CSIR-NATIONAL GEOPHYSICAL RESEARCH INSTITUTE
(Council of Scientific & Industrial Research)
Uppal Road, Hyderabad - 500 007

NGRI No. 03/10/2016-Wks

Dated:03.01.2017

Tender Schedules for the work of **"Water Proofing Treatment of terrace of A.C.Section adjacent to Main Building at NGRI, Hyderabad."** COST OF TENDER PAPERS RECEIVED Rs. 500/- (Rupees Five Hundred only).

Vide D.D. No. ..... Dt: ..... Bank.....

TENDER TO BE SUBMITTED TO THE DIRECTOR, NGRI, Hyderabad

Tender Issued to Shri / M/S. .....
.....
.....

Signature of the Issuing Authority

CONTENTS

Sl.No.	Description	No. of Pages
01.	Contents	1
02.	Detailed Notice Inviting Tenders	4
03.	Compliance to Labour Laws & Apprentice Act	1
04.	Contractor`s Site Superintendence	1
05.	Special Conditions	1
06	Additional Conditions of Cement, Steel & Bitumen	2
07.	Special Conditions	1
08	Additional Special Conditions	1
09	Abstract of Cost	1
10	Schedule of Quantities.	
11.	Special Conditions & General Conditions of Contract CPWD Specifications Vol-1&2 etc. and Drawing	Can be seen in the office of SE (Civil) CSIR-NGRI, during office hours.

EARNEST MONEY DEPOSIT INFORMATION

Earnest money of **Rs. 5,400/-** (Rupees Five Thousand Four Hundred only) deposited with the Director, NGRI, Hyderabad, Vide Demand Draft No..... Dt..... drawn in favour of The Director, NGRI, Hyderabad, on ..... (name of the Bank).

Date:
Cell No: .....
e-mail ID: .....
(If any)

Stamp & Signature of Tenderer

CSIR-NATIONAL GEOPHYSICAL RESEARCH INSTITUTE
(Council of Scientific & Industrial Research)
Uppal Road, Hyderabad – 500 007

NGRI No.03/10/2016 –Wks

Dated: 03-01-2017

NOTICE INVITING TENDERS

Sealed tenders are hereby invited for the work of **Water Proofing Treatment of terrace to A.C.Section adjacent of Main Building at NGRI, Hyderabad,** from the contractors of appropriate class of CPWD, Railways, MES, State PWD and/or also from those who have carried out similar types of works for CSIR/ Semi-Government organizations/ Govt. Organisations/ Public Sector Under Takings etc amounting to 80% of one work, 60% of two works or 40% of three works i.e. minimum amount of for a work is Rs 2.16/1.62/1.08 i.e. in lakh for the last 5 years. The similar type of works means water proofing treatment done with cement based chemicals with brick bat coba.

1. Tender document may be obtained from Cash Section Room No. 20, Extension building, CSIR-NGRI, Uppal Road, Hyderabad from 10.00 A.M. to 12.30 P.M. during working days only on payment of Rs. 500/- for each by means of D.D.(Non-refundable) drawn in favour of "Director, NGRI, Hyderabad", with attested copies certificates of valid registration, experience. Tender documents are also available on CSIR-NGRI website i.e www.ngri.org.in.

2. The tender documents are to be submitted in three sealed envelopes system as detailed below:

   (a). In case of purchase of tender documents from Cash Section, CSIR-NGRI
   Envelope I: 1. DD for EMD (DDs should be issued by the scheduled Banks in the name of the Director, CSIR-NGRI), 2. Self-attested copies of certificates similar type of works done with valid registration, if any, copy of PAN card and Experience.
   Envelope II: Tender Schedules / Price Bid
   Envelope III: Envelope I and II

   (b). In case of down loaded from CSIR-NGRI web site i.e www.ngri.org.in :
   Envelope I : 1. Demand Draft for Cost of tender Document, 2. DD for EMD (DDs should be issued by the scheduled Banks in the name of the Director, CSIR-NGRI), 2. Self-attested copies of certificates similar type of works done with valid registration, if any, copy of PAN card, and Experience.
   Envelope II : Tender Schedules /Price Bids
   Envelope III : Envelope I and II

   Each Envelope is to be superscribed clearly with the NIT NO., dated, name of work, the details of documents in it and date & time of opening.

