Two Bid Tender Document

Civil up-gradation works in Composit Wood Discipline lab of Division of Forest Product at FRI.

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Forest Research Institute
P.O. New Forest
Dehradun-248006
2016-17

NOTICE INVITING e-TENDER

The Head, Engineering & Services Division, FRI, Dehradun invites on behalf of Director, FRI Dehradun online item rate bids from approved and eligible contractors of CPWD, MES, Railways, P & T, State PWD & other Govt. Department etc. :

1. NIT No.30-223/2017/HOD/Engg. & Ser Div./Civil

2. *Name of Work: -* Civil up-gradation works in Composit Wood Discipline lab of Division of Forest Product at FRI.

3. *Estimated Cost: Rs.3,81,300/- Earnest money : Rs.7,600/-. Tender fee Rs. 590/- and period of completion: 30 days, Last date and time of submission of bid: 14-09-17 at 3.00 PM.*

4. *The tender forms and other details can be obtained from the website www.eprocure.gov.in, http://fri.icfre.gov.in/*

Head
Engineering & Services Division
Forest Research Institute
Dehradun

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Name of Work:- Civil up-gradation works in Composit Wood Discipline lab of Division of Forest Product at FRI.

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NIT amounting to Rs.3,81,300/- (Rs. Three lakh eighty one thousand three hundred only) is approved.

Head
Engineering & Services Division
FRI, Dehradun

Press Notice/Application for inviting open bid

INFORMATION AND INSTRUCTIONS FOR CONTRACTORS FOR e-tendering

The Head, Engineering & Services Division, Dehradun on behalf of Director, FRI Dehradun invites online item rate bids from approved and eligible contractors of CPWD, MES, Railways , P & T, State PWD & other Govt. Department etc. for the following work:

NIT No.	30-223/2017/HOD/Engg. & Ser Div.
Name of work & Location	**Civil up-gradation works in Composit Wood Discipline lab of Division of Forest Product at FRI.**
Estimated cost put to bid	Rs. 3,81,300/-
Tender fee	Rs. 500+18% GST (Total Rs. 590/-)
Earnest Money	Rs 7,600/-
Period of Completion	30 days
Last date & time of submission of bid, original EMD, copy of receipt for deposition of original EMD and other Documents as specified in press notice	14-09-17 at 3.00PM
Time & date of opening of bid	15-09-17 at 3.00 PM

1. Contractors who fulfill the following requirements shall be eligible to apply. Joint ventures are not accepted.

   &

   Contractor should have satisfactorily completed the works as mentioned below during the last **FIVE** years ending previous day of last date of submission of bid.
   One similar work costing not less than Rs. **3.05 Lacs**. Two similar works costing not less than Rs. **2.29 Lacs**. Three similar works costing not less than Rs. **1.53 Lacs**.

2. Similar work would means "**Building Construction work**" The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum; calculated from the date of completion to last date of receipt of applications for bids. (Scanned copies of work experience certificates meeting to this criteria shall be uploaded by the agency).

3. The intending bidder must read the terms and conditions of CPWD-6 carefully. He should only submit his bid if he considers himself eligible and he is in possession of all the documents required.

4. Information and Instructions for bidders posted on website shall form of bid document.

5. The enlistment of the contractors should be valid on the last date of submission of bids. In case the last date of opening of bid is extended, the enlistment of contractor should be valid on the original date of opening of tender.

6. The bid document consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents can be seen and downloaded from website www.eprocure.gov.in free of cost.

7. But the bid can only be submitted after **deposition of original EMD in the Office of Head, Engineering & Services Division, FRI Dehradun within the period of bid submission. (The EMD document shall only be payable at Dehradun)** and uploading the mandatory scanned documents such as Demand Draft or Pay order or Banker's Cheque or Deposit at call Receipt or Fixed Deposit Receipt and Bank Guarantee of any Scheduled Bank towards EMD in favour of Director FRI Dehradun **as mentioned in NIT, receipt for deposition of original EMD to office of the Head Engineering & Ser. Division, FRI Dehradun** and other documents as specified.

8. **Tender fee**: **Rs.590/- (including 18% GST) by crossed Demand Draft in favour of Director, FRI payable at Dehradun,** as tender fee/processing charges is applicable. The scanned copy of the same should be uploaded in the Web Portal during online submission is essential. The original draft of tender fee along with other tender documents should be submitted in the Office of Head, Engineering & Services Division, FRI Dehradun within the period of bid submission.

9. Those contractors not registered on the website mentioned above, are required to get registered beforehand. If needed they can be imparted training on online bidding process as per details available on the website.

   The intending bidder must have valid **class-III digital signature** to submit the bid.

10. **The contractor can deposit original EMD in the office of the Head Engineering & Ser. Division, FRI Dehradun within the period of bid submission. (The EMD document shall only be payable at Dehradun). The contractor shall obtain the receipt of EMD from the Head, Engineering & Services Division FRI in the prescribed format uploaded by NIT issuing office.** The Bid Document as uploaded can be viewed and downloaded free of cost by anyone including intending bidder. But the bid can only be submitted after uploading and mandatory scanned documents such as Demand Draft/Pay Order or Banker's Cheque of any scheduled Bank towards EMD in favour of respective Director, FRI Dehradun, **copy of receipt of original EMD** and other documents specified in the press notice.

11. On opening date, the contractor can login and see the bid opening process. After opening of bids he will receive the competitor bid sheets.

12. Contractor can upload documents in the form of JPG format and PDF format.

13. Contractor must ensure to quote rate of each item.

14. In addition to this, if any cell is left blank the same shall be treated as "0". Therefore, if any cell is left blank and no rate is quoted by the bidder, rate of such item shall be treated as "0" (ZERO).

However, if a tenderer quotes nil rates against each item in item rate tender on the lowest amount of the tender or any section/sub head in item rate tender, the tender shall be treated as invalid and will not be considered as lowest tenderer.

15. The required documents meeting the criteria to qualify as "approved and eligible contractors" for the following work along with other documents as mentioned under para "List of Documents to be scanned and uploaded within the period of bid submission", as uploaded by the agency shall be checked first, while opening the bid. The financial bid of only those agencies shall be opened who are found to be eligible agencies, as per this NIT.

16. The department reserves the right to reject any prospective application without assigning any reason and to restrict the list of qualified contractors to any number deemed suitable by it, if too many bids are received satisfying the laid down criterion.

17. If the agency is not registered with Uttarakhand GST department earlier, he has to get register himself with Uttarakhand GST department before submission of the bid.

18. List of Documents to be scanned and uploaded within the period of bid submission:

(a) Demand draft of tender fee.

(b) Demand draft/ Pay order or Banker's Cheque/ Deposit at call receipt/FDR of any Scheduled Bank against EMD.

(c) Enlistment Order of the Contractor ***(CPWD, MES, Railways, P & T, State PWD & other Govt. Department etc.)***.

(d) Copy of receipt for deposition of original EMD issued from office of Head, Engineering & Services Division, FRI (The EMD document shall be issued from Dehradun).

(e) Certificate of work experience and other documents as specified in the press notice. **Satisfactory Completion certificate of the work duly signed by the competent authority should be uploaded and submitted. Without Satisfactory Completion such experience will not be consider**.

(f) ***The bidder are required to submit Tender fee, EMD and Hard copy of the tender document along with a copy of all certificate as uploaded in technical bid. These documents shall be sent and received physically by the office of Head Engineering & Ser. Division Forest Research Institute Dehradun by hand and by post before date & time of opening of technical***

bid and in absence of which the technical bid of the bidder will not be consider.

19. **Following procedure shall be adapted to Deposit earnest EMD.**

(i) The Head, Engineering & Services Division should be received the original EMD for tender.

(ii) The NIT approving authority at the time of issue of NIT shall also fill and upload the following prescribed format of receipt of deposition of original EMD along with NIT:

FORMAT OF RECEIPT OF DEPOSITION OF ORIGINAL EMD

(Receipt No. …...../date……)

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Name of work: **Civil up-gradation works in Composit Wood Discipline lab of Division of Forest Product at FRI**

1. *NIT No. 30-223/2017/HOD/Engg. & Ser Div.*
2. Estimated Cost Rs. 3,81,300/-
3. *Amount of Earnest Money Deposit Rs. 7,600/-*
4. *Last date of submission of bid: 14-09-17 at 3.00 PM*

(*To be filled by Office of the Head Engineering & Services Division, FRI)

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1. *Name of contractor……*
2. *From of EMD …….*
3. *Amount of Earnest Money Deposit…….*
4. *Date of submission of EMD……*

Signature, Name and Designation of Officials
Engineering & Services Division
along with Office stamp

(iii) The Head, Engineering & Services Division receiving EMD and Tender fee in original form shall examine the EMD and Tender fee deposited by the bidder and shall issue a receipt of deposition of earnest money and tender fee to the agency in a given format uploaded by tender. The receipt may be issued by the Office of Head, Engineering & Services Division, FRI.

(iv) The Head, Engineering & Services Division, FRI Dehradun receiving original EMD and Tender fee shall also intimate tender inviting Head, Engineering & Services Division about deposition of EMD and Tender fee by the agency by email/ fax/telephonically.

(v) The original EMD receiving by the office Head, Engineering & Services Division, FRI Dehradun shall release the EMD after verification from the e-tendering portal website (www.tenderwizard.com> tender free view> advance search> awarded tenders) that the particular contractor is not L-1 tenderer and work is awarded.

(vi) The tender inviting Head, Engineering & Services Division, FRI Dehradun will call for original EMD of the L-1 tenderer from EMD receiving office immediately.

The following conditions which already form part of the tender document are specially brought to the notice of all intending tenderers for compliance while filling the tender. They are requested to comply following instructions:

- After submission of the bid the contractor can re-submit revised bid any number of times but before last time and date of submission of bid as notified.
- While submitting the revised bid, contractor can revise the rate of one or more item(s) any number of times (he need not re-enter rate of all the items) but before last time and date of submission of bid as notified.
- When tenders are invited in three bid system and if it is desired to submit revised financial bid then it shall be mandatory to submit revised financial bid. If not submitted then the tender submitted earlier shall become invalid.
- In case of composite tenders, the contractor submitting the tender should read all the three Parts of the tender viz. Part-A, B & C, which are containing schedule of quantities, additional & special conditions, additional specifications, particular specification and other terms and conditions given in the NIT and drawings for Major as well as Minor component of work. Details of these parts are summarized as under :

- **Part A: -** CPWD -6, CPWD – 7/8 including schedule A to F for major component of the work, Standard General Conditions of Contract for CPWD 2014 as amended/ modified up to last date of submission of bid.
- **Part B: -** General/specific conditions, specifications and schedule of quantities applicable to major component of the work.
- **Part C :-** Schedule A to F for minor component of the work, (Officer- in- charge of major component shall also be competent authority under clause 2 and clause 5 as mentioned in schedule A to F for major components) General/specific conditions, specifications and schedule of quantities applicable to minor component(s) of the work.

The **Major** Component of work is **Civil** Work and **Minor** Component of work is **Electrical** Work.

- The bidders should also read the General Conditions of Contract for CPWD from 7 as modified and corrected up to last date of submission of bid of this work, which is available as Govt. of India Publications; however provisions included in the tender document shall prevail over the provisions contained in this standard form. The set of drawings and NIT shall be available with the Head, Engineering & Services Division.
- The contractor should also visit the site of work and acquaint himself with the site and soil conditions before tendering.
- The main contractor shall execute the minor component(s) also. He should be either an eligible contractor himself or associate with himself an eligible agency(s) for execution of electrical work as per CPWD-6 for e-tendering. The contractor shall indicate the names of up-to three such agencies within prescribed time as “Minor component agencies”. In case the details of electrical agency are not submitted by the bidder or are not proper then these shall be submitted before acceptance of the bid.
- After acceptance of the tender by competent authority, the Officer- in- charge of major component of the work shall issue letter of award on behalf of the Director, FRI Dehradun. After the work is awarded, the main contractor will have to enter

into one agreement with Officer- in- charge of major component and has also to sign two/or more copies of agreement depending upon number of Officer- in-charge of minor components. One such signed set of agreement shall be handed over to Officer- in- charge of minor component. Officer- in- charge of major component will operate part A and part B of the agreement. Officer- in- charge of minor component(s) shall operate Part C along with Part A of the agreement.

