Institute of Information Technology Sri City ★ Chittoor A.P.

Authorized Signatory

We accept the terms & conditions

Authorized Sign & Seal/Stamp

Indian Institute of Information Technology, Sri City, Chittoor

Request for Proposal

No.: IIITS/RFP /Soil Investigation /2024/001, Dt. 01/07/2024

Sealed quotations in Single Cover are invited from resourceful agencies for the work of conducting **Soil Investigation and reporting for the proposed construction of various Buildings at IIIT Sri City as per standards** given in the RFP document. The Sealed quotations along with necessary documents should be submitted at the Office of Registrar, IIIT Sri City, 630, Gnan Marg, Sri City, Tirupati District, Andhra Pradesh-517 646.

Enquiry issue date	**01/07/2024**
Last Date Of RFP Submission	**05/07/2024up to 16:00 Hrs**
Date Of RFP Opening	**05/07/2024at 16:10 Hrs**
Mode of Submission	**Sealed quotation in SINGLE Cover system**
Address for Submission	The Registrar Indian Institute of Information Technology Sri City, Chittoor 630, Gnan Marg, Sri City, Satyavedu Mandal, Thirupathi District, Andhra Pradesh – 517 646.

For & On behalf of IIIT Sri City, Chittoor

Authorized Signatory

Signature of the tenderer with seal

I. Special Terms & Conditions:

1. SCOPE OF WORK

The work comprises necessary borings, insitu tests inside bore holes and consolidated reports on the boring work as per IS 1892, for a compact building site covering an area of about 0.4 hectares one borehole or trial pit in each corner and one in the center should be adequate. For very large areas covering Industrial and residential colonies, the geological nature of the terrain will help in deciding the number of boreholes or trial pits.
The scopes of work to be included in the quotation are:

As per BOQ specified Number of boreholes at specified locations to be bored upto one layer of hard stratum with N Value over 100 and conducting the following tests:

i. Conducting standard penetration test and collecting disturbed and disturbed samples.
ii. Determination of Liquid and plastic limits.
iii. Determination of Natural moisture content.
iv. Grain state analysis.
v. Unconfined compression test\Triaxial test.
vi. Consolidation test.
vii. Resistivity of soil
viii. Determination of PH Value of water along with the water table location
ix. Differential Free swell Index and un-drained shear strength
x. Angle of internal friction and Earth Resistivity test.
xi. Coefficient of friction between soil and concrete surface
xii. Chemical analysis of subsoil water and soil with recommendation for steps to taken if any for durability of concrete.
xiii. The report should give bearing capacity, settlement, computation and foundation recommendation for the proposed structures within the site. Recommendations for ancillary buildings like Utility building, compound wall and villas are also to be given separately.
xiv. Rock outcrop to be identified in the drawing / report to be submitted by you.
xv. In case of hard rock, the properties of rock including Recovery, RQD,UCC and Point load index .
xvi. In case of weathered rock, grain size of gravel, Sand, Silt &Clay and Recovery with the average thickness of layer drilled for Hard and weathered rock.

2. FOUNDATION RECOMMENDATIONS

GENERAL

1) Recommended type(s) of foundation system(s) (e.g., spread footings, mats, driven or cast-in-place deep foundation elements).

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2) In case of driven or cast-in-place deep foundation, the vertical, lateral and uplift capacity is to be furnished.
3) Anticipated differential and total foundation settlements.
4) Compaction criteria.
5) Subgrade preparation and modulus of subgrade reaction to be used for slabs on grade.
6) Hydrostatic uplift forces for basement construction below the water table, if applicable.
7) Determination as to whether capillary water break, moisture/vapor barrier, etc., are required.
8) Soil pressures (active, at-rest, and passive) to be used for the design of cantilever and basement-type retaining walls, along with recommended surcharge loadings. Also provide lateral pressures on foundation walls or retaining walls due to earthquake motions.
9) Determination as to whether soil design parameters can be increased for short-term loadings (wind/earthquake).

3. SHALLOW FOUNDATIONS

1) If shallow foundations are recommended, supply the following data:
2) Allowable soil bearing pressure. The report should indicate if net or gross values are being supplied.
3) Coefficient of friction for sliding, and whether it can be combined with passive pressure values.
4) Vertical and horizontal modulus of subgrade reaction and spring constants for shallow foundations where more exact displacement analysis is required.
5) Anticipated factors of safety for design values.