3. Tender (s) received without EMD will be treated as canceled and will not be opened.
4. Each page of the tender document is to be signed by the tenderer with seal.
5. If any documents found to be fake/incorrect at any stage, the tender/work will be cancelled. In that case the same work will be executed through another firm at risk & cost of first awardee/firm/contractor. The firm/contractor will be black listed and the same will be intimated to other public sector organizations.
6. **Estimated cost is Rs. 2.70 Lakhs (Rupees Two Lakh Seventy Thousand only).**
7. Time for carrying out the work for rate contract for 20 days and the date of commencement shall be reckoned from the 10th date issue of the award letter.
8. Complete contract documents to be compiled with by the Tenderer whose tender may be accepted, can be seen at the office of the Director, N.G.R.I., Hyderabad

Stamp & Signature of Tenderer

9. Tenders should be submitted in double sealed covers super scribed with the name of the work, date and time of opening written both on the inner and outer envelopes. Tenders will be received in the office of the Director, N.G.R.I., Hyderabad. The completed Tenders should be dropped in the Tender Box before the closing date and time indicated. In case these are sent by post these should be sent by Regd. Post / Speed post addressed to the **Director, N.G.R.I., Hyderabad–500007**. Tenderers are to ensure that they post the tender well in advance so as to reach us before the closing time and date indicated.

   A. Last date to receive request & to issue tender document: **From 04/01/2017 to 12/01/2017**
   B. Last date of Submission of Tender and Time: **16/01/2017 Up to 2.30 P.M.**
   C. Date and Time of opening of Tender: **16/01/2017 @ 3.00 P.M.**

10. Earnest Money amounting to **Rs. 5,400/-** (Rupees Five Thousand Four Hundred Only) as demand draft of a scheduled Bank and drawn in favour of The **Director, N.G.R.I.,** Hyderabad along with copies of Registration certificate, experience in similar type of works, Income tax clearance certificate etc. are to be submitted while requesting for the tender schedule.
11. The Employer does not bind himself to accept the lowest or any tender and reserves to himself the right of accepting the whole or any part of the tender and the tenderer shall be bound to perform the same at the rates quoted.
12. Canvassing in connection with the tenders is prohibited and the tenders submitted by the contractor who resort to canvassing are liable for rejection.
13. The tenderer shall not be permitted to tender for works in the concerned unit of CSIR in which relative is posted in the grade between Controller of Administration and Junior Engineer, (both inclusive). He shall also intimate the name of persons who are working with him in any capacity subsequently employed by him and who are relatives as mentioned above.

    NOTE: A person shall be deemed to be a relative of another if, and only 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.

14. Tender submitted shall remain valid for 90 days from the date of opening for the purpose of acceptance and award of work, validity beyond 90 days from the date of opening shall be by mutual consent.

15. The Tenderer shall quote rates both in figures and words. He shall also workout the amount for each item of work and write in both figures and words. On check, if there are differences between the rates quoted by the tenderer in words and in figures or in the amount worked out by him, the following procedure shall be followed:

    I. When there is a difference between the rates in figures and in words, the rates which correspond to the amounts worked out by the tenderer shall be taken as correct.

    II. When the amount of an item is not worked out by the tenderer or it does not correspond with the rate written either in figures or in words the rate quoted by the tenderer in words shall be taken as correct.

    III. When the rate quoted by the tenderer in figures and in words tallies, but the amount is not worked out correctly, the rate quoted by the tenderer shall be taken as correct and not the amount.

Stamp & Signature of Tenderer

16. The tenderer should see drawings and in case of doubt, obtain required particulars, which may in any way influence his tender from the Engineer as no claim whatsoever will be entertained for any alleged ignorance thereof.

17. Before tendering, the tenderer shall inspect the site to fully acquaint himself about the condition in regard to accessibility of site, nature and extent of ground, working condition of site and locality including stacking of material, installations of tools and plants (T & P), etc., conditions affecting accommodation and movement of labour, etc., required for the satisfactory execution of the contract. No claim whatsoever on such account shall be entertained by the employer in any circumstances.

