



राष्ट्रीय विज्ञान शिक्षा एवं अनुसंधान संस्थान, भुवनेश्वर
(परमाणु उर्जा विभाग, भारत सरकार का एक स्वयं शासित संस्थान)
NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH, BHUBANESWAR
(AN AUTONOMOUS INSTITUTE UNDER DEPT. OF ATOMIC ENERGY, GOVT. OF INDIA)

NIT No. & Date: - NISER/ IWD-Civil/Services/2018/04~~4~~ Dtd-01.06.2018.

Name of Work: - Construction of one Basket ball and two Tennis courts with asphalt base & 8-layer synthetic acrylic surface of ITF standard at football ground, NISER Campus, Jatni, Khurda.

Estimated Cost of Tender: - Rs 1,10,91,327.00
Completion Time: - 03 (Three) calendar month
Earnest Money : - Rs.2,21,826.00
Cost of tender (non-refundable):- Rs. 1000.00 (Rupees One thousand Only).

NOTE:

1. The details of tender notification can be downloaded from www.tenderwizard.com/NISER under "**Tender Free View**" link.
2. Vendors should obtain the USER ID and PASSWORD from www.tenderwizard.com/NISER by clicking on "**REGISTER ME**" link in the homepage.
3. The Vendor registration fees has to be paid to ITI Ltd for Rs. 1180/-. Using the e-payment link provided at the time of registration, and the mode of payments are Credit Card, Debit Card and Internet Banking. Vendor Registration is Valid for 1year.
4. For further details on e-Tender participation, please contact ITI Help desk on
 - Telephone: 080-49352000/9686115318
 - Email: harishkumar.kb@etenderwizard.com, ambasa@etenderwizard.com.
5. Tenders should be submitted only through e-Tender portal and obtain the Tender Acknowledgement copy as a proof of successful submission.



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TENDER DOCUMENTS

NIT No. NISER/ IWD-Civil/Services/2018/04

Date: 01.06.2018

Name of work: Construction of one Basket ball and two Tennis courts with asphalt base and 8-layer synthetic acrylic surface of ITF standard at football ground, NISER Campus, Jatni, Khurda.

I N D E X

Sl. No.	Particulars	Remarks
1.	Particulars of Contractor	First Part- Technical Bid
2.	Eligibility Criteria	
3.	Abstract of general terms and conditions	
4.	Checklist of documents	
5.	Experience of Contractor	
6.	Bill of Quantities	Second Part - Financial Bid

NOTE: Tender can be downloaded and bided from website address: www.tenderwizard.com/NISER. Tender documents for viewing only are also available in NISER web-site address: www.niser.ac.in

SIGNATURE OF THE OFFICER ISSUING TENDER

01/06/18

NAME OF THE WORK

Construction of one Basket ball and two Tennis courts with asphalt base and 8-layer synthetic acrylic surface of ITF standard at football ground, NISER Campus, Jatni.

FIRST PART

TECHNICAL BID

NOTE

The tenderer should enclose the following documents along with the Technical Bid otherwise tender will be summarily rejected.

- 1)
 - a) Scanned copy of self-attested works completion certificate during the last seven years from Govt./Semi- Govt. organization/PSU's/ Central autonomous bodies/ Sports authority of India not below the rank of E.E as per NIT.
 - b) Scanned copy of self-attested valid Registration Certificate / Proof of manufacturing unit / authorized dealership certificate from OEM (in case of authorized dealer/supplier/contractor).
 - c) Scanned copy of self-attested PAN card.
 - d) Scanned copy of self-attested GST Registration certificate.
 - e) Scanned copy of Income tax clearance certificate.
 - f) Scanned copy of the cost of tender paper for the bidders and EMD amount in separate D.D's as per NIT.
- 2) Also, contractors shall submit the above documents (self-attested) with original for verification before opening of technical bid for verification with original DD for EMD and cost of tender. The bidder those who will not submit the self-attested hard copies of required documents in the office, the technical bid of the bidder will not be opened.
- 3) Incomplete/Partial bid or bid not submitted in prescribed format will be rejected.



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NOTICE INVITING TENDER

Director, NISER invites online tender on two bid system (Technical Bid and Financial Bid) for the following work:-

NIT No. NISER/ IWD-Civil/Services/2018/04, Dated: 01.06.2018

Name of the Work: - **Construction of one Basket ball and two Tennis courts with asphalt base and 8-layer synthetic acrylic surface of ITF standard at football ground, NISER Campus, Jatni, Khurda.**

Estimated Cost	:	Rs 1,10,91,327.00
Earnest Money	:	Rs. 2,21,826.00
Time of Completion	:	03 (Three) calendar month
Cost of tender (non-refundable)	:	Rs. 1000.00 (Rupees One thousand Only)

Tender can be downloaded and bided from website address: www.tenderwizard.com/NISER.
Tender documents for viewing only are also available in NISER website address: www.niser.ac.in

Last date of submission of tender (online):	05 July, 2018 up to 12.30 PM.
Original EMD & Tender Paper cost submission at Office:	05 July, 2018 up to 3.45 PM.
Tender Opening date (Technical Bid):	05 July, 2018 at 04.00 PM.


