



**GOVERNMENT OF INDIA
CENTRAL PUBLIC WORKS DEPARTMENT**

O/o the Executive Engineer (E)-I
1 st Floor, 'C' Wing, Kendriya Sadan,
Koramangala, Bangalore – 560034



Fax No.: 080-25500930, Tel. Office: 080-25521181, E-mail: bedcpwdbng@gmail.com

NOTICE INVITING E-tender

NIT No. 86/EE(E)-I/Bangalore/2026-27

Name of work: Renovation of Guest Houses, Toilets, Hostel rooms including Wiring, IEI, Air Conditioners, Geysers & Fire Extinguishers at ICAR - NBAIR, Hebbal, Bangalore.

Estimated cost: Rs. 83,51,893/- (Elect: Rs. 42,87,581/- + Civil: - Rs. 40,64,312/-)

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Certified that this e - NIT contains 1 - 224 Pages including index Page

**Executive Engineer (E)-I
Central P.W.D, Bangalore**

PART – A (For all component of work)

GOVERNMENT OF INDIA

CENTRAL PUBLIC WORKS DEPARTMENT

COMPOSITE PERCENTAGE RATE NOTICE INVITING TENDER

NIT No.	: 86/EE(E)-I/Bangalore/2026-27
Name of Work	: Renovation of Guest Houses, Toilets, Hostel rooms including Wiring, IEI, Air Conditioners, Geysers & Fire Extinguishers at ICAR - NBAIR, Hebbal, Bangalore.
Composite Estimated Cost	: Rs. 83,51,893/- (Elect: Rs. 42,87,581/- + Civil: - Rs. 40,64,312/-)
Earnest Money	: Rs. 1,67,038/-
Performance Guarantee	: (a) 5% of tendered value or Estimated Cost Put to Tender (ECPT) (whichever is higher). (b) Where the tendered amount is less than eighty percent (80%) of the Estimated Cost Put to Tender (ECPT), the Performance Guarantee, in addition to the requirement under (a) above, shall be increased by an amount equal to the difference between eighty percent (80%) of the ECPT and the tendered amount.
Security Deposit	: 2.5% of bid value
Time allowed	: 06 (Six) Months

Certified that this composite NIT contains 1 to 148 pages.

**Executive Engineer (E)- I
CPWD, Bangalore**

INFORMATION AND INSTRUCTIONS FOR CONTRACTORS FOR TENDERING
FORMING PART OF NIT AND TO BE POSTED ON WEBSITE

(Applicable for inviting tenders in Single bid system)

The Executive Engineer (E)-I, Central. P.W.D, 1st Floor, 'C' Wing, Kendriya Sadan, Koramangala, Bangalore-34 **Phone No. 080-25500930., Tele Fax no. 080-22861570 (Email: cpwdbed2@kar.nic.in, bedcpwdbng@gmail.com)** for and on behalf of the President of India invites online **Percentage Rate** tenders from **approved and eligible enlisted** Contractors of CPWD in appropriate Class [Contractors (Class-II and above) and Contractors of [Class-III and below only SR Region Enlisting in SDG(Chennai), ADG(Kochi), ADG(Bengaluru) and ADG(Hyderabad)] for the following work in **Single Bid System**.

TABLE - 1.0

S.N	Particulars	Particulars
1	Draft NIT No.	86/EE(E)-I/Bangalore/2026-27
2	Name of work & Location	Renovation of Guest Houses, Toilets, Hostel rooms including Wiring, IEL, Air Conditioners, Geysers & Fire Extinguishers at ICAR - NBAIR, Hebbal, Bangalore.
3	Estimated cost put to tender (In Rs.)	Rs. 83,51,893/- (Elect: Rs. 42,87,581/- + Civil: - Rs. 40,64,312/-)
4	Earnest money (In Rs.)	Rs. 1,67,038/-
5	Period of Completion	06 (Six) Months
6	Last date & time of upload of bids.	29 / 09 / 2026 up to 15.00Hrs.
7	Date & time of opening of bid.	29 / 09 / 2026 on 15.30Hrs.

1. 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.
2. Information and instructions for bidders posted on website shall form part of bid document.
3. The bid document consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents can be seen and downloaded from website www.tenderwizard.com/CPWD or www.cpwd.gov.in free of cost.

4. But 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, within the period of bid submission and uploading the mandatory scanned documents such as Insurance Surety Bonds, Account Payee Demand Draft or Banker's Cheque or Fixed Deposit Receipts or/and Bank Guarantee (for balance amount as prescribed) from any of the Commercial Bank towards **EMD in favour of the Executive Engineer (E), BCED-II, CPWD, Bangalore**, receipt for deposition of original EMD to division office of any Executive Engineer (including NIT issuing EE/AE), CPWD and other documents as specified.
5. Those contractors who are not registered or have not updated their profile on the website mentioned above, are required to get registered / update their profile beforehand. The necessary training materials including the videos with step to step process are available on download section of <https://etender.cpwd.gov.in>
6. The intending bidder must have valid class-III digital signature certificate with encryption key (combo type) to perform any operations/transactions on the e-tendering portal/website and the bidder should download and install the eMsigner on their system as per instructions available on download section of <https://etender.cpwd.gov.in>.
7. On the opening date, the contractor can login and see the bid opening process. After opening of bids, he will receive the competitor bid sheets.
8. Contractor can upload documents in JPG format and PDF format.
9. Contractor must ensure to **quote rate of percentage rate**. The column meant for quoting rate in figures appears in Yellow colour and the moment rate is entered, it turns sky blue.

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

However, if a tenderer quotes nil rates against each item in item rate tender or does not quote any percentage above/below on the total amount of the tender or any section / subhead in percentage rate tender, the tender shall be treated as invalid and will not be considered as lowest tenderer.

10. Contractor should quote the percentage above or below at par ECPT to two places of decimal only.
11. **Any dispute arising out of this tender including dispute related to encashment of any Bank Guarantee/ FDR etc., shall be subject to the jurisdiction of courts of Karnataka State only.**
12. GST on all materials as well as GST on Work Contract and Labour Welfare Cess etc., or any other tax applicable in respect of this contract shall be payable by the Contractor. Rate quoted by him shall be inclusive of such taxes, levies etc. and

Government will not entertain any claim for reimbursement whatsoever in respect of the same.

13. The department reserves the right to reject any prospective application without assigning any reason and to restrict the list of qualified contractors to any number deemed suitable by it, if too many tenders are received satisfying the laid down criterion.
14. Online bid documents submitted by intending bidders shall be opened only of those bidders, whose receipt of original EMD deposited with any division of CPWD and other documents scanned and uploaded are found in order.
15. The bid submitted shall be opened at **15:30 Hrs. on 29 / 09 / 2026**
16. **The bidders are advised to visit the site to have more clarity about the site conditions and availability of space for execution of the work.**
17. The intending bidders are required to update their profile in CPWD e-tender portal and to upload their bids well in advance of last date of submission of tender. Any issue related to updating profile/ uploading tender can be resolved through the concerned Executive Engineer/Assistant Engineer (**Phone No. 080-25534963, Tele Fax no. 080-25502762, (Email: bedcpwdbng@gmail.com)** or ERP help line No. 18001803286 or e-mail id cpwd.support@techmahindra.com. The e-tendering bidders are also advised not to wait to raise any issues till the last date of submission of bid in their own interest.
18. Approved and eligible contractors of CPWD of appropriate class & category shall have valid Electrical license from competent authority in the name of contractor or an undertaking that they will either obtain valid electrical license at the time of execution of electrical work or associate with contractors having valid electrical license of eligible class.
19. The contractor submitting the tender should read the schedule of quantities, additional conditions, additional specifications, particular specifications and other terms and conditions given in the NIT ~~and drawings~~. The tenderer should also read the applicable General conditions of Contract mentioned in the **Schedule-E**, which is available as Government of India Publications. The set of drawings and NIT shall be available with the **Executive Engineer (E) -I, CPWD, Bangalore**. The contractor should also visit the site of work and acquaint himself with the site conditions before tendering. ~~The following conditions, which already form part of the tender conditions, are specially brought to his notice for compliance while filling the tender.~~
20. Intending tenderers shall in their own interest read all the items and bring omissions and errors / to the notice of the NIT inviting authority and no claim what so ever shall be entertained after opening of the tender. The decision of the said authority shall be final and binding in all such cases
21. **~~Pre bid conference will be held in the Office of Chief Engineer, CPWD, Bangalore at 11:00 Hrs. on ***** to clear the doubts of intending bidders, if any. Bidders shall send their queries before pre bid meeting latest by 16.00 Hrs on ***** to the Office of Executive Engineer (E) -I, CPWD, Bangalore (e-mail~~**

id. Bedcpwdbng@gmail.com, ~~bedcpwdbng@gmail.com~~) and Postal address of EE is ~~"The Executive Engineer (E) -I, CPWD, 1st Floor, 'C' Wing, Kendriya Sadan, Koramangala, Bangalore - 560 034~~

22. The bid submitted shall become invalid if:

- i) The bidders is found ineligible.
- ii) The bidders does not upload scanned copy of deposited original EMD along with Annexure-A receipt with Division office of any Executive Engineer ,CPWD(The EMD document shall only be issued from the place in which the office of receiving division office is situated.)
- iii) The bidders does not upload all the documents as stipulated in the bid document.

23. List of Mandatory Documents to be scanned and uploaded in JPG format or PDF format within the period of bid submission:

1	Insurance Surety Bonds, Account Payee Demand Draft or Banker's Cheque or Fixed Deposit Receipts or/and Bank Guarantee (for balance amount as prescribed) from any of the Commercial Bank towards EMD in favour of the Executive Engineer (E), BCED-II, CPWD, Bangalore.
2.	Copy of Receipt for deposition of Original EMD issued from any Division office of CPWD where bidder deposited EMD (format of deposition receipt should be as per Annexure-A)
3.	Copy of Enlistment Order in appropriate Class and Category issued by CPWD, Contractors (Class-II and above) and CPWD Enlisted Contractors of [Class-III and below only SR Region Enlisting in SDG(Chennai), ADG(Kochi), ADG(Bengaluru) and ADG(Hyderabad)]
4.	GST registration certificate, if already obtained by the bidder. OR If the bidder has not obtained GST registration as applicable, then he shall scan and upload following undertaking along with 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 Payment by CPWD, 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 any action taken by CPWD or GST department in this regard"
5.	Letter of Transmittal in the format as per Annexure-II of this section.
6.	The agency must upload the ERP Training certificate of self or his / her authorized representative regarding successful completion of ERP Training from ERP portal

24. List of Documents to be submitted after acceptance:

1	Licenses/ Registrations or proof of applying for labour licenses, registration with EPFO, ESIC & BOCW Welfare Board
2	Program Chart (Time and Progress)
3	Should have valid labour license (THROUGH OUT THE CONTRACT PERIOD WITHOUT ANY LAPSE) suitable for executing the work in the state of Karnataka. The contractors from other than Karnataka state shall upload an undertaking that they will apply for the same immediately after award of the work
4	Valid (THROUGH OUT THE CONTRACT PERIOD WITH OUT ANY LAPSE) Electrical License Issued by Competent Authority in the name of the contractor or an undertaking that they will either obtain valid electrical license at the time of execution of electrical work or associate contractors having valid electrical license of eligible class of execution of all electrical works
5	Willingness certificate from concerned specialised competent associates electrical contractors/ agencies.
6	Undertaking from original equipment manufacturer (OEM) in respect of warranty conditions mentioned under special condition for E&M works.
7	Undertaking for OEM in respect of technical support/AMC for items as mentioned under special conditions for E&M works
8	Undertaking regarding warrantee and technical support.
9	Any other documents mentioned in the NIT.

**Executive Engineer (E) -I
Central. P.W.D, Bangalore**

**GOVERNMENT OF INDIA
CENTRAL PUBLIC WORKS DEPARTMENT**

No. 69(1)/2026/EE(E)-I/Bangalore/2017(H)

Dated: 21 / 09/2026

Copy to:-

1. The Chief Engineer, CPWD, Bangalore for information please.
2. The Executive Engineer-I/II/III/CPWD, Bangalore and EE/EE(E), CPWD, Mysore.
3. All Assistant Engineer's under EE(E)-I/ CPWD/ Bangalore.
4. AAO/ OS/ Cashier/ Auditor of EE(E)-I/Bangalore, CPWD, Bangalore
5. Notice Board/ Planning Board.

Executive Engineer (E) -I

BRIEF PARTICULARS OF THE WORK

1. Salient details of the work for which bids are invited are as under:

Sl. No.	Name of Work	Estimated Cost	Period of completion
1	Renovation of Guest Houses, Toilets, Hostel rooms including Wiring, IEL, Air Conditioners, Geysers & Fire Extinguishers at ICAR - NBAIR, Hebbal, Bangalore.	Rs. 83,51,893/- (Elect: Rs. 42,87,581/- + Civil: - Rs. 40,64,312/-)	06 (Six) Months

2. The work site is situated at **ICAR - NBAIR, Hebbal, Bangalore.**
3. Work shall be executed according to **General conditions of Contract mentioned in schedule A to F** and conditions of this contract document.

PROFORMA OF RECEIPT OF ORIGINAL EMD

1. The EE/ Engineer in charge/DDH of any divisions/projects of CPWD or any other officer designated by CPWD Directorate from time to time, are authorised to receive the EMDs. These authorities should receive the original EMD for their tenders or tenders of any other division/projects.
2. The NIT approving authority/Tender inviting authority at the time of issue of NIT shall also fill and upload the following prescribed format of receipt of deposition of original EMD along with NIT :-

RECEIPT OF DEPOSITION OF ORIGINAL EMD (Receipt No. / date)	
1. Name of work: Renovation of Guest Houses, Toilets, Hostel rooms including Wiring, IEL, Air Conditioners, Geysers & Fire Extinguishers at ICAR - NBAIR, Hebbal, Bangalore...	
2. NIT No -. 86/EE(E)-I/Bangalore/2026-27	
3. Estimated cost: Rs. 83,51,893/- (Elect: Rs. 42,87,581/- + Civil: - Rs. 40,64,312/-)	
4. Amount of Earnest Money Deposit: 1,67,038/- (Rupees One Lakh Sixty Seven Thousand and Thirty Eight Only)	
5. Last date of submission of bid: 29 / 09 / 2026 upto 15:00 Hours	
(*To be filled by tender inviting authority/NIT approving authority at the time of issue of NIT and upload along with NIT)	
1.	Name of Contractor
2.	Form of EMD
3.	Amount of Earnest Money Deposit
4.	Date of submission of EMD
5.	Email ID of EMD receiving officer.....S...
6.	Office Phone number.....
Signature, Name and Designation of EMD receiving officer along with Office stamp	
(#To be filled by EMD receiving EE/DDH)	

3. The Authority receiving EMD in original form shall examine the EMD deposited by the bidder and shall issue receipt of deposition of earnest money to the agency in a given format uploaded by tender inviting authority. The receipt may be issued by any subordinate gazetted authority as authorised by the EE/Engineer in charge/DDH.
4. The authority receiving original EMD shall also intimate tender inviting authority about deposition of EMD by the agency by email/fax/telephonically.
5. The original EMD receiving authority shall release the EMD to unsuccessful bidders after the expiry of stipulated bid validity period or immediately after acceptance of the successful bidder, whichever earlier, after verification from the e-tendering portal website (<https://etender.cpwd.gov.in>>closedTender>all) that the particular contractor is not L-1 tenderer and work is awarded.
6. The tender inviting authority will call for original EMD of the L1 tenderer from EMD receiving authority immediately.