4. BUILDING SUBGRADE RECOMMENDATIONS

1) Recommendations for preparation of building subgrade. Address requirements for proof rolling and removal of unsuitable or unsatisfactory and organic material.
2) Recommendations for the use of native material for sub base or the use of imported structural fill material to obtain improved subgrade values.
3) Compaction criteria for all materials below slabs-on-grade and foundations, including foundation drain backfill material. Compaction criteria for all components of the pavement sections including the subbase, base course, and asphalt pavements.
4) Allowable foundation bearing pressures, sliding coefficients, and anticipated factors of safety.

You are requested to carry out the scope of work awarded to you as per "SPECIFICATIONS FOR SUBSOIL INVESTIGATION BORING" which is as noted below:

i) Bore Holes

1) The relevant Standard I.S. 1892 1979 should be adhered to. Particularly the following points are to be carefully observed:
2) Before starting the boring operations, all the equipment (boring rig, samplers, SPT

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Spoons clay\rock cutters, Vane shear equipment etc.) should be carefully inspected to make sure that they are in good working condition.

3) All observations are to be recorded in standard sheets as specified by I.S.1892/1979 by the bore foreman.
4) It is necessary to collect water samples from bore holes for chemical analysis in the laboratory. Where water is used for advancing bore holes (for example: Calyx Drilling), at least a few bore holes should be advanced using heavy duty shell and auger equipment, if necessary, so that water samples can be obtained at different elevations in the bore holes.
5) Where casing pipe is used for retaining the bore hole, the casing pipe should be driven always upto the bottom of the bore hole or ahead if possible. This is very important especially in case of loose sand and silt layers below ground water level and soft clay layers.
6) Extreme care is to be taken to see that thin (but significant for the foundation analysis) layers are not missed, (e.g. thin previous layers in an impervious deposit, thin soft layers in dense granular deposits etc).
7) From every layer, but least every 1.5 m, one representative sample (0.5 to 1.0 Kg by weight) is to be taken.
8) At least one undisturbed sample of not less than 100 mm diameter shall be collected from every cohesive soil layers; it may not be possible to obtain undisturbed clay samples, if the soil is very stiff to hard (SPT value greater than 16). It may also be not possible to obtain undisturbed clay samples, if the clay is soft or very soft (SPT Value less than 4) at least one undisturbed clay sample shall be obtained for every 3 m thickness of cohesive soil layer.
9) The area ratio of the sampler used for undisturbed sampling in cohesive soils should preferably be less than 10% and, in any case, not more than 15%.
10) In the case of very soft to medium stiff cohesive soil layers (SPT values less than 8), in insitu vane shear tests using equipment as per I.S. 44341978 are to be carried out, at least every 3 m.
11) In case of cohesion less soils like sands and gravels where it is difficult to take disturbed samples, standard penetration test (SPT) or an equivalent test should be conducted for each layer, but in general every 1.5 m from GL to 10 m and 2 m interval beyond 10 m. The samples obtained from the sampling spoon in the Standard Penetration Test should be preserved and considered as a representative sample.
12) The SPT may also be conducted in cohesive soil layers, at intervals specified in (g) above; however, where undisturbed (UD) samples are to be collected; the SPT may be conducted at every 3 m intervals. The UD sampling, vane shear testing, and SPT may be done in a sequence, every 3 m depth intervals.
13) Whenever hard rock is encountered, the drilling shall be continued using diamond drilling to a depth of 2 m, the rock samples are extracted and arranged in a core box. Details such as recovery ratio shall be noted.
14) Water level in the bore hole should not be lowered below the Ground Water Level (GWL). If water level in the bore hole comes down in the process of boring, it should be maintained at or above the GWL, by pouring water into the bore holes.

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15) Sometimes, it is advantageous to keep the water level in the bore hole higher than GWL. This will help to stabilize the bottom part of the bore hole.
16) While boring above GWL, it is not permissible to pour any water into the bore hole, in shell and sugar boring.
17) Water level in the bore hole should be recorded as it appears first, by every sudden change, as well as before starting and stopping of work every day for alteast one week or till it stabilizes.
18) After the bore hole is advanced to the required depth, it should be filled with inert materials
19) Such as sand and fine gravel; where casing pipes are used, the sand / gravel filling is to be done as the casing pipes are withdrawn.
20) You should also indicate in your report the suitability of excavated top soil for use in back filling foundation pits and also within the plinth of the building in basement.
21) Shrub clearance etc required for testing to be included after visiting the site and assessing the conditions.