Registrar, NISER



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Tender Notice

NIT No. NISER/ IWD-Civil/Services/2018/04A

Dated: 01.06.2018

Director, NISER hereby invites item rate tender in two parts for the following work of “**Construction of one Basket ball and two Tennis courts with asphalt base and 8-layer synthetic acrylic surface of ITF standard at football ground, NISER Campus, Jatni, Khurda**” from authorized manufacturer or dealer / contractors of CPWD/MES/Railways/State PWDs/ PSU's/ Central Autonomous bodies/ Sports Authorities of India/ AITA and/or those who have worked for DAE or its Organizations or Govt. /Semi Government organizations / Sports Authorities of India/AITA and have successfully carried out a minimum of twenty no's of Tennis / Basket ball courts (synthetic acrylic surface and asphalt base) and out of which a minimum of one/two/three similar works (synthetic acrylic surface and asphalt base Tennis or Basket ball court) of 80%/60%/40% respectively of the estimated cost or above as indicated below have successfully completed during the last seven years. The eligible contractors / bidders may submit their bid along with supporting documents of fulfilling the above conditions otherwise the bids bear the risk of not being considered. The eligible contractors are also required to submit the self-attested copies of PAN Card, Registration, IT clearance certificate and GST Registration certificate.

In support of fulfilling all the essential conditions mentioned in the previous Para the contractor shall submit the past details, mentioning the name of work, estimated cost, tendered amount, gross value of work done, date of commencement as per agreement & actual date of completion as per agreement along with schedule of quantities executed and any penalty levied due to delay in executing the work from an officer not below the rank of Executive Engineer.

Estimated Cost	EMD	Performance Security	Security Deposit	Time of completion
Rs.1,10,91,327.00	Rs.2,21,826.00	@ 5% of tendered amount	A sum @ 5% of the gross amount of the bill shall be deducted from each running bill till the sum amounts to Security Deposit @ 5% of the tendered amount of the work.	03 months from the date of receipt of acceptance letter/ submission of PG

Tender can be downloaded and bided from website address: www.tenderwizard.com/NISER. Tender documents for viewing only are also available in NISER website address: www.niser.ac.in. The tender cost of Rs. 1000.00 & EMD of Rs. 2,21,826.00, separately in the form of A/C payee/ DD/ Banker's cheque drawn on any scheduled Bank, in favor of **Director, NISER**.

The tender documents are to be submitted in two parts (Technical & Financial Bid). Self-attested documents in support of eligibility criteria of the contractor, Technical bid, tender cost and EMD are to be uploaded online. The second part with scheduled items of work & price quoted are to be uploaded in prescribed format as Financial Bid. The bidders those who are applied online have to submit the hard copies along with original documents mentioned in NIT on or before **05 July 2018 upto 3.45 PM and Technical bid will be opened at 04.00 PM on 05th July, 2018**. Those who qualify the technical bid shall be intimated later mentioning the date of opening of the financial bid.

Director, NISER, reserves the right to accept/reject any/all tenders without assigning any reason whatsoever. Part or incomplete tenders will be summarily rejected. No further correspondences whatsoever shall be entertained in this regard. Canvassing in any manner shall result in rejection of the tender.

Any dispute arising out of this shall subject to Bhubaneswar jurisdiction only.


Registrar, NISER

General Terms and Conditions:

1. Online item rate tenders are hereby invited for the work of “**Construction of one Basket ball and two Tennis courts with asphalt base and 8-layer synthetic acrylic surface of ITF standard at football ground, NISER Campus, Jatni, Khurda.** The estimated cost of work is **Rs. 1,10,91,327.00**. The Earnest Money Deposit is **Rs. 2,21,826.00**. Authorized manufacturers or dealers / contractors of CPWD/MES/Railways/State PWDs/ PSU’s/ Central Autonomous bodies/ Sports Authorities of India/ AITA and/or those who have worked for DAE or its Organizations or Govt. /Semi Government organizations /Sports Authorities of India/AITA and have successfully carried out a minimum of twenty no’s of Tennis / Basket ball courts (synthetic acrylic surface and asphalt base) and out of which a minimum of one/two/three similar works (synthetic acrylic surface and asphalt base Tennis or Basket ball court) of 80%/60%/40% respectively of the estimated cost or above as indicated above have successfully completed during the last seven years. The eligible bidders/contractors may submit their bid along with supporting documents of fulfilling the above conditions otherwise their bids bear the risk of not being considered. **The bidders/contractors those who are applied online also required to submit the self-attested copies of PAN CARD, registration, IT clearance certificate, GST registration certificate, EMD (Original) & Tender Paper Cost (Original) before opening of the technical bid on or before 05 July, 2018 upto 3.45 PM.**

In support of fulfilling all the essential conditions mentioned in the previous Para the contractor shall submit the details, mentioning the name of work, estimated cost, tendered amount, gross value of work done, date of commencement as per agreement & actual date of completion as per agreement along with schedule of quantities executed and any penalty levied due to delay in executing the work from an officer not below the rank of Executive Engineer (Civil).