18. Earnest money will be forfeited, if the contractor fails to commence the work as per letter of award work.

19. Except writing rates and amount, the tenderer should not write any conditions or make any changes, additions, alterations and modifications in the printed form of tenders. Tenderers who are desirous to offer rebate, the same should be brought out separately in the covering letter and submitted along with the tender.

20. Some of the provisions of general conditions of contract are given below. Interpretations, however, shall be as given in the general conditions of the contract.

    a) **DEFECTS LIABILITY PERIOD**: Twelve months from the date of completion as certified by the Employer.

    b) **MINIMUM VALUE OF WORK FOR THE INTERMEDIATE CERTIFICATE:** Rs. 2.70 lakhs (Rupees Two Lakh Seventy Thousand only) Intermediate certificate for a lesser amount can not be admitted for payment at the discretion of the Engineer.

21. **SECURITY DEPOSIT**: A sum @ 10% of the gross amount of the bill shall be deducted from each running bill of the contractor till the sum along with the sum already deposited as earnest money, will amount to security deposit of 5% of the tender value of the work. In addition, the contractor shall be required to deposit an amount equal to 5% of the tenderd value of the contract as Performance Security within the period prescribed for commencement of work in the letter of award issued to contractor/firm.

22. **COMPENSATION:** Contractor shall pay as compensation an amount equal to one per cent or such smaller amount as the Employer (Whose decision in writing shall be final) may decide on the cost of the whole work as shown in the agreement, for every week that the work remains un commenced or unfinished or due quantity of work remains incomplete after the proper dates. Compensation to be paid shall not exceed Ten per cent of the estimated cost of the work as shown in agreement.

23. **Tax deduction at source:**
    i. Income tax will be deducted 2% for firms & 1% for individual.
    ii.VAT 5%
    ii. Labour Cess 1%
    iii. Seigniorage charges will be recovered from the contractor's bill as per the rate prescribed time to time by Govt.of T.S. applicable.

24. The required building material, if any, is to be procured by the contractor including steel and cement (ACC/Raasi/ Orient / L&T) and the quality of material be tested by the Engineer-in-charge. The testing charges will be borne by the contractor.

Stamp & Signature of Tenderer

COMPLIANCE TO LABOUR LAWS & APPRENTICE ACT

The contractor shall comply with all the provisions of the Minimum Wages Act, 1948, Contract Labour (Regulation and Abolition) Act, 1970, and rules and orders framed there under and other labour laws affecting contract labour and Apprentice Act, 1961 and the rules and orders framed there under that may be in force or brought into force from time to time. Contractor shall obtain a valid license under Contract Labour (R&A) Act 1970 and Contract Labour (R&A) Central Rules 1971 before commencing work and which should be valid till the completion.

Stamp & Signature of Tenderer

I. CONTRACTOR'S SITE SUPERINTENDENCE

Staff to be employed by contractor on works:
The contractor shall employ the following technical staff during execution of works:

(a) For building and road works

(i) One graduate Engineer, when the tendered cost of work exceeds Rs.10 lakhs
(ii) One qualified Diploma holder (overseer) with experience not less than 3 years when the tendered cost of work exceeds Rs.5 lakhs but less that Rs.10 lakhs
(iii) One qualified Diploma holder when the tendered cost of work is more than Rs.2 lakhs but less than Rs.5 lakhs

(b) For sanitary and water supply works:

One qualified diploma holder with experience of not less than 5 years, out of which one year should be in sanitary and water supply works when the tendered cost of work is more than Rs.50,000/-

(c) For electrical works

(i) One qualified Graduate Engineer possessing Degree in Electrical Engineering from recognized university with an experience of not less than 3 years or a Diploma holder in Electrical Engineering with an experience of not less than 7 years when the tendered cost of the work is not less than Rs.1.5 lakhs
(ii) One Graduate Electrical Engineer with two years experience or a Diploma holder I Electrical Engineering with experience of not less than 3 years, when the tendered cost of the work is more than Rs.75,000/- but less than Rs.1.5 lakhs.
(iii) One Diploma holder in Electrical Engineering with experience of not less than 3 years when tendered cost of work is more than Rs.37,000/- but less than Rs.1.5 lakhs
(iv) One licensed Supervisor with experience of not less than 3 years when the tendered cost of work is more than Rs.7,500/- and less than Rs.37,000/-