LETTER OF TRANSMITTAL

From:

To

The Executive Engineer(E)-I,
CPWD, Bangalore.

Subject: Renovation of Guest Houses, Toilets, Hostel rooms including Wiring, IEL, Air Conditioners, Geysers & Fire Extinguishers at ICAR - NBAIR, Hebbal, Bangalore.

Sir,

Having examined details given in tender notice and bid document for the above work, I/we hereby submit the bid along with all required information and documents.

1. I/We hereby certify that all the statements made and information supplied by me/us are true and correct.
2. I/ We have furnished all information and details necessary for bid and have no further pertinent information to supply.
3. I/We also authorize **Executive Engineer (E)-I, CPWD, Bangalore** to approach individuals, employers, firms and corporation to verify our details, if required.
4. Certificate: It is certified that the information given by me/us in the bid are correct. It is also certified that I/We shall be liable to be debarred, disqualified/ cancellation of enlistment in case any information furnished by me/us is found to be incorrect.
5. Contact Details of our authorized representative are as under:

Name

Mobile Number:

Email id:

Contact Address:

Name of Bidder :

Contact Address :

Email Id of Bidder :

Mobile Number of Bidder(s):

Signature(s) of Bidder(s)

Seal of bidder

On non-judicial stamp paper of minimum Rs.100

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

1. Whereas the Executive Engineer (name of division), CPWD 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), CPWD on behalf of the President of India (hereinafter called "The Government") has entered into an agreement bearing number with (name 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 / Mobilization Advance** 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 exceeding Rs. (Rupees only) on demand by the Government within 10 days of the demand.
3. We, (indicate the name of the Bank), do here by 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 so made 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

Name and address | Authorized signatory

Name

Designation

Staff code No. |
| 2. Signature

Name and address | Bank seal |

*** 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.**

CPWD-6 FOR E-TENDERING

1. The Executive Engineer (E) -I, Central. P.W.D, 1st Floor, 'C' Wing, Kendriya Sadan, Koramangala, Bangalore-34 **Phone No. 080-25500930., Tele Fax no. 080-22861570 (Email: cpwdbed2@kar.nic.in, bedcpwdbng@gmail.com)** on behalf of the President of India invites online percentage rate composite bids from CPWD enlisted contractors of appropriate class and category for the work of:

“Renovation of Guest Houses, Toilets, Hostel rooms including Wiring, IEL, Air Conditioners, Geysers & Fire Extinguishers at ICAR - NBAIR, Hebbal, Bangalore.”

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.

- 1.1 The work is estimated to cost **Rs. 83,51,893/- (Elect: Rs. 42,87,581/- + Civil: - Rs. 40,64,312/-)**. This estimate, however, is given merely as a rough guide.
- 1.1.1 The authority competent to approve NIT for the combined cost and belonging to the major discipline will consolidate NITs for calling the bids. He will also nominate division which will deal with all matters relating to the invitation of bids. For composite bid, besides indicating the combined estimated cost put to bid, should clearly indicate the estimated cost of each component separately. The eligibility of bidders will correspond to the combined estimated cost of different components put to bid.
2. Agreement shall be drawn with the successful bidders on prescribed Form No. **CPWD 7** as amended up to the last date of submission of bid, which is available as a Govt. of India Publication and also available on website www.cpwd.gov.in. Bidders shall quote his rates (inclusive of GST and 1% labour Welfare Cess) 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 **06 (Six) 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.
5. The bid document consisting of specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents except Standard General Conditions of Contract Form can be seen from website www.tenderwizard.com/CPWD or www.cpwd.gov.in free of cost.
6. After submission of the bid, the bidder 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, bidder can revise the quoted rate any number

- of times but before last time and date of submission of bid as notified.
8. When bids are invited in three stage system and if it is desired to submit revised financial bid then it shall be mandatory to submit revised financial bid. If not submitted then the bid submitted earlier shall become invalid.
 9. Earnest Money in the form of Insurance Surety Bonds, Account Payee Demand Draft, Fixed Deposit Receipt, Banker's Cheque or Bank Guarantee including e-Bank Guarantee (for balance amount as prescribed) from any of the Commercial Banks towards EMD in **favour of Executive Engineer(E), BCED-II, CPWD, Bangalore** 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 within the period of bid submission. The EMD receiving Executive Engineer (including NIT issuing EE/AE) shall issue a receipt of deposition of Earnest Money deposit to the bidder in a prescribed format (enclosed Annexure "A") uploaded by tender inviting EE in the NIT. The receipt shall also be uploaded to the e-Tendering web site by the intending bidder up to the specific bid submission date and time.

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 in shape prescribed above, and balance may be deposited in shape of Bank Guarantee including e-Bank Guarantee of any Commercial bank having validity for 90 days 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 other documents as specified in the notice inviting e-tender 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 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, whose original EMD deposited with any division of CPWD and other documents scanned and uploaded are found in order.

The bid submitted shall be opened at 15:30 Hours on 29 / 09 / 2026 in the office of the Executive Engineer(E) -I, Central P. W.D, Bangalore.

10. 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 upload scanned copies of all the documents stipulated in the bid document.
 - (iii) 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 tender opening authority.
 - (iv) 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.
- (OM No. DG/SOP 2022/07 dated 09.11.2022)

11. **The contractor, whose bid is finally accepted, will be required to furnish performance guarantee** 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 to ensure the compliance of aforesaid provisions by the sub-contractors, if any engaged by the contractor for the said work and programme Chart (Time & Progress) within the period specified in schedule F.

12. The description of the work is

“Renovation of Guest Houses, Toilets, Hostel rooms including Wiring, IEI, Air Conditioners, Geysers & Fire Extinguishers at ICAR - NBAIR, Hebbal, Bangalore.”

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 bidders shall be deemed to have full knowledge of the site whether he inspects

it or not and no extra claims / payments consequent on any misunderstanding or otherwise shall be allowed. The bidders 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 mentioned if any, in this tender document 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 assigning any reason. All bids in which any of the prescribed conditions are not fulfilled or any condition including that of conditional rebate is put forth by the bidders shall be summarily rejected.
14. Canvassing whether directly or indirectly, in connection with bids is strictly prohibited and the bids submitted by the tenderers who resort to canvassing will be liable to 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 bidders shall be bound to perform the same at the rate quoted.
16. The tenderer shall not be permitted to bid for works in the CPWD Circle (Division in case of contractors of Horticulture / Nursery category) responsible for award and execution of contracts, in which his near relative is posted as Divisional Accountant or as an officer in any capacity between the grades of Superintending Engineer and Junior Engineer (both inclusive). He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to any gazetted officer in the Central Public Works Department or in the Ministry of Urban Development. Any breach of this condition by the tenderer would render him liable to be removed from the approved list of contractors of this Department.
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 has 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 bids for the work shall remain open for acceptance for a period of **thirty (30) days** from the due date of opening of bids ~~in case of single bid system and 75 (seventy five) days from the date of opening of technical bids in case bids are invited in 2 or 3 bid system.~~ Further,
 - (i) If any tenderer withdraws his tender or makes any modifications in the

terms & condition 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 terms and 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 bidder 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 / tenderer, on acceptance of his bid by the Accepting Authority shall within 15 days from the stipulated date of start of work, sign the agreement consisting of:

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

(b) Standard C.P.W.D. Form 7 & the applicable General Conditions of Contract mentioned in the Schedule-E as modified and corrected upto previous day of the last date of submission of the tender.

20. **COMPOSITE BIDS**

20.1.1 The Executive Engineer in charge of the major component will call bids for the composite work. The cost of bid document and Earnest Money will be fixed with respect to the combined estimated cost put to tender for the composite bid.

20.1.2 The bid document will include following four components:

PART-A : CPWD-6, CPWD-7 including schedule A to F for major component of the work, Standard General Conditions of Contract 2023 for Construction works as modified and corrected upto previous day of the last date of submission of tender and General/ special conditions for major and minor components.

PART-B : General / Special conditions Particular Specifications for major components of work.

PART-C : Schedule A to F for minor component of the work (competent authority under clause 2 and clause 5 shall be same authority as mentioned in schedule A to F for major components), General/specific conditions, specifications and schedule of quantities applicable to minor component(s) of the work.

PART-D : Schedule of quantities and Financial Bid.

- 20.1.3 The bidders must associate with himself, with agencies as per NIT condition.
- 20.1.4 The eligible bidders shall quote rates for all items of major component as well as for all items of minor components of works.
- 20.1.5 After acceptance of the tender by competent authority, the EE in charge of the 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 the major component and has also to sign two or more copies of agreement depending upon number of EE's in charge of the work. One such signed set of agreement shall be handed over to EE in charge of the minor components. EE in charge of the major component will operate Part-A, Part-B and Part-D of the agreement. EE in charge of the minor component (s) shall operate Part-C and Part-D along with relevant portion Part A of the agreement.
- 20.1.6 Entire work under the scope of composite bid including all components shall be executed under one agreement.
- 20.1.7 Security Deposit will be worked out to the tendered amount of the respective component of works. The Earnest Money will be refunded immediately after the expiry of stipulated bid validity period or immediately after acceptance of the successful bidder, whichever is earlier.
- 20.1.8 The main contractor has to associate agency(s) 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 concerned component within prescribed time. Name of the agency(s) to be associated shall be approved by Engineer-in-charge of concerned component.
- 20.1.9 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 of relevant specialised component(s). 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.
- 20.1.10 The main contractor has to enter into MoU as per Form-E with contractor(s) associated by him for execution of specified components(s). This agreement must contain terms and conditions of payment between the main contractor and associate contractor. Copy of such agreement shall be submitted to, EE in charge of concerned 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 with prior approval of Engineer-in-charge concerned.
- 20.1.11 Running payment for the major component shall be made by EE of major discipline to the main contractor. Running payment for minor components shall be made by the Engineer- in-charge of the discipline of minor component directly to the main contractor. The measurement book shall be maintained independently by Engineer-in-Charge of major and

minor components. In case main contractor fails to make the payment to contractor associated by him for specified component(s) within 15 days of receipt of each running account payment then on the written complain of the contractor associated for such specified component(s), the Executive Engineer in charge of concerned component shall serve show cause notice to main contractor and after considering the reply of the same he may make payment directly to the contractor associated for specified component(s) as per terms and conditions of the agreement drawn between main contractor and the associated contractor for the specified component(s).

- 20.1.12(A) The composite work shall be treated as complete when all the components of the work are complete. The completion certificate of the composite work shall be recorded by Engineer-in-Charge of major component after record of completion certificate of all other components.
- 20.1.12(B) Final bill of whole work shall be finalized and paid as per the schedule of payment for different component of work by the Engineer-in-charge of major component of work. Engineer(s) in charge of minor component(s) will prepare and pass the final bill for their component of work and pass on the same to the EE of major component for including in the final bill for composite contract.

- 21 The intending bidders are required to update their profile in CPWD e-tender portal and to upload their bids well in advance of last date of submission of tender. Any issue related to updating profile/ uploading tender can be resolved through the concerned Executive Engineer/Assistant Engineer **080-25534963, and Email Id: (cpwdbed2@kar.nic.in)** or ERP help line no. 18001803286 or e-mail id cpwd.support@techmahindra.com. The e-tendering bidders are also advised not to wait to raise any issues till the last date of submission of bid in their own interest.

**GOVERNMENT OF INDIA
CENTRAL PUBLIC WORKS DEPARTMENT**

**STATE : KARNATAKA
DIVISION: EE (E)-I**

**ZONE : BANGALORE ZONE
BRANCH : B & R**

PERCENTAGE RATE TENDER & CONTRACT FOR WORKS

Tender for the work of: Renovation of Guest Houses, Toilets, Hostel rooms including Wiring, IEI, Air Conditioners, Geysers & Fire Extinguishers at ICAR - NBAIR, Hebbal, Bangalore.

- (i) **To be submitted / uploaded by 15:00 hours on 29 / 09 / 2026 upload at <https://etender.cpwd.gov.in / cpwd>**
- (ii) **To be opened in presence of tenderers who may be present at 15:30 hours on 29 / 09 / 2026 in the office of the Executive Engineer(E) -I, CPWD, Bangalore-560034.**

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.

I/We agree to keep the tender open for Thirty (30) days from the due date of its opening and not to make any modification in its terms and conditions.

I/We have deposited EMD for the prescribed amount in the office of concerned Executive Engineer as per the bid document.

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. 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 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 of the tender form. Further, I/We agree that in case of forfeiture of Earnest Money & Performance Guarantee as aforesaid, I/We shall be debarred for participation in the re-tendering process of the work.

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

Dated:

Signature of Contractor

Witness:

Postal Address

Address :

Occupation :

ACCEPTANCE

The above tender (as modified by you as provided in the letters mentioned hereunder) is accepted by me for an on behalf of the President of India for a sum of Rs..... *Rupee..... *
.....).

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

- (a) *
- (b) *
- (c) *

For & on behalf of the President of India

Signature *

Dated: *

Designation *

PROFORMA OF SCHEDULES

(Separate Proforma for Civil, Elect. & Hort. Works in case of Composite Tenders) (Operative Schedules to be supplied separately to each intending tenderer)

SCHEDULE 'A'

Schedule of quantities : As per Schedule attached

SCHEDULE 'D' : Extra schedule for specific requirements / documents for the work, if any – As per NIT

SCHEDULE 'E' : Reference to General Conditions of Contract: ~~{GCC EPC Projects 2022/ GCC Maintenance Works 2023/GCC Construction works 2023}~~

Applicable GCC is **GCC Construction Works 2023** as modified and corrected upto previous day of the last date of submission of the tender.

Name of work : **“Renovation of Guest Houses, Toilets, Hostel rooms including Wiring, IEL, Air Conditioners, Geysers & Fire Extinguishers at ICAR - NBAIR, Hebbal, Bangalore.”**

Estimated cost of work : **Rs. 83,51,893/- (Elect: Rs. 42,87,581/- + Civil: - Rs. 40,64,312/-)**

(i) Earnest Money : **Rs. 1,67,038/- (to be returned after receiving PG)**

(ii) Performance Guarantee : (a) 5% of tendered value or Estimated Cost Put to Tender (ECPT) (whichever is higher).

(b) Where the tendered amount is less than eighty percent (80%) of the Estimated Cost Put to Tender (ECPT), the Performance Guarantee, in addition to the requirement under (a) above, shall be increased by an amount equal to the difference between eighty percent (80%) of the ECPT and the tendered amount.

