

F. No. 9-72/21-22/NIHSAD (P&S)

Dated: - 18.01.2022

To

Sub:- Quotation (Under two bid system) of Work for Installation of Plate Earthing of Service Floor, PLC Shower System and Containment Laboratory of ICAR-NIHSAD (2nd Call) – reg.

Dear Sirs,

Reputed firms/Authorized firms are invited for quoting their rates for the Installation of Plate Earthing of Service Floor etc. as per under mentioned technical specifications, scope of work & drawing (Annexure I & II).

Sr. No.	Description of work	Unit	Qty	Rate	Amount
1.	Earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including excavation (3 meter), accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 3.0 meter long etc. with charcoal/ coke, salt as required, excavation shall be filled with black cotton soil & all excavated material shall be dumped within the NIHSAD premises as intimated by I/C Electrical section.	Set	4		
2.	Earthing with copper earth plate 600 mm X 600 mm X 3mm thick including excavation (3 meter), accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 3.0 meter long etc. with charcoal/ coke and salt as required, excavation shall be filled with black cotton soil & all excavated material shall be dumped within the NIHSAD premises as intimated by I/C Electrical section.	Set	2		
3.	Supplying and laying 50 mm X 6 mm G.I strip at 0.50 meter below ground as strip earth electrode, including connection/ terminating with G.I. nut, bolt, spring, washer etc. as required. (All jointing shall be welded by overlapping and with 2 sets of G.I. nut bolt & spring washer spaced at 50 mm)	Meter	120		
4.	Supplying and laying 50 mm X 3 mm copper strip at 0.50 meter below ground as strip earth electrode, including connection/ terminating with nut, bolt, spring, washer etc. as required. (All jointing shall be welded with led bridging by overlapping and with 2 sets of brass nut bolt & spring washer spaced at 50 mm)	Meter	28		
5.	Providing measurement of earth resistance value by approved earth testing equipment.	Number	6		
	Technical Specification, Scope of work & drawing attached	Total Amount (For the complete work)			
		GST (if applicable) @.....			
		Grant Total Amount Rs.			

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(Financial bid must be submitted in separate envelope duly sealed)

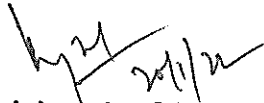
Relevant terms & conditions are as below: -

1. Quotation should be submitted under two bid system in a separate envelope (Technical Bid + Financial Bid) clearly mentioning at the top Tender No F. No. 9-72/21-22/NIHSAD (P&S) "Quotation (Under two bid system) of Work for Installation of Plate Earthing of Service Floor, PLC Shower System and Containment Laboratory" and EMD particulars. The Technical bid and the Financial bid should be sealed in separate envelopes and both these sealed covers are to be put in a bigger cover which should also be sealed. The last date of receipt of above quotation is 17.02.2022 Upto 5:00 PM. The Institute will not be responsible for any postal delays.
2. **Eligibility of Technical bid: -**
 - I. Proof of experience of at least one Electrical Earthing work (Copper / GI) of at least 1.5 Lakhs Amount in Gov./ Reputed/ PSU/ Private organization during last 3 years.
 - II. PAN/GST Registration copy of the bidder.
3. Only technically qualified bids shall be evaluated for financial bid evaluation.
4. The rates should be quoted for F.O.R. ICAR-NIHSAD, Bhopal basis as per quotation based on the scope of work & quality of materials.
5. Discount, if any, should be indicated clearly.
6. This Institute is registered with the Department of Scientific & Industrial Research (DSIR), Govt. of India for purpose of availing custom duty exemption in terms of Government. Notification No. 51/96-Customs dt. 23.07.1996, amended by Notification No. 4312017 dated 30.6.2017, Notification No. 47/2017-Integrated Tax (Rate) dt. 14.11.2017 and Notfn. No.4512017- Central Tax (Rate) dt. 14.11.2017, Notfn. No. 45/2017- Union Territory Tax (Rate) dt. 14.11.2017. However, as per notification No. 45/2017-Central Tax (Rate) dated 14.11.2017 issued by the Min. of Finance, Scientific and Technical instruments, etc. are exempted from the Central tax (in excess of 2.5%) livable there on under section 9 of the Central Goods and Service Tax Act, 2017 supplied to the Departments & laboratories of the Central Government and State Governments, other than a hospital. Since, this Institute is a Scientific Research Institution under Indian Council of Agricultural Research, Min. of Agricultural Govt. of India, and also registered by Min. of Science and Technology, DSIR New Delhi vide their Registration Certificate No. TU/V/RG-CDE/1235/2019dated 01.09.2019.
7. GST should be indicated in clear terms separately. GSTIN Registration/TIN Number should be mentioned. As per the Govt. Notification No. 47/2017-Integrated Tax (Rate) dt. 14.11.2017 and Notfn. No.4512017- Central Tax (Rate) dt. 14.11.2017, Notfn. No. 45/2017- Union Territory Tax (Rate) dt. 14.11.2017. However, as per notification No. 45/2017-Central Tax (Rate) dated 14.11.2017.
8. The rates quoted should be valid for 180 days from the date of opening of quotation.
9. There should be no cutting/overwriting in the quoted rates.
10. Warranty – 01 year from the date of supply/completion of work.
11. Unattested/amended/overwritten figures will not be considered.
12. In all matters of disputes, the decision of the Director of this Institute shall be final and binding.
13. Maximum period of completion of work is 45 days.
14. TDS will be deducted from the bill as per applicable tax rules.
15. **Payment terms: -** Payment will be made reasonable time say within 30 days from the date of receipt of material in good condition without any damage and after installation of the equipment in accordance with the ordered specification at the end. **Since the mode of payment will be e-payment system, hence, Bank Account, Number, Name of Bank with location and IFSC code Number of Bank may be furnished on the body of the bill.**
16. Payment shall be made on actual measurement basis.