1. In case the contractor fails to employ the technical staff as aforesaid, he shall be liable to pay reasonable amount not exceeding the amount shown below for each month of default. These recoveries are subject to modifications from time to time by CSIR based on CPWD:-

(i) In case when a Graduate Engineer is to be employed
..... Rs.3,000/-

(ii) In case when a qualified Diploma holder is required to be employed
..... Rs.1,500/-

(iii) In case when a technical Supervisor is required to be employed
..... Rs.750/-

Stamp & Signature of Tenderer

ADDITIONAL CONDITIONS OF CEMENT, STEEL & BITUMEN

CONDITIONS FOR CEMENT:

1. The contractor shall procure 33 grade (Conforming to IS: 269) or 43 grade (Conforming to IS: 8112) ordinary Portland cement, as required in the work, from reputed manufactures of cement having a production-capacity of one million tones per annum or more such has ACC, L & T, J.P, Rewa, Vikram, Shri Cement, Birla Jute and Cement Corporation of India etc, as approved by Ministry of Industry, Government of India, and holding license to use ISI certification mark for their product whose name shall be got approved from Engineer-in-Charge. Supply of cement shall be taken in 50 Kg. bags bearing manufacture's name and ISI marking, samples of cement arranged by the contractor shall be taken by the Engineer-in-Charge and got tested in accordance with provisions of relevant BIS codes. In case test results indicate that the cement arranged by contractor does not conform to the relevant BIS codes, the same shall stand rejected and shall be removed from the site by the contractor at his own cost within a week's time of written order from the Engineer-in-Charge to do so.

2. The cement shall be brought at site in bulk supply of approximately 50 tones or as decided by the Engineer-in-Charge.
3. The cement godown of the capacity to store a minimum of 2000 bags of cement shall be constructed by the contractor at site of work for which no extra payment shall be made. Double lock provisions shall be made to the door of the cement godown. The keys of one lock shall remain with the Engineer-in-Charge or his authorized representative and the key of the other lock remain with the contractor. The contractor shall be responsible for the watch and ward and safety of the cement godown. The contractor shall facilitate the inspection of the cement godown by the Engineer-in-Charge at any time.
4. The contractor shall supply free of charge the cement required for testing. The cost of tests shall be borne by the contractor.

5. The actual issue and consumption of cement on work shall be regulated and proper accounts maintained as provided in Clause 6 of the contract. The theoretical consumption of cement shall be worked out as per procedure prescribed in Clause 6 of the contract and shall be governed by conditions laid therein.

6. Cement brought to site and cement remaining unused after completion of work shall not be removed from without written permission of the Engineer-in-Charge.

CONDITIONS FOR STEEL:

1. The contractor shall procure steel reinforcement bars conforming relevant BIS codes from main producers as approved by the ministry of steel. The contractor shall have to obtain and furnish test certificate to the Engineer-in-Charge in respect of all supplies of steel brought by him to the site of work. Samples shall also be taken and got tested by the Engineer-in-Charge as per the provisions in this regard in relevant BIS codes. In case the test results indicate that the steel arranged by the contractor does not confirm to BIS codes, the same shall stand rejected and shall be removed from the site of work by the contractor at his cost within a week's time from written orders from the Engineer-in-Charge to do so.

2. The steel reinforcement shall be brought to the site in bulk supply of 10 tonnes or more as decided by the Engineer-in-Charge.

Stamp & Signature of Tenderer

3. The steel reinforcement shall be stored by the contractor at site of work in such a way as to prevent Distortion and corrosion and nothing extra shall be paid on this account. Bars of different size and lengths shall be stored separately to facilitate easy counting and checking.

4. For checking nominal mass, tensile strength, bend test, re-bend test etc.., specimen of sufficient length shall be cut from each size of the bar at random at frequency not less than that specified below:

Size of bar	For consignment below 100 tonnes	For consignment over 100 tonnes
Under 10mm dia.	One sample for each 25 tonnes or part thereof.	One sample for each 40 tonnes or part thereof.
10mm to 16mm dia	One sample for each 35 tonnes or part thereof.	One sample for each 45 tonnes or part thereof.
Over 16mm dia	One sample for each 45 tonnes or part thereof.	One sample for each 50 tonnes or part thereof.

5. The contractor shall supply free of charge the steel required for testing. The cost of tests shall be borne by the contractor.

