

TITLE

Notice Inviting Tender for the work of “Construction of open dais, Green room & washrooms at Phool bagan in front of CESC Garden and Repairing, replacement of 2km barbed wire on the boundary wall of AJCBIBG from Howrah main gate to bakultala gate during the year 2024-25”.

Name of Work: Construction of open dais, Green room & washrooms at Phool bagan in front of CESC Garden and Repairing ,replacement of 2km barbed wire on the boundary wall of AJCBIBG from Howrahmain gate to bakultala gate during the year 2024-25.

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This NIT contains 1 to 87 pages including this page.

Assistant Engineer (P)
CED-IV, CCU, MoEF&CC
KOLKATA

NIT No. **04/EE/CED-IV/CCU/Kol/2024-25**. approved for **Rs.49,61,435.00/-**
(Rupees Forty Nine Lakhs Sixty One Thousand Four Hundred Thirty Five Only)
(Civil & Electrical) and containing page No. 1 to 87

Executive Engineer
CED-IV, CCU, MoEF&CC
KOLKATA

PART-A

**(Form CPWD-6 & 7,
Schedule A to F)**

INFORMATION AND INSTRUCTIONS FOR BIDDERS FOR E-TENDERING FORMING PART OF BID DOCUMENT AND TO BE POSTED ON WEBSITE

The Executive Engineer, CED-IV, Civil Construction Unit (CCU), Ministry of Environment, Forest & Climate Change (MoEF&CC), AJCB Indian Botanic Garden, CNH Building, Shibpur, Howrah (email- eeced4ccu-mef@gov.in/eeced4ccu.mef@gmail.com, Mo. 9433581744) on behalf of President of India invites online Percentage rate bids from CPWD enlisted contractors of appropriate class in Buildings & Roads (erstwhile composite /Building/ Infrastructure) category and firms/contractors of repute in single bid system for the following work:

NIT No.	Name of work and location	Estimated cost put to bid	Earnest Money	Period of Completion	Last date & time of submission of bid, and other Documents as specified in the bid document	Time & date of opening of bid
2	3	4	5	6	7	8
04/EE/CED-IV/CCU /KoL /2024-25	Construction of open dais, Green room & washrooms at Phool bagan in front of CESC Garden and Repairing ,replacement of 2km barbed wire on the boundary wall of AJCBIBG from Howrah main gate to bakultala gate during the year 2024-25.	Rs. 49,61,435.00/- (Civil & Electrical)	Rs. 99,229.00/-	06(Six) Months	Upto-3PM on 14/01/2025	At 3.30PM on 14/01/2025

- 1) The contractor submitting the tender should read the schedule of quantities, additional conditions, additional specifications, particular specifications, CPWD-6 and other terms and conditions given in the NIT and drawings. The bidder should also read the General Conditions of Contract for CPWD Works 2023 for construction work with up to date correction slips. The Tender is available as Government of India Publications and on CPWD website at <https://etender.cpwd.gov.in> however, provisions included in the tender document shall prevail over the provisions contained in the standard form. The sets of drawings and NIT shall be available in the office of **Executive Engineer, CED-IV, CCU, MoEF&CC, kolkata**. The contractor should also visit the site of work and acquaint himself with the site conditions before tendering. He should only submit his tender if he considers himself eligible and he is in possession of all the required documents. The following conditions, which already form part of the tender conditions, are specially brought to his notice for compliance while submitting the tender online. They are requested to comply following instructions.
 - a) Tenders with any condition including that of conditional rebates shall be rejected forth with.
 - b) GST and Labour-Cess etc. as applicable shall be borne by the contractor himself. The contractor shall quote his rates considering all such taxes and hence their quoted rates should be inclusive of all the tax components.
 - c) It will be obligatory on part of the Contractor/ Bidder to tender for and sign the tender documents for all the component parts. The department reserves right to accept tender in full or in part without assigning any reasons.

- 2) 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.
- 3) Information and Instructions for bidders posted on websites all form part of bid document.
- 4) 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.
- 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 can be seen in the office of **Executive Engineer,CED-IV,CCU,MoEF&CC,kolkata**. on all working days between 11 AM to 4 PM except Sunday and public holidays and downloaded from website <https://etender.cpwd.gov.in> free of cost.
- 6) The bid can only be submitted after deposition of original EMD either in the office of Executive Engineer inviting bids or division office of any Executive Engineer, CPWD/CCU, MoEF&CC within the period of bid submission and uploading the mandatory scanned documents as mentioned in the NIT such as Insurance Surety Bond or Demand Draft or Pay order or Banker`s Cheque or Deposit at call Receipt or Fixed Deposit Receipts and BankGuarantee of any Scheduled Bank towards EMD in favour of **“Executive Engineer, CED-I, CCU, MoEF&CC, New Delhi”** receipt of deposition of original EMD to any division office of CCU ,MoEF&CC/CPWD or office of Executive Engineer ,CED-II,CCU, New Delhi and all other documents as mentioned in NIT.
- 7) The online bids will be submitted upto 3 PM on 14/01/2025..The online bid shall be opened at 3:30 PM on 14/01/2025Those contractors not registered on the website mentioned above, are required to get registered before hand .If needed they can be imparted training on online bidding process as per details available on the website.
- 8) The intending bidder must have valid class-III digital signature to submit the bid.
- 9) The Executive Engineer of any division of CCU ,MoEF&CC/CPWD shall receive the original EMD for tender of other division/ Divisions.
- 10) Copy of Enlistment Order and certificate of work experience and other documents as specified in the bid document 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 the bid document shall have to be submitted by the lowest bidder only physically in the office of tender opening authority as and when directed by Engineer- in-charge. Online bid documents submitted by intending bidders shall be opened only of those bidders, whose all documents scanned and uploaded are found in order including scanned copy of EMD & receipt of Deposition of EMD.
- 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) In addition to this, while selecting any of the cells a warning appears that if any cell is left blank, the same shall be treated as “0”.

- 14) 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).
- 15) The required documents meeting the criteria to qualify as "approved and eligible contractors of CPWD" along with other documents as mentioned under para "List of Documents to be scanned and uploaded within the period of bid submission" below, as uploaded by the agency and hard copies received subsequently shall be checked. 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 bid without assigning any reason.
- 17) 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.
- 18) While submitting the revised bid, contractor can revise the rate any number of times but before last time and date of submission of bid as notified.
- 19) In case of composite tenders, the contractor submitting the tender should read all the three Parts of the tenderviz.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 including schedule A to F for major and minor component of the work, Standard General General Conditions of Contract for CPWD Works 2023 for construction work with up to date correction slips**
 - **Part B :-Conditions& specifications and schedule of quantities applicable to major component of the work.**
 - **Part C :-** Conditions and specifications and schedule of quantities applicable to minor component of the work.
 - **PartD:-**Performa for quoting the rates by bidder.
The Major Component of work is Civil Work and Minor Component of work is Electrical Work.
- 20) The bidders should also read the General Conditions of Contract for CPWD Works 2023 for construction work with up to date correction slips, 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 Executive Engineer.
- 21) This work is of urgent nature, the contractor should also visit the site of work and acquaint himself with the limited working space available at site and soil conditions before tendering. The contractor is required to arrange separate Storage and working space away from site for the execution of work.
- 22) The main contractor shall execute the minor component(s) also .He should be either an eligible contractor himself for 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 upto 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.

- 23) After acceptance of the tender by competent authority, the EE-in-charge of major component of the work shall issue letter of award on behalf of the President of India. After the work is awarded, the main contractor will have to enter into one agreement with EE-in-charge of major component and has also to sign two/or more copies of agreement depending upon number of EE's in-charge of minor components. One such signed set of agreement shall be handed over to EE incharge of minor component. EE incharge of major component will operate part A, B and D (Annexure A) of the agreement. EE in charge of minor component(s) shall operate Part A, C and D (Annexure-B) of the agreement.
- 24) 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 EE in charge of minor component as well as to EE 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.
- 25) Tenders with any condition including that of conditional rebates in the tender document shall be rejected forthwith.
- 26) The online percentage rate(s) must be quoted in decimal coinage. Amount shall be calculated and rounded in full rupees by ignoring fifty paise and considering more than fifty paise as rupee one.
- a) The successful bidder shall be required to submit a Performance Guarantee of 5% (Five percent) of the composite contract amount within a period of issue of letter of acceptance as specified in schedule 'F'.
- 27) The contractor shall have to execute guarantee bonds in respect of Stone work, water supply, sanitary installation & drainage works, water proofing works, CPVC and Aluminum Works .
- 28) GST on materials as applicable shall be paid by the contractor himself. The contractor shall quote his rates considering all such taxes.
- 29) Attention is also drawn to Clauses 6 and 7 of General Condition of Contract for CPWD works 2020 for construction works, which prescribes the procedure for computerized recording of measurement and preparation of bill by contractor.
- 30) Intending bidder may submit physical milestone 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 milestones mentioned in the table.
- 31) Intending bidder may give detailed activities /programme for each milestone fixed in the Tender document with in 15 days after award is work.
- 32) Payment for the items with less use of materials beyond permissible limits as mentioned in Schedule 'F' of Part-A & C shall not be made to contractor
- 33) Payment for the items with less use of materials beyond permissible limits as mentioned in Schedule 'F' of Part-A & C shall not be made to contractor
- 34) Payment for the items with less use of materials beyond permissible limits as mentioned in Schedule 'F' of Part-A & C shall not be made to contractor.

35) List of Documents to be scanned and uploaded within the period of bid submission:

- a) Scanned copy of original Insurance Surety Bond / Treasury Challan/ Demand Draft/ Pay Order or Banker's Cheque/Deposit at Call Receipt /FDR/ BankGuarantee of any Scheduled Bank against EMD.
- b) Valid Enlistment Order of the CPWD registered Contractor in appropriate class of composite/B&R category.
- c) Receipt of deposition of original EMD to division office of any Executive Engineer, CPWD (including NIT issuing EE).
- d) PAN Card issued by Income Tax Department.
- e) GST registration Certificate of the state in which the work is to be taken up, if already obtained by the bidder.
- f) If the bidder has not obtained GST registration in the state in which the work is to be taken up, or asrequired by GST authorities, then in such a case the bidder s hall scan and upload following undertaking along with other bid documents.

"If work is awarded to me, I/we shall obtain GST registration certificate, as applicable, within one month from the date of receipt of award letter or before release of any paymentby CCU, whichever is earlier, failing which I/we shall be responsible for any delay in payments which will be due towards me/us on account of the work executed and/or for anyaction taken by CCU or GST department in this regard".

- g) Any other Document as specified in the NIT.

Executive Engineer, CED-IV, CCU
(For and on behalf of the President of India).

**PROFORMA FOR THE RECEIPT TO BE ISSUED BY THE EXECUTIVE ENGINEER
RECEIVING THE EMD.**

Receipt of deposition of original EMD
(drawn in favour of **Executive Engineer, CED-I, CCU, MoEF&CC, New Delhi**)

(Receipt No..... / date.....)

Name of work : **Construction of open dais, Green room & washrooms at Phool bagan in front of CESC Garden and Repairing ,replacement of 2km barbed wire on the boundary wall of AJCBIBG from Howrah main gate to bakultala gate during the year 2024-25.**

NIT No : **. 04/EE/CED-IV/CCU/Kol/2024-25**

Estimated Cost : **Rs.49,61,435.00/-**

Amount of Earnest Money Deposit (EMD) : **Rs.99,229.00/-**

Last date of submission of bid : **14/01/2025.**

To be filled by EMD receiving Executive Engineer

Name of contractor :

Form of EMD :

Amount of Earnest Money Deposit :

Date of Submission of EMD :

(Signature)

Name and Designation of EMD receiving officer
(EE/AE(P)/AO/AAO) along with office stamp

CPWD 6 FOR E- TENDERING

1. Percentage rate bids are invited on behalf of President of India from approved and eligible CPWD registered contractors in building & roads for the work of **“Construction of open dais, Green room & washrooms at Phool bagan in front of CESC Garden and Repairing ,replacement of 2km barbed wire on the boundary wall of AJCBIBG from Howrah main gate to bakultala gate during the year 2024-25.”**

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

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

The work is estimated to cost **Rs.49,61,435.00/-**-This estimate, however, is given merely as a rough guide. The financial bid shall be opened at **03:30 PM on 14/01/2025.**

2. Agreement shall be drawn with the successful bidders on prescribed Form No. CPWD 7 which is available as a Govt. of India Publication and also available on website www.cpwd.gov.in. Bidders 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 08 (Eight) months 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 on as it is where it is basis. The architectural drawings shall be made available in phased manner, as per requirement of the same and as per approved programme of completion submitted by the contractor after award of work.
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 (GCC) Form can be seen on website <https://etender.cpwd.gov.in> or www.cpwd.gov.in free of cost.
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. Details of Earnest Money in the form of Insurance Surety Bond or Treasury Challan or Demand Draft or Pay order or Banker`s Cheque or Deposit at Call Receipt or Fixed Deposit Receipt (drawn in favour **of Executive Engineer, CED-I, CCU, MoEF&CC, NewDelhi**) shall be scanned and uploaded to the e-tendering website within the period of bid submission. The original EMD should be deposited either in the office of Executive Engineer inviting bids or division office of any Executive Engineer, CPWD/CCU,MoEF&CC within the period of bid submission. (The EMD documents shall only be issued from the place in which the office of receiving division office is situated). The EMD receiving Executive Engineer (including NIT issuing EE)shall issue a receipt of deposition of earnest money deposit to the bidder in a prescribed format (enclosed) uploaded by tender inviting EE in the NIT.

A part of earnest money is acceptable in the form of bank guarantee also. In such case minimum 50% of earnest money or Rs. 20 lac, whichever is less, shall have to be deposited through online mode, and balance may be deposited in shape of Bank Guarantee including e-Bank Guarantee any Commercial bank having validity for a period of 90 days for single bid works and 180 days for two bid system or more from the last date of receipt of bids which is to be scanned and uploaded by the intending bidders.

The earnest money given by all the tenderers except the lowest tenderer shall be refunded immediately after the expiry of stipulated bid validity period or immediately after acceptance of the successful bidder, whichever is earlier. However, in case of two/ three bid system, earnest money deposit of bidders unsuccessful during technical bid evaluation etc. should be returned within 30 days of declaration of result of technical bid evaluation.

Copy of Enlistment Order and certificate of work experience and other documents as specified in the notice inviting e- tender shall be scanned and uploaded on the e-Tendering website within the period of bid submission. However, certified copy of all the scanned and uploaded documents as specified in e- tender notice shall have to be submitted by the lowest bidder 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, who has deposited EMD online through CPWD e-tendering portal and Bank Guarantee including e- Bank Guarantee (for balance amount as prescribed) from a Commercial Bank on CPWD e-tendering platform and other documents scanned and uploaded are found in order.

9. The bid submitted shall become invalid and e-Tender processing fee (if applicable) shall not be refunded if:
 - (i) The bidder is found ineligible.
 - (ii) The bidder does not deposit original EMD with division office of any Executive Engineer, CPWD/CCU, MoEF&CC.
 - (iii) The bidder does not upload scanned copies of all the documents stipulated in the bid document.
 - (iv) If any discrepancy is noticed between the documents as uploaded at the time of submission of bid and hard copies as submitted physically by the lowest bidder in the office of bid 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 total 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
10. The contractor whose bid is accepted will be required to furnish performance guarantee at specified percentage of the tendered amount as mentioned in schedule E and within the period specified in Schedule F. This guarantee shall be in the form of Insurance Surety Bonds, Account Payee Demand Draft, Fixed Deposit Receipt or Bank Guarantee from any of the Commercial Banks in accordance with the prescribed form. In case the contractor fails to deposit the said performance guarantee within the period as indicated in Schedule 'F', including the extended period if any, the Earnest Money deposited by the contractor shall be forfeited automatically without any notice to the contractor. The earnest money deposited along with bid shall be returned after receiving the aforesaid performance guarantee. The contractor whose bid is accepted will also be required to furnish either copy of applicable licenses/ registrations or proof of applying for obtaining labour licenses, registration with EPFO, ESIC and BOCW Welfare Board including Provident Fund Code No. If applicable and also ensure the compliance of aforesaid provisions by the subcontractors, if any engaged by the contractor for the said work within the period specified in Schedule F.
11. The description of the work is as follows: **“Construction of open dais, Green room & washrooms at Phool bagan in front of CESC Garden and Repairing ,replacement of 2km barbed wire on the boundary wall of AJCBIBG from Howrah main gate to bakultala gate during the year 2024-25.**

- 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 on behalf of the President of India 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 bidder 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 for rejection.
- 15.** The competent authority on behalf of President of India 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.** If relative working in CPWD then the contractor is not allowed to participate in the tendering process. The contractor (enlisted or non-enlisted in CPWD) shall not be allowed to participate in the tender for work(s) in the CPWD Zonal/Circle /Division/Sub-division responsible for award and/or execution of contract(s) in which his near relative is posted as Divisional Accountant or as an officer in any capacity between the grades of the Chief Engineer and Junior Engineer (both inclusive). He shall also intimate the names of persons who are working or are subsequently employed by him and who are near relatives to any Officer working in the CPWD. Any breach of this condition by the contractor would render him liable to be debarred for a period up to two years from tendering in CPWD as decided by the accepting authority mentioned in Schedule F and his decision will be excepted from clause 25.
- 17.** 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 prior 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.
- 18.** The bid for the work shall remain open for acceptance for a period of 30 (Thirty) days from the date of opening of tenders.

- i) If any tenderer withdraws his tender or makes any modification in the terms & conditions of the tender which is not acceptable to the department within 7 days after last date of submission of bids, then the Government shall without prejudice to any other right or remedy, be at liberty to forfeit 50% of the earnest money absolutely irrespective of letter of acceptance for the work is issued or not.
 - ii) If any tenderer withdraws his tender or makes any modification in the terms & conditions of the tender which is not acceptable to the department after expiry of 7 days after last date of submission of bids, then the Government shall without prejudice to any other right or remedy, be at liberty to forfeit 100% of the earnest money absolutely irrespective of letter of acceptance for the work is issued or not.
 - iii) In case of forfeiture of earnest money as prescribed in para (i) and (ii) above, the bidders shall not be allowed to participate in the rebidding process of the same work.
- 19.** This notice inviting Bid shall form a part of the contract document. The successful bidders/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: -
- i) 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.
 - ii) Standard C.P.W.D. Form 7 or other Standard C.P.W.D. Form as applicable.
 - iii) General Conditions of Contract 2023 for Construction works, Central Public Works Department, as corrected up to last date of submission of bids.
- 20.** The main contractor has to associate agencies for specialized component(s) conforming to eligibility criteria as defined in the bid document and has to submit detail of such agency(s) to Engineer-in-Charge of relevant component(s) within prescribed time. Name of the agency(s) to be associated shall be approved by Engineer-in-Charge.
- 21.** In case the main contractor intends to change any of the above agency/agencies during the operation of the contract, he shall obtain prior approval of Engineer-in-Charge. The new agency/agencies shall also have to satisfy the laid down eligibility criteria. In case Engineer-in-Charge is not satisfied with the performance of any agency, he can direct the contractor to change the agency executing such items of work and this shall be binding on the contractor.
- 22.** The main contractor has to enter into MoU with agency(s) associated by him/ Copy of such MoU shall be submitted to Engineer in charge. In case of change of associate contractor, the main agency(s) has to enter into MoU/agreement with the new contractor associated by him.