17. Performance Security: within 20 (Twenty) days after the issue of a letter/PO by this Institute, the supplier, shall furnish performance security to the institute for an amount of 3% (of Total Ordered value) including the warranty obligation before undertaking the work.
18. The Institute reserves the right to reject any or all the quotation(s) received without assigning any reasons thereof.
19. Tentative date of opening of Technical bid (18.02.2022 at 11:30 AM).

Yours sincerely,

Encl: - Annexure – I &II (Scope of work, Technical Specification & Drawing)


Administrative Officer
Phone No. 0755-2754672

SCOPE OF WORK & TECHNICAL SPECIFICATIONS

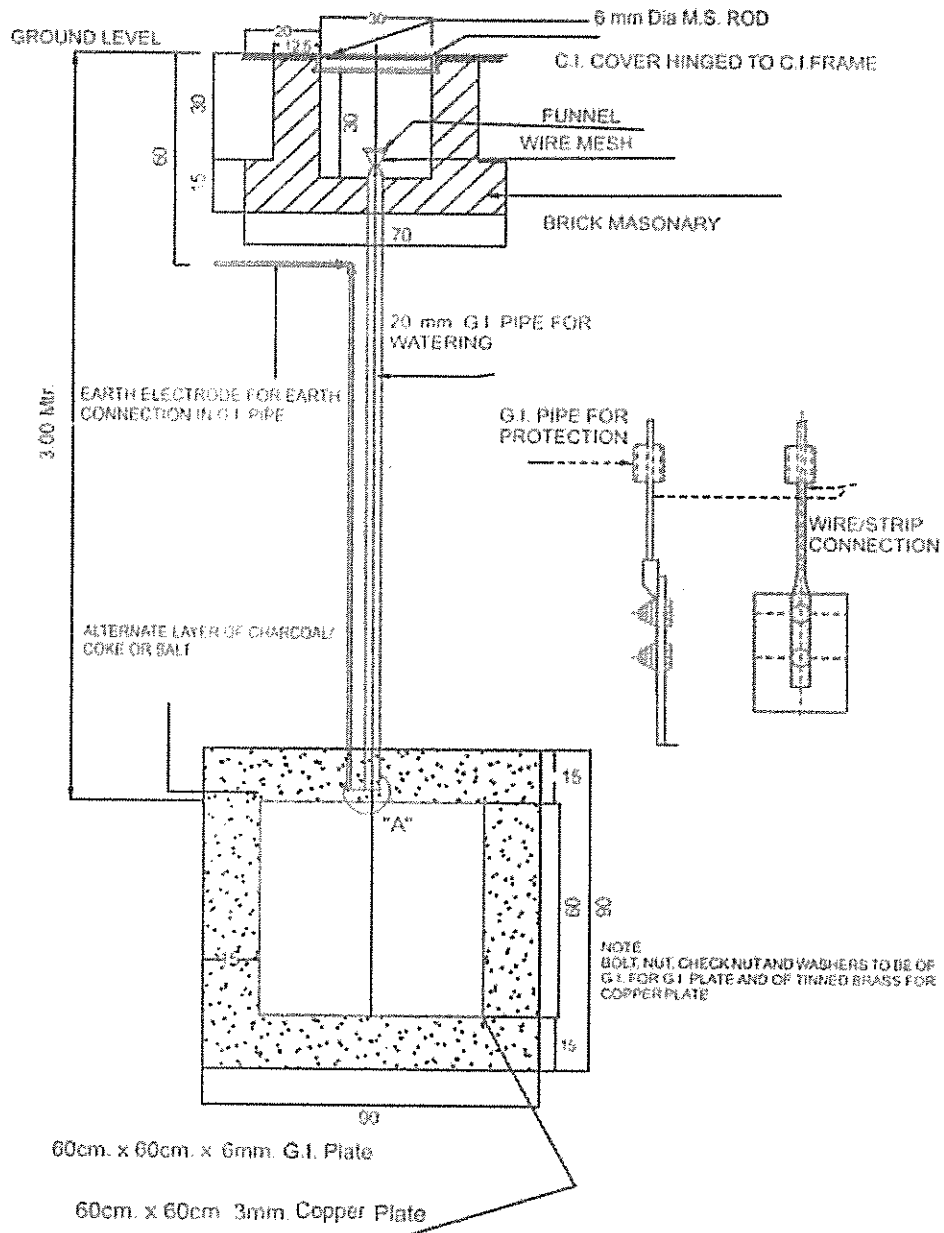
1. Earth pit of size of 1 meter diameter & 3 meter depth shall be excavated. Excavation of the rocky earth, soft murrum, hard murrum etc and filling back with black cotton soil, all excavated material shall be dumped within 01 km lead & charcoal salt/bentonite earthing chemical for the earth pits after earthing work (GI/Copper) is completed.
2. After 3 meter depth, the size of excavation shall be 900x300x900 mm for burying copper/GI plate.
3. A copper plate of 600x600x3mm and GI plate of 600x600x6mm will be buried vertically in depth as described above.
4. At the bottom, 150 mm layer of salt and charcoal (wooden) pieces shall be filled and then copper plate shall be installed.
5. The copper plate shall be connected to copper earth strip of 50x3 mm at minimum two points and joints shall be protected by heavy coat of bitumen. The copper (50x3 mm) strips shall be covered under GI pipe of 2.5 inch diameter of 3 meter length.
6. The GI plate shall be connected to GI earth strip of 50x6 mm at minimum two points and joints shall be protected by heavy coat of bitumen. The GI strips (50x6 mm) shall be covered under GI pipe of 2.5 inch diameter of 3 meter length.
7. GI pipe class (c) of 50 mm diameter of 3 meter length with 5mm thick will have hole of 12 mm diameter in zigzag manner starting from 15 cm away from bottom to 2 meter height for watering shall be used.
8. Funnel with a mesh shall be provided on the top portion of each earth electrode for watering purpose.
9. **Earthing System Inspection Chamber:-**