2. The estimated cost of the work is **Rs. 1,10,91,327.00** (Rupees one crore ten lakh ninety one thousand three hundred and twenty seven only).
3. Period for completion of the work will be **03 calendar months** and the date of commencement shall be reckoned from the date of receipt of acceptance letter/ submission of PG.
4. The tender documents can be made available for viewing only at NISER website www.niser.ac.in.
5. Tenders can only be viewed from website www.niser.ac.in. The cost of tender document (Non-transferable) shall be submitted along with the technical bid. Please note that tender documents are not transferable. Tender can be downloaded and bided from website address: www.tenderwizard.com/NISER.

6. Tender documents are to be uploaded in two parts. The First part shall consist of the technical Bid including the cost of tender, EMD and the documents in support of eligibility criteria. The second part shall contain the financial bid showing the detail schedule of work. **Tenders complete in all respects, will be accepted through online up to 12.30 PM on 05th July 2018. The bid shall be opened at 04.00 PM on 05th July 2018.** Please note, that bids submitted without tender cost and EMD are summarily being rejected. The bidder those who will not submit the self-attested hard copies of required documents in the office, the technical bid of the bidder will not be opened.
7. The Earnest Money amounting to **Rs. 2,21,826.00 (Rupees two lakh twenty one thousand eight hundred & twenty six only)** as demand draft or pay order from any scheduled Bank and drawn in favor of the **Director, NISER** should be deposited along with the tender documents in first part (Technical bid). **Tender received without earnest money will be invalid and rejected.**
8. Director, NISER does not bind himself to accept the lowest or any tender and reserves the right to accept the tender either in whole or in part of the tender and the tenderer shall be bound to perform the same at the rates quoted. The decision of the Director shall be final in this regard.
9. Canvassing in connection with the tenders is prohibited and the tenders submitted by the contractor who resort to canvassing are liable for rejection.
10. The tenderer shall not be permitted to tender for works in the concerned unit of DAE in which a relative is posted in the grade between Controller of Administration and Scientific Assistant (both inclusive). He shall also intimate the names of persons who are working with him in any capacity or subsequently employed by him and who relatives are as mentioned above.

NOTE:-

- A person shall be deemed to be a relative of another if, (a) they are members of a Hindu undivided family; or (b) they are husband and wife; or (c) the one is related to the other in the following manner : Father, Mother (including step mother), Son (including step son), Son's wife, Daughter (including step daughter), Father's father, Son's son, Son's Son's wife, Son's daughter, Son's daughter's husband, Daughter's husband, Daughter's son, Daughter's son's wife, Daughter's daughter, Daughter's daughter's husband, Brother (including step brother), Brother's wife, Sister (including step sister), Sister's husband.
11. The Bid shall remain valid for a minimum period of 90 days from the date of opening of the tender for the purpose of acceptance and award of work. Validity beyond 90 days from the date of opening shall be by mutual consent.
 12. The tenderer should see and obtain the drawings. In case of any queries, necessary clarifications may please be sought from the office of the Scientific Officer-D (Civil). No claim whatsoever will be entertained in this regard for any alleged ignorance thereof.
 13. **Performance Guarantee** is liable to be forfeited if the contractor fails to commence the work as per award letter.
 14. Some of the provisions of the contract are given below.
 - a) **DEFECT LIABILITY PERIOD** – Twelve months from the date of completion as certified by the authorized engineer. Parts /work/materials found defective / not functioning during

this period, the contractor has to replace the defective parts or the equipments etc immediately, without any extra cost. Also, the contractor shall have to provide three years of “warranty certificate” from authorized manufacturer/company for “top acrylic synthetic 8-layer cushion system”.

- b) **MINIMUM VALUE OF WORK FOR THE INTERMEDIATE CERTIFICATE**
Intermediate certificate for a lesser amount can be admitted for payment at the discretion of the Institute.
 - c) **SECURITY DEPOSIT** - A sum @ 5% of the gross amount of the bill shall be deducted from each running bill of the contractor, till the sum amount to security deposit of 5% of the tendered value of the work. In addition, the contractor shall be required to deposit an amount equal to 5% of the tendered value of the contract as **Performance Security** within the period prescribed for commencement of work in the letter of award issued to him.
 - d) **COMPENSATION** – In the event of any delay in completion of the work beyond the scheduled period, the contractor shall pay an amount equal to **one per cent** of the total cost of work or such smaller amount as decided by Director, NISER (whose decision shall be final) as compensation to the institute, for every week that the work remains un-commenced or unfinished. Compensation to be paid shall not exceed **ten per cent of the estimated cost** of the total work as per award letter.
15. Stores to be issued: - No material shall be issued by the Institute. The responsibility for arranging all materials from approved manufacturer as per award letter lies with the contractor.
16. Taxes as applicable will be deducted from every RA bill and also from the final bill of the contractor at the rate prescribed by govt. of India from time to time.
17. Escalation cost will not be given for the work which the stipulated period of completion is 18 (Eighteen) months or less.
18. The successful bidder will be required to inform the names, qualifications and experiences of the supervising staff (Note: the staff should be experienced in making tennis or basket ball court and to take level of the field with level machine as and when required) to be deployed for execution of the work. In case of any changes occurring during the course of execution of the said work, the same shall also be intimated by the bidder to the institute.
19. The Contractor shall have to make his own arrangements for storage of materials required for execution of the work and NISER in any manner shall not be held responsible for the storage and safe custody of the said materials at work site.
20. Source of water will be available within 500mtr or less distance from the site. The contractor shall to make his own arrangements of suitable pipe (if required) for watering the construction site. Water charges @1% will be deducted from the Contractor’s bill.
21. The power will be supplied on request at one point within 100 meter of the building / site premises. The contractor shall install his own main switch, energy meter, cables, electric board/switch room etc. of adequate capacity and of suitable type to receive, control and further distribute the power involved. The exact location and further