(iii) Security Deposit : 2.5% of composite tendered value

SCHEDULE 'F'

GENERAL RULES & DIRECTIONS

Officer inviting tender : Executive Engineer (E)-I, CPWD, Bangalore -34
Phone No: 080-25534963,
Fax No: 080-25502762
Email ID: (cpwdbed2@kar.nic.in,
bedcpwdbng@gmail.com)
Or successor thereof

Maximum percentage for quantity of items of work to be executed beyond which rates are to be determined in accordance with Clauses 12.2 & 12.3	:	See below
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DEFINITIONS:

2(vi)	Engineer-in-Charge	
	(i) Electrical work (Major Component)	Executive Engineer (E)-I, CPWD, Bangalore or his successor thereof.
	(ii) Civil Works (Minor Component)	Executive Engineer (E)-II, CPWD, Bangalore or his successor thereof
2(viii)	Accepting Authority	Executive Engineer (E)-I, CPWD, Bangalore or his successor thereof.
2(x)	Percentage on cost of materials and Labour to cover all overhead and profits	15%
2(x)(a)	Standard Schedule of Rates	
	(i) Electrical work	PAR 2025 and DSR-2025 (E&M) with amendments up to last date of submission of bid.
	(ii) Civil work	2023 DSR with amendments up to last date of submission of bid.
2(xi)	Department	Central Public works Department (CPWD)
9(ii)	Standard CPWD Contract Form	Standard CPWD Contract Form General Conditions of Contract Construction Works 2023 , CPWD Form 7 /8 as modified & corrected up to previous day of the last date of submission of the tender.

CLAUSE 1

- (i) Time allowed for submission of Performance : 7(Seven) days
Guarantee, programme chart (Time and progress) and applicable labour licenses, registration with EPFO, ESIC and BOCW welfare board or proof of applying there of from the date of issue of letter of acceptance.
- (ii) Maximum allowable extension with late fee @ : 3 (Three) days with late fee
0.1% per day of Performance Guarantee @0.1% per day of the PG
amount beyond the period provided in (1) amount
above.....

CLAUSE 2

Authority for fixing compensation under : Chief Engineer, CPWD,
Clause2 Bangalore or his successor
thereof

CLAUSE 2A

Applicable Clause 2/2A : Clause 2

CLAUSE: 5

Number of days from the date of issue of letter of : **10 (Ten) days** or date of
acceptance for reckoning date of start handing over of site
whichever is later

Mile stone(s) as per Table given below: : APPLICABLE

Sl. No.	Description of Milestone (Physical)	Time Allowed in days (from date of start)	Amount to be withheld in case of non-achievement of milestone
1	Submission of details of associated agencies and approvals of all drawings.	30 days	0.50%
2	Supply of all Materials	60 days	1.50%
3	On Installation	120 days	1.00%
4	Testing and Commissioning	150 days	1.00%
5	Approval from local bodies and any local authority and energization after Testing and commissioning and handing over the complete installation.	180 days	1.00%

Withheld amount shall be released if and when subsequent milestone is achieved within respective time specified. The main contractor will ensure that electrical components of the work are executed in time without giving any chance for slippage of milestone an account of delay in execution of associated electrical works by him. However, in case milestones are not achieved by the contractor for the work, the amount shown against milestone shall be withheld by the Engineer-In-Charge of the respective components.

Note: Intending tenderer may submit phasing of activities / milestones on the basis of their resources and methodology at the time of tendering corresponding to physical milestones / stages indicated in the above table. These shall be formed part of the agreement after approval of the accepting authority.

Time allowed for execution of work : 06 (Six) Months

Authority to decide

- (i) Extension of time : Executive Engineer (E)-I CPWD, Bangalore or his successor thereof.
- (ii) Rescheduling of mile stone : The Chief Engineer, Bangalore, CPWD, Bangalore or his successor thereof
- (iii) Shifting of date of start in case of delay in handing over of site. : The Chief Engineer, Bangalore, CPWD, Bangalore or his successor thereof

PROFORMA OF SCHEDULES (Clause 5) Schedule of handing over of site

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

Applicable Clause 5/5A : Clause 5

Clause 6 : Computerized Measurement Book (CMB) / ~~Electronic Measurement Book (EMB)~~

Mode of Measurement	: CMB / EMB
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	: Electrical Works:- Rs. 10.00 Lakhs Civil works :- Rs. 8.20 Lakhs
Clause 7A	
Whether Clause 7A shall be applicable	: Yes, Applicable
	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 are submitted by the contractor to the Engineer-in-charge.
CLAUSE-8	
Competent authorities to inspect and issue completion certificate.	: Engineer in charge or his successor thereof
CLAUSE 10A	
List of testing equipments to be provided by the contractor at site lab	: Electrical work - Lux meter, Earth Tester, Tong Tester, Thermometer, Conduit Bending Machine, Vernier Caliper, Megger Civil work: - Nil
CLAUSE 10B (ii)	
Whether Clause 10B (ii) shall be applicable	: Yes / No
CLAUSE 10C	
Whether Clause 10C shall be applicable (Applicable in only those contracts where Clause-10CC is not applicable)	: Not Applicable
Component of labour expressed as percent of value of work	: 15 %
CLAUSE 10 CC	: Applicable / Not Applicable
Schedule of component of other Materials, Labour etc. for price escalation.	

Component of civil (except materials covered under clause 10CA) /Electrical construction value of work **Xm**%

Component of Labour- expressed as percent of total value of work **Y**%

Note: Xm% should be equal to (100) – (materials covered under clause 10CA i.e. Cement, Steel, POL and other materials specified in clause 10CA + Component of Labour

CLAUSE 11

Specifications to be followed for execution of work (Electrical) : **Electrical Work:**

CPWD General specifications for electrical works, Part-I: Internal 2023, Part-II: External 2023, Local Fire Regulations, CPWD general specifications for air-conditioning / HVAC works- 2024 CPWD specifications 2009 Vol-I &II as amended upto last date of submission / uploading of tender. Special condition, particular specification, relevant BIS codes, NBC 2016 and if all are not available manufactures specification.

Civil work:

CPWD Specifications 2019 volume- I&II with corrections slips up to the last date of submission/uploading of tender.

Special condition, particular specification, relevant BIS codes and if both are not available manufactures specification.

CLAUSE 12

Type of work:

Construction work

12.2. & 12.3	Deviation Limit beyond which clauses 12.2 & 12.3 shall apply for building work	:	100%
12.4	(i) Deviation Limit beyond which clauses 12.2 & 12.3 shall apply for foundation work (except items mentioned in earth work subhead in DSR and related items) (ii) Deviation Limit for items mentioned in earth work subhead of DSR and related items	:	100%

CLAUSE 16

Competent Authority for deciding reduced rates : The Chief Engineer, CPWD, Bangalore-34 or successor thereof

CLAUSE 18

List of mandatory machinery, tools & plants to be deployed by the contractor at site : **Electrical:** As per site requirement and NIT
Civil: Nil

CLAUSE 19C

Authority to decide penalty for each default : EE (E)-I, CPWD, Bangalore-34 or successor thereof

CLAUSE 19D

Authority to decide penalty for each default : EE (E)-I, CPWD, Bangalore-34 or successor thereof

CLAUSE 19G

Authority to decide penalty for each default : EE (E)-I, CPWD, Bangalore-34 or successor thereof

CLAUSE 19K

Authority to decide penalty for each default : EE (E)-I, CPWD, Bangalore-34 or successor thereof

CLAUSE 25

I	Conciliator	The Additional Director General, RB, CPWD, Bangalore
II	Arbitrator Appointing Authority	The Chief Engineer, CPWD, Bangalore
III	Place of Arbitration	Bangalore, Karnataka

CLAUSE 32:

Requirement of Technical Representative(s) and recovery Rate. –**Applicable**

Sl. No.	Qualification	No. of major + minor component	Minimum experience (years)	Designation Technical Staff	Rate at which recovery shall be made from the contractor in the event of fulfilling
1	Graduate Engineer Or Diploma Engineer	1 No. (E & M)	2 or 5 years respectively	Project Manager cum planning/ Quality/ Site/ billing Engineer	Rs. 15,000/- Per month per person

Assistant Engineers retired from government service that are holding Diploma will be treated at par with Graduate Engineers.

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.

CLAUSE 38

- Not Applicable

(i)	(a)	Schedule/statement for determining theoretical quantity of cement & bitumen on the basis of Delhi Schedule of Rates 2023 with upto date correction slips printed by CPWD	
(ii)	Variations permissible on theoretical quantities:		
	(a)	Cement	
		For works with estimated cost put to tender not more Rs. 25 lakhs	3% plus / minus
		For works with estimated cost put to tender more than Rs. 25 lakh	2% plus / minus
	(b)	Bitumen for all works	2.5% plus only and NIL on minus side
	(c)	Steel Reinforcement and structural steel sections for each diameter, section and category	2% plus / minus
	(d)	All other materials	NIL

AMENDMENTS TO GCC 2023 FOR CONSTRUCTION WORKS

केन्द्रीय लोक निर्माण विभाग

कार्यालय ज्ञापन

No. DG/CON/Construction 2023/01

ISSUED BY THE AUTHORITY OF DIRECTOR GENERAL, CPWD

Nirman Bhawan, New Delhi

Dated: 10.11.2023

Sub: Modification in GCC Construction Works - 2023, Receipt and refund of EMDs online through e-gateway of SBI for e-tendering as pilot cases – reg.

The provision on earnest money deposit (EMD) through e-tendering is modified as under and shall only be applicable for C, E, I, N and Central Secretariat Divisions under ADG (Delhi) as pilot cases with immediate effect:-

Existing Provision	Modified Provision
CPWD-EPC CPWD-7/8	CPWD-EPC CPWD-7/8
GOVERNMENT OF INDIA CENTRAL PUBLIC WORKS DEPARTMENT Percentage Rate Tender/Item Rate Tender & Contract for Works	GOVERNMENT OF INDIA CENTRAL PUBLIC WORKS DEPARTMENT Percentage Rate Tender/Item Rate Tender & Contract for Works
TENDER I/We have deposited EMD for the prescribed amount in the office of concerned Executive Engineer as per the bid document.	TENDER I/We have deposited EMD through online payment mode for the prescribed amount as per the bid document.
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 (strike out as the case may be). If I/We, fail to	In respect of portion of EMD prescribed in the shape of BG, the scanned copy of original Bank Guarantee including e-Bank Guarantee (as applicable) of any commercial bank having validity for a period of 90 days for single bid and 180 days for two bid systems or more from the last date of receipt of bids (strike out as the case may be), is to be uploaded. If I/We, fail to

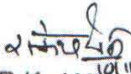
This is issued with the approval of DG CPWD.


10.11.2023
(वी. पी. साहू)

अधीक्षण अभियंता (सी.एंड एम.)

Issued from file No. CSQ/CM/17(1)/2023/ Construction e-file 9134857

के.लो.नि.वि. तथा लो.नि.वि. दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु (के.लो.नि.वि.वेबसाईट के माध्यम से)।


10.11.2023
R.K. JAIN
(EE (Contact))

11

Central Public Works Department
Office Memorandum

No. DG/CON/Construction-2023/02

ISSUED BY THE AUTHORITY OF DIRECTOR GENERAL, CPWD

Nirman Bhawan, New Delhi

Dated: 14.11.2023

Subject: Amendments in Clause 32, Schedule F of Clause 11 and 32 of GCC 2023 Construction Works.

The following amendments in Clause 32, Schedule F of Clause 11 and 32 are made in the GCC 2023 for Construction Works.

Existing Provision	Modified Provision
Clause 32 Employment of Technical Staff and employees	Clause 32 Employment of Technical Staff and employees
Contractors Superintendence, Supervision, Technical Staff & Employees	Contractors Superintendence, Supervision, Technical Staff & Employees
Sl. No. (i) and (iii)	No change
(iv) No Provision	(iv) Building Information Model (BIM) professional shall be deployed by the contractor for the projects wherever required as mentioned in Schedule F. The BIM professional shall be available for the work as and when required by Engineer-in-Charge. The BIM professional will study 3D architectural models, architectural drawings generated from 3D models, service drawings and structural drawings. The BIM professional will interact with architects, planning & site engineers to get the clashes removed. The recovery shall be made from bill of contractor in case of non-deployment of BIM Professionals/technical staff as mentioned in Schedule 'F' of NIT without giving any notice in writing. The decision of Engineer-in-Charge in this respect is final and binding on the contractor.

21/11/23
R.K. JAIN
(EE (Contact))

2/2

SCHEDULE 'F' Clause 11 Specifications to be followed for execution of work No provision	SCHEDULE 'F' Clause 11 Specifications to be followed for execution of work i. Building information model (BIM) is applicable and BIM professional to be deployed by contractor (NIT approving authority to write Yes or No)
SCHEDULE 'F' Clause 32 Requirement of Technical Representative(s) and recovery Rate Assistant Engineers retired from Government services that are holding Diploma will be treated at par with Graduate Engineers. 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. No Provision	SCHEDULE 'F' Clause 32 Requirement of Technical Representative(s) and recovery Rate No Change. No Change. Minimum recovery for not deploying Building Information Model (BIM) professional shall be Rs. two lac per month or as mentioned above, whichever is higher.

This issues with the approval of DG CPWD.

V.P. Sahu
14.11.2023
(V.P. Sahu)

Superintending Engineer (C&M)

Issued from file No. CSQ/CM/17 (1)/2023/Construction e-file 9162768

All CPWD and PWD officers for information and necessary action.
(Through CPWD website).

R.K. Jain
14.11.2023
R.K. JAIN
(EE (Contact))

Central Public Works Department

Office Memorandum

No. DG/CON/Construction 2023/03

ISSUED BY THE AUTHORITY OF DIRECTOR GENERAL, CPWD

Nirman Bhawan, New Delhi

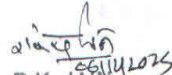
Dated 06.12.2023

Subject: Modifications in Clause 12 and Schedule F for Clause 12 of GCC 2023 for Construction Works

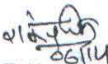
The following amendments are made in the GCC 2023 Construction Works.

Existing provision	Modified provision
CONDITIONS OF CONTRACT Definitions 2. In the contract, the following expressions shall, unless the context otherwise requires, have the meanings, hereby respectively assigned to them:- (i) to (xv) (xvi) No provision (xvii) No provision	CONDITIONS OF CONTRACT Definitions 2. In the contract, the following expressions shall, unless the context otherwise requires, have the meanings, hereby respectively assigned to them:- (i) to (xv) No change (xvi) Extra items are those items which are not available in the contract. a. Non Schedule Extra Items are those items which are not available in the Standard Schedule of Rates specified in Schedule F. b. Scheduled Extra Items are those items which are available in the Standard Schedule of Rates specified in Schedule F. (xvii) Completion cost: The completion cost includes gross amount of work done, amount of extra items and deviations and escalation admissible as per agreement etc.
Clause 12 Deviations/ Variations Extent and Pricing The Engineer-in-Charge shall have power (i) to make alteration in, omissions from, additions to, or substitutions for the original specifications, drawings, designs and instructions that may appear to him to be necessary or advisable during the	Clause 12 Deviations/ Variations Extent and Pricing No Change

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 R.K. JAIN
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progress of the work, and (ii) to omit a part of the works in case of non-availability of a portion of the site or for any other reasons and the contractor shall be bound to carry out the works in accordance with any instructions given to him in writing signed by the Engineer-in-Charge and such alterations, omissions, additions or substitutions shall form part of the contract as if originally provided therein and any altered, additional or substituted work which the contractor may be directed to do in the manner specified above as part of the works, shall be carried out by the contractor on the same conditions in all respects including price on which he agreed to do the main work except as hereafter provided.	
The completion cost of any agreement for Maintenance works including works of upgradation, aesthetic, special repair, addition/ alteration should not exceed 1.25 times of Tendered amount. Any further deviation beyond this limit upto 1.5 times of tendered amount shall be approved by the authority mentioned in schedule 'F' with recorded reason and in exceptional case, ADG shall have full power to approve the deviation beyond 1.50 times of tendered amount with recorded reason and take suitable corrective action.	Deleted
No provision	The completion cost shall, in no case, exceed 1.5 times the contract amount. Contractor will devise a system to keep a watch on quantum of work taken up vis-a-vis balance items required to complete defined scope of work and will give the alerts to Engineer-in-Charge before taking up extra items, deviations so that completion cost does not exceed above limit. Work executed beyond above limit will neither be recorded nor be paid.