- The main contractor has to enter into agreement with the contractor(s) associated by him for execution of minor component(s). Copy of such agreement shall be submitted to Officer- in- charge of minor component as well as to Officer-in- charge of major component. In case of change of associate contractor, the main contractor has to enter into agreement with the new contractor associated by him.
- Tenders with any condition including that of conditional rebates in the tender document shall be rejected forthwith.
- The rate (s) must be quoted in decimal coinage. Amount must be calculated and rounded in full rupees by ignoring fifty paisa and considering more than fifty paisa as rupee one. Rate must be filled both in words and figures. Amount should be worked out for all the items. Rates in words should start with word “Rs.” And finish with word “only” and there should not be undue gap in the words of the rate. For example, the rate of Rs. 2429.50 in figure should be written as “Rs. Two thousand four hundred twenty nine and paisa fifty only”
- The contractor shall have to execute guarantee bonds in respect of water supply and sanitary installation works and water proofing works as per Performa at Annexure I & II.
- Sales tax/VAT, purchase tax, turns over tax, Excise duty, work contract tax or any other tax on materials as applicable shall be paid by the contractor himself. The contractor shall quote his rates considering all such taxes. However, service tax shall be separately reimbursable to the Agency as per Circular No. DGW/CON/241 dated 28/01/2009.
- Attention is also drawn to Clauses 6, 6A and 7 of General Condition of Contract for CPWD works 2014, which prescribes the procedure for computerized recording of measurement and preparation of bill by contractor.

- Intending tenderer may submit physical mile stone on the basis of their resources and methodology at the time of tendering as indicated in the “Schedule F”, otherwise it will be assumed that agency is agreeable to physical mile stones mentioned in the table.
- Intending tenderer may give detailed activities/programme for each mile stone fixed in the tender document while submitting the tender.
- Recovery rates for less use of materials beyond permissible limits is given in Schedule ‘F’ of Part-A & C & also for excess use of departmentally issued material.

Head
Engineering & Services Division
Forest Research Institute
Dehradun

INSTRUCTION FOR E-TENDERING

*Online item rate bids are invited on behalf of Director, FRI Dehradun from approved and eligible contractors of CPWD, MES, Railways, P & T, State PWD & other Govt. Department etc. for the work of "***Civil up-gradation works in Composit Wood Discipline lab of Division of Forest Product at FRI***".*

1. The enlistment of the contractors should be valid on the last date of submission of bids.

In case the last date of opening of bid is extended, the enlistment of contractor should be valid on the original date of opening of bids.

The work is estimated to cost Rs. 3,81,300/-

This estimate, however, is given merely as a rough guide.

The authority competent to approve NIT for the combined cost and belonging to the major discipline will consolidate NITs for calling the bids. He will also nominate Division, which will deal with all matters relating to the invitation of bids.

1.1 For composite tender, besides indicating the combined estimated cost put to tender, should clearly indicates the estimated cost of each component separately. The eligibility of tenderer will correspond to the combined estimated cost of different components put to tender.

1.2 Conditions for all contractors

1.2.1 The Contractor should have satisfactorily completed One similar work costing not less than Rs. **3.05 Lacs**. Two similar works costing not less than Rs. **2.29 Lacs**. Three similar works costing not less than Rs. **1.53 Lacs**.

Similar works mean "Building Construction work"

The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum, calculated from the date of completion to the *previous day of last date of submission of bid.*

1.2.2 To become eligible for issue of bid, the bidders shall have to furnish an affidavit as under:-

"I/We undertake and confirm that eligible similar works(s) has/have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the notice of Department, then I/we shall be debarred for bidding in FRI in future forever. Also, if such a violation comes to the notice of Department before date of start of work, the Officer-in- Charge shall be free to forfeit the entire amount of Earnest Money Deposit". **(Scanned copy to be uploaded at the time of submission of bid).**

1.2.3 It is mandatory for all contractors to upload the work experience certificate(s) and the affidavit as per the provisions of clause 1.2.1 and 1.2.2.

Online bid documents submitted by intending bidders shall be opened only of those bidders, whose "Earnest Money Deposit, Cost of Bid Document and e-tender Processing Fee" and "other documents including eligibility documents as required as per this NIT" placed in separate **sealed envelopes** marked as "Earnest Money, Cost of Bid Document and Cost of Bid Processing Fee" and "Other documents", respectively are found in order. Both these envelopes shall be submitted together in another sealed envelope.

The financial bid of only those agencies shall be opened who are found to be eligible agencies, as per this NIT.

2. Agreement shall be drawn with the successful bidder on prescribed Standard Form which is available in office of Engineering & Services Division. Bidder shall quote his rates as per various terms and conditions of the said form which will form part of the agreement.

3. The time allowed for carrying out the work will be 15 days from the date of start as defined in schedule 'F' or from the first date of handing over of the site, whichever is later, in accordance with the phasing, if any, indicated in the bid documents.

4. The site for the work is available.

5 The bid document consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents except Standard General Conditions of Contract Form can be seen from website www.eprocure.gov.in free of cost and http://fri.icfre.gov.in/

6. After submission of the bid the contractor can re-submit revised bid any number of times but before last time and date of submission of bid as notified.

7. While submitting the revised bid, contractor can revise the rate of one or more item(s) any number of times (he need not re-enter rate of all the items)but before last time and date of submission of bid as notified.

8. When bids are invited in three stage system and if it is desired to submit revised financial bid then it shall be mandatory to submit revised financial bid. If not submitted then the bid submitted earlier shall become invalid.

9. Tender fee in form of Demand draft (Drawn in favour of **Director, FRI Dehradun)** shall be scanned and uploaded to the e-Tendering website within the period of submission. **The receipt of tender fee shall also be uploaded to the e-Tendering website by the intending bidder up-to the specified bid submission date and time.**

10. Earnest Money in the form of Demand Draft or pay order or Banker's Cheque or Deposit at call Receipt or fixed Deposit (Drawn in favour of **Director, FRI Dehradun)** shall be scanned and uploaded to the e-Tendering website within the period of submission. **The original EMD should be deposited in the office of Head, Engineering & Services Division, FRI within the period of bid submission. (The EMD document shall be only payable at Dehradun).**

The receipt of EMD shall also be uploaded to the e-Tendering website by the intending bidder up-to the specified bid submission date and time.

Copy of Enlistment Order and certificate of work experience and other documents as specified in the press notice shall be scanned and uploaded to the e- Tendering website within the period of bid submission.

However, certified copy of all the scanned and uploaded documents as specified in press notice shall have to be submitted by the lowest bidder only within a week physically in the office of tender opening authority.

Online bid documents submitted by intending bidders shall be opened only of those bidders, whose original EMD deposited Head, Engineering & Ser. Division office and other documents scanned and uploaded are found in order.

The bid submitted shall be opened 15-09-17 at 3:00 PM

11. The bid submitted shall become invalid if:

(i) **The bidder is found ineligible**.

(ii) **The bidder does not deposit original EMD and tender fee with office of the Head, Engineering & Services Division, FRI <u>(The EMD and tender fee shall only be payable at Dehradun).</u>**

(iii) The bidder does not upload all the documents (GST registration) as stipulated in the bid document **including the copy of receipt for deposition of original EMD.**

(iv) If any discrepancy is noticed between the documents as uploaded at the time of submission of bid and hard copies as submitted by the lowest bidder in the office of tender opening authority.

(v) **If a tenderer quotes nil rates against each item in item rate tender or does not quote any percentage above/below on the lowest amount of the tender or any section/sub head in percentage rate tender, the tender shall be treated as invalid and will not be considered as lowest tenderer.**

12. Intending Bidders are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their bids as to the nature of the ground and sub-soil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their bid. A bidder shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed. The bidder shall be responsible for arranging and maintaining at his own cost all materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a bid by a bidder implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant, etc. will be issued to him by the Government and local conditions and other factors having a bearing on the execution of the work.

13. The competent authority does not bind itself to accept the lowest or any other bid and reserves to itself the authority to reject any or all the bids received without the assignment of any reason. All bids in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the bidders shall be summarily rejected.

14. Canvassing whether directly or indirectly, in connection with bidders is strictly prohibited and the bids submitted by the contractors who resort to canvassing will be liable to rejection.

15. The competent authority on behalf of Director, FRI Dehradun reserves to himself the right of accepting the whole or any part of the bid and the bidder shall be bound to perform the same at the rate quoted.

16. No Engineer of gazetted rank or other gazetted officer employed in Engineering or Administrative duties in an Engineering Department of the Government of India is allowed to work as a contractor for a period of one year after his retirement from Government service, without the previous permission of the Government of India in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Government of India as aforesaid before submission of the bid or engagement in the contractor's service.

17. The bid for the works shall remain open for acceptance for a period of **Ninety (90) days** from the date of opening of bids. If any bidder withdraws his bid before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the bid which are not acceptable to the department, then the Government shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. Further the bidder shall not be allowed to participate in the rebidding process of the work.

18. This notice inviting Bid shall form a part of the contract document. The successful bidder/contractor, on acceptance of his bid by the Accepting Authority shall within 15 days from the stipulated date of start of the work, sign the contract consisting of:-

a) The Notice Inviting Bid, all the documents including additional conditions, specifications and drawings, if any, forming part of the bid as uploaded at the time of invitation of bid and the rates quoted online at the time of submission of bid and acceptance thereof together with any correspondence leading thereto.

b) Standard C.P.W.D. **Form 7** or other Standard C.P.W.D. Form as mentioned.

Signature of the Head Engineering & Services
Division
For and on behalf of Director, FRI

FOREST RESEARCH INSTITUTE
ITEM RATE BID AND CONTRACT FOR WORKS

Tender for the work of: **Civil up-gradation works in Composit Wood Discipline lab of Division of Forest Product at FRI.**

To be submitted online by 14-09-17 at 3.00 PM

The Bid shall be opened in presence of tenderers who may be present

30-223/2017-18 /HOD/Engg. & Ser Div in the office of the Head, Engineering & Services Division, FRI, Dehradun

TENDER

I/We have read and examined the Notice Inviting tender, schedule, A,B,C,D,E&F. Specifications applicable, Drawings & Designs, General Rules and Directions, Conditions of Contract, clauses of contract, Special conditions, Schedule of Rate & other documents and rules referred to in the conditions of contract and all other contents in the tender document for the work.

I/We hereby tender for the execution of the work specified for the Director FRI Dehradun within the time specified in Schedule 'F', viz., schedule of quantities and in accordance in all respects with the specifications, designs, drawings and instructions in writing referred to in Rule-1 of General Rules and Directions and in Clause 11 of the Conditions of contract and with such materials as are provided for, by, and in respects in accordance with, such conditions so far as applicable.

We agree to keep the tender **open for Ninety (90) days from the date of opening of bid** and not to make any modifications in its terms and conditions.

A sum of **Rs. 7,600/-** is hereby forwarded in Deposit at call Receipt of a Scheduled Bank/Fixed deposit receipt of scheduled bank/demand draft of a scheduled bank/bank guarantee issued by scheduled bank as earnest money. I/we agree that the said Director FRI Dehradun or his successors in office shall without prejudice to any other right or remedy be at liberty to forfeit the said earnest money absolutely. Further, if I/we fail of commence work as specified, I/we agree that Director, FRI Dehradun or his successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said earnest money and the performance guarantee absolutely, otherwise the said earnest money shall be retained by him towards security deposit to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to therein and to carry out such deviations as may be ordered, up to maximum of the items mentioned in Schedule 'F' and those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.3 of the tender form.

Further, I/We agree that in case of forfeiture of earnest money or both Earnest Money as aforesaid, I/We shall be debarred for participation in the re-tendering process of the work.