details about the supply point will on receipt of the contractor's application be decided upon by the Department, whose decision in the matter will be final and binding. The total final connected load and the anticipated maximum demand shall be furnished by the contractor about one month in advance of the actual initial requirement and for any addition in load subsequent to initial supply, at least one week's notice from the date of submission of installation test report for the said additional load will be given. The electricity charges will be deducted from the contractor's bill as per actual meter reading.

22. At the time of starting the work the contractor has to inform the list of tools and plants brought to the site work. No items other than the list submitted will be allowed to be taken out of the site.
23. The work should be executed during day time only for safety reason.
24. Tenderers shall inspect and examine the site and its surroundings and satisfy themselves before submitting their tenders as to the nature of the site and shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their tender. A tenderer shall be deemed to have full knowledge of the site whether he inspects it or not. Submission of a tender implies that the tenderer has read the complete contract documents and is aware of the conditions, specification of the work to be done and of the local conditions and other factors having a bearing on the execution of work. Any claim either for extra amount or for additional time for execution due to ignorance about the site and working condition is not payable.
25. It is the sole responsibility of the tenderer to ensure proper lightning/visibility, access (ladder etc.) and any other safety measures for the trained personnel during work.
26. The work will be executed as per CPWD, DAE procedure of work along with manufacturer's recommendations and direction of Engineer-In-charge.
27. The payment shall be made after satisfactory completion of work.
28. The detail specification for electrical parts or fittings are mentioned in the ANNEXTURE-I.
29. The Institute reserves the right to increase or decrease the quantity of the items/work as well as modification or changes in the drawings etc ,during execution or before commencement of the work, as per requirement.
30. **Liquidated Damage:** If the work is not completed within the scheduled period, the liquidated damage shall be imposed @ ½% per week of delay or part thereof subject to maximum up to 5% the total contract value. The imposition of liquidated damage is however subject to force majeure condition.
31. All the materials shall be tested / inspected in the presence of Department of their representative.

32. All the testing charges shall be borne by the contractor.
33. No materials/equipment shall be shipped to site unless it is inspected, tested and certified for acceptance by the Department or their representative as per applicable standards. Sample of material shall be approved by the Engineer-in-charge before supply the same to the site or commencement of work. The non-approved materials shall be taken out from the site immediately without any delay.


13/6/14
Registrar, NISER


DETAILED SPECIFICATION FOR GRP POLE**Product Name: Glass Fiber Reinforced Epoxy Pole****Length: 9 Meter.****Reference Standards: ANSI C – 132.20, AASHTO-LTS 4, IS: 875.****➤ POLE**

Sl No.	ITEM	NOS
1	Conical GRP Pole --- Top ID 85±2mm, Base ID 216±2mm	1 No
2	GRP Single Arm or Double Arm	1 No
3	Spray PU Coating of GRP Pole (Primer + Finish).	~50μ

➤ **APPLICABLE STANDARDS:** Pole: FES: 057L-1999, ANSI C136.

Wind Loading: AASHTO LTS4–2006 / IS: 875, IS 5649

PERFORMANCE CHARACTERISTICS:

1. Design Wind speed of 180 km/hr.
2. Min. safety factor of 1.5 for pole & base at full load conditions.
3. All coating operations done with spray.
4. Pole designed on basis of long-term modulus.

➤ DIMENSIONS & TOLERANCES:

1. All dimensions in mm unless mentioned otherwise.
2. Overall Dimension Tolerance will be allowed
 - a) For Pole: +/- 2mm
 - b) For OD/ID: +/- 2mm
 - c) For Thickness: No negative tolerance.

➤ **TEST REPORTS & TESTIMONIALS**

1. Manufacturer must submit design calculations for the pole with supply.
2. Manufacturer must have at least 5 yr experience in the design, manufacture and supply of tapering GRP pole. Necessary PO copies received from any central / state government or govt. contractor to be submitted with the tender bid documents.
3. Manufacturer to supply
 - 1] Load Test Report,
 - 2] Material Test Report,
 - 3] Strength Test Report with supply.

➤ **COLOR CODE:**

Pole system to be finished in color of choice decided by the authority.