 06/11/2023
 R.K. JAIN
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	Engineer-in-Charge will verify and confirm the alerts before assigning deviations and / or extra items to the contractor. If additional work(s) is required to complete defined scope of work beyond above limit then Engineer-in Charge may take up such work(s) separately. The contractor will not have any claims whatsoever on this account.
12.1 The time for completion of the works shall, in the event of any deviations resulting in additional cost over the tendered value sum being ordered, be extended, if requested by the contractor, as follows :	12.1 The time for completion of the works shall, in the event of any deviations and extra items resulting in additional cost over the contract amount will be extended, if requested by the contractor, as follows :
i. In the proportion which the additional cost of the altered, additional or substituted work, bears to the original tendered value plus ii. 25% of the time calculated in (i) above or such further additional time as may be considered reasonable by the Engineer-in-Charge	i. In the proportion to the additional cost of work, bears to the original contract amount plus ii. 25% of the time calculated in (i) above.
12.2 Deviation, Extra Items and Pricing	12.2 Deviation, Extra Items and Pricing
In the case of extra item(s) (items which are not available in the contract), the contractor may within fifteen days of the receipt of order or occurrence of the item(s), submit claim for market rate(s), supported with proper analysis of rate and manufacturer's specification for the work, invoices, vouchers, etc. (as applicable), failing which the rate(s) approved later by the Engineer-in-Charge shall be final and binding. Where the contractor submits claim for market rate(s) in the manner prescribed above, the Engineer-in-Charge shall, within 45 days of the receipt of the claims, after giving consideration to the analysis of	a) Non Schedule Extra Items - The contractor may, within fifteen days of the receipt of order to execute extra item or occurrence of the item(s), submit analysis of rate of extra item(s) based on the rates of materials available in basic rate of Standard Schedule of Rate mentioned in schedule F and market rates of the materials which are not available in standard schedule of rate mentioned in schedule F. For this purpose, the basic rate of materials available in Schedule of Rates mentioned in Schedule F will be enhanced or reduced by the applicable cost index, as the case


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rates and other documents submitted by the contractor, determine the rates on the basis of the market rates and the contractor shall be paid in accordance with the rates so determined.

may be.

The rates of the materials which are not available in Standard Schedule of Rates, mentioned in Schedule F, shall be based on, tax paid bills for the material as defined in manufacturer's specification.

Material rates from Standard Schedules of Rates shall be given priority in the analysis of rates.

The rate of extra item will be:-

- i. Analyzed rates as above multiplied by (tender amount divided by estimated cost put to tender), if tendered amount is below the estimated amount put to tender.
- ii. Analyzed rate, if the tendered amount is above the estimated amount put to tender.

Failing which the rate(s) approved later by the Engineer-in-Charge shall be final and binding.

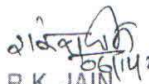
Where the contractor submits analysis of rate of extra items in the manner prescribed above, the Engineer-in-Charge shall, within 60 days of the receipt of the analysis of rate, after giving consideration to the analysis of rates and other documents submitted by the contractor, determine the rate(s) of extra items. The contractor shall be paid in accordance with the rates so determined.

However provisional rates on the basis of invoice will be allowed by the Engineer-in-Charge. Invoice shall be accepted only for materials not available in the Standard Schedule of Rates mentioned in Schedule F. The extra items rate shall be finalized only after submission of tax paid bills by


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	the contractor to the Engineer-in-Charge as required above. The Engineer-in-Charge may apply the discount available in the market on the rate of materials taken from tax paid bills.
(b) No Provision	b) Scheduled Extra Items i. For percentage rate tenders, the extra item(s) shall be paid as per the Standard Schedule of Rates, mentioned in Schedule F, enhanced or reduced by the applicable cost index and further enhanced or reduced by percentage above/ below quoted by the contractor on estimated cost put to tender. ii. For item rate tenders, the extra item(s) shall be paid as per the said schedule rate enhanced or reduced by the applicable cost index and multiplied by (tender amount divided by estimated cost put to tender).
The rate(s) of extra items so determined by the Engineer-in-Charge shall be final and binding on the contractor, and shall not be arbitrable.	Deleted

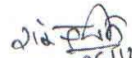

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Deviation, deviated quantities, Pricing In the case of contract items which exceed the limit laid down in Schedule F, the contractor may within fifteen days of the receipt of order or occurrence of the excess, claim revision of the rates, supported with proper analysis of rate and invoices, vouchers, etc. (as applicable), for the quantity in excess of the above-mentioned limit. The Engineer-in-Charge shall within 45 days of receipt of the claims, after giving consideration to the analysis of rates and other documents submitted by the contractor, determine the rates on the basis of the market rates and the contractor shall be paid in accordance with the rates so determined. The rate(s) so determined by the Engineer-in-Charge shall be final and binding on the contractor, and shall not be arbitrable.	c) Deviation, deviated quantities, Pricing In the case of contract items which exceed the limit laid down in Schedule F, the contractor may within fifteen days of the receipt of order or occurrence of the excess, claim revision of the rates, supported with proper analysis of rates and other documents, as per procedure described in para 12.2(a) or 12.2(b) (as applicable), for the quantities in excess of the above-mentioned limit. The Engineer-in-Charge shall within 45 60 days of receipt of the claims, after giving consideration to the analysis of rates and other documents submitted by the contractor, determine the rates and the contractor shall be paid in accordance with the rates so determined. In case, the contractor fails to submit his claim for revision of rates within 15 days of the receipt of order or occurrence of the excess, the Engineer-in-Charge shall determine the rate(s) of such items in accordance with para 12.2 (a) and 12.2 (b) without giving any notice to the contractor. The rates so determined by the Engineer-in-Charge shall be final and binding. The rate(s) of extra items and deviated items so determined by the Engineer-in-Charge shall be final and binding on the contractor.
12.3 In the case of contract items which exceed the limit laid down in Schedule F, the Engineer-in-Charge shall after giving notice to the contractor within 30 days of submission of that bill by the contractor which contains such item(s), and after taking into consideration any reply received from the contractor within 15 days of the issue of such notice, reduce the rate for quantity in excess of the above-mentioned limit on the basis of market rates, within 30 days of the expiry	Deleted


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of the said period of 15 days, and the contractor shall be paid in accordance with the rates so determined.	
The rate(s) so determined by the Engineer-in-Charge shall be final and binding on the contractor, and shall not be arbitrable	
12.4 The cost of any operation necessarily admissible for such operations.	12.3 The cost of any operation necessarily admissible for such operations.
12.4 No provision	12.4 Cost index Latest available Cost index at the time of beginning of execution of extra item and deviation shall be used in sub-clauses 12.2 (a), 12.2 (b) and 12.2 (c) for calculation of rates of extra items.
12.5 No provision	12.5 Labour rates Labour rates will be based on latest available circulars issued by Central Govt. or State Govt. whichever are higher as well as applicable for the work.
PROFORMA OF SCHEDULES (Separate Performa for Civil, Elect.& Hort. Works in case of Composite Tenders) SCHEDULE 'F' Clause 12 Authority to decide deviation upto 1.5 time of tendered amount	PROFORMA OF SCHEDULES (Separate Performa for Civil, Elect.& Hort. Works in case of Composite Tenders) SCHEDULE 'F' Clause 12 Deleted
12.2 & 12.3 Deviation Limit beyond which clauses 12.2 & 12.3 shall apply for building work	12.2 (c) Deviation Limit beyond which clauses 12.2 (c) shall apply for building work


 R.K. JAIN
 (EE (Contract))

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12.4	
(i) Deviation Limit beyond which clauses 12.2 & 12.3 shall apply for foundation work (except items mentioned in earth work subhead in DSR and related items)	(i) Deviation Limit beyond which clauses 12.2 (c) shall apply for foundation work (except items mentioned in earth work subhead in DSR and related items)
(ii) Deviation Limit for items mentioned in earth work subhead of DSR and related items	(ii) Deviation Limit for items mentioned in earth work subhead of DSR and related items

This OM is applicable for all NITs issued w.e.f. date of issue of this OM.
This issues with the approval of DG CPWD.


06.12.2023
(V.P. Sahu)

Superintending Engineer (C&M)

Issued from file No. CSQ/CM/17(1)/Construction/2023 e-file no 9163323
All CPWD and PWD officers for information and necessary action.
(Through CPWD website.


06/11/2023
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(EE (Contact))

केन्द्रीय लोक निर्माण विभाग

कार्यालय झापन

No. DG/CON/Construction 2023/04

ISSUED BY THE AUTHORITY OF DIRECTOR GENERAL, CPWD

Nirman Bhawan, New Delhi

Dated: 08.12.2023

Subject: Modifications in Conditions of Contract, Clause 5 and schedule F in clause 5 of GCC 2023 Construction Works

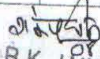
The following amendments are made in the GCC 2023 for Construction works.

Existing Provision	Modified Provision
CONDITIONS OF CONTRACT	CONDITIONS OF CONTRACT
Definitions	Definitions
2. In the contract, the following expressions shall, unless the context otherwise requires, have the meanings, hereby respectively assigned to them:-	2. No change:-
(i) to (xvii)	(i) to (xvii) No Change
(xviii) No provision	(xviii) Concurrent delay: Concurrent delays are those delays occurring in the work concurrently in any combination or combination of all delay fall under different sub clauses 5.2, 5.3 and 5.5.
Clause 5 Time and Extension for Delay	Clause 5 Time and Extension for Delay
The time allowed for execution of the Works as specified in the Schedule 'F' or the extended time in accordance with these conditions shall be the essence of the Contract. The execution of the work shall commence from such time period as mentioned in schedule 'F' or from the date of handing over of the site, notified by the Engineer-in-Charge, whichever is later. If the Contractor commits default in commencing the execution of the work as aforesaid, the performance guarantee shall be forfeited by the Engineer in Charge and shall be absolutely at the disposal of the Government without prejudice to any other right or remedy available in law.	The time allowed for execution of the Works as specified in the Schedule 'F' or the extended time in accordance with these conditions shall be the essence of the Contract. The execution of the work shall commence from such time period as mentioned in schedule 'F' or from the date of handing over of the site, notified by the Engineer-in-Charge, whichever is later. If the Contractor commits default in commencing the execution of the work as aforesaid and such default continues even after time period specified in the notice in writing by the Engineer-in-Charge then the performance guarantee shall be forfeited by the Engineer-in-Charge and shall be absolutely at the disposal of the Government without prejudice to

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R.K. JAIN
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	any other right or remedy available in law. The contract shall stand determined when such decision of forfeiture of the performance guarantee is issued to the contractor.
5.1 As soon as possible but within 7 (seven) working days of award of work and in consideration of a. Schedule of handing over of site as specified in the Schedule 'F' b. Schedule of issue of designs as specified in the Schedule 'F', i. the Contractor shall submit a Time and Progress Chart for each mile stone. The Engineer-in-Charge may within 7 (seven) working days thereafter, if required modify, and communicate the program approved to the contractor failing which the program submitted by the contractor shall be deemed to be approved by the Engineer-in-Charge. The Chart shall be prepared in direct relation to the time stated in the Contract documents for completion of items of the works. It shall indicate the forecast of the dates of commencement and completion of various trades of sections of the work and may be amended as necessary by agreement between the Engineer-in-Charge and the Contractor within the limitations of time imposed in the Contract documents. ii. In case of non-submission of construction programme by the contractor, the program approved by the Engineer-in-Charge shall be deemed to be final.	5.1 The contractor as soon as possible but within 7 (seven) days of issue of letter of award of work shall submit a time and progress chart to the Engineer-in-Charge. Such chart shall be made in due consideration of a. Schedule of handing over of site as specified in the Schedule 'F' b. Schedule of issue of design(s) and drawing(s) as specified in the Schedule 'F', i. The Contractor shall submit a Time and Progress Chart for each milestone. The Engineer-in-Charge may within 7 (seven) days of receipt of such chart, make modifications thereafter, if any, and communicate the approved chart to the contractor, failing which the chart submitted by the contractor shall be deemed to be approved by the Engineer-in-Charge. The Chart shall be prepared in direct relation to the time stated in the Contract documents for completion of items of the works. It shall indicate the forecast of the dates of commencement and completion of various trades of sections of the work and may be amended as necessary by agreement between the Engineer-in-Charge and the Contractor within the limitations of time imposed in the Contract documents. ii. In case of non-submission of time and progress chart by the contractor, the chart prepared by the Engineer-in-Charge shall be deemed to be final.