I/We undertake and confirm that eligible similar work(s) has/ have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the notice of Department, then I/we shall be debarred for tendering in FRI in future forever. Also, if such a violation comes to the notice of Department before date of start of work, the officer-in-Charge shall be free to forfeit the entire amount of Earnest Money Deposit.

I/We hereby declare that I/we shall treat the tender documents drawings and other records connected with the work as secret/confidential documents and shall not communicate information derived there from to any person other than a person to whom I/we am/are authorized to communicate the same or use the information in any manner prejudicial to the safety of the State.

Dated:

Signature of Contractor

Witness:

Postal Address

Address:

Occupation:

ACCEPTANCE

The above tender (as modified by you as provided in the letters mentioned hereunder) is accepted by me for and on behalf of the Director, Forest Research Institute, Dehradun for a sum of Rs._____ (Rupees_____
_____
_____
_____)

The letters referred to below shall form part of this contract Agreement:-

a) _____

b) _____

c) _____

For & on behalf of the Director, FRI

Dated _____

Signature_____

Designation _____

SCHEDULE – 'A', 'B', 'C', 'D', 'E' & 'F'
FOR MAJOR COMPONENT OF WORK (CIVIL WORK)

SCHEDULE 'A'

Schedule of Quantities (as per PWD-3) : **As per separate sheets attached**

SCHEDULE 'B'

Schedule of materials to be issued to the contractor:

S. No.	Description of item	Quantity	Rates in figures & words at which the material will be charged to the contractor	Place of issue
1	2	3	4	5
----------NIL ----------				

SCHEDULE 'C'

Schedule of Tools and Plants to be hired to the contractor:

S. No.	Description	Hire charges per day	Place of issue
1	2	3	4
----------NIL ----------			

SCHEDULE 'D'
Extra schedule for specific requirements/document for the work, if any: **As attached in tender form**

SCHEDULE 'E'*:*

Reference to General Conditions of contract.	**General Conditions of contract for Central PWD Works 2014 as amended/ modified up to last date of submission of bid.**
Name of Work:	**Civil up-gradation works in Composit Wood Discipline lab of Division of Forest Product at FRI.**
Estimated cost of the work:	**Rs. 3,81,300/-**
Earnest money	**Rs. 7,600/-** (to be returned after receiving performance guarantee).

Security Deposit	10% (Ten percent) of work done amount

SCHEDULE 'F'

General rules and direction

Officer inviting tender	**Head, Engineering & Services Division**
Maximum percentage of quantity of items of work to be executed beyond which rates are to be determined in accordance with Clause 12.2 & 12.3	See at appropriate clause under definitions

Definitions:

2(v) **Officer-in-Charge :** **Scientist-D, Engineering & Services Division**

2(vii) **Accepting Authority :** **Director, FRI Dehradun or successor thereof.**

2(x) Percentage on cost of materials and labour to cover all overheads and profits : **15%**

2(xi) **Standard Schedule of Rates:**
Civil Items of Work: **DSR 2014** with up to date correction slips.

2(xii) Department: Forest Research Institute, Dehradun

9(ii) Standard CPWD contract Form: GCC 2014, **CPWD Form 7** as modified & corrected up to last date of submission of bid.

Clause 1	Nil	
Clause 2	Authority for fixing Compensation under Clause 2	**Head, Engineering & Services Division or successor thereof**
Clause 2 A	Whether Clause 2A shall be applicable	**No**
Clause 5	i) Number of days from the date of issue of letter of acceptance for reckoning date of start	**07 Days**
	ii) Time allowed for execution of work	**15 days**

Authority to decide	**Extension of time**	**Head, Engineering & Services Division, FRI or successor thereof.**
	Rescheduling of mile stone	**Head, Engineering & Services Division, FRI or successor thereof.**

Clause 6/ 6A	Clause applicable :	**Clause 6A**
Clause 7	Gross work to be done together with net payment/Adjustment of advances for material collected, if any, since the last such payment for being eligible to interim payment.	**30 lakh**
Clause 7A	Whether Clause 7A shall be applicable	**No Running Account Bill shall be paid for the work till 50% of work done to be carried out by the contractor**
Clause 10A	List of testing equipment to be provided by the contractor at site lab.	**No**
Clause 10 B (ii), (iii)	Whether clause 10-B (ii) and 10-B (iii) shall be applicable.	**No**
Clause 10 C	Component of labour expressed as percentage of value of work	**25%**
Clause 10 CC	Clause 10CC to be applicable in contracts with stipulated period of completion exceeding the period shown in next column	**Not Applicable**
Clause 11	**Specification to be followed for execution of work**:	

For Civil items of work	CPWD Specifications 2009 Vol. 1 and Vol. 2 with up to date correction slips.(Hereinafter called CPWD specifications) and as per manufacturer's specification and recommendation.

Clause 12	**Type of work**	**Original Work.**
12.2 & 12.3	Deviation limit beyond which clause 12.2 & 12.3 shall apply for Building work.	**30%**
12.5 (i)	Deviation limit beyond which clause 12.2 & 12.3 shall apply for foundation/development work (Except items mentioned in earth work).	**30%**

Clause 16	**Competent Authority for Deciding reduced rates:**	
	For Civil items of work	**Head, Engineering & Services Division or successor thereof.**
Clause 18	List of mandatory machinery, tools & plants to be deployed by the contractor at site.	**As per requirement for road work**
Clause 25	Constitution of Dispute Redressal committee (DRC)	
	<u>For total claims more than RS. 25.0 Lakhs.</u>	
	a. Director, Forest Research Institute, Dehradun	**(Chairman)**
	b. Head, Engineering & Ser. Division, FRI, Dehradun	**(Member)**
	c. Officer-In-Charge, Engineering & Services Division, FRI, Dehradun	**(Member)**

(A) <u>For Total claims up to RS. 25.0 Lakhs.</u>

a. Director, Forest Research Institute, Dehradun **(Chairman)**

b. Head, Engineering & Ser. Division, FRI, Dehradun **(Member)**

c. Officer-In-Charge, Engineering & Services Division, FRI, Dehradun **(Member)**

Clause 31 **Applicable.**

Clause 31 (A) **Not Applicable.**

i)	a)	Schedule/ statement for determining theoretical quantity of cement & bitumen on the basis of Delhi Schedule of Rates printed by CPWD	**DSR 2014 with up to date correction slips & market rate.**
ii)		**Variations permissible on theoretical quantities**	
	a)	Cement for works with estimated cost put to tender not more than Rs. 5 lakhs.	**NA**
		For works with estimated cost put to Tender is more than Rs. 5 lakhs.	**NA**
	b)	Bitumen all works	**2.5% plus only & nil on minus side.**
	c)	Steel reinforcement and structural steel Sections for diameter, section and category.	**NA**
	d)	All other materials	**Nil**

RECOVERY RATES FOR QUANTITIES BEYOND PERMISSIBLE VARIATION

Sl No	Description of items	Rates in figures and words at which recovery shall be made from the contractor	
		Excess beyond permissible variation	Less use beyond the permissible variation
1.	Cement (PPC)	**N. A**	**NA**
2.	Steel reinforcement (TMT Bars)		**NA**

SALIENT / MANDATORY REQUIREMENTS FOR THE TENDERER

Name of Work: **Civil up-gradation works in Composit Wood Discipline lab of Division of Forest Product at FRI.**

The tenderer is advised to read and **examine** the tender documents for the work and the set of drawings available with officer-in-charge. He should inspect and examine the site and its surroundings by himself before submitting his tender.

1 Separate schedule of quantity is included in this tender for civil and electrical items of work. If the tenderer wants to offer any unconditional rebates on their rates, the same should also be offered in the respective components of civil and electrical schedule separately. The contractor shall quote the items rates in figures and words accurately so that there is no discrepancy in rates written in figures and words.

2 Time allowed for the execution of work is **30 days.**

3 The contractor(s) shall submit a detailed program of execution in accordance with the master programme/milestone within ten days from the date of issue of award letter.

4 Quality of the project is of utmost importance. This shall be adhered to in accordance with the provisions of CPWD specifications and guidelines given in the relevant paras.

5 The contractor (s) shall make his own arrangements for electricity and water required for the execution of work.

6 Contractor has to deploy required Plant and machinery on the project. Minimum number of plant and machinery to be deployed by him is indicated in this NIT. However, if any additional type and number of plants and machines are required at site, the same shall be deployed by the agency without any extra cost which shall be in order to adhere to the time schedule, as specified in this NIT. In case the contractor fails to deploy the plant and machinery whenever required and as per the direction of the officer-in-charge, he (officer-in-charge) shall be at a liberty to get the same deployed at the risk and cost of the contractor.

7 The contractor shall submit the running bills in the shape of the computerized MB in pages of A-4 size as per the standard format of department and shall act as per modified clause 6A of CPWD-7.

8 The officer inviting tenders shall have the right of rejecting all or any of the tenders and will not be bound to accept the lowest or any other tender.

9 In the case of any tender where unit rate of any item / items appear unrealistic, such tender will be considered as unbalanced and in case the tenderer in unable to provide satisfactory explanation such a tender is liable to be disqualified and rejected.

10 The Security deposit 10% of work done will be deducted from the each bill amount and will be release after completion of defect liability period of the work.

11 On acceptance of the tender, the name of the accredited representative(s) of the contractor who would be responsible for taking instructions from the Officer-in-Charge shall be communicated in writing to the officer-in-charge.

12 Sales Tax/VAT, purchase tax, turnover tax or any other tax on material in respect of this contract shall be payable by the Contractor and Government will not entertain any claim whatsoever in respect of the same.

13 The contractor shall give a list of both Gazetted and Non-Gazetted CPWD employees related to him, if applicable.

14 The tender for maintenance work includes in addition to building work all other works such as sanitary and water supply installations drainage installation, electrical work, horticulture work, roads and paths etc. The tenderer apart from being a registered contractor (B&R) of appropriate class, must associate himself with agencies of appropriate class which are eligible to tender for sanitary and water supply drainage, electrical and horticulture works in the composite tender.

15 The contractor shall comply with the provisions of the Apprentices Act 1961, and the rules and orders issued there under from time to time. If he fails to do so, his failure will be a breach of the contract and the Head/Officer-in-Charge Engineering & Services Division may in his discretion, without prejudice to any other right or remedy available in law, cancel the contract. The contractor shall also be liable for any pecuniary liability arising on account of any violation by him of the provisions of the said Act.

ADDITIONAL CONDITIONS

1. Unless otherwise provided in the Schedule of Quantities/Specifications, the rates tendered by the contractor shall be all inclusive and shall apply to all heights, lifts, leads and depths of the work and nothing extra shall be payable to him on account of the same. Extra payment for centering/shuttering, if required to be done for heights greater than 3.5 m shall however be admissible at the rates arrived at in accordance with clause 12 of the agreement, if not already specified.

2. The contractor shall make his own arrangement for obtaining electric connection(s) if required and make necessary payments directly to the department concerned.

3. Other agencies doing works related with this project may also simultaneously execute their works and the contractor shall afford necessary facilities for the same. The contractor shall leave such necessary holes, openings etc. for laying/burying in the work, pipes cables, conduits, clamps, boxes and hooks for fan clamps etc. as may be required for the other agencies. Nothing extra over the Agreement rates shall be paid for doing these.

4. Some restrictions may be imposed by the security staff etc. on the working and for movement of labour, materials etc. The contractor shall be bound to follow all such restrictions/instructions and nothing extra shall be payable on account of the same.

5. The contractor shall fully comply with all legal orders and directions of the Public or local authorities or municipality and abide by their rules and regulations and pay all fees and charges for which he may be liable in this regard. Nothing extra shall be paid/reimbursed for the same.

6. If as per local Municipal regulations, huts for labour are not to be erected at the site of work; the contractor shall be required to provide such accommodation at a place as is acceptable to the local body and nothing extra shall be paid on this account.