Executive Engineer, CED-IV
(For and on behalf of the President of India)

GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FORESTS & CLIMATE CHANGE

PERCENTAGE RATE BID AND CONTRACT FOR WORKS

Tender for the work of **Construction of open dais, Green room & washrooms at Phool bagan in front of CESC Garden and Repairing ,replacement of 2km barbed wire on the boundary wall of AJCBIBG from Howrah main gate to bakultala gate during the year 2024-25.**

- i) The bid to be submitted online by 3 PM on 14/01/2025
- ii) To be opened in presence of tenderers who may be present at 3:30 PM on 14/01/2025..in the office of in the office of the Executive Engineer, CED-IV, Civil Construction Unit (CCU), Ministry of Environment, Forest & Climate Change (MoEF&CC), AJCB Indian Botanic Garden, CNH Building, Shibpur, Howrah.

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 President of India within the time specified in Schedule 'F' viz., schedule of quantities and in accordance in all respect with the specifications, designs, drawing 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 respect of accordance with, such conditions so far as applicable.

We agree to keep the tender open for acceptance for **Thirty (30)** days from the due date of its opening of bid and not to make any modifications in its terms and conditions.

A copy of earnest money deposit receipt of prescribed amount deposited in the form of Insurance Surety Bonds, Account Payee Demand Draft, Fixed Deposit Receipt, Banker's Cheque or Bank Guarantee (as prescribed) issued by a Commercial Bank, is scanned and uploaded. If I/We, fail to furnish the prescribed performance guarantee within prescribed period, I/We agree that the said President of India 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 to commence work as specified, I/ We agree that President of India or the successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said performance guarantee absolutely. The said Performance Guarantee shall be a guarantee to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to 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. 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 and integrity of the State.

Further, I/We agree that in case of forfeiture of Earnest Money or Performance Guarantee 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 CCU, MoEF&CC in future forever. Also, if such a violation comes to the notice of Department before date of start of work, the Engineer-in-Charge shall be free to forfeit the entire amount of Earnest Money Deposit/Performance Guarantee.

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 & integrity of the State.

Signature of contractor
Postal Address-----**
Telephone No. -----**
Fax -----**
E-MAIL -----**

Witness: Address:
Occupation:

** To be filled by Bidder

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 President of India 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 President of India

Signature.....*

Dated: -----*
.....*

Designation

SCHEDULE – ‘A’, ‘B’, ‘C’, ‘D’, ‘E’ & ‘F’ FOR THE WORK

SCHEDULE ‘A’

Schedule of Quantities -

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 per tender documents
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SCHEDULE ‘E’

Reference to General Conditions of contract	General Conditions of Contract 2023 for Construction works, Central Public Works Department, as amended up to last date of submission of bids.
Name of Work	Construction of open dais, Green room & washrooms at Phool bagan in front of CESC Garden and Repairing ,replacement of 2km barbed wire on the boundary wall of AJCBIBG from Howrah main gate to bakultala gate during the year 2024-25.
Estimated cost of the work	Rs.49,61,435.00/-
Earnest money	Rs.99,229.00/-
Performance Guarantee	5.00% of tendered amount
Security Deposit	2.50% of tendered amount.

SCHEDULE 'F'

GENERAL RULES AND DIRECTION

Officer inviting tender	The Executive Engineer, CED-IV, Civil Construction Unit (CCU), Ministry of Environment, Forest & Climate Change (MoEF&CC), AJCB Indian Botanic Garden, CNH Building, Shibpur, Howrah.
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

Definitions:

2(v)	Engineer-in-Charge	Executive Engineer, CED-IV, CCU, MoEF&CC or his or his legal successor or Assignee thereof.
2(viii)	Accepting Authority	Executive Engineer, CED-IV, CCU, MoEF&CC or his or his legal successor or Assignee thereof
2(x)	Percentage on cost of materials and labour to cover alloverheads and profits	15% .
2(xi)	Standard Schedule of Rates	
	Civil Works	DSR-2023 with correction slips issued upto last date of submission of bids.
	Electrical & Mechanical Works	DSR-2022 with correction slips issued upto last date of submission of bids .
2(xii)	Department:	Civil Construction Unit, MoEF&CC
9(ii)	Standard CPWD Contract Form	CPWD Form 7 of General Conditions of Contract 2023 for Construction works, Central Public Works Department, as modified and corrected up to last date of submission of bids.

Clause 1		
i)	Time allowed for submission of Performance Guarantee, Programme Chart (Time and Progress) and applicable labour licenses, registration with EPFO, ESIC and BOCW Welfare Board or proof of applying thereof from the date of issue of letter of acceptance	7 Days
ii)	Maximum allowable extension with late fee @0.1% per day of Performance Guarantee amount beyond the period as provided in i) above	3 Days

Clause 2	Authority for fixing Compensation under Clause 2	Superintending Engineer, CCU, MoEF&CC or his legal successor or Assignee thereof
Clause 5	Number of days from the date of issue of letter of acceptance for reckoning date of start	7 days or date of handing over of site whichever is later.

Mile stones as per table given below

Sl. No.	Description of mile stone (s)	Time allowed (From date of start)	Amount to be withheld in case of Non-achievement of each Milestone(s)
1	Work done amounting to 20% of accepted tender amount (Civil + Electrical).	1.5 Months	1.25 % of accepted tendered amount.
2	Work done amounting to 45% of accepted tender amount (Civil + Electrical).	03 Months	1.25 % of accepted tendered amount.
3	Work done amounting to 75% of accepted tender amount (Civil + Electrical).	4.5 Months	1.25% of accepted tendered amounts
4	Work done amounting to 100% of accepted tender amount (Civil + Electrical).	06 Months	1.25% of accepted tendered amount.

Time allowed for execution of work :**06 (SIX) Months**

Authority to decide:

i) Authority to convey the decision of shifting of milestone and extension of time:	Executive Engineer, CED-IV, CCU, MoEF&CC or his legal successor or Assignee thereof
ii) Authority to decide rescheduling of mile stones and extension of time.	Superintending Engineer, CCU, MoEF&CC or his legal successor or Assignee thereof
iii) Shifting of date of start in case of delay in handing over of site	Superintending Engineer, CCU, MoEF&CC or his legal successor or Assignee thereof

Note: Date of completion for civil as well as electrical items of work will be same. Levy of Compensation under Clause 2 as well as fair and reasonable extension of time will be granted by the Superintending Engineer, CCU, MoEF&CC thereof in consultation with and on receipt of required information in this regard from Executive Engineer, CED-IV, CCU, MoEF&CC for Civil works and Electrical work.

Schedule of handing over of site

Part	Portion of site	Time period for handing over reckoned from date of issue of letter of intent
Part A	Portion without any hindrance	On date of commencement
Part B	Portions with encumbrances	NA
Part C	Portions dependent on work of other agencies	NA

CLAUSE 5.4: Schedule of rate of recovery for delay in submission of the modified programme in terms of delay days **Rs.500/day**.

Mode of measurement

CMB

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	Rs. 15 Lakhs for Civil Works and 2 lakhs for Electrical & Mechanical Works.
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Clause 7A

No Running Account Bill shall be paid for the work till the applicable labour licenses, registration with EPFO, ESIC and BOCW Welfare Board, whatever applicable as submitted by the Bidder to the Engineer-in- Charge.	Yes
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Clause 8 A: Completion plans to be submitted by the contractor

Authority to decide compensation on account if contractor fails to submit completion plans	Superintending Engineer, CCU, MoEF&CC or his legal successor or Assignee thereof.
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Clause 10 A

List of testing equipment to be provided by the contractor at site lab.

As per details attached in the relevant pages of this bid document.

Clause 10 B

Clause 10B (ii)	
Whether Clause 10 B (ii) shall be applicable	No

Clause 10 C

Whether Clause 10 C shall be applicable	N.A
Component of labour expressed as percent of value of work	25%

Clause 10 CC : Not Applicable.

Clause 11 :

Specifications to be followed for execution of civil work	:	CPWD Specifications 2019 Volume-I and II with correction slips issued upto last date of submission of bids.
Specifications to be followed for execution of Electrical & Mechanical Works	:	CPWD Specifications for Electrical Work. Part-I (Internal) 2023, Part- II (External) 2023.
Building information model (BIM) is applicable and BIM professional to be deployed by contractor (NIT approving authority to write Yes or No)	:	N.A.

Clause 12 : Construction work

12.2 (c)	Deviation limit beyond which clause 12.2 (c) shall apply for building work.	:	100%
	i) Deviation limit beyond which clause 12.2 (c) shall apply for foundation work (except items mentioned in earth work sub head in DSR and related items)	:	100%
	ii) Deviation limit for items mentioned in earth work sub head of DSR and related items	:	100%

Clause 16 :

Competent authority for deciding reduced rates	:	Superintending Engineer, CCU, MoEF&CC or his legal successor or Assignee thereof
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Clause 18 :

List of Mandatory Machinery, tools & plants to be deployed by the contractor at site: -

As per details attached in the relevant pages of this bid document

Clause 19

Clause 19 C	Authority to decide penalty for each default	Executive Engineer, CED-IV, CCU, MoEF&CC or his legal successor or Assignee thereof
Clause 19 D	Authority to decide penalty for each default	Executive Engineer, CED-IV, CCU, MoEF&CC or his legal successor or Assignee thereof
Clause 19 G	Authority to decide penalty for each default	Executive Engineer, CED-IV, CCU, MoEF&CC or his legal successor or Assignee thereof
Clause 19 K	Authority to decide penalty for each default	Executive Engineer, CED-IV, CCU, MoEF&CC or his legal successor or Assignee thereof

Clause 25: Settlement of disputes by Conciliation and Arbitration

Conciliator:	:	SE, CCU or his legal successor or Assignee thereof
Arbitrator Appointing Authority	:	Chief Engineer, CCU, MoEF&CC or his legal successor or Assignee thereof
Place of Arbitration	:	New Delhi

Clause 32 : Requirement of Technical Representative(s) and Recovery Rate

Sl. No.	Minimum Qualification of Technical Representative	Discipline	Designation	Minimum experience	Number	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of Clause 32
1	Graduate Engineer Or Diploma Engineer	Civil + Electrical	Project manager cum planning/ quality/site/billing Engineer	2 or 5 years respectively	1 of major Component	Rs. 15,000/- per month per person

- 1) Assistant Engineers retired from Government services that are holding Diploma will be treated at par with Graduate Engineers.
- 2) Diploma holder with minimum 10-year relevant experience with a reputed construction co. can be treated at par with Graduate Engineers for the purpose of such deployment subject to the condition that such diploma holders should not exceed 50 % of requirement of degree engineers.
- 3) Minimum recovery for not deploying Building information Model (BIM) professional shall be Rs. two lac per month or as mentioned above, whichever is higher.

Clause 38

(i)	(a)	Schedule/statement for determining theoretical quantity of cement & bitumen on the basis of Delhi Schedule of Rates	DSR 2023 with Amendments/ Correction slips up to last date of submission of Tender
(ii)		Variations permissible on theoretical quantities:	
	(a)	Cement	
		For works with estimated cost put to tender more than Rs. 5 lakh.	3% (Three percent) plus/minus.
		Bitumen for all works	2.5% (Two-point five percent) plus only and nil on minus side.
	(b)	Steel Reinforcement and structural steel sections for each diameter, section and category	2% (Two percent) plus / minus
	(c)	All other materials	Nil

RECOVERY RATES FOR QUANTITIES BEYOND PERMISSIBLE VARIATION

S. No.	Description of item	Rates in figures and words at which recovery shall be made from the Contractor	
		Excess beyond permissible variation	Less use beyond permissible variation not permitted
1.	Cement OPC 43 grade /PCC	-	-
2.	Steel reinforcement bars	-	-
3.	Structural steel	-	-

- Nothing extra shall be paid for excess use of materials beyond the theoretical consumption.
- Less use of materials from the theoretical consumption is not permitted.

**(Guarantee offered by Bank to CCU in connection with the execution of contracts)
Form of Bank Guarantee for Earnest Money Deposit /Performance Guarantee/Security Deposit**

1. Whereas the Executive Engineer (name of division) ,
CCU on behalf of the President of India (hereinafter called "The Government")has invited
bids under(NIT number)..... dated..... for
..... (name of work)
..... The Government has further agreed to accept irrevocable
Bank Guarantee for Rs. (Rupees only)
valid upto (date)*..... as Earnest Money Deposit from
(name and address of contractor)(hereinafter called "the contractor")
for compliance of his obligations in accordance with the terms and conditions of the said
NIT.

OR**

Whereas the Executive Engineer (name of division)..... ,
CCU on behalf of the President of India (hereinafter called "The Government") has
entered into an agreement bearing number with
.....(nam
e
and address of the contractor) (hereinafter called "the Contractor") for
execution of work(Name of work)
..... The Government has further agreed to accept an
irrevocable Bank Guarantee for Rs. (Rupees
..... only) valid upto (date)..... as Performance
Guarantee/Security Deposit from the said Contractor for compliance of his obligations in
accordance with the terms and conditions of the agreement.

2. We, (indicate the name of the bank) (herein after referred
to as "the Bank"), hereby undertake to pay to the Government an amount not
exceedingRs. (Rupees..... only) on demand by the Government
within 10 days of the demand.

3. We,(indicate the name of the Bank), do
hereby undertake to pay the amount due and payable under this guarantee
without any demur, 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. 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).

4. We, (indicate the name of the Bank), further undertake
to pay the Government any money so demanded notwithstanding any dispute or
disputes raised by the contractor in any suit or proceeding pending before any Court or
Tribunal, our liability under this Bank Guarantee being absolute and unequivocal. The
payment somade by us under this Bank Guarantee shall be a valid discharge of our
liability for

payment there under and the Contractor shall have no claim against us for making such payment.

5. We, (indicate the name of the Bank)..... , further agree that the Government shall have the fullest liberty without our consent and without affecting in any manner our obligation here under to vary any of the terms and conditions of the said agreement or to extend time of performance by the said Contractor 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 and to forbear 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 or for any forbearance, act of omission on the part of the Government or any indulgence by the Government to the said Contractor 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. We, (indicate the name of the Bank), further agree that the Government at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor at the first instance without proceeding against the Contractor and notwithstanding any security or other guarantee the Government may have in relation to the Contractor's liabilities.
7. This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor.
8. We, (indicate the name of the Bank), undertake not to revoke this guarantee except with the consent of the Government in writing.
9. This Bank Guarantee shall be valid up to unless extended on demand by the Government. Notwithstanding anything mentioned above, our liability against this guarantee is restricted to Rs. (Rupees only) and unless a claim in writing is lodged with us within the date of expiry or extended date of expiry of this guarantee, all our liabilities under this guarantee shall stand discharged.

Date

Witnesses:

- | | |
|---|--------------------------------------|
| 1. Signature.....
signatoryName and address
Designation | Authorized
Name
Staff code no. |
| 2. Signature
sealName and address | Bank |

*Date to be worked out on the basis of validity period of 90 days where only financial bids are invited and 180 days for two/three bid system from the date of submission of tender.

**In paragraph 1, strike out the portion not applicable. Bank Guarantee will be made either for earnest money or for performance guarantee/security deposit/mobilization advance, as the case may be.

ANNEXURE-I I

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

This agreement made this..... day of Two Thousand..... between M/s

..... (hereinafter called the GUARANTOR on the one part) and the PRESIDENT OF INDIA (hereinafter called the Government on the other part)

WHEREAS THIS agreement is supplementary to a Contract No..... dated

..... (Hereinafter called the Contract) and made between the GUARANTOR on the one part and the Government on the other part whereby the contractor inter alia undertook to render the building and structures in the said contract completely water and leak-proof.

AND WHEREAS THE GUARANTOR agreed to give a guarantee to the affect that the said work will remain water and leak proof, for Ten Years from the date of completion of the work under the contract.

NOW THE GUARANTOR hereby guarantee that work executed by him will render the structures completely leak proof and the minimum life of such water proofing treatment shall be Ten years to be reckoned from the date of completion of the work under the contract.

Provided that the guarantor will not be responsible for leakage caused by earthquake or structural defects or misuse of roof or alteration and for such purpose:

- (a) Misuse of roof shall mean any operation which will damage proofing treatment, like chopping of firewood and things of the same nature which might cause damage to the roof;
- (b) Alteration shall mean construction of an additional storey or a part of the roof or construction adjoining to existing roof whereby proofing treatment is removed in parts;
- (c) The decision of the Engineer-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 and in case of any defect being found render the building water proof to the satisfaction of the Engineer-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 Engineer-in-Charge as to the cost payable by the Guarantor shall be final and binding.

That if the guarantor fails to execute the water proofing or 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 Engineer-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 PRESIDENT OF INDIA on the day, month and year first above written.

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

- 1.
- 2.

SIGNED FOR AND BEHALF OF THE PRESIDENT OF INDIA BY in the presence of:

- 1.
- 2.

ANNEXURE-III

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

This agreement made this..... day of Two Thousand between M/s(hereinafter called the GUARANTOR on the one part) and the PRESIDENT OF INDIA (hereinafter called the Government on the other part)

WHEREAS THIS agreement is supplementary to a Contract No.dated (Hereinafter called the Contract)and made between the GUARANTOR on the one part and the Government on the other part whereby the contractor inter alia undertook to render the sanitary installations & water supply works water tight and leak-proof.

AND WHEREAS THE GUARANTOR agreed to give a guarantee to the affect that the said work will remain water tight and leak proof, for Five Years from the date of completion of the work under the contract. NOW THE GUARANTOR hereby guarantee that work executed by him will render completely water tight leak proof and the minimum life of such sanitary installations & water supply works water tight and leak-proof shall be Five years to be reckoned from the date of completion of the work under the contract.

Provided that the guarantor will not be responsible for leakage caused by earthquake or structural defects or misuse. The decision of the Engineer-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 and in case of any defect being found render the building water proof to the satisfaction of the Engineer-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 Engineer-in-Charge as to the cost payable by the Guarantor shall be final and binding.

That if the guarantor fails to execute the water proofing or 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 Engineer-in-Charge will be final and binding on both the parties.

IN WITNESS WHEREOF these presents have been executed by the obligatorand by for and on behalf of the PRESIDENT OF INDIA on the day, month and year first above written.

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

..... 2.