 - 9.1 Earthing system inspection chamber (RCC concrete box) of 600x600x600 mm (inside dimension) with lid cover of approx 5 mm thick with pulling hook, Painting of earth pit covers, Earth pits shall be identified and named properly and Labeling of the earth pits, measurement of earth pit resistance conforming to IS-3043.
10. **Earth Strip:-**
 - 10.1.1 The earth conductors (copper strip) shall be fixed to the wall/columns etc., at every 500mm with 10mm spacers. The total earthing system shall be mechanically and electrically connected to provide independent path to earth.
 - 10.1.2 The area of cross section for copper conductor shall be minimum 50mmx3mm.
 - 10.1.3 The area of cross section for GI strip conductor shall be minimum 50mmx6mm.
 - 10.1.4 Joints and tapings in the main earth loop shall be made in such a way that reliable and good electrical connections are permanently ensured. All welded joints shall be suitably protected by applying red oxide paint and bitumen.
 - 10.1.5 GI earthing strip welded to the earth electrode at the top shall have hot dip galvanized coating of not less than 10 microns thickness.
 - 10.1.6 Welding should be free from defect and the joint is to be properly cleaned.
 - 10.1.7 Bolting of earth strips to be done at end of connecting earth strip to earth pit and also at the other end where earth strips are connected to equipments/structures etc.
11. **Earth Resistance:-**
 - 11.1.1 The earth resistance value of combined earth system shall be less than or equal to 1ohm. It shall be measured by an approved earth testing apparatus for individual earth pits.
12. All civil, electrical & other miscellaneous work related to providing earthing system for service floor, PLC shower systems and containment laboratories at NIHSAD are under scope of this work.
 - 12.1.1 Any item which may not have been specifically mentioned or which the tendered may not mentioned in this tender but are necessary for the completion of the site of earthing shall be provided by the contractor without any extra days.

Drawing: -

Annexure – II

Fig. 12 (Revised)
Method of Plate Earthing
[Clause 8.4.1.1(ii)]

NOT TO SCALE



ALL DIMENSIONS ARE IN CM (OTHER DIMENSIONS SHOWN)

CPWD