7. The structural and architectural drawings shall at all times be properly co-related before executing any work. However, in case of any discrepancy in the item given in the schedule of quantities appended with the tender and Architectural drawings relating to the relevant item, the former shall prevail unless otherwise given in writing by the officer-in-charge.

8. The contractor shall bear all incidental charges for cartage, storage and safe custody of materials issued by department.

9. Samples of various materials required for testing shall be provided free of charges by the contractor. Testing charges, if any, unless otherwise provided shall be borne by the department. All other expenditure required to be incurred for taking the samples; conveyance, packing etc. shall be borne by the contractor himself.

10. For the purpose of recording measurements and preparing running account bills, the abbreviated nomenclature indicated in the publications Abbreviated

Nomenclature of Items of DSR 2014 shall be accepted. The abbreviated nomenclature shall be taken to cover all the materials and operations as per the complete nomenclature of the relevant items in the agreement and relevant specifications.

In case of items for which abbreviated nomenclature is not available in the aforesaid publication and also in case of extra and substituted items for which abbreviated nomenclature are not provided for in the agreement, full nomenclature of item shall be reproduced in the measurement books and bill forms for running account bills.

For the final bill, however, full nomenclature of all the items shall be adopted in preparing abstract in the measurement books and in the bill forms.

11. The contractor shall have to make approaches to the site, if so required and keep them in good condition for transportation of labour and materials as well as inspection of works by the officer in charge. Nothing extra shall be paid on this account.

12. No payment will be made to the contractor for damage caused by rains, or other natural calamities during the execution of the works and no such claim on this account will be entertained.

13. The contractor shall take instructions from the officer-in-charge for stacking of materials. No excavated earth or building materials etc. shall be stacked/ collected in areas where other buildings, roads, services, compound walls etc. are to be constructed.

14. Any trenching and digging for laying sewer lines/water lines/cables etc. shall be commenced by the contractor only when all men, machinery's and materials have been arranged and closing of the trench(s) thereafter shall be ensured within the least possible time.

15. It shall be ensured by the contractor that no electric live wire is left exposed or unattended to avoid any accidents in this regard.

16. The contractor shall maintain in perfect condition, all portions executed till completion of the entire work allotted to him. Where however phased delivery of work is contemplated these provisions shall apply separately to each phase.

17. The entire royalty at the prevalent rates shall have to be paid by the contractor on all the boulders, metals, shingle sand etc. collected by him for execution of the work, directly to the Revenue authority or authorized agents of the State Government concerned or the Central Government, as the case may be.

18. Various factory made materials shall be procured from reputed and approved manufacturers or their authorized dealers. Decision of officer in charge in this regard shall be final and binding.

19. It must be ensure that all materials to be used in work bear BIS certification mark. In cases where BIS certification system is available for a particular material/product but not even a single producer has so far approached BIS for certification the material can be used subject to the condition that it should confirm to CPWD specification and relevant BIS codes. In such case written

approval of the Technical sanctioning Authority may be obtained before use of such material in the work.

20. Contractor shall have to execute a Guarantee Bond in respect of Water Proofing works as per Performa attached in this N.I.T. He shall also have to execute guarantee bonds for water supply and sanitary installations work on the Performa attached in this NIT.

21. The terms machine batched, machine mixed and machine vibrated concrete used elsewhere in agreement shall mean the concrete produced in concrete batching and mixing plant and if necessary transported by transit concrete mixers, placed in position by the concrete pumps, tower crane and vibrated by surface vibrator /needle vibrator / plate vibrator, as the case may be to achieve required strength and durability.

22. Wherever work is specified to be done or material procured through specialized agencies, their names shall be got approved well in advance from officer in charge. Failure to do so shall not justify delay in execution of work. It is suggested that immediately after award of work; contractor should negotiate with concerned specialist agencies and send their names for approval to officer in charge. Any material procured without prior approval of officer in charge in writing is liable to be rejected. Officer-in-charge reserves right to get the materials tested in laboratories of his choice before final acceptance. Non standard materials shall not be accepted.

23. The contractor or his authorized representative shall associate in collection, preparation, forwarding and testing of such samples. In case, he or his authorized representative is not present or does not associate him, the results or such tests and consequences thereon shall be binding on the contractor.

24. The contractor shall get the water tested with regard to its suitability of use in the works and get written approval from the Officer-in-charge before he proceeds with the use of same of execution of works. If the tube-well water is not suitable, the contractor shall arrange Municipal water or from any other sources at his own cost and nothing extra shall be paid to the contractor on this account. The water shall be got tested at frequency specified in latest CPWD specifications/BIS code.

37. Till the work is almost completed to the satisfaction of Officer-in-charge

a. Contractor shall not divert any advance payments or part thereof for any other purpose other than needed for completion of the contracted work. All advance payments received as per terms of the contract (i.e. mobilization, secured against materials brought at site, secured against plant & machinery and / or for work done during interim stages, etc) are required to be re-invested in the contracted work to ensure advance availability resources in terms of materials, labour, plant & machinery needed for required pace of progress for timely completion of work.

b. All running account bills preferred by the contractor for advance payments shall be processed only if **Officer- in- charge** is satisfied that up-to date investments made by the contractor against contracted work are more than the payments received. Accordingly, all running account bills shall be supported with an account of update payments received vis-à-vis up-to date investments made on the work to enable Officer-in-charge to check to his satisfaction that the payments made by officer in charge are properly utilized only on the work and nowhere else".

GENERAL CONDITIONS

1 The contractor (s) shall inspect the site of work before tendering and acquaint himself with the site conditions and no claim on this account shall be entertained by the department.

The contractor (s) shall get himself acquainted with nature and extent of the work and satisfy himself about the availability of materials from kiln or approved quarries for collection and conveyance of materials required for construction.

2. The contractor (s) shall study the soil investigation report for the site, available in the office of the **Officer-in-charge** and satisfy him about complete characteristics of soil and other parameters of site. However, no claim on the alleged inadequacy or incorrectness of the soil data supplied by the department shall be entertained.

3. The tenderer shall see the approaches to the site. In case any approach from main road is required by the contractor, the same shall be provided, improved and maintained by the contractor at his own cost. No payment shall be made on this account.

4. The contractor (s) shall give to the Municipality, Police and other authorities all necessary notices etc. that may be required by law and obtain all requisite Licenses for temporary obstructions, enclosures etc. and pay all fee, taxes and charges which may be livable on account of these operations in executing the contract. He shall make good any damage to the adjoining property whether public or private and shall supply and maintain light and other illumination on for cautioning the public at night.

5. The contractor shall take all precautions to avoid accidents by exhibiting necessary caution boards day and night speed limit board's red flags, red lights and providing barriers. He shall be responsible for all dangers and incidents caused to existing / new work due to negligence on his part. No hindrances shall be caused to traffic during the execution of the work.

6. The contractor shall provide at his own cost suitable weighing surveying and leveling and measuring arrangements as may be necessary at site for checking. All such equipments shall be got calibrated in advance from laboratory, approved by the **Officer-In-Charge**. Nothing extra shall be payable on this account.

7. Contractor shall provide permanent bench marks and other reference points for the proper execution of work and these shall be preserved till the end of work. All such reference points shall be in relation to the levels and locations, given in the Architectural and plumbing drawings

8. The contractor shall submit for the approval of **Officer-in-Charge** names of specialized agencies of repute along with their technical capacity proposed to be engaged by him for executing specialized works, who must have executed satisfactorily works of value as specified in mandatory conditions.

9. The contractor shall take all precautions to avoid accidents by, exhibiting caution boards day and night, speed limit boards, red flags, red light and providing

necessary barriers and other measures required from time to time. The contractor shall be responsible for all damages and accidents due to negligence on his part.

10. Other agencies will also simultaneously execute and install the works of electrification, air conditioning, lifts, fire-fighting etc. for this work and the contractor shall provide necessary facilities for the same. The contractor shall leave such recesses, holes openings etc. as may be required for the electric, air-conditioning and other related works (for which inserts, sleeves, brackets, conduits base pinion, clamps etc. shall be supplied free of cost by the department unless otherwise specifically mentioned) and the contractor shall fix the same at time of casting of concrete, stone work & brick work, if required and nothing extra shall be payable on this account.

11. All materials obtained from Govt. stores or otherwise shall be get checked by the **Officer- in -charge** or his any authorized supervisor staff on receipt of the same at site before use.

12. The contractor shall conduct work so as not to interfere with or hinder the progress or completion of the work being performed by other contractor(s) or by the **Officer- in-charge** and shall as far as possible arrange his work and shall place and dispose of the materials being used or removed so as not to interfere with the operations of other contractor or he shall arrange his work with that of the others in an acceptable and coordinated manner and shall perform it in proper sequence to the complete satisfaction of others.

13. *Existing drains, pipes, cables, over-head wires, sewer lines, water lines and similar services encountered in the course of the execution of work shall be protected against the damage by the contractor at his own expense. The contractor shall not store materials or otherwise occupy any part of the site in a manner likely to hinder the operation of such services.*

14. The contractor shall be responsible for the watch and ward/guard of the buildings, safety of all fittings and fixtures including sanitary and water supply fittings and fixtures provided by him against pilferage and breakage during the period of installations and thereafter till the building is physically handed over to the department. No extra payment shall be made on this account.

15. The contractor shall be fully responsible for the safe custody of materials brought by him issued to him even though the materials are under double lock key system.

16. No payment shall be made to the contractor for any damage caused by rain, snowfall; floods, earthquake or any other natural causes whatsoever during execution of work. The damages of the work will be made good by the contractor at his own cost and no claim on this account shall be entertained.

17. For construction works which are likely to generate malba/rubbish to the tune of more than a tempo/truck load, contractor shall dispose of malba, rubbish & other unserviceable materials and wastes at their own cost to the notified/specified dumping ground and under no circumstances these shall be stacked/dumped, even temporarily outside the construction premises.

ADDITIONAL SPECIFICATIONS

1. The work in general shall be executed as per the description of the item, specifications and conditions attached and CPWD specifications 2009, Vol I & II with up-to-date correction slips and instructions of **Officer- in- charge**.

2. The order of preference in case of any discrepancy as indicated in condition No. 8.1 under "Conditions of Contract" give in standard CPWD contract form may be read as the following:

   i) Nomenclature of items as per schedule of quantities.

   ii) Additional conditions, General Conditions, Additional Specification and Particular Specifications attached with the tender document.

   iii) CPWD Specifications 2009, Vol I & II with up-to-date correction slips..

   iv) Indian standard specifications of B.I.S.

   v) Sound Engineering Practice.

   vi) Decision of **Officer-in-charge.**

   A reference made to any Indian Standard specification in these documents, shall imply to the latest version of that standard. Including such revision/amendments as issued by the bureau of Indian standard up-to last date of receipt of tenders. The contractor shall keep at his own cost all such publications of relevant Indian standard applicable to the work at site.

3. Samples of all materials and fittings to be used in the work in respect of brand manufacturer and quality shall be got approved from the **Officer-in-charge**, well in advance of actual execution and shall be preserved till the completion of the work. Articles bearing BIS certifications mark shall only be used unless no manufacturer has got BIS mark for the particular material. Any material/fitting whose sample has not been approved in advance and any other unapproved material brought by the contractor shall be immediately removed as soon as directed.

4. The rates for all items of work shall unless clearly specialized otherwise include cost of all labour, material tools and plants and other inputs involved in the execution of the item.

5. The contractor (s) shall quote all inclusive rates against the items in the schedule of quantities and nothing extra shall be payable for any of the conditions and specifications mentioned. In the tender documents unless specifically specified otherwise.