SIGNED FOR AND BEHALF OF THE PRESIDENT OF INDIA BY in the presence of:

1. 2.

LIST OF EQUIPMENTS FOR TESTING OF MATERIALS&CONCRETE AT SITE

LABORATORY

All necessary equipment for conducting all necessary tests shall be provided at the site in the well-furnished site laboratory by the contractor at his own cost. The following minimum laboratory equipment's shall be set up at site office laboratory:

Sl. No.	Equipmen t	Numbers (Minimum)
1	Compressing testing machine	As per requirement of work
2	Cube mould	
3	Slump cone, steel plate, tamping rod, steel scale, scoop	
4	Graduated glass measuring cylinder	
5	Sets of sieves of 450mm internal dia for coarse aggregate [100mm, 80mm, 40mm; 20mm;12.5mm, 10mm;4.75mm complete with lid and	
8	Sets of sieves of 200mm internal dia for fine aggregate[4.75mm;2.36mm;1.18mm; 600 microns;300 microns& 150micron ,	
9	Sieve Brushes and sieve shaker capable of 200mm and 300mm diasieves, manually operated with timing switch assembly	
10	Electronic balance 600gx0.1g., 10kg and 50kg	
11	Physical balance weight upto 5 kg	
12	Measuring jars100ml, 200ml,500ml	
13	Gauging trowels 100mm & 200mm with wooden Handle	
14	Spatula 100mm & 200mm with long blade wooden Handle	
15	Vernier callipers12" &6" size	
16	GI tray 600x450x50mm, 450x300x40mm,300x250x40mm	
17	Screw gauge 0.1mm-10mm, least count 0.05	
18	Set of box spanner	
19	Hammer1lb & 2lb	
20	Rubber Hammer	
21	Hacksaw with 6 blades	
22	Measuring tape 5mtr	
23	Depth gauge 20cm	
24	Shovels &Spade	

Note: The above list is only indicative and not exhaustive. The contractor may be required to provide more equipment's as per the requirement of work and as per the direction of the engineer- in- charge.

**LIST OF MANDATORY MACHINERY, TOOLS & PLANTS TO BE DEPLOYED BY
THE CONTRACTOR AT SITE**

S. No.	Equipmen t	Numbers (Minimum)
1.	Needle Vibrators.	As per requirement of work
2.	Plate Vibrator	
3.	JCB, Excavator, Dumper, Tipper	
4.	Reinforcement cutting & Bending machines	
5.	Total station.	
6.	Auto level & staff.	
7.	Water tanker (Minimum capacity of 5000 litres)	
8.	Welding machine 400 Ampere	
9.	Screener for coarse sand and fine sand	
10.	Centrifugal mono block water pump minimum capacity 2 HP	
11.	Steel Shuttering with necessary steel props	
12.	Steel scaffolding and staging materials	
13.	Plain Concrete/Mortar Mixer	
14.	Semi-Automatic Pavement Concrete Paver	
15.	Screed Vibrator	
16.	Any other machinery required for completion of the work as per decision of Engineer-in-charge.	

PART - B

Civil Condition and Specification of Major Component

ADDITIONAL CONDITIONS

GENERAL

The Contractors are advised to inspect and examine the site and its surroundings and satisfy themselves with the nature of site, the means of access to the site, the constraints of space for stacking material / machinery, labour etc., constraints put by local regulations (if any), weather conditions at site (rainfall, snowfall, winter/summer temperatures etc.), general ground / subsoil conditions etc. or any other circumstances which may affect or influence their tenders. No claims, whatsoever, shall be entertained at a later date for any errors found, on plea that the information supplied by the Department in the tender is insufficient or is at variance with the actual site conditions

The work shall generally be carried out in accordance with the "CPWD Specifications 2019 Vol. I & II" with correction slips up to last date of submission of bid (including any extension in last date of bid submission), additional/Particular Specifications, Architectural/Structural drawings and as per instructions of Engineer-in-Charge. Any additional item of work, if taken up subsequently, shall also conform to the relevant specifications mentioned above

The several documents forming the tender are to be taken as mutually complementary to each other.

Detailed drawings shall be followed in preference to small scale drawings and figured dimensions in preference to scale dimensions. Between two or more Clauses of this Contract, the provisions of a specific Clause relevant to the issue under consideration shall prevail over those in other Clauses.

Should there be any difference or discrepancy between the description of items as given in the particular specifications for individual items of work, special conditions and I.S. Codes, drawings etc., the following order of preference shall be observed.

I) Nomenclature of items as per Schedule of Quantities

II)Special/Additional Conditions

III) Particular Specifications

IV)Architectural/Structural drawings

V)CPWD Specifications including upto date correction slips.

CPWD General Conditions of Contract (2023) for Construction works including correction slips

VI) Issued up to last date of submission of bid including extensions if any.

VIII)Indian Standards Specifications of B.I.S.

VIII)ASTM, BS, or other foreign origin code mentioned in tender document.

IX) Manufacturer's specifications and as decided by the Engineer-in-Charge.

X)Sound Engineering practices or well-established local construction practices.

A reference made to any Indian Standard Specifications in these documents, shall imply to the latest version of that standard, including such revisions / amendments as issued by the Bureau of Indian Standards 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.

The tenderer shall acquaint himself with the proposed site of work, its approach roads, working space available etc. before quoting his rates and no claim on this account shall be entertained by the department.

The contractor will not be allowed to construct labour huts in the Campus. The contractor has to make arrangement for labour huts outside Campus at his own cost.

Nothing extra shall be paid on this account.

The contractor shall keep the site neat & clean during execution of the work and cover the building materials with cloths

In case of any fine imposed by authorities due to scattered malba / building materials or any harm due to malba / materials or by worker of the contractor the same shall be paid by contractor within prescribed period otherwise same shall be recovered from the bills or securities / performance guarantee of the contractor.

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

Any legal or financial implications resulting out of disposal of earth shall be sole responsibility of the contractor. Nothing extra shall be paid on this account.

The tenderer shall see the approaches to the site. In case any approach from main road is required at site or existing approach is to be improved and maintained for cartage of materials 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 and the quoted rates shall be deemed to be inclusive of all such activities.

The contractor(s) shall give to the local body, 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 levied on account of these operations in executing the contract. The building work shall be carried out in the manner complying in all respects with the requirements of the relevant bylaws and regulations of the local body under the jurisdiction of which the work is to be executed and nothing extra shall be paid on this account.

The contractor shall ensure that there is no damage to adjoining property. If any such untoward incident happens, he shall be entirely responsible for any consequences besides making good any damages to the adjoining property whether public or private. He shall supply and maintain lights either for illumination or for cautioning the public at night.

The work shall be carried out in the manner complying in all respects with the requirements of the relevant bylaws and regulations of the local body under the jurisdiction of which the work is to be executed or as directed by the Engineer-in-charge and nothing extra shall be paid on this account.

The contractor shall take all necessary precautions to prevent any nuisance or inconvenience to the owners, tenants or occupiers of adjacent properties and to the public in general and to prevent any damage to such properties and any pollution of smoke, streams and water-ways. He shall make good at his cost and to the satisfaction of the Engineer-in-Charge, any damage to roads, paths, cross drainage works or public or private property whatsoever caused thereon by the contractor. All waste or superfluous materials shall be carried away by the contractor without any reservation entirely to the satisfaction of the Engineer-in-Charge

Utmost care shall be taken to keep the noise level to the barest minimum so that no disturbance as far as possible is caused to the occupants / users of building/adjacent properties

Other agencies may also simultaneously execute and install the works of other civil and E&M services for the work. The contractor shall afford necessary facilities for the same. The contractor shall leave such recesses, holes, openings, trenches etc. as may be required for such related works and the contractor shall fix the same at time of casting of concrete, stone work and brick work, if required, and nothing extra shall be payable on this account.

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 Engineer-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

Royalty at the prevailing rates wherever payable shall have to be paid by the contractor on the boulders, metal, shingle, sand, local earth/soil and bajri etc. or any other material collected by him for the work direct to revenue authorities and nothing extra shall be paid by the department for the same.

Permission for the Excavation of the Basement and/or any Mining Approval along with carriage and disposal of surplus excavated earth shall be obtained by the contractor at his own expenses from Local Administration / Revenue Authority. Department / Client Department shall only forward the case to the concerned Authority. Moreover, all the fee including royalty for surplus excavated earth is to be paid by the contractor to the concerned department. Nothing extra shall be paid on account of this to the contractor.

No payment shall be made for any damage caused by rain, snowfall, flood or any other natural calamity, whatsoever during the execution of the work. The contractor shall be fully responsible for any damage to the govt. property and work for which the payment has been advanced to him under the contract and he

shall make good the same at his risk and cost. The contractor shall be fully responsible for safety and security of his material, T&P, Machinery brought to the site by him.

The contractor shall deploy adequate resources e.g. manpower, labour, T&P, Plant & Equipment etc. as per actual requirement of work.

The rates for all items of work shall, unless clearly specified otherwise, include cost of all labour, material, tools and plants and other inputs including all heights/depths, leads and carriages involved in the execution of the item.

The Contractor shall keep himself fully informed of all acts/laws of the Central/State/Local Governments, orders of central/state/local government, decrees of statutory bodies, tribunals having any jurisdiction or authority, which in any manner may affect those engaged or employed and anything related to carrying out the work. All the rules & regulations and bye-laws laid down by Collector / Municipal Corporation of area (where site is located) and any other statutory bodies shall be adhered to, by the contractor, during the execution of work. The Contractor shall also adhere to all traffic restrictions notified by the national/state/local authorities. The contractor shall abide and ensure compliances to terms and conditions of various approvals obtained for the project. He shall protect and indemnify the Department and its officials & employees against any claim and /or liability arising out of violations of any such laws, ordinances, orders, decrees, by himself or by his employees or his authorized representatives. The Contractor shall indemnify the Department against all claims in respect of patent rights, royalties, design, trademarks- of name or other protected rights, damages to adjacent buildings, roads or members of public, in course of execution of work or any other reasons whatsoever, and shall himself defend all actions arising from such claims and shall indemnify the Department in all respect from such actions, costs and expenses. Nothing extra shall be payable on this account

The fee payable to statutory authorities for obtaining the various permanent service connections and occupancy certificate for the building shall be borne by the Department

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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. The conditions shall be considered to include water from any source such as inflow of flood, rain water, surface drainage, sewerage or due to any other reason including surface and sub-soil water etc. and shall apply to the execution in any season

Unless otherwise specified in the schedule of quantities, the rates tendered by the contractor shall be inclusive of all costs & taxes and shall apply to all leads, lifts, depth and height and nothing extra shall be payable on this account.

For completing the work in time, the Contractor might be required to work in two or more shifts (including night shifts). Normally contractors shall not be allowed to execute the RCC, electrical and finishing work at night. Work at night shall, however, be allowed if the site conditions/circumstances so demand. No claim whatsoever shall be entertained on this account, notwithstanding the fact that the contractor may have to pay extra amounts for any reason, to the labours and other staff engaged directly or indirectly on the work according to the provisions of the labour Act and other statutory bodies regulations and the agreement entered upon by the contractor with them.

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

All material shall only be brought at site as per program finalized with the Engineer-in- Charge. Any pre-delivery of the material not required for immediate consumption shall not be accepted and thus not paid for.

The contractor(s) shall take instructions from the Engineer-in-Charge regarding collection and stacking of materials at any place. No excavated earth or building rubbish shall be stacked on areas where other buildings, roads, services and compound walls are to be constructed. The stacking shall take place as per stacking plan however, if any change is required, the same shall be done with the approval of Engineer-in-Charge.

The Contractor shall bear all incidental charges for all type of cartage/carriage upto execution site, storage and safe custody of materials issued by department/arranged by the contractor.

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.

The work should be planned in a systematic manner so that chase cuttings in the walls, ceilings and floors are minimized. Wherever absolutely essential, the chase shall be cut using chase cutting machines. Chases will not be allowed to be cut using hammer / chisel. The electrical boxes should be fixed in walls simultaneously while raising the brick work. The contractor shall ensure proper coordination of various disciplines viz. sanitary & water supply, electrical, fire- fighting and any other services.

Any cement slurry added over base surface for continuation of concreting for better bond is deemed to have been built in the items and nothing extra shall be payable and no extra cement considered in consumption on this account.

Existing drains, pipes, cables, over-head wires, sewer lines, water lines and similar service encountered in the course of the execution of work shall be protected against the damage by the contractor at his own expense. In case the same are to be removed and diverted. The same shall be payable to the contractor. The contractor shall work out the cost and the same shall be approved by Engineer-in-Charge. 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.

The contractor shall be responsible for the watch and ward / guard of the buildings safety, 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.

SAFETY PRECAUTIONS

The contractor(s) shall erect the barricading of required height with Precoated galvanized iron profile sheet/MS sheets with proper structural support for enclosing the full area of constructions as per direction of Engineer-in- charge.

Contractor shall within two weeks of award of work, submit to the Engineer-in- Charge for his approval, list of measures for maintaining safety of manpower deployed for construction

Entry to the site shall be controlled for proper security of man and materials and to avoid accidents.

Necessary personal protective and safety equipment's such as helmet, safety shoes & harness, gloves etc. shall be provided to the all-site Engineers, Supervisory staff, labour and technical staff of the contractor by the Contractor at his own cost and to be used at site

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

In case of any accident of labours/ contractual staff's the entire responsibility will rest on the part of the contractor and any compensation under such circumstances if becomes payable the same shall be entirely borne by the contractor and department shall have no role on this account.

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

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

The contractor shall have to work in pandemic / epidemic conditions such as COVID 19 for which he has to make safety arrangement / measures for the workers / staff and for the premises meant for them, as

per guidelines issued by Government and directions issued by Engineer-in-charge from time to time and nothing extra shall be paid on this account.

QUALITY ASSURANCE

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 Engineer-in-charge & contractor shall be bound to replace / remove such sub-standard / defective work immediately. If any material, even though approved by Engineer-In-Charge is found defective or not conforming to specifications shall be replaced / removed by the contractor at his own risk & cost. All materials and fittings brought by the contractor to the site for use shall conform to the samples approved by the Engineer-in-charge which shall be preserved till the completion of the work. If a particular brand of material is specified in the

particular specification, the same shall be used after getting the same approved from Engineer- In-Charge. Wherever brand / quality of material are not specified in the particular specifications; the contractor shall submit the sample as per list of preferred make given in tender documents. For all other items, materials and fittings of ISI Marked shall be used with the approval of Engineer-In-Charge. Wherever ISI Marked material / fittings are not available, the contractor shall submit samples of materials / fittings manufactured by firms of repute conforming to relevant specifications or IS codes and use the same only after getting the approval of Engineer-In-Charge.

The Contractor shall procure and provide all the materials from the manufacturers / suppliers as per the item description in schedule of quantity and particular specifications for the work. The equivalent brand other than brand / make mentioned in particular specification for any item, shall be permitted to be used in the work, only when the specified make is not available. This is, however, subject to documentary evidence produced by the contractor for non-availability of the brand specified and also subject to independent verification by the Engineer-in-Charge. In exceptional cases, where such approval is required, the decision of Engineer-in- Charge as regards equivalent make of the material shall be final and binding on the Contractor. No claim, whatsoever, of any kind shall be entertained from the Contractor on this account. Nothing extra shall be payable on this account. Also, the material shall be procured only after written approval of the Engineer-in-Charge.

Water tanks, taps, sanitary, water supply and drainage pipes, fittings and accessories should conform to byelaws and municipal body / corporation where CPWD Specifications are not available. The contractor should engage licensed plumbers for the work and get the materials (fixtures/fittings) tested by the Municipal Body/Corporation authorities wherever required at his own cost. Nothing extra shall be paid on this account.

The tests, as necessary, shall be conducted in the laboratory approved by the Engineer-in-Charge. The samples shall be taken for carrying out all or any of the tests stipulated in the particular specifications and as directed by the Engineer-in- Charge or his authorized representative.

All the registers of tests (carried out at Construction Site or in outside laboratories) and all material at site (MAS) registers including cement register shall be maintained by the contractor which shall be issued to the contractor by Engineer-in- charge. All the entries in the registers will be made by the designated Engineering Staff of the contractor and same should be regularly reviewed by JE/AE/AEE/EE. Contractor shall be responsible for safe custody of all the registers.

The Contractor shall at his own risk and cost make all arrangements and shall provide all such facilities including material and labour, the Engineer-in-Charge may require for collecting, preparing, forwarding the required number of samples for testing as per the frequency of test stipulated in the contract specifications or as considered necessary by the Engineer-in-Charge, at such time and to such places, as directed by the Engineer-in-Charge. Nothing extra shall be payable for the above.

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 result of such tests

and consequences thereon shall be binding on the Contractor. The Contractor or his authorized representative shall remain in contact with the Engineer-in-Charge or his authorized representative associated for all such operations. No claim of payment or claim of any other kind, whatsoever, shall be entertained from the Contractor.

Unless specified otherwise, all the testing charges shall be borne by contractor.

All the hidden items such as water supply lines, drainage pipes, electrical conduits, sewers etc. are to be properly tested as per the design conditions before covering.

The contractor shall give performance test of the entire installation(s) as per the standing specifications before the work is finally accepted and nothing extra whatsoever shall be payable to the contractor for the test.

The Contractor shall make available, on request from the Department, the copies of challan, cash memos, receipts and other certificates, if any, vouchers towards the quantity and quality of various materials procured for the work. The Contractor shall also provide information and necessary documentation on the name of the manufacturer, manufacturer's product identification, manufacturer's instructions, warning, date of manufacturing and test certificates (from manufacturers for the product for each consignment delivered at site), shelf life, if any etc., for the department to ensure that the material have been procured from the approved source and is of the approved quality, as directed by the Engineer-in-Charge. Wherever specified, day-to-day account of receipt of such material shall be maintained at site of work

If the Contractor does not provide adequate supporting staff or labour or both for carrying out field tests or collecting and forwarding samples to outside laboratory or for maintaining test records, Engineer in charge may carry out field tests or collect and forward sample to outside laboratory or appoint any person to maintain the registers at risk and cost of Contractor. The charges so incurred shall be entirely borne by contractor and shall be deducted from Running or final bill of contractor. Further, recovery of Rs. 1000/- for each default shall be levied to contractor..

CLEANLINESS OF SITE

The Contractor shall not stack building material / malba / muck on the land or road of the local development authority or on the land owned by the others, as the case may be. So, the muck, rubbish etc. shall be removed periodically, from the site of work to the approved dumping grounds as per the local byelaws and regulations of the concerned authorities and all necessary permissions in this regard from the local bodies shall be obtained by the Contractor. Nothing extra shall be payable on this account. In case, the Contractor is found stacking the building material / malba as stated above, the Contractor shall be liable to pay the stacking charges / penalty as may be levied by the local body or any other authority and also to face penal action as per the rules, regulations and bye-laws of such body or authority. The Engineer –in-Charge shall be at liberty to recover, such sums due but not paid to the concerned authorities on the above counts, from any sums due to the Contractor including amount of the Security Deposit and performance guarantee in respect of this contract agreement.