5. COMMERCIAL CONDITIONS

PRICE: The total price payable shall be based on the measured bill of quantities i.e. on actual basis as certified by Architects on the basis of agreed rates.The rates quoted shall provide for supply of required materials, consumables, skilled and unskilled labour, supervision, all equipment tools and tackles as well as preparatory incidental / intermediate / auxiliary or enabling work etc. as envisaged and as called for in the specifications as per Standard Codes of practice and as per instructions / directions of Architects.

6. COMPLETION PERIOD:

1) You shall mobilize at site within the specified 7 days on receipt of Work Order and thereafter complete the work within the time schedule noted below:
2) Field work: 7 days, Laboratory work and submission of report: 3 days after field work.
3) Boreholes are to be done within specified days at the location directed by the Architects.
4) The plate load test is to be carried out after completion of Earthwork by other agency. Bore hole locations are to be marked in plan and submitted with the report

The materials, design and workmanship shall satisfy the relevant Indian Standard, the job specifications contained herein and codes referred to; where the job specifications stipulate requirements in addition to those contained in the standard codes and specifications, those additional requirements shall also be satisfied. In the absence of any standard / specifications / codes of practice for detailed specifications covering any part of the work covered in the scope of work awarded to you, the instructions / directions of Architects, or their representative will be binding.

All materials brought shall be in good condition and if rejected for any reason by Architects

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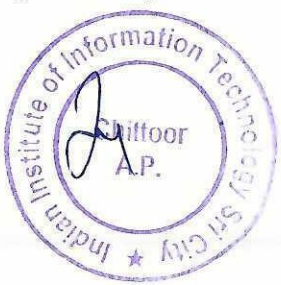


they shall be replaced within a reasonable time as fixed by Architects, at no extra cost.

The entire work covered scope of work shall be carried out in accordance with Technical Specifications, Standards, etc. and as well as the instructions of Architects.

It is to be clearly understood that you shall be responsible to complete the entire work in all respects and any works to achieve, though not specifically covered under the scope of work, shall be carried out by you.

You shall give every day category wise labour and equipment's deployed, report along with progress of work done on previous day in the Performa approved by Architects.

7. FIRMNESS OF OFFER:

The rate quoted should be firm till completion of the work. The rate should include mobilization, labour and all incidentals.

8. PAYMENT TERMS:

a. Payment will be made on actual measurements.

b. 50% of the total value on completion of field work before submission of report.

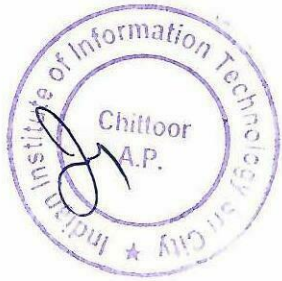
c. Balance 50% of the bill amount after submission of the report.

9. TAXES AND DUTIES:

The Rates unless otherwise specified, will be deemed to include sales tax, excise duty, , sales tax or VAT or GST or any other taxes and duties, which are in force or may be levied by the Central/State/Local Governments from time to time, on the production and sale of the goods. TDS/Income Tax etc. are to be deducted at source from the bills of contractor as per the rules.

10. JURISDICTION: All the disputes arising out of this order shall have exclusive jurisdiction of Tirupathi, Andhra Pradesh only.

The Director, IIIT Sri City reserves the right to accept or reject any or all the Tenders without assigning any reason.



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Quotation

Name of Work: Soil Investigation and reporting for the proposed construction of various Buildings at IIIT Sri City as per standards
Name of the Bidder:

S.No.	Description	Qty	Unit	Rate (in Rs.)	Amount (in Rs.)
A	**MOBILISATION OF EQUIPMENT & DEMOBILIZATION POST COMPLETION**				
1	Mobilization of rotary drilling and boring equipment as required completing the work within the stipulated time schedule including mobilization of necessary associated machineries and accessories etc. Rate shall include for supply of equipment at site including transportation, loading and unloading of the equipment's and required skilled personnel, erection of the equipment at required locations for boring of hole to the specified depth and size, shifting of rig to the required different location for boring and demobilization of the equipment's and machineries after completion of boring works, clear or demobilize the equipment's from the site after completion of the entire work. Note: Please indicate the number of rigs being planned for mobilization at site for completion of the boring work (Nos as per drawing) within the stipulated time period	1	Lot		
B	**BORING AND DRILLING**				
1	Boring and Drilling of Hole using rotary drilling rig in any kind of soils including medium /soft rocks up to refusal strata to a depth as given below and to a size of 150mm dia to N > 100 with conducting all kinds of tests including Standard penetration tests confirming to IS, but without Core recovery.				
	a) Up to 10 Mtr. depth from existing natural ground level.	60	RM		
	b) Depth from 10 Mtr. to 20 Mtr. Or N >100 whichever is lower	40	RM		