6. Unless otherwise specified in the schedule of quantities the rates for all items shall be considered as inclusive of pumping/baling out water, if necessary, for which no extra payment shall be made. Those conditions shall be considered to include water from any source such as inflow of flood, surface and sub-soil water etc. and shall apply to the execution in any season

MATERIAL AND QUALITY ASSURANCE OF THE WORK

1. The contractor shall ensure quality control measures on different aspects of construction including materials, workmanship and correct construction methodologies to be adopted. He shall have to submit quality assurance programme within two weeks of the award of work. The quality assurance programme should include method statement for various items of work to be executed along with check lists to enforce quality control.
2. The contractor shall get the source of all other materials, not specified elsewhere in the document, approved from the **Officer-in-charge**. The contractor shall stick to the approved source unless it is absolutely unavoidable. Any change shall be done with the prior approval of the **Officer-in-charge** for which tests etc. shall be done by the contractor at his own cost. Similarly, the contractor shall submit brand/ make of various materials not specified in the agreement, to be used for the approval of the **Officer-in-charge** along with samples and once approved, he shall stick to it.

3. **Test Laboratories :**

A). Laboratory at Site:

The contractor shall provide at site, the testing equipment and materials for the field tests mentioned in the list of mandatory tests given in CPWD specifications 2009 Vol. 1 & 2 at his own cost. Nothing extra shall be payable to him on this account. In all cases, cost of samples and to and fro carriage shall be borne by the contractor.

The representatives of the department shall be at liberty to inspect the testing facilities at site and conduct testing at random in consultation with **Officer-in-charge** The contractor shall provide all necessary facilities for the purpose. The laboratory shall be equipped, inter alia, with the following equipments:

a) **Balances:**
   i) 7 kg to 10 kg capacity, semi-self indicating type – Accuracy 10 gm.
   ii) 500 gm capacity, semi-self indicating type Accuracy 1 gm.
   iii) Pan Balance- 5 kg Capacity - Accuracy 10 gm.

b) **Ovens-** Electrically operated, thermostatically controlled up-to 1100C: Sensitivity 10C.

c) **Sieves:** as per IS: 460
   i) IS Sieves – 450 mm internal dia of sizes 100 mm, 80 mm, 63 mm, 50 mm, 40 mm, 25 mm, 20 mm, 12.5 mm, 10 mm, 6.3 mm, 4.75 mm, complete with lid and pan.

ii) IS Sieves – 200 mm internal dia (brass frame) consisting of 2.36 mm, 1.18 mm, 500 microns, 425 microns, 300 microns, 212 microns, 150 microns, 90 microns, 75 microns with lid and pan.

d) Sieve shaker capable of 200 mm and 300 mm dia sieves, manually operated with timing switch assembly.

All test which can be performed in the site lab with above equipments shall be done at site except that at least 10% testing of materials shall be got done from external laboratories. However, for the tests to be carried out by the external laboratories, the contractor shall supply free of charge all the materials required for testing, including transportation. The testing charges shall be borne by the Contractor / Department in the manner described in Para-B below.

B) Other Laboratories :

The contractor shall arrange carrying out of all tests required under the agreement through the laboratory as approved by the officer in charge and shall bear all charges in connection therewith including fee for testing. The said cost of tests shall be borne by the contractor/department in the manner indicated below.

i) By the contractor, if the results show that the test does not conform to relevant CPWD Specifications / BIS code or specification mentioned elsewhere in the documents

ii) By the department, if the results conform to relevant CPWD Specifications / BIS code or specification mentioned elsewhere in the documents.

However, no testing charges will be payable by the contractor for the tests conducted in CPWD laboratories.

If the tests, which were to be conducted in the site laboratory, are conducted in other laboratories for whatever the reasons, the cost of such tests shall be borne by the contractor.

4. **Sampling of Materials :**

Sample of building materials fittings and other articles required for execution of work shall be got approved from the **Officer-in-charge**. Articles manufactured by companies of repute and approved by the **Officer-in-charge** shall only be used. Articles bearing BIS certification mark shall be used in case the above are not available, the quality of samples brought by the contractor shall be judged by standards laid down in the relevant BIS specifications. All materials and articles brought by the contractor to the site for use shall conform to the samples approved by the **Officer-in-charge** which shall be preserved till the completion of the work.

5. The contractor shall ensure quality construction in a planned and time bound manner. Any sub-standard material/work beyond set out tolerance limit shall be summarily rejected by the **Officer-in-charge**

6. BIS marked materials except otherwise specified shall be subjected to quality test at the discretion of the **Officer-in-charge** besides testing of other materials as per the specifications described for the item/materials. Wherever BIS marked materials are brought to the site of work, the contractor shall if required, by the **Officer-in-charge** furnish manufacturers test certificate or test certificate from approved testing laboratory to establish that the material produced by the contractor for incorporation in the work satisfies the provisions of BIS codes relevant to the material and/or the work done.

7. The contractor shall procure all the materials at least in advance so that there is sufficient time to testing and approving of the materials and clearance of the same before use in work.

8. All materials brought by the contractor for use in the work shall be got checked from the **Officer-in-charge** or his authorized representative of the work on receipt of the same at site before use.

9. The contractor shall be fully responsible for the safe custody of the materials issued to him even if the materials are in double lock and key system.

10. **QUALITY & QUARRIES OF STONE AGGREGATE & SAND**

The Stone aggregate/stone shall be brought from quarries as approved by the Engineer-in-charge, as shown below against each or any other quarry. The materials shall however confirm to CPWD specifications.

Stone/Sand	From
Stone aggregate 40mm nominal size and above	Material to be obtained from the bonafide Quarries and matching to the CPWD Specifications and terms and conditions of this agreement.
Stone aggregate 20mm nominal size and below	…… do ……
Stone for soling	…… do ……
Coarse sand of fineness modulus 2.5 to 3.5 and confirming to CPWD specifications 2009.	…… do ……
Fine sand of fineness modulus 1.2 to 1.6 and confirming to CPWD specifications 2009.	…… do ……

11. **Outside /Independent Testing Facilities**

Extensive testing of the materials used for construction is a pre-requisite for attaining high quality of the work. This shall also require specialized tests, physical, chemical, ultrasonic, x-ray and various other types of tests which

cannot possibly be carried out in a site laboratory. These tests also require specialized personnel who regularly deal in such testing. Therefore the need arises for carrying out the tests in outside laboratories. These laboratories may be in the Government sector, Semi Government or Private sector.

All govt. Institutes, Institutes of Technology, National Institutes of Technology, Central and State research Centers, Centrally and State funded laboratories stands approved. No approval is required for testing in these laboratories/institutes. However, the outside private laboratories shall be approved in the following manner:

1. **The Director, FRI Dehradun will approve the private lab on the recommendation of Chief Engineer if no approved labs as above are available within 200 km of the work site. A particular private Lab will be approved for specified tests and work/project. Approving authority will specify the tests while approving the laboratory.**
2. **A lab will have to submit details of space available, equipments, staff (Technical and non Technical), Accreditation and approval from various department/institutes. Lab must be NABL approved.**
3. **Initial approval of lab should be for one year and can be revalidated for further one year and so on.**
4. **Every lab will be audited for maintenance and calibration of equipments and employment of staff prior to approval/revalidation.**

However, testing of material in any Govt. Lab/Public Undertaking Lab/IIT or NIT Lab/Government Engineering College may be allowed by Officer-in-Charge without prior approval of higher officers provided these labs have all necessary facility to carry out the required tests.-

PARTICULAR SPECIFICATIONS

1.0 R.C.C. WORK

1.1 CENTERING AND SHUTTERING FOR RCC WORK

The concrete surface shall be free from honey combing, offsets, superfluous mortar, cement slurry and foreign matter. The form work shall be assembled in such a way as to facilitate removal of their parts in proper sequence without any damage to the exposed cement concrete surfaces and corners etc. The contractor shall keep skilled staff for special care and supervision to check the form work and concreting so that every member is made true to its size, shape, level and alignment so that it does not result in any deformation, snug, bulges etc. The contractor shall also take suitable precautionary measure to prevent breaking and chipping of corners and edges of completed work until the building is handed over. The size of shuttering plates for slabs shall not be less than 0.6 m x 0.9 m in general. However, contractor has to provide tape to seal the joint properly to get smooth surface. Further shuttering shall be of such quality that there are no undulations and surfaces will be fairly even and no extra thick ceiling plaster shall be permitted to make the surface even.

Only MS centering/shuttering and scaffolding material unless & otherwise specified shall be used for all RCC. Work to give an even finish of concrete surface. However marine ply shuttering in exceptional cases as per site requirement may be used on specific request from contractor on approval by the Engineer-in-Charge.

Nothing extra shall be paid for the centering and shuttering circular in shape wherever the form work is having a mean radius exceeding 6 m in plan.

1.2 RCC WORK (ORDINARY)

1.2.1 Water cement ratio for ordinary RCC work shall not be more than 0.50. Contractor shall use concrete mixture of proper design and arrangement for measuring water for mixing of concrete.

1.2.2 In respect of all projected slabs at all levels including cantilever canopy the payment for the RCC work shall be made under the item RCC slabs. The payment for shuttering at the edges shall be made under item of centering and shuttering of RCC slabs. Nothing extra shall be paid for the side shuttering at the edge of these projected balconies and projected verandah slabs.

1.3 PRE-CAST RCC WORK

1.3.1 Pre-cast reinforced concrete units shall be of grade or mix as specified. Provision shall be made in the mould to accommodate fixing devices such as hooks, flats etc. And forming of notches and holes. Each unit shall be cast in one operation. A sample of the unit shall be got approved from Engineer-in-Charge before taking up the work.

1.3.2 Pre-cast units shall be clearly marked to indicate the top of member and its locations.

1.3.3 Pre-cast units shall be stored, transported and placed in position in such a manner that these are not damaged.

1.3.4 The compaction of the concrete shall be done by vibrating table or external vibrator, as approved by Engineer-in-Charge. The rate quoted for the item shall include the element for framework and mechanical vibration.

1.3.5 Rate for item includes cost of all materials labour and all operations involved cost of MS frames lugs including their welding, lifting hooks is also included.

1.13 **REINFORCEMENT:**

The rate of reinforcement in RCC work includes all operations including straightening cutting, welding, binding with annealed steel wire or welding and placing in position at all the floors with all leads and lift complete.

1.14 CURRENCY CHEST :

R.C.C. walls, floor and roof of Currency Chest will be 450mm thick duly fortified with rows of TANG BARS in addition to reinforcement bars specified in structural drawings. The TANG BARS will be supplied by the department/specialized agency free of cost. Placing of the TANG BARS will be done by the separate/specialized agency doing the work of security doors. Contractor will coordinate with the aforesaid specialized agency for placement of TANG BARS and casting of RCC walls, floor & roof of Currency Chest thereafter. R.C.C. and reinforcement will measured in relevant item under R.C.C. Subhead and nothing extra shall be paid to the contractor on this account.

9.0 STEEL WORK

9.1 The rate of T- angle iron frame shall include the following.

(a) M.S. sill/tie of 10mm dia bar welded to T-iron frames to keep the frames vertical in correct position. The sill / tie shall be embedded in floor concrete. No tie is necessary for window frames.

(b) Each T – iron frame for doors shall have 4 Nos. M.S. lugs 15x3mm, 10 cm long welded to each vertical member of the frame.

(c) M.S. flat 6 x 25mm , 100mm long having threaded holes (No. of flats shall correspond to the no. of butt hinges to be fixed to door / window shutters) shall be welded at appropriate places at the back of the T-iron frames for fixing the required butt hinges to the frame with machine screws.

9.2 All welded structural steel work shall be tested for quality of weld as laid down in IS 822-1970 before actual erection if required.

9.3 Additional Condition for Structural Steel for Trusses

The contractor shall procure structural mild steel section as per requirement of design conforming to IS : 2062 – 1999 (Fifth Revision) grade Fe 410-'O' of weldable quality from main producers such as SAIL, TISCO, RINL as approved by the Ministry of Steel. The steel tubes for structural purposes as per requirement of design will conform to IS: 1161 -1998 (Fourth Revision) manufactured by highly reputed manufacturers approved by Engineer-in-Charge.

The contractor shall have to obtain furnish test certificates 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 tested by the Engineer-in-charge as per the provision in this regard as per the relevant BIS codes. In case the test results indicate that the steel arranged by the contractor does not

conform 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 of written orders from the Engineer-in-charge.