The contractor shall take instructions from the Engineer-In-Charge regarding collection and stacking of materials at any place. No excavated earth or building rubbish shall be stacked on areas where other buildings, roads, services and compound walls are to be constructed
The site of work shall be always kept clean due to constraints of space and to avoid any nuisance to the users of buildings in the adjacent plots. The Contractor shall take all care to prevent any water- logging at site. The wastewater, slush etc. shall not be allowed to be collected at site. For discharge into public drainage system, necessary permission shall be obtained from relevant authorities after paying the necessary charges, if any, directly to the authorities. The work shall be carried out insuch a way that the

area is kept clean and tidy. All the fees/charges in this regard shall be borne by the Contractor. Nothing extra shall be payable on this account

It is the responsibility of contractor to keep building neat and clean. The contractor shall spray the chemicals fumigate site area to check the mosquitoes at frequent interval or as directed by the Engineer in charge. The contractor shall also make lighting and temporary ventilation arrangement in basement.

The contractor shall not wash the drum of TM (transit mixture) at site and shall avoid the spread of leachate / cement slurry to be spread at the site of work and all care shall be taken to keep the site neat and clean at his own cost

Employ measures to segregate the waste on-site into inert, chemical or hazardous wastes. Recycle the unused chemical/hazardous wastes such as oil, paint, batteries and asbestos. The inert waste is to be disposed off to Municipal Corporation/local bodies dump yard and landfill sites

The contractor shall provide potable water for all workers. The contractor shall provide the minimum level of sanitation and safety facilities for the workers at site. The contractor shall ensure cleanliness of workplace with regard to the disposal of waste and effluent; provide clean drinking water and latrines and urinals as per applicable standard.

Special condition for Cement

Agency shall procure OPC conforming to IS : 8112 / PPC conforming to IS : 1489 (Part 1) as required in the work from cement manufacturers mentioned in the list of Preferred makes for civil works.

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.

The cement shall be brought at site in bulk supply of approximately 10 tonnes or as decided by the Engineer-in-Charge

The cement godown of the capacity to store a minimum of 200 bags of cement shall be constructed by the contractor at site of work for which no extra payment shall be made.

Double lock provision shall be made to the door of the cement godown. The keys of one lock shall remain with the Engineer-in-charge or his authorized representative and the key of the other lock shall remain with the contractor. The contractor shall be responsible for the watch and ward and safety of the cement godown. The contractor shall facilitate the inspection of the cement godown by the Engineer-in-Charge at any time.

The cement shall be got tested by the Engineer-in-Charge and shall be used on the 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 test laboratories

The actual issue and consumption of cement on work shall be regulated and proper accounts maintained. The theoretical consumption of cement shall be worked out as per procedure prescribed in clause 38 of the contract and shall be governed by conditions laid therein. In case the cement consumption is less than theoretical consumption including permissible variation, recovery at the rate so prescribed shall be made after ensuring structural soundness and stability on the basis of testing. In case of excess consumption, no adjustment need to made

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

The damaged cement shall be removed from the site immediately by the contractor on receipt of a notice in writing from the Engineer-in-Charge. If he does not do show within three days of receipt of such notice, the Engineer-in-Charge shall get it removed at the cost of the contractor

Separate cement registers showing the receipt of the OPC and PPC shall be maintained at site. The contractor shall construct separate godowns for storage of OPC & PPC at site and nothing extra on this account shall be payable

. Special condition for Cement:

- i) Unless otherwise specified in this document, PPC cement shall be used except for RCC work and Design Mix concrete. However, use of PPC cement for RCC work and design mix concrete may be allowed in case the concrete is produce in batch mix plant installed at site with no cost adjustment in the contract amount. Agency shall procure OPC conforming to IS: 8112 / PPC conforming to IS : 1489 (Part 1) as required in the work from cement manufacturers mentioned in the list of Preferred makes for civil works or from any other reputed cement manufacturer having a production capacity not less than 1 million tons per annum as approved by competent authority of CCU. Uses of GGBS /Fly ash with OPC is permitted as per norms.
- ii)The supply of cement shall be taken 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 relevant BIS codes. In case the test results indicate that the cement arranged by the Contractor does not conform to the relevant BIS codes, the same shall stand rejected, and it shall be removed from the site by the Contractor at his own cost within a weeks time of written order from the Engineer- in-charge to do so. Supply of cement shall be taken in 50-kg bags bearing manufacturer' s name, or his registered trademarks if any and grade and type of cement as well as ISI marking.
- iii) The cement shall be brought at site in bulk supply of approximately 40 tons or as decided by the Engineer-in-charge on the basis of requirement of work in progress. The cement godown of Minimum 2000 bags capacity to store the cement shall be constructed by the Contractor at site of work for which no extra payment shall be made.
- iv) Double lock provision shall be made to the door of the cement godown. The keys of one lock shall remain with the engineer-in-charge or his authorised representative and the keys of other lock shall remain with the contractor. The contractor shall be responsible for the watch and ward and safety of cement godown. The contractor shall facilitate the inspection of cement godown by the Engineer-incharge at any time.
- v)The cement shall be got tested by the Engineer-in-charge and shall be used on the work only after satisfactory test results have been received.
- vi) The actual issue and consumption of cement on work shall be regulated and proper accounts shall be maintained. The theoretical consumption of cement shall be worked out. In case the cement consumption is less than theoretical consumption including permissible variation, recovery at the rate so prescribed shall be made. In case of excess consumption, no cost adjustment shall be made.
- vii) The cement brought to the site and the cement remaining unused after completion of the work shall not be removed from site without the written permission of the Engineer-in-charge.
- viii) The damaged cement shall be removed from the site immediately by the Contractor on receipt of a notice in writing from the 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.

Special Conditions for Steel Reinforcement

- i)The Contractor shall/procure ISI marked TMT bars of various grades from the Steel Manufacturers mentioned in preferred make list for civil works or their authorized dealers/ authorized distributors/channel partners.
- ii)Samples shall also be taken and got tested by the Engineer-in-Charge as per the provisions in this regard in relevant BIS codes. In case the test results indicate that the reinforcement steel arranged by the contractor does not conform to the specifications, 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 or written orders from the Engineer-in-Charge to do so.
- iii) The steel reinforcement bars shall be brought to the site in bulk supply of 25 tonnes or more, or as decided by the Engineer-in-charge.

iv) The steel reinforcement bars shall be stored by the contractor at site of work in such a way as to prevent their distortion and 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.

v) 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, and at frequency not less than that specified below:

Size of bar	For consignment below 100ton	For consignment above 100ton
Under 10 mm dia bars	One sample for each 25 tonnes or part there of	One sample for each 40 tonnes or part there of
10 mm to 16mm dia bars	One sample for each 35 tonnes or part there of	One sample for each 45 tonnes or part there of
Over 16mm dia bars	One sample for each 45 tonnes or part there of	One sample for each 50 tonnes or part there of

vi) The contractor shall supply free of charge the steel required for testing including its transportation to testing laboratories.

vii) The actual issue and consumption of steel on work shall be regulated and proper accounts maintained. The theoretical consumption of steel shall be worked out. 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 needs to be made.

viii) The Steel brought to site and remaining unused shall not be removed from site without the written permission of Engineer-in-Charge.

ix) The standard sectional weights referred to shall be as given in Table 5.4 in para 5.3.4 in CPWD Specification 2019 Vol.-I and will be considered for conversion of length of various sizes of TMT Bars in to standard weight. Record of actual sectional weights shall also be kept diameter and 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. If the derived weight is less than the standard weight, then the Derived Actual Weight shall be accepted if it is within the following tolerances specified in IS:1786-2008, otherwise whole lot will be rejected. However, deductions shall be made for the difference in derived actual weight and standard weight at the rate determined by engineer-in-charge. If the derived actual weight is found more than the standard weight, then nothing shall be paid extra for the difference in derived actual weight and standard weight.

x) The contractor shall submit original vouchers from the manufacturer for the total quantity of steel supplied under each consignment to be used in the work. All consignment received at the work site shall be inspected by the Site staff along with the relevant documents before acceptance. The contractor shall obtain Original Vouchers and copy of Test Certificates and furnish the same to the Engineer-in-Charge in respect of all the lots of steel brought by him from approved supplier to the site of work. The original vouchers and copy of test certificates shall be defaced by the Site staff and kept on record in the site office.

xi) The reinforcement steel brought to site of work shall be stored on brick / timber platform of 30/40-cm height, nothing extra shall be paid on this account.

Special condition for Cement:

- i) Unless otherwise specified in this document, PPC cement shall be used except for RCC work and Design Mix concrete. However, use of PPC cement for RCC work and design mix concrete may be allowed in case the concrete is produce in batch mix plant installed at site with no cost adjustment in the contract amount. Agency shall procure OPC conforming to IS: 8112 / PPC conforming to IS : 1489 (Part 1) as required in the work from cement manufacturers mentioned in the list of Preferred makes for civil works or from any other reputed cement manufacturer having a production capacity not less than 1 million tons per annum as approved by competent authority of CCU. Uses of GGBS /Fly ash with OPC is permitted as per norms.
- ii)The supply of cement shall be taken 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 relevant BIS codes. In case the test results indicate that the cement arranged by the Contractor does not conform to the relevant BIS codes, the same shall stand rejected, and it shall be removed from the site by the Contractor at his own cost within a weeks time of written order from the Engineer- in-charge to do so. Supply of cement shall be taken in 50-kg bags bearing manufacturer' s name, or his registered trademarks if any and grade and type of cement as well as ISI marking.
- iii) The cement shall be brought at site in bulk supply of approximately 40 tons or as decided by the Engineer-in-charge on the basis of requirement of work in progress. The cement godown of Minimum 2000 bags capacity to store the cement shall be constructed by the Contractor at site of work for which no extra payment shall be made.
- iv) Double lock provision shall be made to the door of the cement godown. The keys of one lock shall remain with the engineer-in-charge or his authorised representative and the keys of other lock shall remain with the contractor. The contractor shall be responsible for the watch and ward and safety of cement godown. The contractor shall facilitate the inspection of cement godown by the Engineer-incharge at any time.
- v)The cement shall be got tested by the Engineer-in-charge and shall be used on the work only after satisfactory test results have been received.
- vi) The actual issue and consumption of cement on work shall be regulated and proper accounts shall be maintained. The theoretical consumption of cement shall be worked out. In case the cement consumption is less than theoretical consumption including permissible variation, recovery at the rate so prescribed shall be made. In case of excess consumption, no cost adjustment shall be made.
- vii) The cement brought to the site and the cement remaining unused after completion of the work shall not be removed from site without the written permission of the Engineer-in-charge.
- viii) The damaged cement shall be removed from the site immediately by the Contractor on receipt of a notice in writing from the 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.

Special Conditions for Steel Reinforcement

- i)The Contractor shall/procure ISI marked TMT bars of various grades from the Steel Manufacturers mentioned in preferred make list for civil works or their authorized dealers/ authorized distributors/channel partners.
- ii)Samples shall also be taken and got tested by the Engineer-in-Charge as per the provisions in this regard in relevant BIS codes. In case the test results indicate that the reinforcement steel arranged by the contractor does not conform to the specifications, 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 or written orders from the Engineer-in-Charge to do so.
- iii) The steel reinforcement bars shall be brought to the site in bulk supply of 25 tonnes or more, or as decided by the Engineer-in-charge.

iv) The steel reinforcement bars shall be stored by the contractor at site of work in such a way as to prevent their distortion and 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.

v) 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, and at frequency not less than that specified below:

Size of bar	For consignment below 100ton	For consignment above 100ton
Under 10 mm dia bars	One sample for each 25 tonnes or part there of	One sample for each 40 tonnes or part there of
10 mm to 16mm dia bars	One sample for each 35 tonnes or part there of	One sample for each 45 tonnes or part there of
Over 16mm dia bars	One sample for each 45 tonnes or part there of	One sample for each 50 tonnes or part there of

vi) The contractor shall supply free of charge the steel required for testing including its transportation to testing laboratories.

vii) The actual issue and consumption of steel on work shall be regulated and proper accounts maintained. The theoretical consumption of steel shall be worked out. 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 needs to be made.

viii) The Steel brought to site and remaining unused shall not be removed from site without the written permission of Engineer-in-Charge.

ix) The standard sectional weights referred to shall be as given in Table 5.4 in para 5.3.4 in CPWD Specification 2019 Vol.-I and will be considered for conversion of length of various sizes of TMT Bars in to standard weight. Record of actual sectional weights shall also be kept diameter and 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. If the derived weight is less than the standard weight, then the Derived Actual Weight shall be accepted if it is within the following tolerances specified in IS:1786-2008, otherwise whole lot will be rejected. However, deductions shall be made for the difference in derived actual weight and standard weight at the rate determined by engineer-in-charge. If the derived actual weight is found more than the standard weight, then nothing shall be paid extra for the difference in derived actual weight and standard weight.

x) The contractor shall submit original vouchers from the manufacturer for the total quantity of steel supplied under each consignment to be used in the work. All consignment received at the work site shall be inspected by the Site staff along with the relevant documents before acceptance. The contractor shall obtain Original Vouchers and copy of Test Certificates and furnish the same to the Engineer-in-Charge in respect of all the lots of steel brought by him from approved supplier to the site of work. The original vouchers and copy of test certificates shall be defaced by the Site staff and kept on record in the site office.

xi) The reinforcement steel brought to site of work shall be stored on brick / timber platform of 30/40-cm height, nothing extra shall be paid on this account.

LIST OF PREFERRED MAKE / MANUFACTURERS FOR DIFFERENT MATERIALS TO BE USED IN THIS PROJECT FOR CIVIL WORKS

Acceptable makes of materials to be used in the work are enclosed. In case of non-availability of these makes, the Superintending Engineer, CCU may allow use of alternative makes on the recommendations of Engineer-in-charge. Only BIS marked materials in the list shall be used in the work. Non-BIS marked materials may be permitted by the Engineer-in-charge only when BIS marked materials are not manufactured. If approved make/brand of any material is not given in the list, the same will be approved by the Superintending Engineer, CCU on the recommendations of Engineer-in-charge

SL. NO.	DETAILS OF MATERIALS	MANUFACTURERS NAME
1	ANTI TERMITE PESTICIDES	BAYER, FMC INDIA, HINDUSTAN INSECTICIDES
2	STEEL (TMT FE-500D)	TATA TISCON, RINL, JINDAL STEEL & POWER LTD, JSW STEEL LTD. AND SAIL
3	STRUCTURAL STEEL SECTIONS	TATA, JINDAL, SAIL, RINL
4	CEMENT [OPC AND (P.P.C.) 43 GRADE]	ACC, AMBUJA, ULTRATECH, WONDER, JK, SHREE
5	PRECAST DUCTS/DRAINS/ DRAIN COVER/KERB CHANNEL	KK, NITCO, KERAKROME, TERRAFIRMA, FUJISILVERTECH
6	WHITE CEMENT	BIRLA WHITE, J.K. WHITE, ULTRATECH
7	CC PAVERS	NITCO, UNISTONE, KK
8	VITRIFIED TILES (DOUBLE CHARGED / FULL BODY/ULTRA SLIM /ANTISKID / ACID-ALKALI RESISTANT)- (ALL TILES SHALL BE PROCURED FROM FULLY OWNED FACTORY OF THE MANUFACTURER AND NOT FROM JV / OUTSOURCED)	SOMANY, KAJARIA, RAK
9	CERAMIC GLAZED TILES	SOMANY, KAJARIA, RAK
10	WATER-PROOF CEMENT PAINT	SNOWCEM, ASIAN PAINT, SIKA, NEROLAC
11	SYNTHETIC ENAMEL PAINT	ASIAN PAINT, AKZONOBEL (DULUX), NEROLAC, ICI
12	PLASTIC EMULSION PAINT	ASIAN PAINT, NEROLAC, AKZONOBEL (DULUX), ICI
13	DISTEMPER/ACRYLIC EMULSION PAINT	ASIAN PAINT, BERGER, NEROLAC, DULUX
14	TEXTURED PAINT	ASIAN, OIKAS, DULUX
15	STEEL PRIMER	NEROLAC, BERGER, ASIAN PAINTS
16	WOOD PRIMER	NEROLAC, BERGER, ASIAN PAINTS
17	EXTERIOR WATERPROOFING PAINT	RAINCOAT (DR. FIXIT), ASIAN, BERGER
18	WOOD FINISH (MELAMINE & PU POLISH)	ASIAN. ICI, JOTUN, NEROLAC

S. NO.	DETAILS OF MATERIALS	MANUFACTURERS NAME
19	LAMINATE	MERINO, GREENLAM, CENTURY, DURO
20	PLY BOARD, PLYWOOD (PINE BOARD)	GREEN, MERINO, CENTURY, DURO
21	SELF LEVELLING COMPOUND	MAPAI, ARDEX ENDURA, BIZZAR
22	EPDM GASKET	HANU, ANAND, VICTOR
23	WOOD ADHESIVE	FEVICOL, 3M, ARALEDITE, SIKA
24	FLUSH DOOR (ALL FLUSH DOORS SHALL BE PROCURED FROM FULLY OWNED FACTORY OF THE MANUFACTURER AND NOT FROM JV / OUTSOURCED)	GREEN, MERINO, CENTURY, DURO
25	WATER REPELLENT PAINT	ARDEX ADURA, WEBER, PIDILITE
26	FIRE SEALANT	HILTI, 3M, MCCOY
27	TILE ADHESIVE	PIDILITE, ARDEX ENDURA, WEBER, MAPEI
28	STONE ADHESIVE	PIDILITE, ARDEX ENDURA, WEBER
29	DASH, ANCHORING FASTENERS	HILTI, FISCHER, CANON
30	ALUMINIUM COMPOSITE PANEL	ALUCOBOND, REYNOBOND, ALPOLIC
31	EPOXY GROUTING COMPOUND	PIDILITE, ARDEX ENDURA, WEBER, MAPEI
32	READY MIX GYPSUM PLASTER	SAINT GOBAIN, USG BORAL, ULTRATECH
33	READY MIX CEMENT PLASTER	WEBER, ULTRATECH, BIRLA WHILTE
34	SILICON SEALANT	GE, DOW CORNING, PIDILITE
35	GYPSUM BOARD	USG BORAL, LAFAGE, SAINT GOBAIN, KNAUF DANOLINE
36	FLOAT GLASS	ASAHI, MODI GLASS, SAINT GOBAIN GLASS
37	MECHANICAL COUPERS	USHA MARTIN, DEXTRA, HALFEN
38	CRYSTALLIANE CEMENTITIOUS WATERPROOFING COMPOUND	XYPEX CONSTRUCTION CHEMICAL, KRYTONE, PENETRON
39	WATERPROOFING MEMBRANE (SBS/HDPE/POLYUREA/CEMENTITIOUS ETC.)	SIKA, GRACE, SOPREMA
40	WATERPROOFING CUM PU FOAM INSULATION	SIKA, GRACE, SOPREMA
41	VERMICULLITE TREATMENT	NEWKEM, GRACE, SOPREMA
42	HOLLOW METAL PRESSED DOORS (METAL DOORS)	NAVAIR, TATA PRAVESH, SHAKTI HORMANN