SECTION 2: MATERIAL & DESIGN

2.1 Surface protection / Finish / Color:

- Pole and bracket system to be finished in desired PU color of choice.

2.2 Pole Insertion Ends: The pole insertion end will be chamfered to facilitate entry of the base anchoring with the pole.

SECTION 3: PERFORMANCE CRITERIA

Strength & Factor of Safety: The fully assembled and loaded anchoring will withstand at least 1.5 times the forces induced under maximum wind conditions on the corresponding pole using the "worst case" analysis. The anchors will be made by GI/SS304 material inset with corrosion resistant GRP Pole. The tubing shall also be made thicker than the structural demands.

SECTION 4: TESTING, PACKAGING & LABELING

4.1 Certificate: A minimum sample will be tested to assure conformance of the pole to assure performance criteria. The testing certificate will be made available with the supplied materials.

4.2 Labeling & Packaging: The bracket will be wrapped in waterproof Bubble plastic paper.

SECTION 5 : DEVIATION

Deviation: to this specification will not be allowed.

: POLE:

SECTION 1: GENERAL REQUIREMENT OF POLE:

- 1.1 **Description:** The pole will be round, hollow, uniform, and continuously tapering.
- 1.2 **Joints:** The pole will be in Joint less construction (bolted riveted or hinged not permissible).
- 1.3 **Manufacturer:** The manufacturer shall have at least 5 years of experience in the design, manufacture and supply of Glass filament wound GRP lighting poles.

SECTION 2: MATERIAL

- 2.1 **Manufacture / Construction:** The pole will be made from a minimum of 62% Wind Strand Glass Roving encapsulated in a maximum of 38% high temperature cured specially formulated corrosion and UV resistant unfilled **Epoxy Resin matrix**. The dielectric rating of the material will be at least 5kV / mm. The pole will be constructed from continuous electrical glass ravings'. The pole shall be made via the filament winding process on a 4-axis Filament Wound CNC winding machine. Winding shall be done in such a way that pole has desired stiffness and strength. Substitution by alternate manufacturing process will not be permitted.
- 2.2 **Thickness:** Pole shall have a thickness of min 7 mm thickness for 9 mtr besides what may be required to achieve the loading and safety specified in Clause 3.0
- 2.3 **Flame Resistance:** Pole will not contain chlorine (or any halogen) or other toxic materials in excess of trace levels and always less than safe OSHA (or equivalent) limits. When subjected to 2 consecutive 60 seconds flame application, it must self extinguish after the last flame application. We use Fire Retardant Resin for manufacturing pole.
- 2.4 **Surface Finish:** Pole will be provided with architecturally pleasing finish. It shall be provided with at least 2-part polyurethane finish. Pole will be free from defects, commercially practicable in color, shall be completely opaque, shall have a minimum density of 1.8 and other physical characteristics / properties mentioned below. In general, the pole shall be free from nicks and burrs.
- 2.5 **Color:** Pole shall be supplied 50-micron thickness of paint shall be done by the application of air-spray only.

SECTION 3: PERFORMANCE CRITERIA

3.1 **Performance Standards:**

- Pole will conform to ANSI Standard C-136.20. Wind loading calculations will be as per AASHTO – LTS4/6 “Standard Specification for Structural Supports for Highway Signs, Luminaries and Traffic Signal” and IS: 875.
- The pole shall be capable of withstanding wind load due to pressures exerted by wind blowing at a maximum speed (including gust) of 180 km/ph. The wind loading capacity of the pole shall be demonstrated by way of an actual load test.

Pole shall also have sufficient load carrying capacity.

3.2 UV Resistance:

Since the long-term cost effectiveness of the pole depends critically on the UV resistance of the pole special attention will be paid to characterize the UV resistance characteristics of the Pole. The pole will have outstanding resistance to:

- Humidity
- Atmospheric corrosion
- Chemical corrosion
- Acid rain
- Salt Spray – 1000 Hour.

Further, the pole will have negligible (<1%) water absorption (ASTM D570). Above all the pole will have a tested resistance to the Ultra Violet rays from the sun.

3.3 Vertical Loading:

The pole will withstand a minimum vertical load from a luminary of 25kg per bracket arm at maximum wind speed.

3.4 Strength & Factor of Safety:

The fully assembled and loaded pole will withstand at least 1.50 times the load induced by the maximum wind conditions specified in Section 3.1 and calculated as per AASHTO standards. The pole will have

- Barcol Hardness of 52 (ASTM D253) or Shore Hardness > 100

3.5 Stiffness:

The pole will not deflect more than 15% of the free height under full load and under maximum wind speed conditions specified in Section 3.1. The pole will have a Heat Deflection Temperature of 140 °C.

3.6 Permanent Set:

The pole will not exhibit a permanent deflection of more than 1% under any dynamic wind load or static fitting load.

.Section 4: Testing

In addition to the type tests mentioned above the following routine tests must also be carried out.

4.1. **Curing:** The pole must be produced on a computer controlled machine and the curing must be done at high temperatures as per pre-determined time-temperature curve. A certificate shall be provided to confirm that the pole is 100% cured.