6. The actual issue and consumption of steel on work shall be regulated and proper accounts maintained as provided in clause 6 of the contract. The theoretical consumption of steel shall be worked out as per procedure in clause 6 of the contract and shall be governed by conditions laid therein.

7. Steel brought to side and steel remaining unused shall not be removed from site without the written permission of the Engineer-in-charge.

CONDITIONS FOR BITUMEN

1. The contractor shall bring the required grade of Bitumen as specified in the item of works in sealed Drums of ISI mark & standard company / Refinery of ISI grade.

2. The contractor shall tests the bitumen free of charge in the standard approved. Laboratory as per ISI & CPWD practice for its quality.

3. The quality of Bitumen to be collected as per relevant codes of work as specified in ISI & CPWD practice.

4. In case the road work is done by Hot Mix Plant with mineral aggregate or at site the necessary relevant test of mix for quality and proportion of Bitumen to be carried out by the contractor on his own expenditures as per ISI codes & CPWD practice of the concerned works.

Stamp & Signature of Tenderer

Special Conditions

1. Contractor should incorporate any material after taking written approval from Superintending Engineer.

2. Testing of all the materials to be got done by the contractor at his own cost by taking the letter from the office of NGRI before incorporating them.

3. Contractor has to arrange errors free leveling instruments, leveling staff, surveyor etc. He has to submit the levels of the ground/area where the work is earmarked by the Superintending Engineer on graph sheet. After completion of the work he has to submit levels of completed work. Leveling instrument should be arranged for checking levels as and when required by Engineer-in-charge.

4. Contractor has to submit the concrete mix design from the approved authorized Institute/Laboratory for the verification /consideration of Engineer-in-charge.

5. Contractor has to take levels of the work to be completed in writing from the Superintending Engineer before commencement of the work.

6. Time completion of work is essence of the contract/work. If contractor failed to complete the work within stipulated period necessary penalty will be imposed as per relevant clause of CSIR agreement clause.

7. The surface of base concrete to be cleaned wherever earth, mud, leaves, debris etc are lying.

8. Required number of steel moulds to be kept on site for casting concrete cubes.

9. Cubes to be casted as per standard specifications and to be cured to the required period.

10. Before starting the work contractor should submit the samples of materials.

11. Necessary IT, VAT etc. Govt. taxes will be deducted from the bill.

12. Payment will be made at site standard mode of measurement only.

To do the work as per the above special conditions, no extra payment will be made to the contractor. I read the CSIR works agreement conditions also and work will be completed according to rules, conditions, special conditions, specifications etc.

Stamp & Signature of Tenderer

CSIR-NATIONAL GEOPHYSICAL RESEARCH INSTITUTE

HYDERABAD-500 007

ADDITIONAL SPECIAL CONDITIONS

Plastic Emulsion and oil bound washable distemper & synthetic Enamel paint:

Material should be used of 1st qualify manufactured by reputed firms like M/s Jenson & Nicholson, M/s ICI, M/s Asian Paints. Once the material is approved it shall be brought to site in original sealed tins/drum directly from the supplier and shall be held at the joint custody of all the contractor and Engineer-in-charge from the Department at site. Supply in part or broken containers will not be accepted for the work. Empty tins/drums should be removed from site only when passed/ordered by the Engineer-in-charge.

Paints shall generally conform in the chemical composition and other characteristics to the relevant British standards or I.S. specifications.
II External Paint: Manufacture of M/s Asian Paints

III a) Storing of Paint: All the materials shall be kept properly when not actually in use. Lids of container shall kept closed and the surface of the paint in open or partially open containers shall be covered with a thick layer of turpentine to prevent the formation of skin. Materials which in the opinion of the Engineer-in-charge have become stale or fat shall not be used on the work and shall be removed from the site of the work forthwith.

b) Preparation of the surface: Surface shall be thoroughly cleaned of all dust, stains etc. All cracks, crevices and uneveness shall be made good by applying enamel putty, allowing it to dry and then papering the same to give a smooth and even surface.

c)Application: After the preparation of surface and having got the area approved by the Engineer-in-charge paint shall be applied.
IV) a) Necessary cleaning of floors, doors windows and glass panes etc., after painting is to be done by the contractor, no extra payment will be made for such cleaning and washing of floors etc.
b) Contractor shall fully cover the house hold article with polythene sheet/cloth while painting inside the quarter.
c) Contractor shall clean sanitary and electrical installation including fans and also make good the damages if caused operation to any of the installations.
d) Contractor should quote rate for carrying out work up to any height as per scope of work and the location of the buildings in the campus.
e) Ali the Painting application have to carried out only be suitable paint brush/ Roller/Spray as required.