S. NO.	DETAILS OF MATERIALS	MANUFACTURERS NAME
43	ROLLER BLIND	VISTA, MAC, HUNTER DOUGLUS
44	PRELAMINATED PARTICLE BOARD	MERINO, CENTURY PLY, GREENLAM
45	HYDRAULIC DOOR CLOSER, FLOOR SPRING, DOOR AUTOMATION	DORMA, GEZE, HAFELE, HORMANN
46	HARDWARES FOR FIRE RATED DOORS	HAFELE, DORMA, GEZE, HORMANN
47	HARDWARE FOR FURNITURE ITEMS	HETTICH, EBCO, HAFELE
48	STAINLESS STEEL FITTINGS/HARDWARE FOR WOODEN/METAL/GLAZED/STEEL DOOR & WINDOWS	HAFELE, DORMA, GEZE, HORMANN
49	WIRE MESH	STERLING ENTERPRISES, MICROMESH, HARVER STANDARD, INDIA WIRE MESH
50	ADHESIVE TAPE	3M, NORTON, BOPD, TESA
51	HIGH PERFORMANCE EPOXY BASED RESIN ANCHOR SYSTEM	FOSROC, CICO, SIKA
52	EPOXY MORTAR	FOSROC, SIKA, MYK LATICRETE, CICO
53	NUTS, BOLTS & SCREWS	GKW, KUNDAN, PRIYA, ATUL
54	ALUMINIUM SECTIONS FOR DOORS & WINDOWS ETC.	JINDAL, HINDALCO, BHORUKA
55	HARDWARE FITTINGS FOR ALUMINIUM WINDOWS & DOORS	GEZE, HAFELE, DORMA
56	MS SECTIONS (PIPES, BOXES CHANNELS)	JINDAL HISAR, TATA, SURYA
57	S.S. MATERIAL/HADRAILS/RAILINGS	JINDAL STAINLESS STEEL LTD., TATA STEEL, SAIL
58	WALL PUTTY	JK, BIRLA, ASAIN PAINT
59	FLOOR HARDENER	PIDILITE, FOSROC, SIKA, CICO
60	POLYSULPHIDE SEALANT	PIDILITE, ARDEX ENDURA, WEBER, BASF.
61	EXPANSION JOINT	MIGUA, CS, CAMEO
62	WATERPROOFING COMPOUND	FOSROC, SIKA, PIDILITE
63	ADMIXTURES/CURING COUMPOUND	FOSROC, SIKA, ATPL, KUNALCOM CHEM, ASIAN PAINT, PIDILITE
64	REFLECTIVE GLASS, TINTED GLASS, HIGH PERFORMANCE GLASS, LACQUERED GLASS	SAINT GOBAIN, ASAHI (INDIA), PILKINGTON
65	LOOKING GLASS / MIRROR	ATUL, MODI GUARD, GOLDEN FISH
66	HIGH PERFORMANCE GLASS	SAINT GOBAIN, ASAHI, PILKINGTON

S. NO.	DETAILS OF MATERIALS	MANUFACTURERS NAME
67	METAL/ALUMINUM FALSE CEILING	SAINT GOBAIN, HUNTER DOUGLUS, ARMSTRONG
68	AAC BLOCK	AEROCON, JINDAL BLOCK, MODCRETE, FINECRETE
69	AAC BLOCK ADHESIVE	ARDEX ENDURA, PIDILITE, WEBER
70	HIGH PRESSURE LAMINATE INTERIOR/EXTERIOR GRADE	MERINO, FUNDERMAX, GREENLAM
71	UPVC WINDOWS	FENESTA, ALUPLAST, KOENMERLING
72	WALL GUARD, HAND RAIL, CORNERGUARD	CONSTRUCTION SPECIALITIES / GRADUS INPROCORP INDIA PVT. LTD./WINDOWTECH
73	SOLID ACRYLIC SURFACE	MERINO, LG, GRANIMUM, SAMSUNG-STARON
74	VINYL / CONDUCTIVE FLOORING, DADO SKIRTING	FORBO, TARAKETT, ARMSTRONG, GERFLOOR
75	CALCIUM SILICATE TILES FALSE CEILING	AEROLITE, RAMCO, HILUX
76	FIRE CHECK DOORS (METAL/ROLLING/GLAZED)	NAVAIR, TATA PRAVESH, SHAKTI HORMANN
77	FIRE CURTAIN	ORIENT, PACIFIC, KENT, NECO
78	LEAD LINED DOOR	NAVAIR, SHAKTI HORMANN, METAFLEX, RESPONSIVE
79	FIRE RESISTANT GLASS	SAINT GOBAIN, ASAHI, PILKINGTON
80	ALUMINIUM GLAZED DOORS/WINDOWS	HINDALCO, SHAKTI HORMANN, GLAZE TECHNO, SARLA
81	POLYESTER POWDER COATING/ PVDF COATING	JOTUN, AKZONOBEL, ASIAN PPG, NIPPON
82	GLASS PROCESSOR FOR MAKING DGU/TOUGHENING	AIS, ART N GLASS, GSC, KAENAL GLASS, SAINT GOBAIN
83	PVB/ SGP LAMINATE FILM, SENTRY FILM	DUPONT, SAFLEX, EASTMAN, LG, 3M
84	ACOUSTIC SEAL / DOOR SEAL	LORIENT, RAVEN, DORMA, 3M, HAFELE
85	PAINT AND PRIMER FOR FIRE CHECKDOOR.	VIPER, BERGER, NULLIFIRE
86	INTUMESCENT FIRE / SMOKESEAL	ASTRO FLAME, RAVEN, SEALZ, LORIENT
87	CALCIUM SILICATE BOARD FOR FIRE DOOR	PROMOTECH, PROMINA, RAMCO
88	FRP DOOR & FRAMES	FIBREWAYS, JAISHREE, FIBRE TECHNO, BHATT FRP, JAYNA
89	FLY ASH BRICKS	POWERBRICKS, PAUBHARA, YBW

S. NO.	DETAILS OF MATERIALS	MANUFACTURERS NAME
90	INSULATION	UP TWIGA, LLOYD, ROXUL ROCKWOOL, ROCKWOOLINDIA
91	ANTI BACTERIAL PAINT	JOTUN/LIQUIDE PLASTIC /CONSTRUCTION SPECIALITY
92	GRAPHIC FILM	3M, AVERY DENNISON
93	GRC/ FRP	BIRLA WHITE, UNISTONE, SANDERSON, SHENISHA CORPORATION
94	PLASTER OF PARIS	JK, BIRLA, SAKARNI, ULTRATECH
95	MR BOARD	SAINT GOBAIN, USG BORAL, ARMSTRONG
96	MINERAL FIBRE SUSPENDED CEILING SYSTEM	SAINT GOBAIN, USG BORAL, ARMSTRONG, KNAUF AMF
97	CURTAIN TRACK AND CURTAIN FABRIC	WINDOWTECH, DECOREX, MEDFRESHE, RESPONSIVE
98	POLYMER MODIFIED ADHESIVE	ULTRATECH, BALL ENDURA, PIDILITE, WEVER
99	ANTI BACTERIAL AND ANTI SKID VITRIFIED TILES	SOMANY, SIMPOLO, KAJARIA, JOHNSON, RAK
100	POLYCARBONATE SHEET	DANPALON, SOLALITE, DPI SYSTEM, EVERLITE, CPI
101	GI PIPES	JINDAL, PRAKASH SURYA
102	GI FITTINGS	UNIK, KS, ICS
103	CPVC PIPES	ASTRAL, PRINCE, SFMC
104	HDPE PIPES	SUPREME, FINOLEX, ASTRAL, RELIANCE, SMARTFLOW
105	CC (SPUN) IRON PIPE	NECO, SKF, HIF
106	CCI SOIL, WASTE, VENT PIPES & FITTINGS	NECO, SKF, HIF
107	C.P. BRASS FITTING	JAQUAR, ROCA, KOHLER
108	SS SINK	NILKANTH, NIRALI, JAYNA
109	C.P. BRASS BATHROOM ACCESSORIES / FITTINGS	JAQUAR, ROCA, KOHLER
110	GLASS SHOWER PARTITION	DORMA, HAFELE, GEZE
111	SANITARY WARE (URINAL, WASH BASIN, WC ETC.)	JAQUAR, GROHE, KOHLER
112	GLASS MOSAIC TILE	ITALIA, CORAL, KAJARIA
113	LIQUID SOAP DISPENSER	EURONICS, TOSHI, UTEC, DOLPHY

114	HAND DRIER	EURONICS, TOSHI, UTEC, DOLPHY
115	AROMA DISPENSER	EURONICS, TOSHI, UTEC, DOLPHY

S. NO.	DETAILS OF MATERIALS	MANUFACTURERS NAME
116	SHOE SHINNING MACHINE	EURONICS, TOSHI, UTEC, DOLPHY
117	TISSUE DISPENSER WITH TRASH	EURONICS, TOSHI, UTEC, DOLPHY
118	HAND TOWEL DISPENSER	EURONICS, TOSHI, UTEC, DOLPHY
119	NITRILE RUBBER INSULATION	ARMACELL, K-FLEX, A-FLEX, SUPREME
120	FAÇADE AND WINDOW SYSTEM	SCHUCO, ALUK, REYNAERS, GUTMANN
121	FIRE STOP IN CURTAIN WALL SYSTEM	HILTI, 3M, FISCHER, LORIENT
122	POP OUT VENT FOR FAÇADE AND SYSTEM WINDOW HARDWARE	COTSWOLD, SCHUCO, ALUK, REYNAERS
123	ALUMINIUM OPERABLE LOUVER	TECHNAL, DOMAL, YOGI GLAZE, SCHUCO
124	AIR TRANSFER GRILL	RUSKIN, SYSTEM AIR, TROX, TREMCO
125	POLYURETHANE CONCRETE FLOORING, EPOXY FLOORING, SELF-LEVELLING FLOORING	ARDEX ENDURA, SIKA, MAPEI, SAINTGOBAIN - WEBER
126	ENGINEERED WOODEN FLOORING AND SKIRTING	MIKASA (GREENLAM), TARKETT, HAVWOODS, PARADOR (HIL), PERGO, KAHRS
127	RAISED/ FALSE ACCESS FLOORINGSYSTEM	LINDNER, UNIFLOOR, TANKARIA, FLEXI FLOOR
128	SOLID SURFACE (CORIAN)	DUPONT, LG, STARON-SAMSUNG, LUXOR (DURLAX)
129	CAR DECK FLOORING SYSTEM	MAPEI, SAINT GOBAIN – WEBER, MYK ARMENT
130	ENGINEERED MARBLE	HR JOHNSON, KALINGA STONE, NITCO, QUASTONE
131	RUBBERISED PAVERS	SUNFLEX, FLOOR GUARD, BORON RUBBERS
132	COLOUR HARDENER	SIKA, FOSROC, PIDILITE
133	IPE WOOD	HKS FLOORING, INDIANA, RESHAWOOD
134	SYNTHETIC THATCH ROOFING	PALMEX, WINROYAL, SYNTHETIC THATCH

135	ASPHALT CEMENT SHINGLES	TAPCO, CERTAINTEED, MALARKEY
S. NO.	DETAILS OF MATERIALS	MANUFACTURERS NAME
136	STRETCH MEMBRANE / TENSILE FABRIC	SERGE FERRARI, CHUKOH, MEHLER, VERSAIDAG
137	STAMP CONCRETE PIGMENT / APPLICATOR	UNITED FLOORING, CONCRETE BY DESIGN, FLEX STONE
138	SS TACTILE	EMINENT, FERROTECH, SUNDARAM, JINDAL
139	BAMBOO DECKING, ROOFING & CLADDING	ECO GREEN FLOORING, EPITOME BAMBOOWOOD, LAMIWOOD
140	OUTDOOR SIGNAGES	3M, AVERY DENNISON, VEDAAANSHI SIGNS
141	ACOUSTIC PANELS	ARMSTRONG, USG BORAL, ANUTONE, ROCKWORTH,
142	C&D WASTE PRECAST ELEMENT	GM CONCRETE, ILFS
143	THERMOPLASTIC PAINT/ROAD MARKING PAINT	NEROLAC, ASIAN, SHALIMAR, BERGER, STP LTD
144	WEATHER/STRUCTURE SILICON SEALANT	WACKER, MCCOY, DOW CORNING
145	BACKER ROD	SUPREME/SYSTRANS
146	POLYSTRENE BOARD	SUPREME, DOW CORNING, TEXAS, PIDILITE
147	DUCTILE IRON PIPES	ELECTROSTEEL, KESORAM, TISCO
148	STAINLESS STEEL PIPES AND FITTINGS	VIEGA, JINDAL STAINLESS STEEL, J-PRESS
149	SLUICE VALVES	SANT, ADVANCE, AUDCO, ZOLOTO, KIRLOSKAR, LEADER
150	GATE / BALL VALVES	SANT, LEADER, ZOLOTO
151	ELECTROMAGNETIC FLOWMETER	ENDRESS HAUSER, KROHNE MARSHALL, NEXTENG ENVIRO PVT LTD, SEIMENS, ABB
152	CI/DI MANHOLE COVER	NECO, SKF, RIF, BIC
153	DWC PIPES	NOBLE POLYTEC, ALOM POLY EXTRUSIONS LTD., ASTRAL, ANEKINDUSTRIAL PLASTICS
154	DRAIN CHANNEL WITH SS SLOTTEDGRATING	ACO, KESSEL, PRUTHA
155	WATER BASED MELAMINE POLISH	ASIAN, PIDILITE, DULUX
156	ALL FURNITURE ITEMS	ROCKWORTH / SPACEPLUS DESIGN LABS/DURIAN/GODREJ/ STEELCASE /

		HERMAN MILLER/ HAWORTH
157	CARPET	SUPINOE/ MILLIKAN/ SHAW
158	IRRIGATION FITTINGS, VALVES AND OTHER ACCESSORIES	RAIN BIRD / NETAFIM / BERMAD / HUNTER / TORO
159	IRRIGATION PUMPS	LUBI / RAIN BIRD / GRUNDFOS

SCHEDULE OF QUANTITY (CIVIL)

SCHEDULE OF QUANTITIES

Name of Work:-Construction of open dais, Green room & washrooms at Phool bagan in front of CESC Garden and Repairing ,replacement of 2km barbed wire on the boundary wall of AJCBIBG from Howrah main gate to bakultala gate during the year 2024-25.

SI No	Description of work	Unit	Qty	Rate	Amount
1.1	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, for all lift, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.				
1.1.1	All kinds of soil.	cum	136.38	253.30	34545.00
1.2	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 and for all lift.	cum	110.02	190.70	20981.00
1.3	Supplying and filling in plinth with sand under floors, including watering, ramming, consolidating and dressing complete.	cum	6.64	2066.45	13721.00
2.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :				
2.1.1	1:2:4 (1 cement : 2 coarse sand (zone-III) derived from natural sources : 4 graded stone aggregate 20 mm nominal size derived from natural sources)	cum	3.36	7666.05	25758.00
2.1.2	1:5:10 (1 cement : 5 coarse sand (zone-III) derived from natural sources : 10 graded stone aggregate 40 mm nominal size derived from natural sources)	cum	20.91	6342.80	132628.00

2.2	Providing and laying cement concrete in retaining walls, return walls, walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window sills, fillets, sunken floor etc., up to floor five level, excluding the cost of centering, shuttering and finishing:				
2.2.1	1:1½:3 (1 cement : 1½ coarse sand (zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources).	Cum	4.50	10078.25	45352.00
2.3	Extra for providing and mixing water proofing material in cement concrete work in doses by weight of cement as per manufacturer's specification.	per bag of 50kg cement used	14.84	6.00	89.00
2.4	Making plinth protection 50mm thick of cement concrete 1:3:6 (1 cement : 3 coarse sand (zone-III) derived from natural sources : 6 graded stone aggregate 20 mm nominal size derived from natural sources) over 75mm thick bed of dry brick ballast 40 mm nominal size, well rammed and consolidated and grouted with fine sand, including necessary excavation, levelling & dressing & finishing the top smooth.	Sqm	15.56	729.10	11345.00
3.1	Centering and shuttering including strutting, propping etc. and removal of form for				
3.1.1	Foundations, footings, bases of columns, etc. for mass concrete	sqm	90.49	381.55	34526.00
3.1.2	Suspended floors, roofs, landings, balconies and access platform.	sqm	148.43	902.25	133921.00
3.1.3	Lintels, beams, plinth beams, girders, bressumers and cantilevers	sqm	224.69	716.55	161002.00
3.1.4	Columns, Pillars, Piers, Abutments, Posts and Struts	sqm	117.38	935.40	109797.00
3.1.5	Stairs, (excluding landings) except spiral-staircases	sqm	2.52	744.35	1876.00
3.2	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.				