All expenses relating to testing of steel including laboratory charges shall be borne by the contractor.

10 VARIATION IN CONSUMPTION OF MATERIALS

10.1 The pig lead for caulking of joints of SCI pipes shall be used as per the theoretical consumption for SCI pipes of sizes 100mm, 75mm, 50mm at 0.98Kg, 0.88 Kg and 0.77Kg. per joint respectively. Over and above the theoretical quantities of lead as worked out a variation of 5% shall be allowed for wastage etc. Any difference between the actual consumption of pig lead and the theoretical consumption worked out on the above basis shall be recovered at double the issue rate. Where the pig lead is arranged by the contractor, also a variation of 5% shall be allowed. In case the variation is on the lower side, the quantity of pig lead used less shall be recovered from the contractor at market rate to be determined by the Engineer-in-charge whose decision in this matter shall be final.

10.2 The theoretical quantity of cement to be utilized in item of concrete involving use of single aggregate and mixed by volume batching shall be computed on the basis of the coefficient for cement to be used in different item of the work provided in DSR reducing each of the co-efficient by 5%. However, where the concrete is mixed by weight batching no such reduction shall be made from theoretical co-efficient given in **DSR 2014** for concrete with crushed stone aggregate.

ADDITIONAL CONDITIONS FOR CEMENT AND STEEL

1. CONDITIONS FOR CEMENT PROCURED BY THE CONTRACTOR:

1.1 The contractor shall procure **Portland Pozzolana Cement** (conforming to IS: 1489 - Part-I), as required in the work, from reputed manufacturers of cement, *having a production capacity of one million tones or more, such as A.C.C.,* Ultratech, J.P., Vikram, Shri cement, Birla Jute and Cement Corporation of India etc. i.e. agencies approved by Ministry of Industry, Government of India and holding license to use ISI certification mark for their product. The tenderers may also submit a list of names of cement manufacturers which they propose to use in the work. The tender accepting authority reserves right to accept or reject name(s) of cement manufacturer(s) which the tenderer proposes to use in the work. No change in the tendered rates will be accepted if the tender accepting authority does not accept the list of cement manufacturers, given by the tenderer, fully or partially.

1.2 Supply of cement shall be made in 50 kg. bags bearing manufacturer'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 the relevant BIS codes. In case the test results indicate that the cement arranged by the contractor does not confirm to the relevant BIS code 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.

1.3 The cement shall be brought at site in bulk supply of approximately **30 tonnes** or as directed by the Engineer-in-Charge.

1.4 The cement godown of the capacity to store a **minimum of 1000 bags of cement** shall be constructed by the contractor at site of work for which no extra payment shall be made.

1.5 Double locks provision shall be made to the door of cement godown. The keys of the one lock shall remain with the Engineer-in-Charge or his authorized representative and the key of the other lock shall remain with the contractor. The contractor shall be responsible for the watch and ward and safety of the cement godowns so that the cement is removed from the godowns according to the daily requirement with the knowledge of both the parties and proper account maintained in standard Performa. The contractor shall facilitate the inspection of the cement godowns by the Engineer-in-Charge or his authorized representatives at any time.

1.6 The cement shall be got tested by Engineer-in-charge and shall be used on work only after satisfactory test results have been received. The contractor shall supply free of charge the cement required for testing including its transportation cost to testing laboratories. The cost of tests shall be borne by the contractor/Department in the manner indicated below:

a) By the contractor, if the results show that the test does not conform to relevant CPWD Specifications / BIS code or specification mentioned elsewhere in the documents.

b) By the department, if the results conforms to relevant CPWD Specifications / BIS code or specification mentioned elsewhere in the documents.

1.4 The cost of tests shall be borne by the contractor/Department in the manner indicated below:

a) By the contractor, if the results show that the test does not conform to relevant CPWD Specifications / BIS code or specification mentioned elsewhere in the documents.

b) By the department, if the results conforms to relevant CPWD Specifications / BIS code or specification mentioned elsewhere in the documents.

1.7 The actual issue and consumption of cement on work shall be regulated and proper accounts maintained as provided in clause10 of the contract. The theoretical consumption of cement shall be worked out as per procedure prescribed in clause 42 of the contract and shall be governed by conditions laid therein. In case the cement consumption is less than theoretical consumption including variations, recovery at the rate so prescribed shall be made. In case of excess consumption no adjustment need to made.

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

1.9 Damaged cement shall be removed from the site immediately by the contractor on receipt of a notice in written from Engineer-in-Charge. If he does not do so within 3 days of receipt of such notice, the Engineer-in-Charge shall get it removed at the cost of the contractor.

1.10 Wet curing period shall be enhanced to a minimum of 10 days or its equivalent. In hot & arid regions, the minimum curing period shall be 14 days or its equivalent.

1.11 Till the time, BIS makes it mandatory to print the %age of fly ash on each bag of cement, the certificate from the PPC manufacturer indicating the same shall be obtained and permission obtained from Engineer-in-Charge before use of such cement in works.

1.12 The contractor may use OPC in place of PPC only after written permission of Engineer-in-Charge. In such case, no extra payment shall be made in any form to the contractor by the Department.

2. **CONDITIONS FOR STEEL REINFORCEMENT FOR RCC WORKS PROCURED BY THE CONTRACTOR:**

2.**1** The contractor shall procure TMT bars of **Fe 500D** grade from primary producers such as **SAIL or TISCO or RINL** as approved by Ministry of Steel. The TMT bars procured from primary producers shall conform to manufacture's specifications.

2.2 TMT bars procured from primary producers, the specifications shall meet the provisions of IS 1786: 2008 pertaining to **Fe 500D** grade of steel.

2.3 The contractor shall have to obtain vouchers and furnish test certificates to the Engineer-in-charge in respect of all supplies of steel brought by him to the site of work.

2.4 Samples shall also be taken and got tested by the Engineer-in-charge as per the provisions in this regard in the relevant BIS codes. In case the test results indicate that the steel arranged by the contractor does not conform to the specifications as defined under para 1.1 and 1.2 above, the same shall stand rejected and it shall be removed from the site of work by the contractor at his cost within a week time of written orders from the Engineer-in-charge to do so.

2.5 The steel reinforcement shall be brought to the site in bulk supply **of 20 tonnes** or more or as directed by the Engineer-in-charge.

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

2.7 For checking nominal mass, tensile strength, bend test, re-bend test etc. specimens 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 10 mm dia bars	One sample for each 25 tonnes or part thereof	One sample for each 40 tonnes or part thereof
10 mm to 16 mm dia bars	One sample for each 35 tonnes or part thereof	One sample for each 45 tonnes or part thereof
Over 16 mm dia bars	One sample for each 45 tonnes or part thereof	One sample for each 50 tonnes or part thereof

The contractor shall supply free of charge the steel required for testing including its transportation to testing laboratories. The cost of tests shall be borne by the contractor.

2.8 The actual issue and consumption of steel on work shall be regulated and proper accounts maintained as provided in clause 10 of the contract. The theoretical consumption of steel shall be worked out as per procedure prescribed in clause 42 of the contract and shall be governed by the conditions laid therein. In case the consumption is less than theoretical consumption including permissible variations recovery at the rate so

prescribed shall be made. In case of excess consumption no adjustment need to be made.

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

2.10 Steel bars brought by the contractor for use in the work shall be got checked from the Engineer-in-Charge or his authorized representative of the work on receipt of the same at site before use.

2.11 If the quantity of steel actually used in the work is found to be more than the theoretical quantity of steel including authorised variation, nothing extra shall be payable to the contractor on this account. In the event of it being discovered that after the completion of the work the quantity of steel used is less than the quantity ascertained as herein before provided (allowing variation on the minus side as stipulated in clause 42). The cost of quantity of steel so less used shall be recovered from the contractor at rate as specified in schedule 'F'. Decision of the Engineer-in-Charge in regard to theoretical quantity of steel which should have been actually used and recovery of the rate specified shall be final and binding on the contractor.

2.12 In case the contractor brings surplus quantity of steel the same after completion of the work will be removed from the site by the contractor at his own cost after approval of the Engineer-in-Charge.

2.13 Reinforcement including authorised spacer bars and lappages shall be measured in length of different diameters, as actually (not more than as specified in the drawing) used in the work, nearest to a centimeter. Wastage and unauthorised overlaps shall not be measured.

2.14 The standard sectional weights referred to as in Table 5.4 under para 5.3.4 in CPWD specifications for works 2009 Vol. 1 will be considered for conversion of length of various sizes of MS bars, Tor steel bars and TMT bars into standard weight.

2.15 Records of actual sectional weight shall also be kept dia-wise & lot-wise. The average sectional weight for each diameter shall be arrived at from samples from each lot of steel received at site. The decision of the Engineer-in-Charge shall be final for the procedure to be followed for determining the average sectional weight of each lot. Quantity of each diameter of steel received at site of work each day will constitute one single lot for the purpose. The weight of steel by conversion of length of various sizes of bars based on the actual weighted average sectional weight shall be termed as derived actual weight.

2.16 If the derived weight as in para 39.15 above is lesser than the standard weight as in para 39.14 above, the derived actual weight shall be taken for payment.
If the derived actual weight is found more than the standard weight then the standard weight as worked out in para 39.14 above shall be taken for payment. In such case

nothing extra shall be paid for the difference between the derived actual weight and the standard weight.

2.17 Mixing of different type of steel/different grades of steel shall not be allowed in the same structural members as main reinforcement to satisfy clause 26.1 of IS:456.

2.18 Tolerances on Nominal Mass (individual sample) shall be as under:-

Sl. No.	Nominal size mm	Tolerances on the Nominal Mass, percentage
1	Upto and including 10	-8%
2	Over 10 upto & including 16	-6%
3	Over 16	-4%

Signature of Contractor

Annexure-I

TO BE EXECUTED BY THE CONTRACTOR FOR REMOVAL OF DEFECTS AFTER COMPLETION IN RESPECT OF STONE WORKS

The agreement made this _____ day of _____ Two Thousand and _____ between _____ son of _____ (hereinafter called the GUARANTOR of the one part) and the Director, Forest Research Institute Dehradun (hereinafter called the Government of the other part.)

WHEREAS THIS agreement is supplementary to a contract (Hereinafter called the Contract) dated _____ and made between the GUARANTOR OF THE ONE PART AND the Government of the other part, whereby the contractor inter alia, undertook to render the work in the said contract recited structurally stable workmanship, finishing and use of sound materials.

AND WHEREAS THE GUARANTOR agreed to give a guarantee to the affect that the said work will remain structurally stable and guaranteed against faulty workmanship, finishing and unsound materials and other related problems.

NOW THE GUARANTOR hereby guarantee that work executed by him will remain structurally stable after the expiry of maintenance period prescribed in the contract for the **minimum life of five years** to be reckoned from the date after expiry of maintenance period prescribed in the contract.

The decision of the Officer-in-charge with regard to nature and cause of defect shall be final. During this period of guarantee, the guarantor shall make good all defects to the satisfaction of the Officer-in-charge calling upon him to rectify the defects failing which the work shall be got done by the Department by some other contractor at the Guarantor's risk and cost. The decision of the Officer-in-charge as to the cost payable by the Guarantor shall be final and binding.

That if the guarantor fails to make good all the defects, commits breach there under, then the guarantor will indemnify the principal and his successor against all loss, damage, cost expense or otherwise which may be incurred by him by reason of any default on the part of the GUARANTOR in performance and observance of this supplementary agreement. As to the amount of loss and/or damage and/or cost incurred by the Government, the decision of the Officer-in-charge will be final and binding on both the parties.

IIN WITNESS WHEREOF these presents, have been executed by the obligator _____ _____ and _____ by _____ for and on behalf of the DIRECTOR, FRI DEHRADUN on the day, month and year first above written.