Stamp & Signature of Tenderer

CSIR-NATIONAL GEOPHYSICAL RESEARCH INSTITUTE
HYDERABAD 500 007

ABSTRACT OF COST

S.NO.	NAME OF THE WORK	TOTAL COST
1.	Total brought forward from the Last page of tender schedule of Quantities: PART-A	Rs. _____
	GRAND TOTAL:	Rs. _____

(Rupees _____ Only)

All the materials shall be quality specified and approved by our engineer. The Contractor should inspect the site, examine specifications, drawings, schedules of quantities and tender their rates. The rates given in the schedule of quantities will be deemed to include all the necessary materials, T & P labour required for satisfactory completion of work as shown in the drawings, specifications, schedule of work.

Stamp & Signature of Tenderer

NATIONAL GEOPHYSICAL RESEARCH INSTITUTE

(Council of Scientific & Industrial Research)

Uppal Road, Hyderabad - 500 007

12/16

Name of the Work-Water Proofing treatment of terrace of A.C. Section adjacent to Main Building at NGRI, Hyderabad

				B.F.	
S.No.	Description of Work	Qty.	Unit	Rate in Rs. (In figures and words)	Amount
1	Dismantling stone tile work in floors and roofs laid including cement mortar removal and stacking servicable material within NGRI store and stacking of unservicable material in proper place.(Removing of stone tile flooring with carefully to aviod to break of stone tiles.) as per instructions of Engineer-in-charge				
	For thickness of tiles above 25 mm and up to 50 mm or as per existing at site	94.00	Sqm		
2	Dismantling old plaster or skirting raking out joints and cleaning the surface for plaster including and dumping in a place in proper maner as instruction given by Engineer-in-charge.	10.00	Sqm		
3	Demolishing brick work manually /by meachanical means including stacking of serviceable material dumping in a place in proper manner as instruction given by Engineer-in-charge.				
	In cement mortar	3.00	cum		
4	Demolishing cement concrete manually/ by mechanical means and including dumping if dismantled materials at one place as per instructions of Engineer-in-charge.				
	Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix)	3.00	cum		

Total

				B.F.	
S.No.	Description of Work	Qty.	Unit	Rate in Rs. (In figures and words)	Amount
5	Providing and laying integral cement based water proofing treatement including preparation of surface as required for treatment of roofs, balconies, terraces etc. consisting of following operations. a) Applying and a slurry coat of neat cement using 2.75 kg/sqm. of cement admixed with water proofing compound conforming to IS:2645 and approved by Engineer-in-charge over the RCC slab including adjoining wall up to 300 height cleaning the surface before treatment. b) Laying brick bats with mortar using broken bricks /brick bats 25 mm to 115 mm size with 50% of cement mortar 1:5 (1 cement: 5 coarse sand) admixed with water proofing compound conforming to IS:2645 and approved by Engineer-in-charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement: 5 coarse sand) admixed with water proofing compound conforming to IS:2645 approved by Engineer-in-charge to required slope and treating similary				
	the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs. c) After two days of proper curing applying a second coat of cement slurry using 2.75 kg/sqm of cement admixed with water proofing compound conforming to IS:2645and approved by the Engineer-in-charge. d) Finishing the surface with 20 mm thick jointless cement mortar of mix 1:4(1 cement: 4 coarse sand) admixed with water proofing compound conforming to IS:2645 and approved by Engineer-in-charge including laying glass fibre cloth of apporved quality in top layeer of plaster and finally finishing the surface with trowel with neat cement slurry and making of 300x300 mm square 3mm deep. e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test. All above operations to be done in order and as directed and specified by the Engineer-in-Charge.				
	For this item the contractor has to submit 10 years Guarantee.				
	With average thickness of 120 mm and minimum thickness at khurra as 65 mm.	122.00	Sqm		