3.2.1	Thermo-Mechanically Treated bars of grade Fe-500D or more.	kg	4603.60	104.95	483148.00
3.3	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete above plinth level.				
3.3.1	Thermo-Mechanically Treated bars of grade Fe-500D or more.	Kg	1226.55	104.95	128726.00
3.4	Add for plaster drip course/ groove in plastered surface or moulding to R.C.C. projections.	metre	47.60	76.30	3632.00
3.5	Providing and laying in position ready mixed or site batched design mix cement concrete for reinforced cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Portland Pozzolana / Ordinary Portland /Portland Slag cement, admixtures in recommended proportions as per IS: 9103 to accelerate / retard setting of concrete, to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cost of centering, shuttering, finishing and reinforcement as per direction of the engineer-in-charge; for the following grades of concrete. Note: Extra cement up to 10% of the minimum specified cement content in design mix shall be payable separately. In case the cement content in design mix is more than 110% of the specified minimum cement content, the contractor shall have discretion to either re-design the mix or bear the cost of extra cement.				
3.5.1	All works upto plinth level				
3.5.1.1	Concrete of M25 grade with minimum cement content of 330 kg /cum	cum	54.16	9248.45	500896.00
3.5.2	All works above plinth level upto floor V level				
3.5.2.1	Concrete of M25 grade with minimum cement content of 330 kg /cum	Cum	14.43	9594.50	138449.00
3.4	Add for using extra cement in the items of design mix over and above the specified cement content therein.	quintal	22.63	713.75	16156.00
4.1	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth in:				
4.1.1	Cement mortar 1:4 (1 cement : 4 coarse	cum	1.26	6055.35	7630.00

	sand)				
4.1.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	10.15	5851.20	59390.00
4.2	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and sizes in :				
4.2.1	Cement mortar 1:6 (1 cement : 6 coarse sand)	Cum	23.91	7975.80	190701.00
4.3	Half brick masonry with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundations and plinth in :				
4.3.1	Cement mortar 1:3 (1 cement :3 coarse sand)	Sqm	0.30	820.95	246.00
4.4	Half brick masonry with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level.				
4.4.1	Cement mortar 1:3 (1 cement :3 coarse sand)	Sqm	29.06	1033.80	30042.00
5.1	Providing and fixing 1st quality ceramic glazed wall tiles conforming to IS: 15622 (thickness to be specified by the manufacturer), of approved make, in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge, in skirting, risers of steps and dados, over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm, including pointing in white cement mixed with pigment of matching shade complete.	Sqm	21.41	1233.75	26415.00
6.1	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia & length (hold fast lugs or dash fastener shall be paid for separately).				
6.1.1	Sal wood	cum	0.04	113378.60	4535.00
6.2	Extra for providing frosted glass panes 4 mm thick (weight not less than 10 kg per sqm) instead of ordinary float glass panes 4 mm thick (weight not less than 10 kg per sqm) in doors, windows and clerestory window shutters. (Area of opening for glass panes excluding portion inside rebate shall be measured).	Sqm	6.60	171.65	1133.00

6.3	Providing and fixing ISI marked flush door shutters conforming to IS : 2202 (Part I) non-decorative type, core of block board construction with frame of 1st class hard wood and well matched commercial 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters:				
6.3.1	30 mm thick including ISI marked Stainless Steel butt hinges with necessary screws	Sqm	3.69	2113.55	7799.00
6.4	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. including priming coat with approved steel primer all complete.				
6.4.1	Fixed to steel windows by welding	kg	129.60	213.20	27631.00
6.5	Providing 40x5 mm flat iron hold fast 40 cm long including fixing to frame with 10 mm diameter bolts, nuts and wooden plugs and embedding in cement concrete block 30x10x15cm 1:3:6 mix (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size).	Each	12.00	222.70	2672.00
6.6	Providing and fixing ISI marked, IS : 1341, M.S. heavy weight butt hinges with necessary screws etc. complete :				
6.6.1	125x90x4.00 mm	Each	6.00	69.30	416.00
6.7	Providing and fixing aluminium die cast body tubular type universal hydraulic door closer (having brand logo with ISI, IS : 3564, embossed on the body, door weight upto 35 kg and door width upto 700 mm), with necessary accessories and screws etc. complete.	Each	2.00	1094.50	2189.00
6.8	Providing and fixing aluminium sliding door 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 nuts and screws etc. complete :				
6.8.1	300x16 mm	Each	2.00	295.10	590.00
6.9	Providing and fixing aluminium 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 :				
6.9.1	250x10 mm	Each	2.00	112.05	224.00
6.9.2	150x10 mm	Each	8.00	80.35	643.00

6.10	Providing and fixing aluminium 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 :				
6.10.1	125 mm	Each	12.00	64.50	774.00
6.11	Providing and fixing 37 mm thick factory made PVC door shutter, styles and rails made of PVC hollow section of size 100 mm x 37 mm with wall thickness 2 mm (± 0.2 mm), with inbuilt bead on one side, styles and rails mitered cut and joint at the corners by means of 2 nos of plastic brackets of size 75 mm x 220 mm at each corner and stainless steel screws, reinforcing the hinge side of style by inserting PVC profile of size 28 mm x 30 mm, with wall thickness 2 mm (± 0.2 mm). Lockrail of size 100 mm x 37 mm, wall thickness 2 mm (± 0.2 mm) will be fixed to the vertical styles. Providing with PVC snapfit beads and panel of size 100 mm x 20 mm, and inserting 2 nos tie bar of 6 mm dia and fastening with nuts and washers complete, all as per manufacturer's specification and direction of Engineer-in-charge.	Sqm	2.44	3966.15	9677.00
6.12	Providing and Fixing factory made PVC door frame made of PVC extruded sections of size 75 mm x 53 mm, having wall thickness 2.0 mm (± 0.2 mm). Both verticalssides of the frame reinforced with PVC profile of cross section size 28 mm x 30 mm x 2 mm thickness (± 0.2 mm) and 75 mm x 200 mm long, including reinforcing both ends of the top frame with PVC profile. PVC Door Frame and PVC reinforcement profile to be mitred cut, jointed and fusion welded together, including providing and fixing 3 nos of 125 mm long stainless steel hinges to frame, fixing the frame with jamb with required nos & sizes of anchor dash fastener, all complete as per manufacturer's specification and direction of engineer- in-charge.	metre	9.62	743.25	7150.00

7.1	Providing and fixing factory made ISI marked steel glazed doors, windows and ventilators, side /top /centre hung, with beading and all members such as F7D, F4B, K11 B and K12 B etc. complete of standard rolled steel sections, joints mitred and flash butt welded and sash bars tenoned and riveted, including providing and fixing of hinges, pivots, including priming coat of approved steel primer, but excluding the cost of other fittings, complete all as per approved design, (sectional weight of only steel members shall be measured for payment).				
7.1.1	Fixing with 15x3 mm lugs 10 cm long embedded in cement concrete block 15x10x10 cm of C.C. 1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)	Kg	172.80	127.55	22041.00
7.2	Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.				
7.2.1	In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works	kg	100.00	167.95	16795.00
7.3	Providing & fixing glass panes with putty and glazing clips in steel doors, windows, clerestory windows, all complete with :				
7.3.1	4.0 mm thick glass panes	Sqm	6.60	1035.95	6837.00
8.1	Kota stone slab flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab, including rubbing and polishing complete with base of cement mortar 1 : 4 (1 cement : 4 coarse sand) :				
8.1.1	25 mm thick	sqm	119.07	1895.70	225721.00
8.2	Kota stone slabs 20 mm thick in risers of steps, skirting, dado and pillars laid on 12 mm (average) thick cement mortar 1:3 (1 cement: 3 coarse sand) and jointed with grey cement slurry mixed with pigment to match the shade of the slabs, including rubbing and polishing complete.	sqm	8.19	2291.20	18765.00

8.3	Providing and laying rectified Glazed Ceramic floor tiles of size 300x300 mm or more (thickness to be specified by the manufacturer), of 1st quality conforming to IS : 15622, of approved make, in all colours, shades, except White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick Cement Mortar 1:4 (1 Cement : 4 Coarse sand), jointing with grey cement slurry @ 3.3 kg/ sqm including pointing the joints with white cement and matching pigments etc., complete.	sqm	3.81	1400.60	5336.00
8.4	Providing and laying vitrified floor tiles in different sizes (thickness to be specified by the manufacturer) with water absorption less than 0.08% and conforming to IS: 15622, of approved make, in all colours and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand), jointing with grey cement slurry @ 3.3 kg/ sqm including grouting the joints with white cement and matching pigments etc., complete.				
8.4.1	Size of Tile 600x600 mm	sqm	29.82	1511.55	45074.00
8.5	Providing and laying Vitrified tiles in different sizes (thickness to be specified by manufacturer), with water absorption less than 0.08 % and conforming to I.S. 15622, of approved make, in all colours & shade, in skirting, riser of steps, over 12 mm thick bed of cement mortar 1:3 (1 cement: 3 coarse sand), jointing with grey cement slurry @ 3.3 kg/ sqm including grouting the joint with white cement & matching pigments etc. complete.				
8.5.1	Size of Tile 600x600 mm	Sqm	3.47	1579.30	5480.00
9.1	Providing and fixing on wall face unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion, (i) Single socketed pipes.				
9.1.1	75 mm diameter	metre	7.60	242.10	1840.00
9.2	Providing and fixing on wall face unplasticised - PVC moulded fittings/ accessories for unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion.				
9.2.1	Bend 87.5°				

9.2.1.1	75 mm bend	Each	4.00	103.05	412.00
9.2.2	Shoe (Plain)				
9.2.2.1	75 mm Shoe	Each	2.00	90.60	181.00
9.3	Providing and fixing unplasticised -PVC pipe clips of approved design to unplasticised - PVC rain water pipes by means of 50x50x50 mm hard wood plugs, screwed with M.S. screws of required length, including cutting brick work and fixing in cement mortar 1:4 (1 cement : 4 coarse sand) and making good the wall etc. complete.				
9.3.1	75 mm	Each	4.00	359.90	1440.00
9.4	Providing and fixing to the inlet mouth of rain water pipe cast iron grating 15 cm diameter and weighing not less than 440 grams.	Each	2.00	53.20	106.00
10.1	12 mm cement plaster of mix :				
10.1.1	1:4 (1 cement: 4 coarse sand)	Sqm	134.93	347.75	46922.00
10.1.2	1:6 (1 cement: 6 coarse sand)	sqm	199.57	334.35	66726.00
10.2	15 mm cement plaster on rough side of single or half brick wall of mix:				
10.2.1	1:6 (1 cement: 6 coarse sand)	sqm	126.64	384.65	48712.00
10.3	6 mm cement plaster of mix :				
10.3.1	1:3 (1 cement : 3 fine sand)	sqm	53.54	292.35	15652.00
10.4	Neat cement punning.	Sqm	5.19	77.75	404.00
10.5	Distemping with 1st quality acrylic distemper (ready mixed) having VOC content less than 50 gram/litre, of approved manufacturer and of required shade and colour all complete to achieve even shade and colour				
10.5.1	New work (two or more coats) over and including water thinnable priming coat with cement primer having VOC content less than 50 gram/litre	sqm	180.18	180.65	32550.00
10.6	Finishing walls with Acrylic Smooth exterior paint of required shade :				
10.6.1	New work (Two or more coat applied @ 1.67 ltr/10 sqm over and including priming coat of exterior primer applied @ 0.90 litre/10 sqm)	sqm	356.51	156.30	55723.00
10.7	Applying priming coat:				
10.7.1	With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanised iron/ steel works	Sqm	22.80	65.60	1496.00

10.8	Painting (two or more coats) on rain water, soil waste and vent pipes and fittings with synthetic enamel paint of approved brand and manufacture and required colour over a priming coat of approved steel primer on new work.				
10.8.1	100 mm diameter pipes	metre	15.00	79.80	1197.00
10.9	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade :				
10.9.1	Two or more coats on new work	sqm	67.28	151.70	10206.00
10.10	Painting with black anti-corrosive bitumastic paint of approved brand and manufacture to give an even shade :				
10.10.1	Two or more coats on new work	Sqm	22.80	136.45	3111.00
10.11	French spirit polishing :				
10.11.1	Two or more coats on new works including a coat of wood filler	Sqm	10.08	434.20	4377.00
10.12	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.	Sqm	153.00	151.85	23233.00
10.13	Wall painting with acrylic emulsion paint, having VOC (Volatile Organic Compound) content less than 50 grams/ litre, of approved brand and manufacture, including applying additional coats wherever required, to achieve even shade and colour.				
10.13.1	Two coats	Sqm	152.91	133.75	20452.00
10.14	Applying priming coats with primer of approved brand and manufacture, having low VOC (Volatile Organic Compound) content.				
10.14.1	With water thinnable cement primer on wall surface having VOC content less than 50 grams/litre	Sqm	152.91	71.95	11002.00
10.15	Painting with black anti-corrosive bitumastic paint of approved brand and manufacture to give an even shade :				
10.15.1	One or more coats on old work	Sqm	152.08	91.20	13870.00

11.1	Cutting holes of required size in brick masonry wall for fixing of exhaust fan including providing and fixing 300 mm dia PVC pipe conforming BIS-12818 and making good the same etc. complete as per direction of Engineer-in-charge.	Each	2.00	280.35	561.00
12.1	Demolishing brick work manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge.				
12.1.1	In cement mortar	Cum	4.50	2004.65	9021.00
12.2	Dismantling steel work in single sections including dismembering and stacking within 50 metres lead in:				
12.2.2	Channels, angles, tees and flats	kg	70.20	2.25	158.00
12.3	Dismantling barbed wire or flexible wire rope in fencing including making rolls and stacking within 50 metres lead.	kg	720.00	35.85	25812.00
13.1	Supplying at site Angle iron post & strut of required size including bottom to be split and bent at right angle in opposite direction for 10 cm length and drilling holes upto 10 mm dia. etc. complete.	kg	70.20	122.35	8589.00
13.2	Providing and fixing concertina coil fencing with punched tape concertina coil 600 mm dia 10 metre openable length (total length 90 m), having 50 nos rounds per 6 metre length, upto 3 m height of wall with existing angle iron 'Y' shaped placed 2.4m or 3.00 m apart and with 9 horizontal R.B.T. reinforced barbed wire, stud tied with G.I. staples and G.I. clips to retain horizontal, including necessary bolts or G.I. barbed wire tied to angle iron, all complete as per direction of Engineer-in-charge, with reinforced barbed tape(R.B.T.) / Spring core (2.5mm thick) wire of high tensile strength of 165 kg/ sq.mm with tape (0.52 mm thick) and weight 43.478 gm/ metre (cost of M.S. angle, C.C. blocks shall be paid separately)	metre	2000.00	365.65	731300.00

14.1	Providing and fixing white vitreous china pedestal type water closet (European type W.C. pan) with seat and lid, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever), conforming to IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required :				
14.1.1	W.C. pan with ISI marked white solid plastic seat and lid	Each	2.00	6339.90	12680.00
14.2	Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brass pillar taps, 32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require:				
14.2.1	White Vitreous China Wash basin size 550x400 mm with a pair of 15 mm C.P. brass pillar taps	Each	2.00	2239.70	4479.00
14.3	Providing and fixing white vitreous china pedestal for wash basin completely recessed at the back for the reception of pipes and fittings.	Each	2.00	1637.95	3276.00
14.4	Providing and fixing P.V.C. waste pipe for sink or wash basin including P.V.C. waste fittings complete.				
14.4.1	Flexible pipe				
14.4.1.1	32 mm dia	Each	2.00	116.35	233.00
14.5	Providing and fixing 600x450 mm beveled edge mirror of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers complete.	Each	2.00	1564.60	3129.00
14.6	Providing and fixing soil, waste and vent pipes :				
14.6.1	100 mm dia				
14.6.1.1	Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside IS:15905	Metre	15.00	1137.75	17066.00
14.7	Providing and fixing bend of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.				
14.7.1	100 mm dia pipe				

14.7.1.1	Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905	Each	4.00	551.90	2208.00
14.8	Providing and fixing plain bend of required degree.				
14.8.1	100 mm dia pipe				
14.8.1.1	Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside IS:15905	Each	4.00	358.10	1432.00
14.9	Providing and fixing terminal guard :				
14.9.1	100 mm				
14.9.1.1	Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905	Each	1.00	415.70	416.00
14.10	Providing lead caulked joints to sand cast iron/centrifugally cast (spun) iron pipes and fittings of diameter :				
14.10.1	100 mm	Each	15.00	604.90	9074.00
14.11	Providing and fixing M.S. stays and clamps for sand cast iron/ centrifugally cast (spun) iron pipes of diameter :				
14.11.1	100 mm	Each	2.00	135.90	272.00
14.12	Providing and fixing trap of self cleansing design with screwed down or hinged grating with or without vent arm complete, including cost of cutting and making good the walls and floors :				
14.12.1	100 mm inlet and 100 mm outlet				
14.12.1.1	Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905	Each	2.00	830.45	1661.00
14.13	Providing and fixing PTMT towel rail complete with brackets fixed to wooden cleats with CP brass screws with concealed fittings arrangement of approved quality and colour.				
14.13.1	600 mm long towel rail with total length of 645 mm, width 78 mm and effective height of 88 mm, weighing not less than 190 gms.	Each	2.00	689.85	1380.00

14.14	Providing and fixing white vitreous china battery based infrared sensor operated urinal of approx. size 610 x 390 x 370 mm having pre & post flushing with water (250 ml & 500 ml consumption), having water inlet from back side, including fixing to wall with suitable brackets all as per manufacturers specification and direction of Engineer-in-charge.	Each	1.00	7764.00	7764.00
15.1	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge.				
15.1.1	25 mm nominal dia Pipes	Metre	15.00	390.75	5861.00
15.2	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge. Concealed work, including cutting chases and making good the walls etc.				
15.2.1	20 mm nominal dia Pipes	Metre	15.00	523.10	7847.00
15.3	Providing and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc.				
15.3.1	25 mm dia nominal bore	Metre	15.00	455.15	6827.00
15.3.2	32 mm dia nominal bore	Metre	15.00	525.75	7886.00
15.4	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :				
15.4.1	32 mm nominal bore.	Each	1.00	671.00	671.00
15.5	Providing and placing on terrace (at all floor levels) polyethylene water storage tank, IS : 12701 marked, with cover and suitable locking arrangement and making necessary	Ltr	1000.00	10.70	10700.00

	holes for inlet, outlet and overflow pipes but without fittings and the base support for tank.				
15.6	Providing and fixing C.P. brass stop cock (concealed) of standard design and of approved make conforming to IS:8931.				
15.6.1	15 mm nominal bore	Each	4.00	652.35	2609.00
15.7	Providing and fixing C.P. Brass extension nipple (size 15mmx50mm) of approved make and quality as per direction of Engineer-in-charge.	Each	2.00	72.75	146.00
15.8	Providing and fixing PTMT grating of approved quality and colour.				
15.8.1	Circular type				
15.8.1.1	100 mm nominal dia	Each	2.00	36.60	73.00
16.1	Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 coarse sand) with R.C.C. top slab with 1:1.5:3 mix (1 cement : 1.5 coarse sand (zone-III) : 3 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand (zone-III) : 8 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement complete as per standard design :				
16.1.1	Inside size 90x80 cm and 45 cm deep including C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover and frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg) :				
16.1.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	2.00	12046.65	24093.00
16.2	Providing and fixing in position pre-cast R.C.C. manhole cover and frame of required shape and approved quality				
16.2.1	L D- 2.5				
16.2.1.1	Circular shape 450 mm internal diameter	Each	2.00	1138.10	2276.00

16.3	Constructing soak pit 1.20x1.20x1.20 m filled with brickbats including S.W. drain pipe 100 mm diameter and 1.20 m long complete as per standard design.	Each	1.00	2781.50	2782.00
17.1	Grading roof for water proofing treatment with				
17.1.1	Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size)	Cum	2.32	7825.45	18155.00
				Total	4012503.00
	Add Enhancement for Cost Index @ 20% On DSR'2023 Item Including GST on Total				802500.60
				Total	4815003.60
				Say	4815004.00

PART-C
ADDITIONAL CONDITIONS, SPECIFICATIONS AND
SCHEDULE OF QUANTITIES APPLICABLE TO
ELECTRICAL AND MECHANICAL COMPONENT OF THE
WORK

ADDITIONAL CONDITIONS

1. The scope includes Planning, Design & preparation of Drawings for E&M services, obtaining approvals from the department ,supplying ,Installation ,testing and commissioning of Internal & External Electrical Installations, Point Wiring, Power wiring, LT Cabling Work, LED light Fittings, Ceiling fans ,Switchboards ,MCB/MCCBDBs, LAN, EPABX, UPS, Split AC system, Audio-Video Conferencing system as per CPWD specifications and relevant BIS standards as amended up to last date of submission of bid including extensions if any.
2. The work shall be carried out strictly in accordance with CPWD specification for electrical works CPWD general specification Part-I (Internal) 2023, General specification for Heating Ventilation & Air Conditioning (HVAC) works -2017, and amended up to date and in accordance with Indian Electricity Rules, 1956, Indian Electricity Act, 2003as amended up to date and NBC 2016 as amended up to date and as per instructions of the Engineer-in-Charge i/c as below and nothing extra will be paid.
3. The scope of works & specification is given in general but they are not exhaustive i.e. does not mention all the incidental works required to be carried out for complete execution of the item of work. The work shall be carried out, all in accordance with true intent and meaning of the specifications and the drawings taken together, regardless of whether the same may or may not be particularly shown on the drawings and/ or described in the specifications, provided that the same can be reasonably inferred there from. There may be several incidental works, which are not mentioned in the contract document/specifications but will be necessary to complete the item in all respect.
4. All these incidental works/ costs which are not mentioned, but are necessary to complete the work shall be deemed to have been included in the overall amount quoted by thecontractorforvariouscomponentsofwork.Noadjustmentofrateshallbemadeforanyvariation in quantum of incidental works due to variation/change in actual working drawings.
5. Adjustment of rates shall not be made due to any change in incidental works or any other deviation in such element of work (which is incidental to the items of work and are necessary to complete such items in all respects) on account of the directions of Engineer-in-charge. Nothing extra shall be payable on this account.
6. Agency will get the scheme approved from the local bodies wherever required before start of the work and if required after completion of the work also.
7. Three final copies of the documents prepared shall be submitted to Engineer-in-charge for record. All the documents created out of the assignment will become the sole property of the Department. The contractor shall obtain completion certificate after completion of the project from statutory local bodies before handing over.