4.2. **Load Test:**

The pole shall be load tested to establish the wind loading capacity of the pole. All the accessories shall also be tested to perform under the wind loading conditions specified under Section 3.1. A formal in-house load test report must be provided with the supply.

4.3. Certificate:

A minimum sampling will be tested to assure conformance of the pole to all performance criteria. The testing certificate will be made available with the supply. Sampling shall be done as per approved QAP.

4.4. Packaging:

Each pole shall be individually wrapped in waterproof Bubble/Wrapping plastic Paper. A Pull string shall be provided to facilitate unwrapping.

NOTE: Drawing will be provided after getting clearance from your side.


Registrar, NISER



National Institute of science education and research, JATNI
Notice Inviting E-Tender No.- NISER/ IWD-Civil/Services/2018/04A dated 01.06.2018.
Bill of Quantities

Construction of one Basket ball and two Tennis courts with asphalt base and 8-layer synthetic acrylic surface of ITF standard at football ground, NISER Campus, Jatni, Khurda.

FINANCIAL BID

www.tenderwizard.com/NISER

Name of the Vendor						
Sl. No.	Description of Items	Unit	Quantity	Rate in Figures	Rate in Words	Amount
1	Earth work in surface excavation not exceeding 30 cm in depth but exceeding 1.5 m in width as well as 10 sqm on plan giving a gradient of 1:120 towards one side depending where the main drainage is located, including getting out and disposal of excavated earth upto 50 m and lift upto 1.5 m, as directed by Engineer-in-Charge.All kinds of soil.Note: Excavation level determined so as to keep the finished level minimum 150mm above the surrounding areas.	Sq M	2179.00		#NAME?	0.00
2	Preparation and consolidation of sub grade with power road roller of 8 to 12 tonne capacity , dressing to camber and consolidating with road roller including making good the undulations etc. and re-rolling the sub grade and disposal of surplus earth with lead upto 50 metres.	Sq M	1976.00		#NAME?	0.00
3	Supplying chemical emulsion in sealed containers including delivery as specified. Chlorpyrifos/ Lindane emulsifiable concentrate of 20%	ltr	722.00		#NAME?	0.00
4	Diluting and injecting chemical emulsion for anti-termite treatment (excluding the cost of chemical emulsion) :Treatment of soil surface using chemical emulsion @ 1 ltr solution / hole, 300 mm apart including drilling 12 mm diameter holes on existing ground & making good: With chlorpyrifos/Lindane E.C. 20% with 1% concentration	Sq M	2343.00		#NAME?	0.00
5	Construction of granular sub-base by providing close graded Material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by tippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge. With material conforming to Grade-III (size range 26.5mm to 0.075 mm) having CBR Value-20. Note: giving a gradient of 1:120 towards one side depending where the main drainage is located.	Cu M	294.00		#NAME?	0.00
6	Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm) to wet mix macadam (WMM) specification including premixing the material with water at OMC in for all leads & lifts, laying in uniform layers with mechanical paverfinisher in sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge. Note: giving a gradient of 1:120 towards one side depending where the main drainage is located.	Cu M	294.00		#NAME?	0.00
7	Providing and applying tack coat using bitumen emulsion conforming to IS: 8887, using emulsion pressure distributor including preparing the surface & cleaning with mechanical broom.With medium setting bitumen emulsion.On W.B.M / W.M.M. @ 0.50kg/sqm	Sq M	1954.00		#NAME?	0.00

8	Providing and laying bituminous macadam using crushed stone aggregates of specified grading (with graded sieve aggregate finer to 25mm) premixed with bituminous binder of specified grade, transported to site by tippers, laid over a previously prepared surface with paver finisher equiped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge.50 to 100 mm average compacted thickness with bitumen of grade VG-30 @ 3.50% (percentage by weight of total mix) prepared in Drum Type Hot Mix Plant of 60-90 TPH capacity. Note: giving a gradient of 1:120 towards one side depending where the main drainage is located.	Cu M	100.00		#NAME?	0.00
9	Providing and applying tack coat using bitumen emulsion conforming to IS: 8887, using emulsion pressure distributor including preparing the surface & cleaning with mechanical broom.With medium setting bitumen emulsion.On W.B.M / W.M.M. @ 0.25kg/sqm	Sq M	1954.00		#NAME?	0.00
10	Providing and laying semi- dense Bituminous concrete using crushed stone aggregates of specified grading(with graded stone aggregate with max size 8/10mm graded down to fines of 25%), premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equiped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in- Charge.25 mm compacted thickness with bitumen of grade VG- 30 @ 5% (percentage by weight of total mix) and lime filler @ 2% (percentage by weight of Aggregate) prepared in Drum Type Hot Mix Plant of 60-90 TPH capacity. Allow to cure 27/30 days maximum.Note: giving a gradient of 1:120 towards one side depending where the main drainage is located.	Sq M	1954.00		#NAME?	0.00
11	Providing and Spreading manually Grit Powder mixed with PPT and cement on the finished asphalt surface to close the porosity of fresh asphalt and allowing the surface to be dried for minimum 30 days prior to laying the synthetic surfacing etc complete with the company specification & ITF norm or as directed by the Engineer in charge.	Sq M	1954.00		#NAME?	0.00
12	Earth work in excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50 m and lift upto 1.5 m, as directed by Engineer-in-charge.All kinds of soil	Cu M	162.00		#NAME?	0.00
13	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.All kinds of soil.	Cu M	21.00		#NAME?	0.00
14	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level.					
a	1:3:6 (1 Cement : 3 coarse sand (zone-III) : 6 graded stone aggregate 20 mm nominal size).	Cu M	42.00		#NAME?	0.00
b	1:4:8 (1 Cement : 4 coarse sand (zone-III) : 8 graded stone aggregate 40 mm nominal size).	Cu M	21.00		#NAME?	0.00
15	Supplying and filling in plinth with sand under floors, including watering, ramming, consolidating and dressing complete.	Cu M	27.00		#NAME?	0.00
16	Finishing walls with Acrylic Smooth exterior paint of required shade :New work (Two or more coat applied @ 1.67 ltr/10 sqm overand including priming coat of exterior primer applied @ 2.20 kg/ 10 sqm)	Sq M	147.00		#NAME?	0.00
17	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth in:Cement mortar 1:6 (1 cement : 6 coarse sand)	Cu M	136.00		#NAME?	0.00