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iii. The approval by the Engineer-in-Charge of such programme shall not relieve the contractor of any of the obligations under the contract. iv. The contractor shall submit the Time and Progress Chart and progress report using the mutually agreed software or in other format decided by Engineer-in-Charge for the work done during previous month to the Engineer-in-charge on or before 5th day of each month failing which a recovery as per Schedule F to be decided by the NIT approving authority shall be made on per week or part basis in case of delay in submission of the monthly progress report v. No provision	iii. The approval by the Engineer-in-Charge of such programme shall not relieve the contractor of any of the obligations under the contract. iv. The contractor shall submit the Time and Progress Chart containing upto date progress of work using the mutually agreed software or in the format decided by Engineer-in-Charge. Such chart shall be submitted by the contractor on or before 5th day of each month failing which a recovery as mentioned in Schedule 'F' shall be made at the earliest from running account bill without any notice in this regard. v. While recording the hindrances in the progress of the work, due consideration should be given to the cause of hindrance. The hindrances shall be segregated in following categories : a) delays due to reasons beyond the control of both parties (sub-clause 5.2) b) delays attributable to the Department and concurrent delays (sub-clause 5.3). c) delays solely attributable to the contractor (sub-clause 5.5)
5.2 If the work(s) be delayed by:- i. force majeure, or ii. abnormally bad weather, or iii. serious loss or damage by fire, or iv. civil commotion, local commotion of workmen, strike or lockout, affecting any of the trades employed on the work, or v. delay on the part of other contractors or tradesmen engaged by Engineer-in-Charge in,	5.2 Delays due to reasons beyond the control of both parties: If the work(s) delayed by:- i. force majeure, or ii. abnormally bad weather, or iii. serious loss or damage by fire, or iv. civil commotion, local commotion of workmen, strike or lockout, affecting any of the trades employed on the work, or v. delay on the part of other contractors or tradesmen engaged by Engineer-in- Charge in

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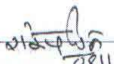
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executing work not forming part of the Contract, or vi. any other cause like above which, in the reasoned opinion of the Engineer-in-Charge is beyond the Contractor's control	executing work not forming part of the Contract, or vi. any other cause like above which, in the reasoned opinion of the Engineer-in-Charge is beyond the Contractor's control.
Then upon the happening of any such event causing delay, the contractor shall immediately give notice thereof in writing to the Engineer-in-Charge but shall nevertheless use constantly his best endeavours to prevent or make good the delay and shall do all that may be reasonably required to the satisfaction of the Engineer-in-Charge to proceed with the works.	Then upon the happening of any such event causing delay, the contractor shall within 03 (three) days give online notice thereof through ERP Portal to the Engineer-in-Charge but shall nevertheless use constantly his best endeavors to prevent or make good the delay and shall do all that may be reasonably required to the satisfaction of the Engineer-in-Charge to proceed with the work(s). The contractor shall have no claim on account of any hindrance in case notice(s) are not given by the contractor through ERP portal. The Engineer-in-Charge, on receipt of such notice(s) after considering the factual ground situation, shall either acknowledge or reject the notice(s) In case of rejection, the reason(s) for rejection shall be communicated by Engineer-in-Charge to the agency. The decision of Engineer-in-Charge with regard to nature of event causing delay, its start date and end date, as has been finalized during acknowledgement of notice, shall be final and binding. The end date of such events shall be recorded by Engineer-in-Charge either during acknowledgment of notice or subsequent to acknowledgement if end date of hindrance is after the date of acknowledgement of notice. In absence of notice by the contractor, Engineer-in-Charge or his representative(s) may record the events causing delay within 05 (five)

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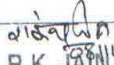
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	days of occurrence of hindrance on ERP portal provided further that not recording of events causing delay by the Engineer-in-Charge does not ipso facto entitle the contractor for any hindrance.
The contractor shall have no claim of damages for extension of time granted or rescheduling of milestone/s for events listed in sub clause 5.2.	No change.
5.3 In case the work is hindered in the opinion of the contractor, by the Department or for any reason / event, for which the Department is responsible, the authority as indicated in Schedule 'F' shall, if justified, give a fair and reasonable extension of time and reschedule the mile stones for completion of work.	5.3 Delays attributable to the department In case the work is hindered, in the opinion of the contractor, by the Department or for any reason / event, for which the Department is responsible, then upon the happening of such event causing delay, the Contractor shall within 3 (three) days give online notice there of through ERP Portal to the Engineer-in-Charge but shall nevertheless use constantly his best endeavours to prevent or make good the delay and shall do all that may be reasonably required to the satisfaction of the Engineer-in-Charge to proceed with the work. The contractor shall not be entitled for any hindrance in case notice(s) are not given by the contractor through ERP portal. The Engineer-in-Charge, on receipt of such notice(s) after considering the factual ground situation, shall either acknowledge or reject the notice(s). In case of rejection, the reason(s) for rejection shall be communicated by Engineer-in-Charge to the agency. The decision of Engineer-in-Charge with regard to nature of event causing delay, its start date and end date, as has been finalized during acknowledgement of notice, shall be final and binding.


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	The end date of such events shall be recorded by Engineer-in-Charge either during acknowledgment of notice or subsequent to acknowledgement if end date of hindrance is after the date of acknowledgement of notice. In absence of notice by the contractor, Engineer-in-Charge or his representative(s) may record the events causing delay within 05 (five) days of occurrence of hindrance on ERP portal provided further that not recording of events causing delay by the Engineer-in-Charge does not ipso facto entitle the contractor for any hindrance.
Such extension of time or rescheduling of milestone/s shall be without prejudice to any other right or remedy of the parties in contract or in law, provided further that for concurrent delays under this sub clause and sub clause 5.2 to the extent the delay is covered under sub clause 5.2 the contractor shall be entitled to only extension of time and no damages.	Such extension of time or rescheduling of milestone(s) shall be without prejudice to any other right or remedy of the parties in contract or in law, provided further that for concurrent delay(s) under this sub clause and sub clause 5.2 to the extent the delay is covered under sub clause 5.2, the contractor shall be entitled to only extension of time and shall have no claim of damages.
5.4 Request for rescheduling of Mile stones or extension of time, to be eligible for consideration, shall be made by the Contractor in writing within fourteen days of the happening of the event causing delay on the prescribed forms i.e. Form of application by the contractor for seeking rescheduling of milestones or Form of application by the contractor for seeking extension of time (Appendix - XVI) respectively to the authority as indicated in Schedule 'F'. The Contractor shall indicate in such a request the period by which rescheduling of milestone/s or extension of time is desired. With every request for rescheduling of milestones, or if at any time the actual progress of work falls behind the approved programme by more than 10% of the stipulated period of completion of contract, the contractor shall produce a revised programme without causing any delay in execution	5.4 Rescheduling of milestone(s) and 'extended date of completion' The request for rescheduling of Milestone(s) and extension of time, shall be made by the Contractor through ERP Portal once in a month on the basis of hindrances accepted by Engineer-in-Charge under sub-clause 5.2 and sub-clause 5.3. The Contractor shall indicate in such a request number of days by which rescheduling of milestone(s) and/or extension of time is desired. Deleted


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of the work. A recovery as specified in Schedule 'F' shall be made on per day basis in case of delay in submission of the revised programme. No provision	The authority as indicated in Schedule 'F', after examining the request, shall give a fair and reasonable extension of time for completion of work and simultaneously reschedule the milestone(s), if required so. The authority shall consider all the hindrances accepted as per sub-clauses 5.2, 5.3 and 5.5. The authority shall decide rescheduling of milestone(s) and extension of time within 21 (Twenty One) days of the request submitted by the contractor through ERP portal. In event of no request by the contractor for rescheduling of milestone(s) and extension of time, the authority as indicated in Schedule F, after affording opportunity to the contractor, may give fair and reasonable extension of time based on hindrances accepted by Engineer-in-Charge and reschedule the milestone(s) once in a month. Such justified extension of time shall determine the 'extended date' of completion of work.
5.4.1 In any such case the authority as indicated in Schedule 'F' may give a fair and reasonable extension of time for completion of work or reschedule the mile stones. E-in-C shall finalize/ reschedule a particular mile stone before taking an	5.4.1 Provided that the end date of any event causing delay shall not fall beyond the date of request for extension of time or rescheduling of milestone(s) by the contractor. In case end date of event falls beyond the date of submission of said request, then period for extension up to date of application shall be considered in the said request for events eligible for consideration and remaining period shall be applied in subsequent request of extension of time or rescheduling of milestone(s). Engineer-in-Charge shall finalize/ reschedule a particular mile stone

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R.K. JAIN
/EE (Conte

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action against subsequent mile stone. Such extension or rescheduling of the milestones shall be communicated to the Contractor by the authority as indicated in Schedule 'F' in writing, within 21 days of the date of receipt of such request from the Contractor in prescribed form. In event of non-application by the contractor for extension of time E-in-C after affording opportunity to the contractor, may give, supported with a programme (as specified under 5.4 above), a fair and reasonable extension within a reasonable period of occurrence of the event.	before taking an action against subsequent mile stone. Such extension or rescheduling of the milestones shall be communicated to the Contractor by the authority as indicated in 'Schedule 'F' in writing, within 21 (twenty one) days of the date of receipt of such request from the Contractor on ERP Portal.
5.5 In case the work is delayed by any reasons, in the opinion of the Engineer- in-Charge, by the contractor for reasons beyond the events mentioned in clause 5.2 or clause 5.3 or clause 5.4 and beyond the justified extended date, without prejudice to right to take action under Clause 3, the Engineer-in-Charge may grant extension of time required for completion of work without rescheduling of milestones. The contractor shall be liable for levy of compensation for delay for such extension of time.	5.5 Delays attributable solely to the contractor In case the work is delayed by reasons solely attributable to the contractor, then Engineer-in-Charge or his representative(s) may record the event causing delay within 05 (five) days of occurrence of delay in the ERP portal. Contractor shall take the notice of the same for necessary action. He may submit his version, if any within 05 (Five) days. Engineer-in-Charge, considering the version of the contractor, will take decision on such recording of the event and the decision of the Engineer-in-Charge shall be final and binding. The contractor shall be liable for levy of compensation for such delays (i.e. for the period beyond the justified extended date of completion as determined in sub clause 5.4 and this default of contractor shall be dealt in conjunction with clause 2 of the contract. In case the work is delayed, due to hindrances attributable solely to the contractor, beyond the justified extended date (as stated in sub clause 5.4), the authority indicated in Schedule 'F', without prejudice to provisions to take action under Clause 3, may grant extension of

21/05/2023
R.K. JAIN
(EE (Contact))

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	time required for completion of work without rescheduling of milestone(s) and extend the date of completion.
PROFORMA OF SCHEDULES (Separate Performa for Civil, Elect.& Hort. Works in case of Composite Tenders)	PROFORMA OF SCHEDULES (Separate Performa for Civil, Elect. & Hort. Works in case of Composite Tenders)
SCHEDULE 'F'	SCHEDULE 'F'
Clause 5	Clause 5
Authority to decide:	
i. Extension of time (Engineer in Charge or Engineer in Charge of Major Component in case of Composite Contracts, as the case may be)	i. Authority to convey the decision of shifting of milestone and extension of time (Engineer-in-Charge or Engineer-in-Charge of Major Component in case of Composite Contracts, as the case may be)
ii. Rescheduling of mile stones (Superintending Engineer/ PM/CPM in Charge or Superintending Engineer/ PM/CPM in Charge of Major Component in case of Composite Contracts, as the case may be)	ii. Authority to decide rescheduling of milestone and extension of time (SE/SE&PD/CE/CE&ED).
iii. Shifting of date of start in case of delay in handing over of site (Superintending Engineer/ PM/CPM in Charge or Superintending Engineer in Charge of Major Component in case of Composite Contracts, as the case may be)	iii. Shifting of date of start in case of delay in handing over of site (SE/SE&PD/CE/CE&ED).

This OM is applicable for all NITs uploaded after date of issue of this OM.

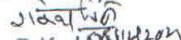
This is issued with the approval of DG CPWD.


 08.12.2023
 (वी. पी. साहू)

अधीक्षण अभियंता (सी.एंड एम.)

Issued from file No. CSQ/CM/17(1)/2023/ Construction e-file 9161772

के.लो.नि.वि. तथा लो.नि.वि. दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु (के.लो.नि.वि.वेबसाईट के माध्यम से)।


 R.K. JAIN
 (Contact)

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केन्द्रीय लोक निर्माण विभाग
कार्यालय झापन

No. DG/CON/Construction 2023/05

ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD

NIRMAN BHAWAN, NEW DELHI

Dated: 08.02.2024

Subject: Modifications in Conditions of Contract and Clause 19 of GCC 2023 for Construction Works

The following amendments are made in the GCC 2023 for Construction Works:

Existing provision	Modified provision
CONDITIONS OF CONTRACT Definitions 2. In the contract, the following expressions shall, unless the context otherwise requires, have the meanings, hereby respectively assigned to them:- (i) to (xviii) (xix) No provision (xx) No provision	CONDITIONS OF CONTRACT Definitions 2. In the contract, the following expressions shall, unless the context otherwise requires, have the meanings, hereby respectively assigned to them:- (i) to (xviii) No change (xix) Adolescent Person: A person who has completed his/her fourteenth year of age but has not completed his eighteenth year. (xx) Hazardous works: Hazardous process/works are the works as defined in the clause (cb) of the Factory Act, 1948.
Clause 19 Labour Laws to be complied by the Contractor The contractor shall comply with the provisions of the Contract Labour (Regulation and Abolition) Act, 1970, and the Contract Labour (Regulation and Abolition) Central Rules, 1971. The contractor shall also obtain a valid licence under the said Act before the commencement of the work, and continue to have a valid licence until its completion. The contractor shall also comply with provisions of the Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979.	Clause 19 Labour Laws to be complied by the Contractor No change No change No change

The contractor shall also abide by the provisions of the Child and Adolescent Labour (Prohibition and Regulation) Act, 1986.	The contractor shall also abide by the provisions of the Child and Adolescent Labour (Prohibition and Regulation) Act, 1986, amended by Amendment Act No. 35 of 2016 and thereafter time to time.
The contractor shall also comply with the provisions of the building and other Construction Workers (Regulation of Employment & Conditions of Service) Act, 1996 and the building and other Construction Workers Welfare Cess Act, 1996.	No change
Any failure to fulfil these requirements shall attract the penal provisions of this contract arising out of the resultant non-execution of the work.	No change
Clause 19A No labour below the age of eighteen years shall be employed on the work.	Clause 19A No person below the age of fourteen years shall be employed on the work. However Adolescent Persons can be employed on non-hazardous works/process.
C.P.W.D. Contractor's Labour Regulations 2. DEFINITIONS i. (c) Who is an out worker, that is to say, person to whom any article or materials are premises under the control and management of the principal employer. No person below the age of 18 years shall be employed to act as a workman.	C.P.W.D. Contractor's Labour Regulations 2. DEFINITIONS i. (c) No change. No person below the age of fourteen years shall be employed on the work. However Adolescent Persons can be employed on non-hazardous works/process.

This issues with the approval of DG CPWD.


08.02.2024
(वी. पी. साहू)

अधीक्षण अभियंता (सी. एंड एम.)

Issued from file No. CSQ/CM/17(1)/2023/Construction e-file 9169019
केलोनिवि तथा लोनिवि दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु।
(केलोनिवि वेबसाइट के माध्यम से)

**Central Public Works Department
Office Memorandum**

No. DG/CON/Construction 2023/06

ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD 01.08.2024

NIRMAN BHAWAN, NEW DELHI

Dated: 20.02.2024

Subject: Modifications in Conditions of Contract, Clause 19 and 20 of GCC 2023 for Construction Works

The following amendments are made in the GCC 2023 for Construction Works:

Existing provision	Modified provision
CONDITIONS OF CONTRACT Definitions 9. Signing of Contract:- The successful tenderer/contractor, on acceptance of his tender by the Accepting Authority, shall, within 15 days from the stipulated date of start of the work, sign the contract consisting of:- (i) to (iii) No Provision	CONDITIONS OF CONTRACT Definitions 9. Signing of Contract:- The successful tenderer, on acceptance of his tender by the Accepting Authority, shall, within 15 days from the stipulated date of start of the work, sign the contract consisting of:- (i) to (iii) No change In the event of successful tenderer being a firm/company, then the agreement shall be signed by all the partners or directors thereof individually. In the event of the absence of any partner/director, it shall be signed on his behalf by a person holding a power of attorney (duly notarized by notary public or board resolution in case of company) authorizing him to do so.
Clause 19 B Payment of Wages (i) The contractor shall pay to labour employed by him either directly or through subcontractors, wages not less than fair wages as defined in the C.P.W.D. Contractor's Labour Regulations or as per the provisions of the Contract Labour (Regulation and Abolition) Act, 1970 and the contract Labour (Regulation and Abolition) Central Rules, 1971, wherever applicable.	Clause 19 B Payment of Wages (i) The contractor shall pay to labour employed by him either directly or through subcontractors, wages not less than fair wages as defined in the C.P.W.D. Contractor's Labour Regulations or as per the provisions of the Contract Labour (Regulation and Abolition) Act, 1970 and the contract Labour (Regulation and Abolition) Central Rules, 1971 and Gazette Notification 19.01.2017, S.O 188 (E) extra ordinary part 2 – sec. 3 (ii) amended time to time.