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	c) Depth from 20 Mtr. to 30 Mtr. Or N >100 whichever is lower	40	RM		
2	Boring and Drilling in Rock layers / Hard strata as given below using Nx size TC/diamond bit with core recovery. (5m drilling in Medium / Hard rock)				
	I) In Weathered / Medium rock (N≥100) covering the below requisites a) Grain size of gravel b) Sand c) Silt & Clay d) Recovery e) Shear strength of rock at each depth	40	RM		
	II) In Hard rock / Medium rock covering the below requisites a) Core Recovery at each depth b) Rock Quality Designation at each depth c) UCS d) Point load index e) Shear strength value at each depth	30	RM		
C	**LABORATORY TESTS:**				
1	Conducting and submitting the following laboratory tests: a) Sieve analysis, b) Liquid limit, Plastic limit and Plasticity index, c) Bulk density and moisture content, d) Hydrometer analysis, e) Specific gravity of soil, f) Differential free swell index, g) Consolidation test h) Triaxial/direct shear test, i) unconfined compressive strength, j) Soil resistivity to design the earthing system for electrical works, h) Coefficient of friction between soil and concrete surface, i) Rate of water percolation in soil j) Tensile strength test or Bracelian Test k) Static cone penetration test l) Including the other tests specified in the technical specification etc on the sample explored from the Bore hole. Rate shall include for collecting the	1	LS		

Indian Institute of Information Technology Sri City Chittoor

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	samples, analyze the samples, preparation of test reports and submission of the same with observations as part of the Main report.				
	Note : Soil samples shall be collected from the Boreholes as many required for testing of the above tests, while boring the hole. It is the responsibility of Soil Investigation agency to assess the required no & qty of disturbed and un-disturbed samples of required dia and long including protecting and packing the samples in the air tight container etc. Assessment of the each test from the above lists required for analysis is also the responsibility of Soil Investigation agency confirming to IS. As per the technical specification all the tests to be conducted for the tests for all bores.	1	LS		
2	Carrying out chemical analysis of soil / water sample for sulphates, chlorides & pH including recommendation for type of cement, grade of concrete and steel and special measures required to be taken from durability considerations including collecting the samples in bore hole and prepare and submit the test report with observations as part of the Main report confirming to IS.**For all bores**	1	LS		
3	Conducting compressive strength test, water absorption specific gravity & porosity of rock core samples recovered In weathered rock (N≥100) and In hard rock of the bore hole including specimen preparation, arranging and submitting rock core samples in core box to the required dia and length. Rate shall include for analyze the samples, preparation of test reports and submission of the same with observation as part of the Main report.	8	Each		
4	Conducting standard penetration test (SPT) and Vane shear test with in the bore holes at least one undisturbed sample of not less than 100 mm diameter shall be collected from every cohesive soil / cohesion less soils layers at 1.5 meters interval.	100	Nos		

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5	Conducting soil investigation at the proposed building in the locations as marked in the tender drawing and submitting the reports comprising the following details of laboratory tests results, field tests results, foundation recommendations, sub grade recommendations, site earth retaining system recommendations, other recommendations and details as mentioned in the detailed technical specification and BOQ through 4 sets of hard copies reports, 2 sets of soft copies in CD format and full length video coverage of collecting samples, total in-situ testing, lab test procedures and other tests specifid in technical specification. The quoted rate is including collection of samples, in-situ testing procedure and lab testing procedures should be done as specified in the relevant IS code, Technical specification and BOQ.	1	Lot		
Total Amount in Rs.					
GST Amount in Rs					
Grand Total Amount Rs.					
Amount in words:					

Amount in Words with GST:

For & On behalf of IIIT Sri City, Chittoor

Authorized Signatory

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