8. Stage Payment for E&M packages: The following percentage of contract rates shall be payable against the stages of work shown herein:

S.No	Stage of Work	Payment terms in %
1	On initial in section of materials and delivery at site in good condition on basis	50%
2	On completion of installation	25%
3	On completion of testing and commissioning	20%
4	On Handing Over	5%
	Total	100%

9. The contractor has to submit MOU with associated contractor (in case electrical contractor is associated), engineers name, credential, email address & mobile no. before start of work. The main agency should possess a valid electrical contractor license. for executing EI works otherwise he has to associates contractor having valid electrical contractor license.
10. The contractor shall employ Supervisory staff as per NIT provision who will be constantly in touch with the department and will sign site order book.
11. All the material to be used on this work by the contractor shall be got approved from the Engineer-in-Charge in advance before installation at the site.
12. The work shall be carried out according to instructions of the Engineer-in-Charge.
13. All damages done to the building during the execution of electrical work shall be the responsibility of the contractor and the same will be made good immediately at his own cost to the satisfaction of the Engineer-in-Charge. In case, the repair is not satisfactory, the department will get it rectified & any expenditure incurred by the department in this connection shall be recovered from the contractor and decision of the Engineer-in-charge about recovery shall be final & binding on the contractor.
14. The bad workmanship will not be accepted and defects shall be rectified at contractor's cost to the satisfaction of the Engineer-in-Charge. The program of electrical works is to be coordinated in accordance with the civil work. All the debris of the electrical works should be removed and the site should be cleared by the contractor immediately after the accruing of debris daily. Similarly rejected material if any should be immediately cleared off from the site by the contractor.
15. Cement for work is to be arranged and used by the contractor himself and nothing extra will be paid on this account.
16. The contractor or his engineer is bound to sign the site order book as and when required by the Engineer-in-Charge and to comply with the remarks therein.

17. The size of conduit and wiring shall be got approved from the Engineer-in-Charge before the execution of work.
18. The contractor shall make his own arrangement at his own cost for Electrical/ General tools and plants required for the work. In case, proper tools are not available, the department will purchase the tools for confide use of work at the risk & cost of the contractor.
19. Main board and main distribution board: The work shall be carried out according to the drawing/details as approved by the Engineer-in-Charge. The contractor shall have to get the sample approved before the whole lot is brought to site. The main board, distribution board shall be properly labelled.
20. No tax shall be separately paid by the department. The rates tendered should be inclusive all taxes and duties. Statutory deductions at source shall be made while releasing payment through running/final bills as applicable. A certificate specifying the rate and amount of deduction shall however be issued by the department. The entire installation shall be at the risk and responsibility of the contractor until these are tested and handed over to the department. The watch & ward is the responsibility of the contractor till handing over.
21. Notwithstanding the schedule of quantities, all items of interrelated works considered necessary to make the installation complete and operative are deemed to be included, shall be provided by the contractor at no extra cost.
22. The connection inter connection, earthing and inter earthing shall be done by the contractor wherever required and nothing extra shall be paid on this account.
23. Nothing extra shall be paid for inter connections with thimbles/Wires/Tapes strips etc. used on the work.
24. The contractor has to make his own arrangements for stores and watch and ward and no extra claim for this will be entertained.
25. The contractor shall make his own arrangements for electrical power supply for the construction activities. No extra payments for the same will be made.
26. The wiring and conduit route shall be marked by the contractor on the drawing first, and shall be got approved from the Engineer-in-charge.
27. The rupturing capacity of the MCB's shall be 10KA. The MCB's shall have ISI mark.
28. The insulated copper wire to be used on this work shall be FRLS type of multi stranded.
29. Make of MCB/MCCB shall be the same as the make of MCB DB.

30. The contractor shall on demand by the Engineer-in-charge, furnish the proof to the satisfaction of Engineer-in-charge regarding purchase of Wires, Modular switches & accessories, MCBs MCBDB fan & fixture and accessories and other items, from the manufactures authorized outlets.
31. All PVC/MS conduits accessories shall be of the same make as conduits and shall be ISI marked. The conduits shall be terminated as switch boxes/metallic junction boxes with suitable glands/check nuts.
32. Cutting of brick walls shall be done with due care. All repairs and patch works shall be neatly carried out to match the original finish and to the entire satisfaction of the Engineer in Charge.
33. All the sub main and circuits wiring includes loose wire for connections inside switch boxes and MCB DBs. No payment for these loose wires shall be made. However, wires within the cubicle panel will be measured and paid under relevant item of work.
34. To facilitate drawing of wires, 18 SWG GI fish wire shall be provided along with laying of recessed conduit for which no extra payment shall be made. Conduits laid for other services, like TV, Telephone etc., where wiring is not done along with IEI work, fish wire shall be invariably drawn.
35. The connection between incoming switch/isolator and bus bar shall be made with suitable size of thimble and cable at no extra cost.
36. Copper conductor of insulated cables of size 1.5 Sq.mm and above shall be stranded and terminals provided with crimped lugs.
37. All hardware items such as screws, thimbles, GI wire etc. which are essentially required for completing an item as per specification will be deemed to be included in the item even when the same have not been specifically mentioned.
38. All hardware items such as nuts/bolts/screws/washers etc. to be used in work shall be of zinc/cadmium plated iron.
39. While laying conduit, suitable size junction boxes shall be provided for pulling the wire as per the decision of the Engineer-in-charge.
40. Materials to be used in work are to be ISI marked. The make of the materials has been indicated in the list of preferred makes. No other makes will be acceptable. The materials to be used in the work shall be got approved by the Engineer in Charge/his representative before its use at site. The Engineer-in-charge shall reserve the right to instruct the contractor to remove the material which, in his opinion, is not acceptable.
41. Where switches / sockets / regulator / telephone / TV / internet outlets are to be provided, the same shall be of only one make. Modular accessories for UPS outlets shall be of distinguishable colour.

42. The materials used in the work shall be of approved make as per list of preferred makes. In the preferred makes of fitting model no. of one of the acceptable makes has been mentioned for guidance. However, the contractor is free to supply other makes mentioned therein, provided the parameters of the fittings match with the fitting model No. mentioned in NIT. The decision of Engineer-in-charge shall be final.
43. **The firm should submit the warranty against manufacturer defect for a period of 5 years from the date of completion of work for LED fittings, UPS, EPABX system, Krone Box & Audio-Video Conferencing system and products from the manufacturer.**
44. The contractor shall have to work as per the convenience of the concerned Department.
45. Any conduit which is not to be wired by the contractor shall be provided with GI fish wire for wiring for some other agency subsequently. Nothing extra shall be paid for the same.
46. The tenderer should either himself meet the eligibility conditions for the respective E&M components or otherwise he will have to associate with agencies, fulfilling the eligibility requirements and hence consent letter from eligible Associate Agency of the respective components of E&M work shall also be submitted as per attached **Proforma in Form "A"**.
47. In case the main contractor is himself eligible (as per eligibility criteria) for executing any specific minor component and intends doing the job himself, he may not be required to associate with another agency for that minor component of work. In such cases the main contractor also has to submit the documents as per eligibility criteria mentioned for associated agency of individual E&M component.
48. In support of the eligibility conditions of the proposed Associated Contractor, copy of their registration documents, Electrical License, GST Documents duly attested by the applicants (Main Contractor) shall be submitted to the **Executive Engineer, CED-IV, CCU** for deciding the eligibility. Each such Associated Contractor will certify that they are not debarred as on the day of application for tender participation. Proposal for associating agency for minor components of work shall be submitted in **Form 'B'** of this tender document from each associate independently for all electrical and mechanical components.
49. The main contractor should submit an affidavit of MoU signed with eligible associated contractor. The MoU in the enclosed **Form 'C'** shall be signed by both the parties, main contractor as 1st party and associated contractor as 2nd party independently for all electrical and mechanical components.
50. In the event of the concerned E&M agency not performing satisfactorily or failure of associate contractor to complete the E&M work, the main contractor on written directions
51. of the department, shall remove the Associate contractor deployed on the work and shall submit name of new associate agency who fulfil the conditions mentioned in the NIT to execute the leftover work without any loss of time or variation in cost to the department. **Such associates**

shall also give an undertaking along with the main tenderer but both of them together will stand guarantee for the equipment's already supplied for which payment has been released by the department in part. If any equipment supplied for the work, during the currency of the earlier Associate contractor and paid partly by the Department, becomes redundant / not in a position to be installed and commissioned and put to beneficial use due to change in agency for execution of E&M work, the main contractor shall be liable for replacement of the equipment(s) at no cost to Department. No change of Associated Contractor will be allowed without prior approval of the Engineer-in-charge of the work.

52. In respect of all works i.e., Electrical installation., the materials shall be procured only from the original equipment manufacturers / authorized dealers of OEM. The contractor shall submit all documentary details in fulfilment of these conditions regarding procurement of materials including relevant test certificates.
53. Before completion of defect liability period as per condition laid down in GCC 2023, the main contractor has to submit security deposit of 5% of 80% of the price of LED fittings, UPS, EPABX system, Krone Box & Audio-Video Conferencing system for the remaining 4 years warranty period for LED fittings, UPS, EPABX system, Krone Box & Audio-Video Conferencing system in acceptable form i.e. FDR/ Bank guarantee to Engineer in charge. The Security Deposit deducted from the bills of contractor shall be refunded to the main contractor only after submission of above security deposit for LED fittings, UPS, EPABX system, Krone Box & Audio-Video Conferencing system by main contractor, failing which this security deposit shall be deducted from Security Deposit deducted for total work and balance amount only will be refunded after completion of defect liability period. The LED fittings, UPS, EPABX system, Krone Box & Audio-Video Conferencing system Security Deposit will be released after completion of warranty period of 5 years to the main contractor.
54. The contractor shall execute the whole work in the most substantial and workman like manner in strict accordance with the specifications, approved design, drawings, particular specifications, special conditions, additional conditions and instructions of the Engineer-in-Charge.
55. The contractor shall at his own expense and risk arrange land for accommodation of labour, setting up of office, storage of materials, erection of temporary workshops, construction of approach roads to the site of work, including land required for carrying out of all jobs connected with the completion of the work. The contractor shall have to abide by the regulations of the authorities concerned and the directions of the Engineer-in-Charge for use of land available at the site of work. If it becomes necessary during construction to remove or shift the stored materials, shed, workshop, access roads, etc, to facilitate execution of the work included in this agreement or any other work by any other agency, the contractor shall remove or shift these facilities as directed by the Engineer-in-Charge and no claim whatsoever shall be entertained on this account.
56. The contractor shall at his own cost submit samples of all materials sufficiently in advance and obtain approval of Engineer-in-Charge. The materials to be used in actual execution of the work

shall strictly conform to the quality of samples approved by the Engineer-in-Charge and nothing extra shall be paid on this account. The acceptance of any sample or material on inspection shall not be a bar to its subsequent rejection, if found defective.

- 57.** The contractor shall at his cost, make all arrangements and shall provide necessary facilities as the Engineer-in-Charge may require for collecting, preparing, packing, forwarding and transportation of the required number of samples for tests and for analysis at such time and to such places as directed by the Engineer-in-Charge. Nothing extra shall be paid for the above operations including the cost of materials required for tests and analysis. All expenditure to be incurred for testing of samples e.g. Packaging, sealing, transportation, loading, unloading etc including testing charges shall be borne by the contractor.
- 58.** The necessary tests shall be conducted in the laboratory approved by the Engineer-in-Charge. The samples for carrying out all or any of the tests shall be collected by the Engineer-in-charge or on his behalf by any other officer of CCU. The contractor or his authorized representative shall associate himself in collection, preparation, packing and forwarding of such samples for the prescribed tests and analysis. In case the contractor or his authorized representative is not present or does not associate himself in the aforesaid operation the results of such tests and consequences thereon shall be binding on the contractor.
- 59.** Materials used on work without prior inspection and testing (where testing is necessary) and without approval of the Engineer-in-Charge are liable to be considered unauthorized, defective and not acceptable. The Engineer-in-Charge shall have full powers to require the removal of any or all of the materials brought to site by contractor which are not in accordance with the contract specifications or do not conform, in character or quality to the samples approved by the Engineer-in-Charge. In case of default on the part of the contractor in removing rejected materials, the Engineer-in-Charge shall be at liberty to have them removed at the risk and cost of the contractor.
- 60.** The contractor shall make his own arrangement of water required for execution of work and get the water tested at his own cost with regard to its suitability for use in the works and get written approval from the Engineer-in-Charge before he proceeds with the use of same for execution of work.
- 61.** The work shall be carried out in such a manner so as not to interfere or adversely affect or disturb other works being executed by other agencies, if any.
- 62.** Any damage done by the contractor to any existing works or work being executed by other agencies shall be made good by him at his own cost.
- 63.** The work shall be carried out in the manner complying in all respects with the requirement of relevant rules and regulations of the local bodies under the jurisdiction of which the work is to be executed and nothing extra shall be paid on this account.

64. For completing the work in time, the contractor may have to work in two or more shifts and no claims whatsoever shall be entertained on this account, notwithstanding the fact that the contractor will have to pay to the labourers and other staff engaged directly or indirectly on the work according to the provisions of the labour regulations and the agreement entered upon and/or extra amount for any other reasons.
65. The contractor shall take all precautions to avoid all accidents by exhibiting necessary caution boards and by providing red flags, red lights and barriers. The contractor shall be responsible for any accident at the site of work and consequences thereof.
- 66. Quality Assurance Manual (Quality Assurance Plan & Checklist for E &M Service).**
- (a) Main contractor/Associate shall submit the required quantity of materials as sample for Testing from Govt. / approved private Laboratory.
- (b) The decision on testing shall be as per E&M quality checklist of CPWD vide OM No. 51(4)/CE(E)/CSQ/2016/293 (H) dated 31.03.2016 as applicable or as per direction of Engineer in charge and shall be binding on contractor. Contractor shall submit the required size and quantity of samples for the testing.
- (c) Department shall send the samples to the testing laboratory & the test results shall directly come to department.
67. All the equipments shall be delivered with (i) Manufacturer's test certificate, (ii) Manufacturer's technical catalogues and Installation/ Instruction (O&M) manuals. For LED luminaries, the contractor shall also submit the LM-79 test report of LED luminaries from NABL accredited laboratory.
68. Models of the fittings other than that mentioned in list of preferred make may be accepted provided the performance parameters are at par or higher than the model mentioned therein. Nothing extra shall be paid on this account.
69. Scaffoldings & any other T & P required for execution, testing and commissioning of work shall be arranged by the contractor and is included in the cost of work tendered by the contractor.
- 70. Inspection before Dispatch:** All routine tests shall be conducted before dispatch of equipment. No equipment shall be dispatched out from the manufactures premises before such tests are conducted and test result recorded. These test certificates shall be given along the supply of equipment. The Engineer-In-charge shall, if he so desires inspect and witness the pre-delivery tests. For this purpose, the agency shall give 15 days advance notice. Agency shall arrange for inspection of the department. Department shall bear expenses of its officials for inspection as far as travelling, boarding and / lodging is concerned. However, the inspection shall be done at the discretion of the department without any cost implication but **ROUTINE TEST & TYPE TEST Certificates** shall have to be submitted for all the equipment.

71. Prior to dispatch, all equipment shall be adequately protected & insured for the whole period of transit, storage and erection against corrosion and incidental damages etc. from the effect of vermin, sunlight, rain, heat, humid climate and accidents etc.
72. **APPROVAL OF MATERIALS, SHOP FLOOR DRAWINGS AND COMMENCEMENT OF WORK:** The contractor shall submit list of makes & Model numbers of all items of equipment and *accessories* for each Sub Head of work. Catalogues of the equipment to be supplied. Shop floor drawings of each packages/ Sub work shall be submitted separately for approval. It is the responsibility of the tenderer to get the makes, models and shop floor drawings approved by the department before placing of order.
73. **Insurance:** The agency shall include storage cum erection insurance including third party insurance right from the storage to commissioning and handing over of various equipment. In insurance, the beneficiary shall be Engineer-In-charge at the cost of the agency. All insurance which the agency is required to enter into under the contract shall be affected any authorized general insurance company and the agency shall produce the policies of insurance. In case of any delay in handing over, the insurance cover will be suitably extended by the contractor at his own cost.
74. **Remedy of failure to insure:** If the agency fails to effect and keep in force the insurance referred to in the preceding sub-clause and in case of unforeseen eventuality of theft/damage etc. to any material, the contractor only shall be held responsible and necessary rectification/ replacement has to be done by contract or himself.
75. **Quality of material and workmanship:** All parts of the equipment shall be of such design, size and material so as to function satisfactorily under all rated conditions of operation. All components of the equipment shall have adequate factor of safety. The work of fabrication and assembly shall conform to sound engineering practice and on the basis of "Fail Safe Design". The mechanical parts subject to wear and tear shall be easily replaceable type. The construction of the equipment shall be such as to facilitate easy operation, inspection, maintenance and repairs. All connections and contacts shall be designed to minimize risk of accidental short circuits caused by animals, birds and vermin etc. All identical items and their component parts should be completely interchangeable including spare parts.
76. **Inspection and testing at Factory and site:** The department reserves the right to inspect the equipment and get it tested at factory itself for which the Contractor has to give 15 day's notice for inspection. The travelling cost of Officers will be borne by the Department. The installation shall be subject to necessary inspection during every stage of erection, by the Engineer-In-charge or his authorized representative. The successful bidder shall provide all facilities and assistance for the purpose. The completed installations shall be inspected and tested by the Engineer-in-charge in the manner as will be laid down by department. All instruments and facilities necessary for the tests shall be provided by the agency.