SIGNED, sealed and delivered by OBLIGATOR in the presence of:

1. _____
2. _____

SIGNED FOR AND ON BEHALF OF THE DIRECTOR, FRI DEHRAUN BY _____ _____ in the presence of:

1. _____
2. _____

Annexure-II

GUARANTEE TO BE EXECUTED BY THE CONTRACTOR FOR REMOVAL OF DEFECTS AFTER COMPLETION IN RESPECT OF WATER SUPPLY AND SANITARY INSTALLATIONS

The agreement made this _____ day of _____ Two Thousand and _____ between _____ son of _____ (hereinafter called the GUARANTOR of the one part) and the DIRECTOR; FRI DEHRADUN (hereinafter called the Government of the other part.)

WHEREAS THIS agreement is supplementary to a contract (Hereinafter called the Contract) dated _____ and made between the GUARANTOR OF THE ONE PART AND the Government of the other part, whereby the contractor inter alia, undertook to render the work in the said contract recited structurally stable workmanship, finishing and use of sound materials.

AND WHEREAS THE GUARANTOR agreed to give a guarantee to the affect that the said work will remain structurally stable and guaranteed against faulty workmanship, finishing, manufacturing defects of materials and leakages, etc.

NOW THE GUARANTOR hereby guarantee that work executed by him will remain structurally stable after expiry of maintenance period prescribed in the contract for the **minimum life of three year** to be reckoned from the date after the expiry of maintenance period prescribed in the contract.

The decision of the officer-in-charge with regard to nature and cause of defect shall be final.

During this period of guarantee, the guarantor shall make good all defects to the satisfaction of the officer-in-charge calling upon him to rectify the defects failing which the work shall be got done by the Department by some other contractor at the Guarantor's cost and risk. The decision of the Officer-in-Charge as to the cost, payable by the Guarantor shall be final and binding.

That if the guarantor fails to make good all the defects commits breach there under, then the guarantor will indemnify the principal and his successor against all loss, damage, cost expense or otherwise which may be incurred by him by reason of any default on the part of the GUARANTOR in performance and observance of this supplementary agreement. As to the amount of loss and/or damage and or cost incurred by the Government, the decision of the officer-in-charge will be final and binding on both the parties.

IN WITNESS WHEREOF these presents, have been executed by the obligator _____ and _____ by _____ for and on behalf of the DIRECTOR, FRI DEHRADUN on the day, month and year first above written.

SIGNED, sealed and delivered by OBLIGATOR in the presence of:

1. _____
2. _____

SIGNED FOR AND ON BEHALF OF THE DIRECTOR, FRI DEHRADUN BY _____ _____ in the presence of:

1. _____
2. _____

Annexure-III

BANK GUARANTEE BOND

In consideration of the DIRECTOR, FRI DEHRADUN (hereinafter called "the Government") having agreed under the terms and conditions of agreement No. _____ dated _____ made between _____ and _____ (hereinafter called "the contractor(s)") _____ for the work _____ _____ _____ (hereinafter called "the said agreement") having agreed to production of a irrevocable Bank Guarantee for Rs. _____ (Rupees ___ _____ _____ only) as a security/guarantee from the contractor(s) for compliance of his obligations in accordance with the terms and conditions in the said agreement, we

_____ (hereinafter referred to as "the Bank") hereby undertake to pay to the

(Indicate the name of the Bank)

Government an amount not exceeding Rs._____ (Rs. _____ _____ only) on demand by the Government.

2. We _____ (Indicate the name of the Bank) do hereby undertake to pay the amounts due and payable under this Guarantee without any demure, merely on a demand from the Government stating that the amount claimed is required to meet the recoveries due or likely to be due from the said contractor(s). Any such demand made on the bank shall be conclusive as regards the amount due and payable by the bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. _____ (Rupees _____ only).

3. We, the said bank further undertake to pay to the government any money so demanded notwithstanding any dispute or disputes raised by the contractor(s) in any suit or proceeding pending before any court or tribunal relating thereto, our liability under this present being absolute and unequivocal.

The payment so made by us under this bond shall be a valid discharge of our liability for payment there under and the contractor(s) shall have no claim against us for making such payment.

4. We _____ (Indicate the name of the Bank) further agree that the guarantee herein contained shall

remain in full force and effect during the period that would be taken for performance of the said agreement and that it shall continue to be enforceable till all the dues of the Government under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged or till officer-in-charge on behalf of the government certified that the terms and conditions of the said agreement have been fully and properly carried out by the said contractor(s) and accordingly discharges this guarantee.

5. We _____ (Indicate the name of the Bank) further agree with the Government that the Government shall have the fullest liberty without our consent and without effecting in any manner our obligations hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said contractor(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the government against the said contractor(s) and to forebear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said contractor(s) or for any forbearance, act of omission on the part of the government or any indulgence by the Government to the said contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

6. This guarantee will not be discharged due to the change in the constitution of the Bank or the contractor(s).

7. We _____ (Indicate the name of the Bank) lastly undertake not to revoke this guarantee except with the previous consent of the Government in writing.

8. This guarantee shall be valid up to _____, unless extended on demand by Government. Notwithstanding anything mentioned above, our liability against this guarantee is restricted to Rs. _____ (Rs. _____only) and unless a claim in writing is lodged with us within six months of the date of expiry or the extended date of expiry of this guarantee all our liabilities under this guarantee shall stand discharged.

Dated: the _____ day of _____

for _____

(Indicate the name of the Bank)

Annexure-IV

AFFIDAVIT

I /We have submitted a bank guarantee for the work _____ _____ __

(Name of work)

Agreement No. _____

Dated _____from _____

(Name of the Bank with full address)

to the Head, Engineering & Ser. Division, FRI Dehradun _____with a view

(Name of the Division)

to seek exemption from payment of performance guarantee in cash. This Bank guarantee expires on _____ I / We undertake to keep the validity of the bank guarantee intact by getting it extended from time to time at my / our own initiative up to a period of _____ months after the recorded date of completion of the work or as directed by the Engineer in charge.

I / We also indemnify the Government against any losses arising out of non-encasement of the bank guarantee if any.

(Deponent)
Signature of Contractor

Note: The affidavit is to be given by the Executants before a first class Magistrate.

Annexure-V

INTEGRITY PACT

To,

……..,
……..,
……..

Sub: NIT No. ……. for the work …….....

Dear Sir,

It is here by declared that FRI, Dehradun is committed to follow the principle of transparency, equity and competitiveness in public procurement.

The subject Notice Inviting Tender (NIT) is an invitation to offer made on the condition that the Bidder will sign the integrity Agreement, which is an integral part of tender/bid documents, failing which the tenderer/bidder will stand disqualified from the tendering process and the bid of the bidder would be summarily rejected.

This declaration shall form part and parcel of the Integrity Agreement and signing of the same shall be deemed as acceptance and signing of the Integrity Agreement on behalf of the FRI.

Yours faithfully

Head
Engineering & Services Division
Forest Research Institute

Annexure-VI

To,

Head,
Engineering & Services Division
Forest Research Institute
Dehradun

Sub: Submission of Tender for the work of ……..……....

Dear Sir,

I/We acknowledge that FRI, Dehradun is committed to follow the principles thereof as enumerated in the Integrity Agreement enclosed with the tender/bid document.

I/We agree that the Notice Inviting Tender (NIT) is an invitation to offer made on the condition that I/We will sign the enclosed integrity Agreement, which is an integral part of tender documents, failing which I/We will stand disqualified from the tendering process. I/We acknowledge that THE MAKING OF THE BID SHALL BE REGARDED AS AN UNCONDITIONAL AND ABSOLUTE ACCEPTANCE of this condition of the NIT.

I/We confirm acceptance and compliance with the Integrity Agreement in letter and spirit and further agree that execution of the said Integrity Agreement shall be separate and distinct from the main contract, which will come into existence when tender/bid is finally accepted by FRI. I/We acknowledge and accept the duration of the Integrity Agreement, which shall be in the line with Article 1 of the enclosed Integrity Agreement.

I/We acknowledge that in the event of my/our failure to sign and accept the Integrity Agreement, while submitting the tender/bid, FRI shall have unqualified, absolute and unfettered right to disqualify the tenderer/bidder and reject the tender/bid is accordance with terms and conditions of the tender/bid.

Yours faithfully

(Duly authorized signatory of the Bidder)

***Annexure*-VII**

To be signed by the bidder and same signatory competent / authorized to Sign the relevant contract on behalf of FRI

INTEGRITY AGREEMENT

This Integrity Agreement is made at ..... on this..... Day of .....20.....

BETWEEN

DIRECTOR, FRI DEHRADUN represented through Head, Engineering & Services Division, ..., (Name of Division) FRI,..... (Address of Division), (Hereinafter referred as the '**Principal**/**Owner**', which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

AND

..... (Name and Address of the Individual/firm/Company) through ..... (Hereinafter referred to as the (Details of duly authorized signatory) "**Bidder**/**Contractor**" and which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

Preamble

WHEREAS the Principal / Owner has floated the Tender (NIT No. .....) (Hereinafter referred to as "**Tender**/**Bid**") and intends to award, under laid down organizational procedure, contract for .... (Name of work) hereinafter referred to as the "**Contract**".

AND WHEREAS the Principal/Owner values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/transparency in its relation with its Bidder(s) and Contractor(s).

AND WHEREAS to meet the purpose aforesaid both the parties have agreed to enter into this Integrity Agreement (hereinafter referred to as "**Integrity Pact**" or "**Pact**"), the terms and conditions of which shall also be read as integral part and parcel of the Tender/Bid documents and Contract between the parties.

NOW, THEREFORE, in consideration of mutual covenants contained in this Pact, the parties hereby agree as follows and this Pact witnesses as under:

Article 1: Commitment of the Principal/Owner

1) The Principal/Owner commits itself to take all measures necessary to prevent corruption and to observe the following principles:

   (a) No employee of the Principal/Owner, personally or through any of his/her family members, will in connection with the Tender, or the execution of the Contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.

   (b) The Principal/Owner will, during the Tender process, treat all Bidder(s) with equity and reason. The Principal/Owner will, in particular, before and during the Tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the Tender process or the Contract execution.

   (c) The Principal/Owner shall endeavor to exclude from the Tender process any person, whose conduct in the past has been of biased nature.

2) If the Principal/Owner obtains information on the conduct of any of its employees which is a criminal offence under the Indian Penal code (IPC)/Prevention of Corruption Act, 1988 (PC Act) or is in violation of the principles herein mentioned or if there be a substantive suspicion in this regard, the Principal/Owner will inform the Chief Vigilance Officer and in addition can also initiate disciplinary actions as per its internal laid down policies and procedures.

Article 2: Commitment of the Bidder(s)/Contractor(s)

1) It is required that each Bidder/Contractor (including their respective officers, employees and agents) adhere to the highest ethical standards, and report to the Government / Department all suspected acts of **fraud or corruption or Coercion or Collusion** of which it has knowledge or becomes aware, during the tendering process and throughout the negotiation or award of a contract.

2) The Bidder(s)/Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the Tender process and during the Contract execution:

   a) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal/Owner's employees involved in the Tender process or execution of the Contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the Tender process or during the execution of the Contract.

b) The Bidder(s)/Contractor(s) will not enter with other Bidder(s) into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict
Competitiveness or to cartelize in the bidding process.

c) The Bidder(s)/Contractor(s) will not commit any offence under the relevant IPC/PC Act. Further the Bidder(s)/Contract(s) will not use improperly, (for the purpose of competition or personal gain), or pass on to others, any information or documents provided by the Principal/Owner as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

d) The Bidder(s)/Contractor(s) of foreign origin shall disclose the names and addresses of agents/representatives in India, if any. Similarly Bidder(s)/Contractor(s) of Indian Nationality shall disclose names and addresses of foreign agents/representatives, if any. Either the Indian agent on behalf of the foreign principal or the foreign principal directly could bid in a tender but not both. Further, in cases where an agent participate in a tender on
behalf of one manufacturer, he shall not be allowed to quote on behalf of another manufacturer along with the first manufacturer in a subsequent/parallel tender for the same item.

e) The Bidder(s)/Contractor(s) will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the Contract.