21/02/24
R.K. JAIN
(EE (Contract))

(v) The contractor shall comply with the provisions of the Payment of Wages Act, 1936, Minimum Wages Act, 1948, Employees Liability Act, 1938, Workmen's Compensation Act, 1923, Industrial Disputes Act, 1947, Maternity Benefits Act, 1961, and the Contractor's Labour (Regulation and Abolition) Act 1970, or the modifications thereof or any other laws relating thereto and the rules made there under from time to time.	Thus higher of the wages either notified by Govt. of India, Ministry of Labour and/or that notified by the local administration of the State Govt. both relevant to the place of work and the period of reckoning shall be paid by the contractor to the labourer . (v) The contractor shall comply with the provisions of the Payment of Wages Act, 1936, Minimum Wages Act, 1948, Employees Liability Act, 1938, Workmen's Compensation Act, 1923, Industrial Disputes Act, 1947, Maternity Benefits Act, 1961, and the Contractor's Labour (Regulation and Abolition) Act 1970, Gazette Notification 19.01.2017, S.O 188 (E) extra ordinary part 2 – sec. 3 (ii) and or the modifications thereof or any other laws relating thereto and the rules made there under from time to time.
Clause 20 Minimum Wages Act to be Complied With The contractor shall comply with all the provisions of the Minimum Wages Act, 1948, and Contract Labour (Regulation and Abolition) Act, 1970, amended from time to time and rules framed there under and other labour laws affecting contract labour that may be brought into force from time to time.	Clause 20 Minimum Wages Act to be Complied With The contractor shall comply with all the provisions of the Minimum Wages Act, 1948, and Contract Labour (Regulation and Abolition) Act, 1970, Gazette Notification 19.01.2017, S.O 188 (E) extra ordinary part 2 – sec. 3 (ii) amended from time to time and rules framed there under and other labour laws affecting contract labour that may be brought into force from time to time.

This issues with the approval of DG CPWD.

[Signature] 01.03.2024
(V.P. Sahu)

Superintending Engineer (C&M)

Issued from file No. CSQ/CM/17(1)/2023 e-file no. 9163323

To all the concerned officers of CPWD/PWD for information and necessary action please. (Through CPWD Website)

[Signature]
R.K. JAIN 24/2/2024
(C&M)

Central Public Works Department

Office Memorandum

No. DG/CON/Construction 2023/07

ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD

NIRMAN BHAWAN, NEW DELHI

Dated: 01-03-2024

Subject: Modifications in Clause 7 of GCC 2023 for Construction Works

The following amendments is made in the GCC 2023 for Construction Works :

Existing provision	Modified provision
Clause 7 Payment on intermediate certificate to be regarded as Advances No payment shall be made for work, estimated to cost Rs. twenty lacs or less till after the whole of the work shall have been completed and certificate of completion given. fixed for the same by the Engineer-in-Charge.	Clause 7 Payment on intermediate certificate to be regarded as Advances No change.
The contractor shall not be entitled to be paid any such interim payment if the gross work done together with net payment/ adjustment of advances for material collected, if any, since the last such payment is less than the amount specified in Schedule 'F', in which case the interim bill shall be prepared on the appointed date of the month after the requisite progress is achieved.	The contractor shall not be paid any such interim payment if the gross work done together with net payment/ adjustment of advances for material collected, if any, since the last such payment is less than the amount specified in Schedule 'F', in which case the interim bill shall be prepared on the appointed date of the month after the requisite progress is achieved.
No provision	However, to expedite the progress of work, Engineer-in-Charge, on the request of contractor, may make interim payment(s) even before the net payment limit specified in schedule 'F' is achieved. In such case(s) no interest / compensation shall be recoverable from contractor. Such payment by Engineer-in-Charge shall not be construed as waiver of limit specified in schedule 'F' for subsequent interim payment(s).

21/2/24
R.K. JAIN
(EE (Contact))

Engineer-in-Charge shall arrange to have the bill verified by taking or causing to be taken, prescribed time limit.	No Change
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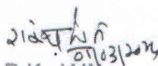
This issues with the approval of DG CPWD.


01/03/2024
(V.P. Sahu)

Superintending Engineer (C&M)

Issued from file No. CSQ/CM/17(1)/2023/Const. e-file no. 9135972

To all the concerned officers of CPWD/PWD for information and necessary action please. (Through CPWD Website)


R.K. JAIN
(EE (Contact))

Central Public Works Department

Office Memorandum

No. DG/CON/Construction 2023/08

ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD

NIRMAN BHAWAN, NEW DELHI

Dated: 05.03.2024

Subject: Modifications in Clause 19 of GCC 2023 for Construction Works

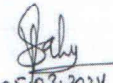
The following amendments are made in the GCC 2023 for Construction Works:

Existing provision	Modified provision
Clause 19 Labour Laws to be complied by the Contractor	Clause 19 Labour Laws to be complied by the Contractor
The contractor shall comply with the provisions of the Contract Labour (Regulation and Abolition) Act, 1970, and the Contract Labour (Regulation and Abolition) Central Rules, 1971.	No change
The contractor shall also obtain a valid licence under the said Act before the commencement of the work, and continue to have a valid licence until its completion.	No change
The contractor shall also comply with provisions of the Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979.	No change
The contractor shall also abide by the provisions of the Child and Adolescent Labour (Prohibition and Regulation) Act, 1986, amended by Amendment Act No. 35 of 2016 and thereafter time to time.	No change.
The contractor shall also comply with the provisions of the building and other Construction Workers (Regulation of Employment & Conditions of Service) Act, 1996 and the building and other Construction Workers Welfare Cess Act, 1996.	No change

21/2/2024
R.K. JAIN
(EE (Contact))

No provision	The contractor shall also comply with the provisions of Sexual Harassment of Women at Workplace (Prevention Prohibition and Redressal) Act, 2013 and amendment thereafter time to time.
Any failure to fulfill these requirements shall attract the penal provisions of this contract arising out of the resultant non-execution of the work.	Any failure to fulfil these requirements shall attract the penal provisions of the relevant act and in this contract
Clause 19 M	Clause 19 M Sexual Harassment of Women at Workplace
No Provision	The contractor shall comply with all provision(s) and guideline(s) of Sexual Harassment of Women at Workplace (Prevention Prohibition and Redressal) Act, 2013 and amendment thereafter time to time or any other rules framed under any labour law affecting women worker(s).

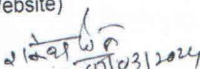
This issues with the approval of DG CPWD.


05/03/2024
(V.P. Sahu)

Superintending Engineer (C&M)

Issued from file No. CSQ/CM/17(1)/2023 e-file no. 9163323

To all the concerned officers of CPWD/PWD for information and necessary action please. (Through CPWD Website)


05/03/2024
R.K. JAIN
(EE (Contact))

Central Public Works Department
Office Memorandum

No. DG/CON/Construction 2023/09

ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD

NIRMAN BHAWAN, NEW DELHI

Dated: 01.04.2024

Subject: Modifications in Clause 1, 8 and 41 of GCC 2023 for
Construction Works

The following amendments are made in the GCC 2023 for Construction Works:

Existing provision	Modified provision
Clause 1 Performance Guarantee	Clause 1 Performance Guarantee
Sl. No. (i) to (iv)	Sl. No. (i) to (iv) No Change
(v) On substantial Completion of any work which has been completed to such an extent that the intended purpose of the work is met and ready to use, then a provisional Completion certificate shall be recorded by the Engineer-in-Charge. The provisional certificate shall have appended with a list of outstanding balance item of work that need to be completed in accordance with the provisions of the contract.	(v) As per requirement of the client or otherwise specified in the contract, part completion certificate may be issued for the building(s)/ infrastructure project for the part(s) which have been completed in all respect and are ready for use. However, statutory approvals, Completion drawing of various services, wherever required, shall be obtained before handing over of building(s)/ part(s) of the project. Scope of the completed part(s) shall be mentioned in such part completion certificate.
This provisional completion certificate shall be recorded by the concerned Engineer-in-charge with the approval of Superintending Engineer /Project Manager / Chief Engineer/ Chief Project Manager, if required. After recording of the provisional Completion Certificate for the work by the competent authority, the 80 % of performance guarantee shall be returned to the contractor, without any interest.	The part completion certificate shall include outstanding balance work that need to be completed in accordance with the provisions of the contract. This part completion certificate shall be recorded by the authority as per contract value of work . After recording of the part Completion Certificate for the work by the competent authority, the proportionate amount of 80% of performance guarantee shall be returned to the contractor, without any interest.
However in case of contracts involving Maintenance of building and services /any other work after construction of same building and services/ other work, then 40% of performance guarantee shall be returned to the contractor, without any interest after recording the provisional Completion certificate.	However in case of contracts involving Maintenance of building and services /any other work after construction of same building and services/ other work, then proportionate amount of 40% of performance guarantee shall be returned to the contractor, without any interest after recording the part Completion certificate.

R.K. JAIN
EE (Contract)

2/2

Clause 8 Completion Certificate Within ten days of the completion of the work, the contractor shall give notice of such completion to the Engineer-in-Charge and within thirty days of the receipt of such notice, the Engineer-in-Charge shall inspect the work and if there is no defect in the work, shall furnish the contractor with a final certificate of completion, otherwise a provisional certificate of physical completion indicating defects (a) to be rectified by the contractor and/or (b) for which payment will be made at reduced rates, shall be issued.	Clause 8 Completion Certificate Within ten days of the completion of the work or on part completion of one or more building(s) out of independent building in a project or infrastructure project, as per requirement of client or otherwise specified in schedule F, the contractor shall give notice of such completion to the Engineer-in-Charge and within thirty days of the receipt of such notice, the Engineer-in-Charge shall inspect the work and shall furnish the contractor with a part or final completion certificate as the case may be, indicating defects (a) to be rectified by the contractor and/or (b) for which payment will be made at reduced rates.
But no final certificate sum actually realized by the sale thereof.	No change.
Clause 41 Release of Security deposit after labour clearance The Security Deposit security deposit and refund the balance amount.	Clause 41 Release of Security deposit after labour clearance No change.
No Provision	In case, if part completion certificate of work is recorded then security deposit shall be released only after recording final completion certificate of the work and after completion of defect liability period whichever is later or specified otherwise in the contract.

This issues with the approval of DG CPWD.

Sahu
01.04.2024
(V.P. Sahu)

Superintending Engineer (C&M)

Issued from file No. CSQ/CM/17(1)/2023/Construction e-file 9163323

All CPWD and PWD officers for information and necessary action.(Through CPWD website)

21/04/2024
R.K. JAIN
EE (Contract)

**Central Public Works Department
Office Memorandum**

No. DG/CON/Construction 2023/10

ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD

NIRMAN BHAWAN, NEW DELHI

Dated: 03-06-2024

Subject: Modifications in Clause 36 of GCC 2023 for Construction Works

The following amendment is made in the Clause 36 of GCC 2023 for Construction Works:

Existing provision	Modified provision
Clause 36 If relative working in CPWD then the contractor not allowed to tender The contractor shall not be <u>permitted</u> to tender for works in the CPWD circle <u>(Division in case of contractors of Horticulture/Nursery categories)</u> responsible for award and execution of contracts in which his near relative is posted as Divisional Accountant or as an officer in any capacity between the grades of the <u>Superintending Engineer</u> and Junior Engineer (both inclusive). He shall also intimate the names of persons who are working <u>with him in any capacity</u> or are subsequently employed by him and who are near relatives to any <u>Gazetted Officer in the C.P.W.D. or in the Ministry of Housing and Urban Affairs</u>. Any breach of this condition by the contractor would render him liable to be <u>removed from the approved list of contractors of this Department. If however the contractor is registered in any other department, he shall be debarred from tendering in CPWD for any breach of this condition.</u>	Clause 36 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 Zone/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 upto 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.
NOTE: By the term "near relatives" is meant wife, husband, parents and grandparents, children and grandchildren, brothers and sisters, uncles, aunts and cousins and their corresponding in-laws.	No change.

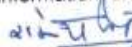
This issues with the approval of DG, CPWD.


 03-06-2024
 (V.P. Sahu)

Superintending Engineer (C&M)

Issued from file No. CSQ/CM/17(1)/2023/Construction e-file 9135972

All CPWD and PWD officers for information and necessary action (Through CPWD website)


R.N. JAIN
 EE (Contract)

Central Public Works Department

Office Memorandum

No. DG/CON/Construction 2023/11

ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD

NIRMAN BHAWAN, NEW DELHI

Dated: 03-06-2024

Subject: Additions in 'General Rules and Directions' of GCC 2023 for Construction Works

The following additions are made in GCC 2023 for Construction Works under 'General Rules and Directions':

Existing provision	Modified provision			
General Rules and Directions Sl. No. 1 to 16	General Rules and Directions No Change			
No Provision	17. Price Preference to SC/ST individual contractor <table><tr><th>for item</th><th>rate/percentage</th><th>rate</th></tr></table> tender: Price preference in quoted item rate/percentage rate tender shall be applicable to the individual enlisted/non-enlisted SC/ST contractor as under:- i. For work(s) upto and equal to an estimated cost of Rs.2.70 lakh a price preference upto 5% (with reference to the lowest valid tender) may be allowed in favor of individual SC/ST enlisted/non-enlisted contractor. No earnest money is required in such case(s). ii. For work(s) beyond an estimated cost of Rs. 2.70 lakh and upto and equal to estimated cost of Rs. 6.20 lakh, the price preference upto 5% (with reference to the lowest valid tender) may be allowed in favour of individual enlisted SC/ST contractor. However, earnest money at a reduced rate of ½% may be accepted in such cases. iii. The price preference upto 5% (with reference to the lowest valid price bid) may be allowed in favour of individual SC/ST contractor. The above concession shall be allowed only after proper verification of the individual contractor's claim of belonging to SC/ST community.	for item	rate/percentage	rate
for item	rate/percentage	rate		
Schedule F	Schedule F			
No Provision	Price Preference to SC/ST individual contractor is valid upto (date)			

This issues with the approval of DG CPWD.


 03-06-2024
 (V.P. Sahu)

Superintending Engineer (C&M)

Issued from file No. CSQ/CM/17(1)/2023/Construction

e-file 9163323

All CPWD and PWD officers for information and necessary action.(Through CPWD website)


 R.K. JAIN
 EE (Contract)

केन्द्रीय लोक निर्माण विभाग

कार्यालय झापन

No. DG/CON/Construction 2023/12

ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD

NIRMAN BHAWAN, NEW DELHI

Dated: 09.10.2024

Subject: Modifications in Clause 10A of GCC 2023 for Construction Works

The following amendment is made in the Clause 10A of GCC 2023 for Construction Works:

Existing provision	Modified provision
Clause 10A Materials to be provided by the contractor The contractor shall as specified in Schedule F. No Provision	Clause 10A Materials to be provided by the contractor (i) No Change (ii) Maintenance of Material at Site (MAS) Register (a) MAS register of the key materials including Cement, Steel Bitumen, Paint, Primer, Distemper, Varnishes, Tile Adhesive, Admixture, Anti termite chemical Water proofing compound material and other items as required by Engineer-in-Charge, and shall be maintained as per proforma in Appendix-XX of GCC. All the entries in the MAS registers are made by the designated staff of the contractor and same is reviewed weekly by the authorized representative and fortnightly by the Engineer-in-Charge. However, contractor is responsible for maintenance and safe custody of MAS registers.
(b) No provision	(b) The self-attested copies of tax paid bill of all the materials entered in the MAS register shall be submitted by the contractor at the time of review by representative of Engineer-in-Charge. In case of any doubt, genuineness of the tax paid bills; it can be verified by the representative of the Engineer-in-Charge or the Engineer-in-Charge, however, onus of genuineness of tax paid bills rest with the contractor.