Total

				B.F.	
S.No.	Description of Work	Qty.	Unit	Rate in Rs. (In figures and words)	Amount
6	Disposal of unservicable materials or demolished or dismantaled materials like plaster, brick, lime concrete, cement concrete, tarfelt sheet etc inside the NGRI camps along compond wall of CSIR-NGRI and levelling as desired by the contractor. The truck load of capacity about 80 Cuft	6.00	Trip		
7	Labour rate for laying of old stone tile flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab, including with base of cement mortar 1 : 4 (1 cement : 4 coarse sand) :	31.00	Sqm		
8	Half brick masonry with common burnt clay F.P.S. (non modular) bricks of class designation 35 in superstructure above plinth level up to floor V level.				
	Cement mortar 1:4 (1 cement :4 coarse sand)	24.00	sqm		
9	18 mm cement plaster in two coats under layer 12 mm thick cement plaster 1:5 (1 cement: 5 coarse sand) and a top layer 6 mm thick cement plaster 1:3 (1 cement : 3 coarse sand) finished smooth with sponge.	50.00	sqm		
10	Providing and fixing on wall face unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion, (i) Single socketed pipes.(including clips to fix rain water pipes)(make of Prince or Sudhaker)				
	110 mm diameter	24.00	Rm		
11	Providing and fixing on wall/column face unplasticised-PVC moulded fittings/accessories for unplasticised-PVC rain water pipes con- forming to IS:4985 including jointing with seal ring conforming to IS:5382 leaving 10 mm gap for thermal expansion.(make of Prince or Sudhaker)				
11.1	Bend 87.5 degree				

Total

				B.F.	
S.No.	Description of Work	Qty.	Unit	Rate in Rs. (In figures and words)	Amount
	110 mm bend	10.00	each		
11.2	Shoe(Plain)				
	110 mm shoe	6.00	each		
12	Providing and fixing of CRS sheet of standard IS 513 having yield strength of 240 MPC with gavalanized as per IS 277/GIS 3302 of sheet 0.47 TCT zinc coating of 120 GSM both side mass painted as per IS 14246 RMP tolerance of 0.03 as per IS 513 of colour off white, green, light blue of wide 1.06 m semi corrogated sheets in curves as required plans with double "E" fashner of required size of make of Uttam gavalanized or equivalent and complete the job as per instruction of Engineer-in-charge.				
	Shed(Light colour) Top	20.00	sqm		
13	Painting with Synthetic Enamel paint of Two coat with one coat of steel primer of Asian Brand. Before painting removing the rust by scraping with sand papering and to remove loose particles completely etc. (Steel structure is steel staircase with steel shed complete. The complete structure including inside and outside all steel sections, plates, landing, threader, hand rainling, truss, perlin etc to complete the work.)(Stair case is situated at A.C. Section)	1.00	Job		
14	Making of Drop wall using Cement Mortar (1Cement :4 Coarse Sand) and two layer of chicken wire mesh including strengthing of old Reinforcemnt by using new TMT Bar and Binding wire.(TMT Bar will be measured spearately.)	9.00	Sqm		
15	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.				
	Thermo-Mechanically Treated bars	25.00	Kg		

Total

				B.F.	
S.No.	Description of Work	Qty.	Unit	Rate in Rs. (In figures and words)	Amount
16	Removing of old waterproofing sheet/tarfelt/membrane by using manpower/mechnical/trouching and disposed the unserviceable materials out the camps.	44.00	Sqm		
17	Removal of bitumen coating from parapet wall/roof with out dismantaling of plaster by using hand griding/sander machine.	44.00	Sqm		
18	Finishing walls with Acrylic Smooth exterior paint of Asian brand product Apex ultima protek of required shade: for external area				
	New work (Two or more coat applied @ 1.67 kg/10sqm over and including base coat of exterior base coat applied @ 0.70 ltrs/10 sqm)	52.00	Sqm		
19	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete. (strengthing of old frame work)	101.00	Kg		
20	Removing dry or oil bound distemper, water proofing cement paint or any exterior paint and the like by scrapping, sand papering and preparing the surface smooth including necessary repairs to scratches, crack filling by the smart cark filler of asian etc. complete	52.00	Sqm		
				Total	

Contractor's Signature

Total