3) The Bidder(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

4) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm indulge in fraudulent practice **means a willful misrepresentation or omission of facts or submission of fake/forged documents in order to induce public official to act in reliance thereof, with the purpose of obtaining unjust advantage by or causing damage to justified interest of others and/or to influence the procurement process to the detriment of the Government interests.**

5) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm use Coercive Practices (means the act of obtaining something, compelling an action or influencing a decision through intimidation, threat or the use of force directly or indirectly, where potential or actual injury may befall upon a person, his/ her reputation or property to influence their participation in the tendering process).

Article 3: Consequences of Breach

Without prejudice to any rights that may be available to the Principal/Owner under law or the Contract or its established policies and laid down procedures, the Principal/Owner shall have the following rights in case of breach of this Integrity Pact by the Bidder(s)/Contractor(s) and the Bidder/ Contractor accepts and undertakes to respect and uphold the Principal/Owner's absolute right:

1) If the Bidder(s)/Contractor(s), either before award or during execution of Contract has committed a transgression through a violation of Article 2 above or in any other form, such as to put his reliability or credibility in question, the Principal/Owner after giving 14 days notice to the contractor shall have powers to disqualify the Bidder(s)/Contractor(s) from the Tender process or terminate/determine the Contract, if already executed or exclude the Bidder/Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of transgression and determined by the Principal/Owner. **Such exclusion may be forever or for a limited period as decided by the Principal/Owner.**

2) **Forfeiture of EMD /Security Deposit**: If the Principal/Owner has disqualified the Bidder(s) from the Tender process prior to the award of the Contract or terminated/determined the Contract or has accrued the right to terminate/determine the Contract according to Article 3(1), the Principal/Owner apart from exercising any legal rights that may have accrued to the Principal/Owner, may in its considered opinion forfeit the entire amount of Earnest Money Deposit, Performance Guarantee and Security Deposit of the Bidder/Contractor.

3) **Criminal Liability:** If the Principal/Owner obtains knowledge of conduct of a Bidder or Contractor, or of an employee or a representative or an associate of a Bidder or Contractor which constitutes corruption within the meaning of IPC Act, or if the Principal/Owner has substantive suspicion in this regard, the Principal/Owner will inform the same to law enforcing agencies for further investigation.

Article 4: Previous Transgression

1) The Bidder declares that no previous transgressions occurred in the last 5 years with any other Company in any country confirming to the anticorruption approach or with Central Government or State Government or any other Central/State Public Sector Enterprises in India that could justify his exclusion from the Tender process.

2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the Tender process or action can be taken for banning of business dealings/ holiday listing of the Bidder/Contractor as deemed fit by the Principal/ Owner.

3) If the Bidder/Contractor can prove that he has resorted / recouped the damage caused by him and has installed a suitable corruption prevention system, the Principal/Owner may, at its own discretion, revoke the exclusion prematurely.

Article 5: Equal Treatment of all Bidders/Contractors/Subcontractors

1) The Bidder(s)/Contractor(s) undertake(s) to demand from all subcontractors a commitment in conformity with this Integrity Pact. The Bidder/Contractor shall be responsible for any violation(s) of the principles laid down in this agreement/Pact by any of its Subcontractors/sub-vendors.

2) The Principal/Owner will enter into Pacts on identical terms as this one with all Bidders and Contractors.

3) The Principal/Owner will disqualify Bidders, who do not submit, the duly signed Pact between the Principal/Owner and the bidder, along with the Tender or violate its provisions at any stage of the Tender process, from the Tender process.

Article 6- Duration of the Pact

This Pact begins when both the parties have legally signed it. It expires for the Contractor/Vendor 08 (Eight) Months after the completion of work under the contract or till the continuation of defect liability period, whichever is more and for all other bidders, till the Contract has been awarded.
If any claim is made/lodged during the time, the same shall be binding and continue to be valid despite the lapse of this Pacts as specified above, unless it is discharged/determined by the Competent Authority, CPWD.

Article 7- Other Provisions

1) This Pact is subject to Indian Law, place of performance and jurisdiction is the **Head quarters of the Division** of the Principal/Owner, who has floated the Tender.

2) Changes and supplements need to be made in writing. Side agreements have not been made.

3) If the Contractor is a partnership or a consortium, this Pact must be signed by all the partners or by one or more partner holding power of attorney signed by all partners and consortium members. In case of a Company, the Pact must be signed by a representative duly authorized by board resolution.

4) Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intensions.

5) It is agreed term and condition that any dispute or difference arising between the parties with regard to the terms of this Integrity Agreement / Pact, any action taken by the Owner/Principal in accordance with this **Integrity Agreement/ Pact or interpretation thereof shall not be subject to arbitration.**

Article 8- LEGAL AND PRIOR RIGHTS

All rights and remedies of the parties hereto shall be in addition to all the other legal rights and remedies belonging to such parties under the Contract and/or law and the same shall be deemed to be cumulative and not alternative to such legal rights and remedies aforesaid. For the sake of brevity, both the Parties agree that this Integrity Pact will have precedence over the Tender/Contact documents with regard any of the provisions covered under this Integrity Pact.

IN WITNESS WHEREOF the parties have signed and executed this Integrity Pact at the place and date first above mentioned in the presence of following witnesses:

.....

(For and on behalf of Principal/Owner)

.....

(For and on behalf of Bidder/Contractor)

WITNESSES:

1.....

(Signature, name and address)

2.....

(Signature, name and address)

Place:

Dated:

Schedule of Quantity of Work

Name of Work: **Civil up-gradation works in Composit Wood Discipline lab of Division of Forest Product at FRI.**

Item No.	Description of item	Qty	Unit	Rate	Amount	Remarks
1	Taking out old iron chawkhat with door as per direction of scientist of wood Composit discipline.	6.00	nos			
2	Mirror polishing on marble work/Granite work/stone work where ever required to give high gloss finish complete.	60.00	sqm			
3	Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering - All work upto plinth level :					
3.1	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	2.00	cum			
4	Brick work with F.P.S. bricks of class designation 75 in superstructure above plinth level upto floor V level in all shapes and sizes in :					
4.1	Cement mortar 1:6 (1 cement : 6 coarse sand)	2.00	cum			
5	Reinforced cement concrete work in beams, suspended floors, roofs having slope upto 15° landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral stair cases upto floor five level excluding the cost of centring, shuttering, finishing and reinforcement with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size).	1.00	cum			
6	Centring and shuttering including strutting, propping etc. and removal of form for :					
6.1	Shelves (Cast in situ)	5.60	sqm			
7	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete.					
7.1	cold twisted wire	112.00	kg			
8	Half brick masonry with common burnt clay F.P.S. (non modular) bricksof class designation 7.5 in superstructure above plinth level up to floor V level.					
8.1	Cement mortar 1:4 (1 cement :4 coarse sand)	3.75	sqm			
9	12 mm cement plaster on the rough side of single or half brick wall of mix :	-	-			
9.1	1:4 (1 cement : 4 fine sand)	20.00	sqm			
10	Providing and fixing 18mm thick gang saw cut mirror polished (premoulded and prepolished) machine cut for kitchen platforms, vanity counters ,window sills , facias and similar locations of required size of approved shade, colour and texture laid over 20mm thick base cement mortar 1:4 (1 cement : 4 coarse sand) with joints treated with white cement, mixed					

	with matching pigment, epoxy touch ups, including rubbing, curing moulding and polishing to edge to give high gloss finish etc. complete at all levels.					
10.1	Granite of any colour and shade					
10.2	Area of slab upto 0.50 sum	26.80	sqm			
11	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS : 1285, fixed with rawl plugs and screws or with fixing clips, or with expansion hold fasteners including necessary filling up of gaps at junctions, at top, bottom and sides with required PVC/neoprene felt etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / panelling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing and panelling to be paid for separately) :					
11.1	For fixed portion.					
11.2	Anodised aluminum (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 15)	118.09	kg			
12	For shutters of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of PVC / neoprene gasket required (Fittings shall be paid for separately).					
12.1	Anodised aluminum (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 15)	60.00	kg			
13	Providing and fixing glazing in aluminum door, window, ventilator shutters and partitions etc. with PVC/ neoprene gasket etc. complete as per the architectural drawings and the directions of engineer-in-charge . (Cost of aluminum snap beading shall be paid in basic item) :					
13.1	With float glass panes of 5.50 mm thickness	8.68	sqm			
14	Providing and fixing ISI marked aluminum butt hinges anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc. complete:					
14.1	125x75x4 mm	23.00	each			
15	Providing and fixing aluminum tower bolts ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc. complete :					
15.1	300x16 mm	20.00	each			
16	Providing and fixing aluminum handles ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required					

	colour or shade with necessary screws etc. complete :					
16.1	125 mm	20.00	each			
17	Providing and fixing 100mm brass locks (best make of approved quality) for aluminum doors including necessary cutting and making good etc. complete.	2.00	each			
18	Providing and fixing anodised aluminum grill (anodised transparent or dyed to required shade according to IS: 1868 with minimum anodic coating of grade AC 15) of approved design/pattern, with approved standard section and fixed to the existing window frame with C.P.brass/ stainless steel screws @ 200 mm centre to centre, including cutting the grill to proper opening size for fixing and operation of handles and fixing approved anodised aluminum standard section around the opening, all complete as per requirement and direction of Engineer-in-charge. (Only weight of grill to be measured for payment).	40.00	kg			
19	Providing and fixing Armstrong prima adria micro look ceiling edge mineral fiber ceiling tile in tru horizontal level false grid manufecture by m/s Armstrong world Industries or equivelent using hot dipped chemically cleaned capping prefinished in baked polyester paint, Armstrong main t size 30×15 mm.every 1200mm C/ C maximum and rotar stitched and 600 mm Armstrong cross tea at every 1200 mm C/C maximum and Armstrong wall angle alround the wall to form grid size of 600×600 mm.and suspending the grid using 2mm prestraightened G.I. rod / wire and 8mm. dia anchor fasterners at every 1200mm intervals at the main tee and laying armstrong prima adtia microillok edge mineralfiber ceiling tiles of size 600×600×15 mm over the formed grid including providing necessary openings and additional framework required for light fittings etc. manufactured by M/S armstrong world industries having fire rating of 60 minutes as per BS 476/23 of 1987 .light reflection of > 85%, noice reduction Co-efficient (NCR) of 0.50 sound attenuation of 32 db k= 052-067 W/m K weight of 4.0 kg./ sqm and humidity resistance of 95%. The work shall be executed engineer in-charge.	58.00	sqm			
20	Providing and fixing fly proof galvanized M.S. wire gauze to windows and clerestory windows using galvanized M.S. wire gauge with average width of aperture 1.4 mm in both directions with wire of dia. 0.63 mm.					
20.1	With 12 mm. mild steel U beading	7.50	sqm			
21	Making plinth protection 50mm thick of cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) over 75mm bed by dry brick ballast 40mm nominal size well rammed and consolidated and grouted with fine sand including finishing the top smooth.	30.00	sqm			
22	Providing and applying leak stop for removing the leakage of old G.C.I sheet where ever required	75.00	sqm			

	complete					
23	Removing white or colour wash by scrapping and sand papering and preparing the surface smooth including necessary repairs to scratches etc. complete	146.00	sqm			
24	Providing and applying plaster white cement based of average thickness1 mm and approved brand and manufactured over the plastered wall surface to prepare the surface even and smooth complete	70.00	sqm			
25	Distempering with oil bound washable distemper of approved brand and manufacture to give an even shade :					
25.1	Old Work (one or more coat)	146.00	sqm			
26	Painting on G. S. sheet with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade :					
26.1	Old work (one or more coats)	75.00	sqm			
27	Finishing walls with water proofing cement paint of required shade :					
27.1	Old work .one or more coats	214.00	sqm			
28	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade :					
28.1	One or more coats on old work.	50.00	sqm			

Note: Rates to quoted inclusive all taxes.