[Signature]
09.10.24
R K SINGH
EE(Manual)

1
2

Appendix-XX
REGISTER OF MATERIAL AT SITE (MAS)

1. Division/Sub-division
2. Name of Work
3. Name of Article/Item
4. Estimated Requirements

S. No.	Date of Receipts (Details of Challans/ Bills, Specific location where Plants and Materials received/ Vehicle No.	Received from/ Issued to	Quantity Received	Date of issue	Specific location where Plants & Materials Displayed / Delivered / issued	Quantity Issued	Balance Quantity	Signature of authorized representative of contractor	Signature of authorized representative of Engineer-in-Charge/ AE/EE/	Remarks
1	2	3	4	5	6	7	8		9	10

This issues with the approval of DG, CPWD.


 (दिनेश कुमार उज्जैनिया)
 अधीक्षण अभियंता (सी.एंड एम.)

Issued from file No. CSQ/CM/17(1)/ Construction/2024
e-file 9184028 (DFA/9301389)

केलोनिवि तथा लोनिवि दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु।
(केलोनिवि वेबसाईट के माध्यम से)


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केन्द्रीय लोक निर्माण विभाग

कार्यालय ज्ञापन

No. DG/CON/Construction-2023/13

ISSUED BY THE AUTHORITY OF DIRECTOR GENERAL, CPWD

Nirman Bhawan, New Delhi

Dated: 29.10.2024

Subject: Modifications in Conditions of Contract, Clause 10A of GCC Construction Works 2023.

Following amendments are made in the GCC Construction Works 2023:-

Existing Provision	Modified Provision
Clause 10A: Materials to be provided by the Contractor (i) The contractor shall, thereof and in case of default, the Engineer-in-Charge may cause the same to be supplied and all costs which may attend such removal and substitution shall be borne by the Contractor. The contractor shall at his own expense, provide a material testing lab at the site for conducting routine field tests. The lab shall be equipped at least with the testing equipment as specified in schedule F. No Provision	No Change Field Laboratory: The contractor shall at his own expense, setup a material testing lab equipped with the testing equipment as specified in schedule F at site for conducting routine field test. External Laboratory: Letter for submitting sample(s) for testing of material shall be sent through e-mail to the Lab by authorized representative of Engineer-in-Charge or Engineer-in-Charge of the work along with name(s) of test(s) to be done on the material. The contractor shall collect the sample(s) from the site and submit it to the lab; make necessary payment for the testing charges. He will inform on the same day through email to authorized representative of Engineer-in-Charge and Engineer-in-Charge regarding submission of sample (s) and

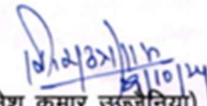

29.10.24
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No Provision	payment made to the lab. If he either fails to collect or submit the sample(s) to the lab within 03 days or in time as prescribed in the specifications, whichever is earlier, the Engineer-in-Charge shall collect and submit the sample(s) and make necessary payment for testing charges to the lab. In such case, Engineer-in-Charge shall make recovery on account of collection and submission of sample(s) to the lab and paid testing charges etc. from the next R/A bill / Final bill of the contractor. This action of Engineer-in-Charge shall be final and binding. If the contractor fails three times in collection and/or submitting sample(s) and/or fails to make payment for testing charges, the contractor shall be debarred from tendering in CPWD for a period of two years.
Sl. no. (ii) (a) and (b)	No change

This OM is applicable for all NITs uploaded after date of issue of this OM.

This is issued with the approval of DG CPWD.


 (दिनेश कुमार उज्जैनिया)
 अधीक्षण अभियंता (सी.एंड.एम.)

Issued from file No. CSQ/CM/17(1)/2024/Construction e-file- 9184436 (DFA/9303295)
 केलोनिवि तथा लोनिवि दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु।
 (केलोनिवि वेबसाईट के माध्यम से)


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केन्द्रीय लोक निर्माण विभाग

कार्यालय झापन

No. DG/CON/Construction 2023/14

ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD

NIRMAN BHAWAN, NEW DELHI

Dated: 03.01.2025

Subject: Modifications in General Rules and Directions of GCC 2023 for Construction Works.

The following amendments are made in the General Rules and Directions of GCC 2023 for Construction Works:

Existing provision	Modified provision
Applicable for Item Rate Tender only (CPWD - 8) 4 The rates rupee one. In case the lowest tendered amount (worked out on the basis of quoted rate of Individual items) of two or more contractors is same, then such lowest contractors may be asked to submit sealed revised offer quoting rate of each item of the schedule of quantity for all sub sections/sub heads as the case may be, but the revised quoted rate of each item of schedule of quantity for all sub sections/sub heads should not be higher than their respective original rate quoted already at the time of submission of tender. The lowest tender shall be decided on the basis of revised offer. If the revised their tenders. In case of any be forfeited. In case all lowest contractors. Contractor of the work.	Applicable for Item Rate Tender only (CPWD - 8) 4 No change In case the lowest tendered amount (worked out on the basis of quoted rate of Individual items) of two or more contractors is same, then such lowest contractors may be asked to submit revised price bid online using e-tender website, quoting rate of each item of the schedule of quantity for all sub sections/sub heads as the case may be, on the revised template which has been sent to them by the Tender Inviting Authority (TIA), but the revised quoted rate of each item of schedule of quantity for all sub sections/sub heads should not be higher than their respective original rate quoted already at the time of submission of tender. The lowest tender shall be decided on the basis of revised offer. No change
Applicable for Percentage Rate Tender only [CPWD- 7] 4B In case the lowest tendered amount (estimated cost + amount worked on the basis of percentage above/below) of two or more contractors is same, such lowest contractors will be asked to submit sealed revised offer in the form of letter mentioning percentage above/ below on estimated cost of tender including all sub sections/sub	Applicable for Percentage Rate Tender only [CPWD- 7] 4B In case the lowest tendered amount (estimated cost + amount worked on the basis of percentage above/below) of two or more contractors is same, such lowest contractors will be asked to submit revised price bid online quoting percentage above/ below on estimated cost of tender including all sub sections/sub heads as the case may

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heads as the case may be, but the revised percentage quoted above/below on tendered cost or on each sub section/ sub head should not be higher than the percentage quoted at the time of submission of tender. The lowest tender shall be decided on the basis of revised offers.	be on the revised template which has been sent to them by the Tender Inviting Authority (TIA), but the revised percentage quoted above/below on tendered cost or on each sub section/ sub head should not be higher than the percentage quoted at the time of submission of tender. The lowest tender shall be decided on the basis of revised offers.
In case of any be forfeited.	
If the revised their tenders.	No change
In case all process of the work.	

This issues with the approval of DG, CPWD.

(दिनेश कुमार उज्जैनिया)
अधीक्षण अभियंता (सी.एंड.एम.)

Issued from file No. CSQ/CM/17(1)/ Construction/2024
e-file 9185053 (DFA/9307326)

केलोनवि तथा लोनवि दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु।
(केलोनवि वेबसाइट के माध्यम से)

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केन्द्रीय लोक निर्माण विभाग
कार्यालय झापन

No. DG/CON/ Construction 2023/15
ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD

NIRMAN BHAWAN, NEW DELHI

Dated: 31.01.2025

Subject: Modifications in Clause 7A of GCC 2023 for Construction Works.

The following amendments are made in the Clause 7A of GCC 2023 for Construction Works:

Existing provision	Modified provision
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 are submitted by the contractor to the Engineer-in-Charge.	Clause 7A (a) No Running Account Bill/Final Bill shall be paid for the work till the applicable labour licenses, registration with EPFO, ESIC and BOCW Welfare Board, whatever applicable are submitted by the contractor to the Engineer-in-Charge. (b) The following documents shall also be part of the bill submitted by the contractor (these documents shall be owned by the contractor) before making payment:- 1. Details of person employed with date of their employment up to previous month. 2. Documents of payment made to the employees directly into their bank accounts up to previous month. 3. Documents of attendance through biometric attendance or other mode up to previous month. 4. Documents of deposition of EPF and ESI deductions in the employee's accounts up to previous month. 5. Any penalty imposed on the agency for delay in disbursing payment and deposition of EPF and ESI deductions in the employee's accounts up to previous month. 6. Any other document(s) required as per statutory requirements and/or as directed by Engineer-in-Charge. (c) In case, any of the documents submitted by the contractor is found false/forged at a later date, action for debarment of contractor will be taken by the SE/CE concerned.

This issues with the approval of DG, CPWD.

(दिनेश कुमार उज्जैनिया)

अधीक्षण अभियंता (सी.एंड.एम.)

Issued from file No. CSQ/CM/17(1)/2023/Construction e-file 9184028 (DFA/9313089)

केलोनवि तथा लोनवि दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु।

(केलोनवि वेबसाईट के माध्यम से)

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केन्द्रीय लोक निर्माण विभाग
कार्यालय ज्ञापन

No. DG/CON/Construction 2023/16
ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD

NIRMAN BHAWAN, NEW DELHI

Dated: 10.02.2025

Subject: Modifications in Clauses 7, 8, 9 and Schedule F of clause 8 of GCC 2023 for Construction Works.

The following amendments are made in the Clauses 7, 8, 9 and Schedule F of clause 8 of GCC 2023 for Construction Works:

Existing provision	Modified provision
Clause 7 Existing provisions No provision	Clause 7 No change In case of correction / rejection / short documents, it will be mandatory for Engineer-in- Charge to give recorded reasons for correction / rejection / submission of additional documents within seven days after submission of running bill by the contractor.
Clause 8 Completion Certificate (Issued vide OM No. DG/Construction-2023/09 dated 01.04.2024) Within ten days of the completion of the work or on part completion of one or more building(s) out of independent building in a project or infrastructure project, as per requirement of client or otherwise specified in schedule F, the contractor shall give notice of such completion to the Engineer-in-Charge and within thirty days of the receipt of such notice, the Engineer-in-Charge shall inspect the work and shall furnish the contractor with a part or final completion certificate as the case may be, indicating defects (a) to be rectified by the contractor and/or (b) for which payment will be made at reduced rates.	Clause 8 Completion Certificate Within ten days of the completion of the work or on part completion of one or more building(s) out of independent building in a project or infrastructure project, as per requirement of client or otherwise specified in schedule F, the contractor shall give notice of such completion to the Engineer-in-Charge and the Engineer-in-Charge, within seven days of receipt of intimation of completion from contractor will inspect the work and satisfy himself about completion of part /full work, then intimate to the concerned authorities as mentioned in Schedule F for inspection and issuance of part / final completion certificate. The concerned authorities will inspect the work and issue part/final completion certificate within thirty days of the receipt of such intimation. The Engineer-in-Charge shall furnish to the contractor a part / final completion certificate as the case may be, indicating defects (a) to


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Page 1 of 3

But no final certificate sum actually realized by the sale thereof.	be rectified by the contractor and/or (b) for which payment will be made at reduced rates. No change.
Clause 9 Payment of Final Bill The final bill shall be submitted by the contractor in the same manner as specified in interim bills within three months of physical completion of the work or within one month of the date of the final certificate of completion furnished by the Engineer-in-Charge whichever is earlier. No further claims shall be made by the contractor after submission of the final bill and these shall be deemed to have been waived and extinguished. Payments of those items of the bill in respect of which there is no dispute and of items in dispute, for quantities and rates as approved by Engineer-in-Charge, will, as far as possible be made within the period of three months the period being reckoned from the date of receipt of the bill by the Engineer-in-Charge or his authorized Asstt. Engineer, complete with account of materials issued by the Department and dismantled materials.  R K SINGH EE(Manual)	Clause 9 Payment of Final Bill i. The final bill shall be submitted by the contractor to the Engineer-in-Charge in the same manner as specified in interim bills within three months of physical completion of the work or within one month of the date of the final completion certificate furnished by the Engineer-in-Charge whichever is earlier. At the time of submission of the final bill, receipt will be given by the O/o Engineer-in-Charge. ii. In case of correction / rejection / short documents, it will be mandatory for Engineer-in- Charge to give recorded reasons for correction / rejection / submission of additional documents within fifteen days after submission of final measurement and/or final bill by the contractor. iii. Final bill will be accepted with all pre-requisite documents such as sanctioned copies of extra items and deviation in quantities, escalation statements, recovery statement, theoretical statement, final completion certificate, final extension of time case, mandatory tests statement, dismantled materials account and other documents as mentioned in clause 7A etc. iv. An undertaking alongwith the final bill will be submitted by the contractor that "I / we hereby undertake that all the measurements/claims payable under this contract have been included in the final bill and will not submit any other bill/claims in future under this agreement thereafter". v. No further claims shall be entertained from the contractor after submission of the final bill and these shall be deemed to have been waived off and extinguished. Payments of those items of the bill in respect of which there is no dispute and of items in dispute, for quantities and rates as approved by Engineer in charge will, be made within the

If the final bill is submitted by the contractor within the period specified above and delay in payment of final bills is made by the department after prescribed time limit, a simple interest @ 5 % (five percent) per annum shall be paid to the contractor from the date of expiry of prescribed time limit, provided the final bill submitted by the contractor is found to be in order.	period of three months. The period of three months will be reckoned from the date of receipt of the bill in complete shape after necessary corrections / additional documents, by the Engineer-in-Charge. vi. In case of foreclosure / determination of contract, if the contractor fails to submit the EOT case, final measurement /bills within 30 days of foreclosure/ determination, the EOT case and final bill will be prepared and decided by the department. The final bill shall only be paid after withholding amount equivalent to maximum compensation to be levied on the contractor. vii. If the final bill, in complete shape, is submitted by the contractor within the period specified above and delay in payment of final bill is made by the department after prescribed time limit, a simple interest @5% (five percent) per annum may be paid to the contractor from the date of expiry of prescribed time limit, provided the final bill submitted by the contractor contains all the documents as mentioned in para – (iii) & (iv) above. .
Schedule F Clause 8 No Provision	Schedule F Clause 8 Competent Authorities to inspect and issue part / final completion certificate (To be filled by NIT approving authority).

This issues with the approval of DG, CPWD.

(दिनेश कुमार उज्जैनिया)
अधीक्षण अभियंता (सी.एंड एम.)

Issued from file No. CSQ/CM/17(1)/2025/Construction
e-file 9190123 (DFA/9315615)

केलोनियि तथा लोनियि दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु।
(केलोनियि वेबसाईट के माध्यम से)

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EE(Manual)

केन्द्रीय लोक निर्माण विभाग
कार्यालय ज्ञापन

No. DG/CON/ Construction 2023/17
ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD

NIRMAN BHAWAN, NEW DELHI

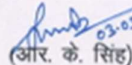
Dated: 03.03.2025

Subject: Modifications in Clause 14 of GCC 2023 for Construction Works 2023.