18	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :1:1½:3 (1 Cement: 1½ coarse sand (zone-III) : 3 graded stone aggregate 20 mm nominal size).	Cu M	39.00		#NAME?	0.00
19	18 mm cement plaster in two coats under layer 12 mm thick cement plaster 1:5 (1 cement : 5 coarse sand) finished with a top layer 6 mm thick cement plaster 1:6 (1 cement : 6 fine sand).	Sq M	563.00		#NAME?	0.00
20	6 mm cement plaster of mix :1:3 (1 cement : 3 fine sand)	Sq M	180.00		#NAME?	0.00
21	Neat cement punning.	Sq M	551.00		#NAME?	0.00
22	Providing and fixing M.S. grills of required pattern in frames of openings of RCC or brick structure etc. with M.S. flats, square or round bars, angles etc. including priming coat with approved steel primer all complete.Fixed to openings. Note: 16mm sq. bar shall be fixed in 20x20mm ms angle frame for fixed on the surface drain.	kg	3295.00		#NAME?	0.00
23	Providing and fixing G.I. chain link fabric fencing of required width in mesh size 50x50 mm including strengthening with 2 mm dia wire or nuts, bolts and washers as required complete as per the direction of Engineer-in-charge.Made of G.I. wire of dia. 4 mm, PVC coated to achieve outer dia not less than 5 mm in required colour and shade	Sq M	1193.00		#NAME?	0.00
24	Providing and fixing of GI pipe frame fencing, including appropriate openable doors of approved size by welding etc. to similar works like GI chain link fabric fencing, including applying priming coat of approved ready mixed red oxide zinc chromate primer. G.I. pipes should conforming to IS:1239 PART-1 (2004) of heavy duty (C class) of JINDAL/TATA make with approved quality etc complete with all G.I. fittings, like Tee, bend, socket etc including proper line,level & gradient etc complete as per direction of Engineer in charge. 50 mm dia nominal bore. Note: GI chain link fabric fencing & red oxide zinc chromate primers shall be paid separately.	kg	11116.00		#NAME?	0.00
25	Applying priming coat:With ready mixed red oxide zinc chromate primer of approved brand and manufacture over a base coat of ETCH primer (with itching H primer) on steel galvanised iron/ steel works etc. complete with uniform finish & looking good as per direction of EIC.	Sq M	505.00		#NAME?	0.00
26	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade :Two or more coats on new work	Sq M	527.00		#NAME?	0.00
27	Providing & laying , ITF approved, 8-layer synthetic acrylic outdoor sport surface with Deco turf Cushion system, manufactured by California Sports Surfaces (Country of Origin - USA) with the 1st layer consist of one coat of Resurfacer, two coats of Deco Turf II, Three coats of Deco Base II, One coat of Textured coat and final application of one non-textured Deco colour MP coat etc complete as per ITF standard & specification of Deco turf Cushion System etc complete as per direction of Engineer-in-charge. The total thickness of the synthetic acrylic cushion system (8-layer) should be 6 to 8mm. The surface should be recoatable playing surface & executed following " Deco turf installation guidelines for new asphalt surface" etc complete as per direction of E-I-C. NOTE: The work will be executed by authorised applicator of Decoturf having experience of making minimum 50nos of simillar type of coat. Agency shall provide 3 years of warrenty.	Sq M	1988.00		#NAME?	0.00
28	Making game line marking of Tennis court as per ITF norm & specification etc complete as per direction of EIC.	no	2		#NAME?	0.00
29	Providing & fixing removable tennis poles of 75mm x 75mm x 3mm square. The powder coated thickness is of 60microns & in built gear box in sq MS pipe. The height of the pole is 3'.2" from the ground level. Net: Tournament grade: Twin Twisted 2.5mm thick with 45mm x 45mm opening: Length: 13.5mtrs, Height:3'2"etc complete as per direction of EIC.	pair	2		#NAME?	0.00
30	Supplying and stacking of good and soft (no red and hard soil) earth free from silt, roots & other foreign materials suitable for lawn or ornamental grassing at site including royalty and carriage (earth measured in stacks will be reduced by 20% for payment).	Cu M	57		#NAME?	0.00