77. All electrical & mechanical fittings / fixture / appliances, to be provided for the work, where BEE certification is available should have **5-starrating (ofBEE)**.

78. **QUALITY ASSURANCE:**The Contractor shall make available, on request from the Department, for record, copies of challans, cash memos, receipts and other certificates, if any, vouchers towards the quantity and quality of various materials procured and the same shall be kept in record. These shall also provide information on the name of the manufacturer, manufacturer's product identification, manufacturer's instructions, warning, date of manufacturing and test certificates from manufacturers for the product for each consignment delivered at site, shelf life, if any, for the department to ensure that the material have been procured from the approved source and of the approved quality, as directed by the Engineer-in-Charge.

79. Storage and safe custody of all materials shall be the sole responsibility of the Contractor. Nothing extra shall be payable on this account. This shall include cost of painting of the entire installation. The major equipment's shall be factory final finish painted. The agency shall be required to do only touch up to the damages caused to the painting during transportation, handling & installation at site, if there is no major damage to the painting. However, hangers, support set c. of bus trunking & cable tray etc. shall be painted with required shade including painting with two coats of anticorrosive primer paint or pressurized paint for touch up of powder coated equipment at site.

80. The scope of works includes the on job technical training of two persons of department at site. Nothing extra shall be payable on this account.

81. Interpreting Specifications:

In interpreting the specifications, the following order of decreasing importance shall be followed in case of contradictions:

- i) Nomenclature of items as per Schedule of Quantities
- ii) Special/Additional Conditions
- iii) Particular Specifications
- iv) Architectural/Structural drawings
- v) CPWD Specifications including upto date correction slips.
- vi) CPWD General Conditions of Contract (2023) for Construction works including correction slips issued up to last date of submission of bid including extensions if any.
- vii) Indian Standards Specifications of B.I.S.
- viii) ASTM, BS, or other foreign origin code mentioned in tender document.
- ix) Manufacturer's specifications and as decided by the Engineer-in-Charge.
- x) Sound Engineering practices or well-established local construction practices

**CONSENT LETTER FROM ELIGIBLE ASSOCIATE AGENCY OF MINOR COMPONENT
OF WORK**

Name of work: .

I / We hereby give my consent to associate with M/s....., for
Executing the minor component of work of
(Mention category).

I / We will execute the work as per specifications and conditions of the agreement and as per
directions of the Engineer –in-Charge for the corresponding minor work till the completion of the
work.

I / We will be responsible for necessary action to handover the installations and for rectification of
defects and repair during the maintenance / warranty period.

Also, I / We will employ full time technically qualified Engineer / supervisor for the minor component
of the work as required for the work. I / We will attend inspection of officers of the department as and
when required.

Date:

Signature with date of Major component
Contractor
Address

Signature with date of Associate/Minor Component
Contractor
Address

Witness with address
(From major component contractor side)

Witness with address
(From minor component contractor side)

PROPOSAL FOR ELIGIBLE ASSOCIATING AGENCIES FOR MINOR COMPONENTS OF WORK

I/we hereby propose the following agencies as mentioned against each for executing corresponding minor components of work. Their consent letters are also attached.

Sl. No	Name of Associated Contractor	Category and class of registration	Enlistment copy / Completion Certificates attached	Monetary Limit of work	Validity of registration	Consent Letter Attached (Yes/No)
1)						

Note: Self-Attested photocopies of enlistment order, valid electrical contractor license, work experience certificates of each agency for each component of E&M work shall be submitted.

Signature of contractor

AFFIDAVIT OF MEMORANDUM OF UNDERSTANDING (MOU)
(to be submitted for each and every E&M component)

M/s. (Name of the firm with full address)Enlistment Status (Valid Upto)
.....(Henceforth called the main Contractor)

M/s. (Name of the firm with full address)..... Enlistment Status (Valid Upto)
.....(Henceforth called Associated Contractor)

For the execution of E &M component Works

Name of work:

We state that M.O.U between us will be treated as an agreement and has legality as per Indian Contract Act (amended up to date) and the department (CCU) can enforce all the terms and conditions of the agreement for execution of the above work. Both of us shall be responsible for the execution of work as per the agreement to the extent this MOU allows. Both the parties shall be paid consequent to the execution as per agreement to the extent this MOU permits. In case of any dispute, either of us will go for mediation by the Engineer In charge. Any of us may appeal against the mediation to the Chief Engineer, His decision shall be final and binding on both of us.

We have agreed as under:

The Associated Contractor will execute all E & M works in the wholesome manner as per terms and conditions of the agreement.

The Associated Contractor shall be liable for disciplinary action if he fails to discharge the action(s) and other legal action as per agreement.

All the machinery and equipments, tools and tackles required for execution of the E & M works, as per agreement, shall be the responsibility of the Associated Contractor.

The site staff required for the E & M work shall be arranged by the Associated Contractor as per terms and conditions of the agreement.

SIGNATURE OF MAIN CONTRACTOR

Date:

Place:

SIGNATURE OF ASSOCIATED CONTRACTOR

Date :

Place:

Witness with address
(From major component contractor side)

Witness with address
(From minor component contractor side)

**UNDERTAKING LETTER FROM MANUFACTIRERES OF LED FITTINGS
(ON THEIR LETTER HEAD)**

We hereby agree that:

1. All the LED fittings supplied by us are guaranteed for five years including drivers from the date of handing over.
2. In case of discontinuation of model and non-availability of spares, we will replace the fittings with equivalent/ high end model in case of manufacturing defect during the warranty period of 5 years.

For M/S,

.....
(Authorized signatory of manufacturer of LED luminaries)

Counter Signature,

Major contractor

LIST OF PREFERRED MAKES OF MATERIALS

Acceptable makes of materials to be used in the work are enclosed. In case of non-availability of these makes, the Superintending Engineer, CCU may allow use of alternative makes on the recommendations of Engineer-in-charge. Only BIS marked materials in the list shall be used in the work. Non-BIS marked materials may be permitted by the Engineer-in-charge only when BIS marked materials are not manufactured. If approved make/brand of any material is not given in the list, the same will be approved by the Superintending Engineer, CCU on the recommendations of Engineer-in-charge.

Sl. No	Items	Makes
	<u>Electrical Installations</u>	
1	PVCinsulated FRLS copper conductor single core cable	Polycab/Finolex/ Havells
2	MSConduitandits Accessories	AKG/BEC/NIC
3	PVCConduitandits Accessories	BEC/Precision/ Norpack
4	G.I. Raceway	Legrand/MK(Honey well)/ OBO
5	ModularSwitch&Socket/USBcharger/Telephone socket/TVsocket/Fan Regulator	Legrand(Arteor)// Schneider (Unica pure) / MK -Blenz Plus
6	Anchorfastener	Hilti/3M/Fischer
7	FanBox (withrod&hook assembly)	Forconcealed:Castiron/GIContinuously welded
8	1.1KV GradeXLPEPower Cable	Polycab/RR Kabel/Havells
9	1.1KV GradeFiresurvival cable	Polycab/RR Kabel/Havells
10	CableLugsandGland	Commet/Gripwel/Dowell/Jainsons/Raychem
11	Cables(Control,Signal&communication,Coaxial systemcable)	Polycab/KEI/Havells/ Grandlay
12	Cat-6UTP/CAT-6A,UTP/STPCable,FibreOptics cable	Legrand /PANDUIT/COMMOSCOPE
13	GIPerforatedCableTray	Slotco /Indiana / AKG/BEC
14	UPVC/HDPEPipe/DWC	Duraline/Rex/ Tirupati
15	MCB,RCCB	Legrand(DX3)/L&T(Exora)/ Siemens (Betagard) /Schneider (Acti-9)/ Havells
16	MCCB	Siemens(3VA) Schneider NSX / L&T (D-Sine) / Legrand (DPX3)
17	MCBDB	Legrand(Ekinox)/Hager/ Siemens (Betagard) /Schneider (Acti-9)
18	BusBaraluminium	Hindalco/Nalco
19	Ceilingfan/Exhaustfan/kitchenfreshair/wallfan	Havells/Crompton/Usha
20	LEDIndoorLuminaires	Philips/ Regent/ Lighting Technology
21	LEDDecorativelight Luminaires	Philips/ Regent/ Lighting Technology
	<u>UPS</u>	
1	UPS	Schneider (APC)/Emerson (vertiv)/ Numeric
2	Battery	Exide/ Amaron/ TATA Green
	<u>EPABX</u>	

1	EPABXsystem	SYNTEL NEXGEN/ Matrix
2	Server	Dell/HP/IBM /Lenovo
3	Rack	Panduit/ APW/HP/ Poweride/ Protection Engineering
4	Caller ID Phone	Beetel/ Coral Telecom
5	Telephone cable	Havells/ Polycab/ KEI
	HVAC	
1	SplitTypeAC	Daikin/ O-General/ Carrier
2	RefrigerantPiping	Mandev/Mexflow/Rajco/RR SHRAMIK
3	Closed cell Nitrile rubber insulation/ EPDM insulation	Armaflex/Aerocell/ ALP
	AUDIO-VIDEO	
1	LED DISPLAY	SAMSUNG/ LG/SONY/PANASONIC
2	SPEAKERS	QSC/ BOSE/ QUEST
3	AMPLIFIER	QSC/ QUEST/ BOSE
4	DIGITAL SIGNAL PROCESSOR	QSC/Allen & HEATH/ BIAMP
5	BOUNDARYMICROPHONE	SHURE/QSC/DPA
6	GOOSENECK MICROPHONE	SHURE/DPA/Sennheiser/Televic
7	HANDHELD MICROPHONE	SHURE/BOSCH/ SENNHEISER/QSC/Audio-Technica
8	LAVIER MICROPHONE	SHURE/BOSCH/ SENNHEISER/QSC/Audio-Technica
9	PODIUM	Fidato / Globus/ Ordain/ATDSC
10	MATRIX SWITCHER	Kramer/Lightware/ Extron/ Crestron.
11	DISTRIBUTION AMPLIFER	Kramer/Lightware/ Extron/ Crestron.
12	TRANSMITTER & RECEIVER	Kramer/Lightware/ Extron/ Crestron.
13	TABLE MOUNT ENCLOSURE	KRAMER/CRESTRON/ LEGRAND
14	PTZ CAMERAS	SONY/LUMENS/VADDIO/QSC
15	CONTROL TOUCH PANEL AND CONTROL SYSTEM	CRESTRON/QSC/KRAMER
16	NETWORK SWITCH	HPE / CISCO/ NETGEAR/ JUNIPER
17	EQUIPMENT RACK	APW PRESIDENT /VALRACK/RITTAL/POWERIDE/PROTECTION ENGINEERING
18	SPEAKER & MICROPHONE CABLE	KRAMER/CRESTRON/EXTRON/LIGHTWARE
19	HDMI CABLE/ VGA CABLE,PATCH CABLES, CONTROLCABLE/ACTIVE USB CABLE	KRAMER/CRESTRON/EXTRON/LIGHTWARE

SSSNote:

1. The contactor shall submitted samples & technical submittals of all material before procurement for approval & shall procure after approval directly from manufacturer and the Authorized dealers only.
2. Material not specified in attached list of acceptable makes shall be got approved from Engineer-in-charge & consultant before use on work. Decision of Engineer-in-

charge & Consultant shall be final in this respect.

3. Either the model shall be got approved or Sample shall be submitted for approval by Engineer in Charge before confirming order to supplier.
4. Contractor shall normally not use more than two (except for Equipments: Lifts, DG Set, Transformer, HVAC Equipments, UPS, where only One make is allowed) out of the above preferred makes.
5. For any item not covered in the above list, the contractor shall get the samples and make approved from the Engineer-in-charge before the supply is made.
6. All items shall conform to e-waste management and handling rules 2011 issued by Min. of Environment and Forest, Government of India or ROHS (restrictions on use of Hazardous substances)/WEEE compliant as per EU norms or American norms. Certificate shall be submitted wherever applicable.
7. The material shall not be older by more than Six months from date of supply at site.
8. Proof of dispatch from factory/dealer shall always be submitted to Engineer-in-charge for verification.

Assistant Engineer (E)
CED-IV, CCU, Howrah

Executive Engineer
CED-IV, CCU, Howrah

- **SCHEDULE OF
QUANTITY
(E&M WORK)**

Schedule of Work

Name of work :- Construction of open dais, Green room & washrooms at Phool bagan in front of CESC Garden and Repairing ,replacement of 2km barbed wire on the boundary wall of AJCBIBG from Howrah main gate to bakultala gate during the year 2024-25.

S No	Description of Items	Qty	Unit	Rate	Amount (RS)
	Part B - Electrical				
	Wiring				
1	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable etc as required.				
a	Group C	22	Point	1467.00	32274.00
2	Wiring for group controlled (looped) light point/fan point/exhaust fan point/ call bell point (without independent switch etc.) with 1.5 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ recessed PVC conduit, and earthing the point with 1.5 sq. mm FRLS PVC insulated copper conductor single core cable etc. as required.				
a	Group C	2	Point	858.00	1716.00
3	Wiring for light/ power plug with 2X4 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ recessed medium class PVC conduit along with 1 No 4 sq. mm FRLS PVC insulated copper conductor single core cable for loop earthing as required.	50.00	mtr	334.00	16700.00
4	Wiring for light/ power plug with 4X4 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ recessed medium class PVC conduit along with 2 Nos 4 sq. mm FRLS PVC insulated copper conductor single core cable for loop earthing as required.	40.00	mtr	537.00	21480.00
5	Wiring for circuit/ submain wiring along with earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required				
a	2 X 1.5 sq. mm + 1 X 1.5 sq. mm earth wire	40.00	mtr	233.00	9320.00
6	Supplying and drawing following sizes of FRLS PVC insulated copper conductor, single core cable in the existing surface/ recessed steel/ PVC conduit as required.				
a	6 x 1.5 sq. mm	20.00	mtr	181.00	3620.00
7	Supplying and fixing of following sizes of				

	medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required.				
a	25 mm	10.00	mtr	145.00	1450.00
11	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 6 pin 5/6 & 15/16 amps modular socket outlet and 15/16 amps modular switch, connection etc. as required.	10	nos.	586.00	5860.00
12	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 2 Nos. 3 pin 5/6 A modular socket outlet and 2 Nos. 5/6 A modular switch, connections etc. as required. (For light plugs to be used in non residential buildings).	10	nos.	676.00	6760.00
13	Supplying & fixing suitable size GI box with modular plate and cover in front on surface or in recess including providing and fixing 25A modular socket outlet and 25 A modular SP MCB, "C" curve including connections, painting etc. as required.	2	nos.	727.00	1454.00
14	Supplying and fixing following way, horizontal type three pole and neutral, sheet steel, MCB distribution board, 415 volts, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator)				
a	6 way (4 + 18), Double door	1	nos.	4974.00	4974.00
15	Supplying and fixing 5 amps to 32 amps rating, 240/415 volts, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
a	Single pole	18	nos.	256.00	4608.00
16	Supplying and fixing following rating, four pole, 415 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
a	63 amps	1	nos.	1034.00	1034.00
17	Earthing with G.I. earth pipe 4.5 metre long, 40 mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. (but without charcoal/ coke and salt) as required.	2	Nos.	5368.00	10736.00
18	Providing and laying earth connection from earth electrode with 6 SWG dia G.I. Wire in 15 mm dia G.I. pipe from earth electrode including connection with	12	Mtr.	287.00	3444.00

	G.I. thimble excavation and re-filling as required.				
19	Providing and fixing 6 SWG dia G.I. wire on surface or in recess for loop earthing along with existing surface/ recessed conduit/ submain wiring/ cable as required.	12	Mtr.	42.00	504.00
20	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size in the existing RCC/ HUME/ METAL pipe as required.				
a	Upto 35 sq. mm	50	Mtr.	37.00	1850.00
21	Supplying and laying of following size DWC HDPE pipe ISI marked along with all accessories like socket, bend, couplers etc. conforming to IS 14930, Part II complete with fitting and cutting, jointing etc..direct in ground (75 cm below ground level) including excavation and refilling the trench but excluding sand cushioning and protective covering etc., complete as required.				
a	63 mm dia (OD-63 mm & ID-51 mm nominal)	50	Mtr.	247.00	12350.00
	Total				140134.00
	Add 6.33% on DSR items for enchancing GST from 12% to 18%				8870.48
	Total				149004.48
	Add L.Cess @ 1% on DSR items				1490.04
	Total				150494.53
	Total after applying M.F 0.973 on DSR Items				146431.17
	Total				146431.17
	Say				146431.00

CIVIL CONSTRUCTION UNIT					
. 04/EE/CED-IV/CCU/Kol/2024-25					
Name of work: Construction of open dais, Green room & washrooms at Phool bagan in front of CESC Garden and Repairing ,replacement of 2km barbed wire on the boundary wall of AJCBIBG from Howrah main gate to bakultala gate during the year 2024-25.					
SCHEDULE OF QUANTITY					
Name of the Contractor					
Sl. No.	Name of component	Estimated cost (Rs.)	Percentage above or below the estimated cost	% in Figures	Total Cost (Rs.)
1	2	3	4	5	6
1	Civil + E&M Works	Rs.49,61,435.00/-	*	*	*

:- To be filled online in bid document.

- 1) The Column Nos. 4 & 5 are mandatory to be filled by the bidders / tenderers. If these columns are left blank, the tender become invalid.
- 2) The amount in figures in column No.6 shall appear automatically corresponding to the percentage quoted in column No.4 & 5.
- 3) The tenderer is required to quote the percentage only above or below or at par with the estimated cost to cover all the rates of item covered under the respective packages.
- 4) The percentage shall be written in 2 (two) place of decimal.
- 5) If the percentage selection in column No 4 is "At Par", by default the percentage will be considered as "Zero" only. In other words, if "At par" is selected in column No.4, then no need to fill column No. 5