31	Spreading of sludge, dump manure and/or good earth in required thickness as per direction of officer-in-charge (cost of sludge, dump manure and/ or good earth to be paid separately).	Cu M	57.00		#NAME?	0.00
32	Providing & laying natural Bermuda selection 1 grass turf with earth 50mm to 60mm thickness (fresh, green & free from weeds) on existing ground prepared with proper level and ramming with required tools wooden and then rolling the surface with light roller make the surface smoothen and light watering the same, as per direction of officer in charge. Bermuda Grass selection- 1 grass turf with machine cut For Sports Field.	Sq M	375.00		#NAME?	0.00
33	Providing or supplying and spreading good quality organic manure @ 100gm/sqm on field etc complete as per direction of EIC.	kg	50.00		#NAME?	0.00
34	Making game line marking of Basket ball court as per International norm & specification etc complete as per direction of EIC.	no	1		#NAME?	0.00
35	Providing & fixing of Basket ball square pipe 5" Vertical section with base plate of 1'x1' of 12mm thick with 4" arm extension 1.2mtr in 5mm thick with female sochet of 3' with base plate of 1' x 1' of 12mm Back board of 20mm transperate poly acrylic board with MS frame with Dunking ring with Nylon net & fixed with anchor bolt, as per international sports norm etc complete as per direction of EIC.	pair	1		#NAME?	0.00
36	Supply ,installation,testing and comissioning of 9 meter Glass Fiber Reinforced Epoxy pole with 2 nos of 300W led fixture on the pole as following POLE Supply ,erection,testing and comissioning of 9 meter Glass Fiber Reinforced Epoxy Pole Single Bracketchannel (1000mm) GRP Designer Conicalpole with IP 67 protection and provision of terminal for mounting MCB and termination of incoming and outgoing cables as per ANSI C – 132.20, AASHTO-LTS 4, IS: 875. Junction box should be provided 500 mm above base plate with 4 Nos terminals on epoxy insulator.The pole should be 9 mm thick.The inner diameter of the pole shold not be less than 220 mm at the bottom and less than 85 mm at the top. (For detailed specification of GRP pole please refer Annexure-1 of NIT document) Make-Bajaj/valmont/similar Earthing of POLE Earthing of above pole with 2 nos. of 8 SWG tinned copper earth wires each 8 Mtrs long coiled in one metre dia at a depth of 1400mm. Below ground level, complete with soldering end connections with sockets, 3/8" dia 1" long GI earthing bolt fully threaded & welded on pole etc. all as per drawings, specifications and as per the instruction of EIC. Lighting Fixture Supply, installation testing and comissioning of 300 W LED flood light fixtures similar to make-Bajaj,Model-BARFEG 300W LED and all others accessories for illumination of tennis court. Wiring and Terminal box Laying of 2.5 sqmm FRLS PVC insulated copper conductor, single core cable 6 run (2x2.5 SQMM+1x2.5 SQMM for 2 nos of fixture) from terminal to fixture Providing two nos of 6 A ratings, SP MCB, "C" curve, 10 kA breaking capacity	Set	18		#NAME?	0.00
37	Supply, installation, testing & commissioning of 4C X 16 sqmm 1.1 KV grade aluminiumstranded circular/ sector shape core conductor with XLPE insulation, extrudedPVC inner sheathed, G.I wire/flat strip armoured, extruded FRLS grade PVC outersheathed cable conforming to IS : 1554 Part I / IS7098 Part-I with latest amendments, fixed onwall/column/slab/false ceiling or in existing humepipe /trench (on cable trays)/ shaft/pit/ on 5mm thickM.S. flat /GI spacer/ angle/ support fixed withcoach screws/grouted in wall/anchor fasteners2mm. thick G.I. fabricated saddle, all fixing accessories, etc complete including painting ofM.S spacers/angles and saddles or in ground at adepth of 900 mm below ground level, sand bedding, laying of bakedbricks on side & top-, temporary reinstatement,back filling, dewatering, consolidation, disposal ofexcess earth within the radius of 500 m and making good to the original finish etc providingbrass cable number tag as per enclosedspecifications, drawings & as per instructions of the EI	Meter	1100		#NAME?	0.00
38	Supplying and making end termination with brass compression gland and tinned copper lugs for 4C X 16 sqmmsize of XLPE aluminium conductor cable of 1.1 kV grade as required with gland earthing.	Set	48		#NAME?	0.00
39	Supply installation,testing and comissioning of 63A Switch disconnector fuse with SS encloure of P 67 protection to be fixed in 9 Meter pole with two numbers of earthing with 6 SWG GI wire	Each	2		#NAME?	0.00
Total cost						0.00