The following amendments are made in the Clause 14 of GCC 2023 for Construction Works 2023:

Existing provision	Modified provision
Clause 14 Carrying out part work at risk & cost of contractor If contractor: (iii) The Engineer- in-Charge without invoking action under clause 3 may, without prejudice to any other right or remedy against the contractor which have either accrued or accrue thereafter to Government, by a notice in writing to take the part work / part incomplete work of any item(s) out of his hands and shall have powers to : (a) Take possession of the site and any materials, constructional plant, implements, stores, etc., thereon; and/or (b) Carry out the part work / part incomplete work of any item(s) by any means at the risk and cost of the contractor.	Clause 14 Carrying out part work at risk & cost of contractor If contractor: (iii) The Engineer- in-Charge without invoking action under clause 3 may, without prejudice to any other right or remedy against the contractor which have either accrued or accrue thereafter to Government, by a notice in writing to take the part work / part incomplete work of any item(s) out of his hands and shall have powers to : (a) Take possession of the site and any materials, constructional plant, implements, stores, etc., thereon; and/or (b) Carry out the part work / part incomplete work of any item(s) by any means at the risk and cost of the contractor. The contractor, from whom a part work / part incomplete work of any item(s), has been taken out of his hands, shall not be allowed to participate in the tendering/quotation process of part work / part incomplete work of any item(s).

This issues with the approval of DG, CPWD.


(अ. के. सिंह)
कार्यपालक अभियन्ता (एम.)

Issued from file No. CSQ/CM/17(1)/2023/Construction e-file-9184028 (DFA/9319526)
केलोनियि तथा लोनियि दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु।
(केलोनियि वेबसाईट के माध्यम से)

R K SINGH
EE(Manual)

केन्द्रीय लोक निर्माण विभाग
कार्यालय ज्ञापन

No. DG/CON/ Construction 2023/18
ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD

NIRMAN BHAWAN, NEW DELHI **Dated: 16.06.2025**
Subject: Modifications in Clause 25.2(b) and 25.6 of GCC 2023 for Construction Works.

The following amendments are made in the Clause 25.2(b) and 25.6 of GCC 2023 for Construction Works:

Existing provision	Modified provision
Clause 25.2 (b) Qualification of Arbitrators: It is a term of this contract that each member of the Arbitral Tribunal shall be Graduate Engineer with experience in execution of public works engineering contracts, and he should have worked earlier at a level not lower than the Chief Engineer (equivalent to level of Joint Secretary to the Government of India). The aforesaid educational qualification and work experience shall be mandatory for appointment as Arbitrator. The age of Arbitrator at the time of appointment shall not exceed 75 years. An Arbitrator may be appointed notwithstanding the total number of active arbitration cases with him.	Clause 25.2 (b) Qualification of Arbitrators: It is a term of this contract that each member of the Arbitral Tribunal shall be Graduate Engineer (in Civil or Electrical or Mechanical Engineering) with experience in execution of public works engineering contracts and he should have worked earlier at a level not lower than the SAG (Level 14 of 7th CPC) of the Government of India). The aforesaid educational qualification and work experience shall be mandatory for appointment as Arbitrator. The age of Arbitrator at the time of appointment shall not exceed 70 years .
Clause 25.6 Fee payable to Arbitrator(s): The fee payable to the arbitral tribunal shall be as per CPWD OM No.2/2006/SE(TLC)/CSQ/137 dated 19.11.2019 (or latest amendment), and shall be shared equally by both the parties.	Clause 25.6 Fee payable to Arbitrator(s) for arbitration cases, shall be as per the fee given in the fourth schedule of the Arbitration & Conciliation Act, 1996 (or latest amendment), and shall be shared equally by both the parties.

This issues with the approval of DG, CPWD.

चन्द्र पाल
(चन्द्र पाल) 16/06/2025

अधीक्षण अभियंता (सी. एंड एम.)

Issued from file No. CSQ/CM/17(1)/2025 / Construction e-file 9135700 (TLC File)
केलोनवि तथा लोनवि दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु।
(केलोनवि वेबसाईट के माध्यम से)

R K SINGH
16.06.25
R K SINGH
EE(Manual)

केन्द्रीय लोक निर्माण विभाग
कार्यालय ज्ञापन

No. DG/CON/Construction-2023/19

ISSUED BY THE AUTHORITY OF DIRECTOR GENERAL, CPWD

Nirman Bhawan, New Delhi

Dated: 06.11.2025

Subject: Modification of Clause 19L of GCC-2023 for Construction Works.

The clause 19L in GCC-2023 for Construction Works is being modified:

Existing Provision	Modified Provision
Clause 19 L: Contribution of EPF and ESI The ESI and EPF contributions on the part of employer in respect of this contract shall be paid by the contractor. These contributions on the part of the employer paid by the contractor shall be reimbursed by the Engineer-in-charge to the contractor on actual basis. The verification of deployment labour will be done through biometric attendance system or any other suitable method by the Engineer in Charge. The applicable and eligible amount of EPF & ESI shall be reimbursed preferably within 7 days but not later than 30 days of submission of documentary proof of payment provided same are in order	Clause 19 L: Contribution of EPF and ESI It will be mandatory for all the agencies to register with ESI and EPFO departments within 30 days of the award of the work unless exempted by the provisions of ESI and / or EPFO and as amended time to time. The ESI and EPF contributions on the part of employer in respect of this contract shall be paid by the contractor. These contributions on the part of the employer paid by the contractor shall be reimbursed by the Engineer-in-charge to the contractor on actual basis. The verification of deployed labour will be done through biometric attendance system or any other suitable method by the Engineer in Charge. The agency shall submit an affidavit on a stamp paper of Rs. 100 that the employees were engaged fully and exclusively on the work for which the claim is being made. The applicable and eligible amount of EPF & ESI shall be reimbursed preferably within 7 days but not later than 30 days of submission of documentary proof of payment provided same are in order

This is issued with the approval of DG CPWD.

अधीक्षण अभियंता

(चन्द्र पाल)
सी. एंड. ई. मैनेजर (C&M)
06.11.2025

Issued from file No. CSQ/CM/17(1)/2024/ Construction e-file 9195855 (DFA/9350595)

के.लो.नि.वि. तथा लो.नि.वि. दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु (के.लो.नि.वि.वेबसाइट के माध्यम से)।



D.P. Jindal
EE (Contract)

केन्द्रीय लोक निर्माण विभाग

कार्यालय ज्ञापन

No. DG/CON/Construction 2023/20

ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD

VIDYUT BHAWAN, NEW DELHI

Dated: 27.02.2026

Subject: Modifications in General Rules & Directions, Clause 1 and Schedule E of GCC 2023 Construction Works

The following modifications are made in the General Rules & Directions, Clause 1 and Schedule E of GCC 2023 Construction Works.

Existing provision	Modified provision
General Rules & Directions 11 (i) The Contractor whose tender 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.	General Rules & Directions 11 (i) The Contractor whose tender is accepted, will be required to furnish performance guarantee as mentioned in Schedule 'E' and within the period specified in Schedule F.
Clause 1 Performance Guarantee (i) The contractor shall submit an irrevocable Performance Guarantee at specified percentage of the tendered amount as mentioned in Schedule 'E', in addition to other deposits mentioned elsewhere in the contract for his proper performance of the contract agreement, (not withstanding and/or without prejudice to any other provisions in the contract) within period specified in Schedule 'F' from the date of issue of letter of acceptance.	Clause 1 Performance Guarantee (i) The contractor shall submit an irrevocable Performance Guarantee as mentioned in Schedule 'E', in addition to other deposits mentioned elsewhere in the contract for his proper performance of the contract agreement, (not withstanding and/or without prejudice to any other provisions in the contract) within period specified in Schedule 'F' from the date of issue of letter of acceptance.
Sl. No. (ii) to (v)	No change
SCHEDULE 'E' Reference to General Conditions of contract Sl. No. (i)	SCHEDULE 'E' Reference to General Conditions of contract No change


 27/2/26
 EF(1)
 D.P. Jindal
 EE (Contract)

(ii) Performance Guarantee : 5% of tendered value.	(ii) Performance Guarantee : (a) 5% of tendered value or Estimated Cost Put to Tender (ECPT) (whichever is higher). (b) Where the tendered amount is less than eighty percent (80%) of the Estimated Cost Put to Tender (ECPT), the Performance Guarantee, in addition to the requirement under (a) above, shall be increased by an amount equal to the difference between eighty percent (80%) of the ECPT and the tendered amount.
Sl. No. (iii)	No change

Sl. No. (iii)

No change

अधीक्षक अभियंता (सी. एंड. एम.)
चक्रवात (अ.) अ. (सी. एंड. एम.)
27.02.2026

Issued from file No. CSQ/CM/17(1)/2026/Construction e-file 9212995 (DFA/9365660)

27/12/16
E (6/6)
D.P. Jindal
EE (Contract)

केन्द्रीय लोक निर्माण विभाग

कार्यालय ज्ञापन

No. DG/CON/Misc./48

ISSUED BY THE AUTHORITY OF DIRECTOR GENERAL, CPWD

Vidyut Bhawan, New Delhi

Dated: 17.06.2026

Subject: Advisory for timely processing of the tenders.

There are some instances of non-adherence of timelines prescribed for scrutiny of tenders as per Annexure-17 of SOP to CPWD Works Manual 2024, resulting in to cancellation of tenders as bids were not processed and accepted in validity period of bids as prescribed in the respective tenders.

The relevant provisions exist in SOP No. 4/1 (11) for CPWD Works Manual 2024. Further, the responsibilities of the officers are also mentioned for scrutiny of tenders in SOP No. 5/6 for CPWD Works Manual 2024.

In view of above, all the concerned are hereby advised to adhere strictly to the provisions of SOP No. 4/1 (11), 5/6 and Annexure-17 of SOP for CPWD Works Manual 2024 for processing of tenders timely and within the validity period of tender.

This issues with the approval of DG, CPWD.


(चन्द्र पाल)
15.06.2026

अधीक्षण अभियंता (सी.एंड एम.)

Issued from file No. CSQ/CM/17(1)/2026 e-file 9210604 (DFA/9361024)
के.लो.नि.वि. तथा लो.नि.वि. दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु (के.लो.नि.वि.वेबसाईट के माध्यम से)।

केन्द्रीय लोक निर्माण विभाग

कार्यालय ज्ञापन

No. DG/CON/Construction 2023/21

ISSUED BY THE AUTHORITY OF DIRECTOR GENERAL, CPWD

Vidyut Bhawan, New Delhi

Dated: 18.08.2026

Sub: Modification in Clause 19K: Deployment of Skilled/Semi-Skilled Tradesmen for GCC 2023 Construction Works.

Following modification is made in Clause 19K: Deployment of Skilled/Semi-Skilled Tradesmen for GCC 2023 Construction Works.

Existing Provision	Modified Provision
Clause 19 K Employment of skilled/ semi-skilled workers The contractor shall, at all stages of work, deploy skilled/semi-skilled tradesmen who are qualified and possess certificate in particular trade from CPWD Training Institute/Industrial Training Institute/ National Institute of construction Management and Research (NICMAR)/ National Academy of Construction, CIDC or any similar reputed and recognized Institute managed/ certified by State/Central Government. The number of such qualified tradesmen shall not be less than 20% of total skilled/semi-skilled workers required in each trade at any stage of work. The contractor shall submit number of man days required in respect of each trade, its scheduling and the list of qualified tradesmen along with requisite certificate from recognized Institute to Engineer in charge for approval. Notwithstanding such approval, if the tradesmen are found to have inadequate skill to execute the work of respective trade, the contractor shall substitute such tradesmen within two days of written notice from Engineer-in- Charge. Failure on the part of contractor to obtain approval of Engineer-in Charge or failure	Clause 19 K Deployment of skilled/semi-skilled workers The Contractor shall, at all stages of work, deploy skilled and semi-skilled tradesmen who are duly qualified and hold certificates in their respective trades, from the CPWD Training Institute, or from awarding bodies recognized under the aegis of National Council for Vocational Education and Training (NCVT), Ministry of Skill Development and Entrepreneurship (MSDE), or any institute recognized/certified by the State or Central Government for this purpose. The number of such qualified tradesmen shall not be less than 20% of the total skilled/semi-skilled workers required in each trade at any stage of work. The Contractor shall submit, for approval of the Engineer-in-Charge, the number of man-days required for each trade, the proposed scheduling, and the list of qualified tradesmen along with requisite certificates issued by any of the above recognized institutes. To make up any shortfall below the prescribed minimum limit of 20% of skilled/semi-skilled tradesman, the Contractor shall arrange skilling of

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to deploy qualified tradesmen will attract a compensation to be paid by contractor at the rate specified in schedule 'F' per such tradesman per day. Decision of Engineer in Charge as to whether particular tradesman possesses requisite skill and amount of compensation in case of default shall be final and binding. Provided always, that the provisions of this clause, shall not be applicable for works with estimated cost put to tender being less than Rs. 5 Crores. For work costing more than Rs. 10 Crores, and upto Rs. 50 Crores, the contractor shall arrange on site training as per National Skill Development Corporation (NSDC) norms for at least 20% of the unskilled workers engaged in the project in co-ordination with the CPWD Regional Training Institute & National Skill Development Corporation (NSDC) for certification at the level of skilled/semi-skilled tradesmen. For work costing more than Rs. 50 Crores, the contractor shall arrange on site training as per National Skill Development Corporation (NSDC) norms for at least 30% of the unskilled worker engaged in the project in coordination with the CPWD Regional Training Institute & National Skill Development Corporation (NSDC) for certification at the level of skilled/semi-skilled tradesmen. The cost of such training as stated above shall be born by the Government. The necessary space and workers shall be provided by the contractor and no claim what so ever shall be entertained.

workers at site under the Recognition of Prior Learning (RPL) program, conducted by awarding bodies recognized under NCVET or any institute recognized/certified by the State or Central Government for this purpose. The cost of such recognition/training, including the infrastructure required at site, shall be borne by the Contractor. The tradesmen undergoing training shall be paid their wages by the contractor for period during the training, and no reimbursement in this respect shall be made by the Government.

This provision shall not be applicable for works with an estimated cost put to tender of less than ₹5 Crore in case of construction works and less than ₹50 Lakh in case of maintenance works.

In the event, the contractor fails to provide the mandatory training to the tradesmen, a penalty of ₹1,000 per day per tradesman falling short of the required 20% target shall be imposed on the Contractor. Decision of Engineer in Charge shall be final and binding in this regard.

This issues with the approval of DG CPWD.

(चन्द्र पाल)
अधीक्षण अभियंता (सी.एंड.एम.)

Issued from file No. CSQ/CM/17(1)/2026/ Construction e-file 9196031 (DFA/ 9388060)

के.लो.नि.वि. तथा लो.नि.वि. दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु (के.लो.नि.वि.वेबसाईट के माध्यम से)।

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PART B

E & M WORKS

Name of the Work: Renovation of Guest Houses, Toilets, Hostel rooms including Wiring, IEL, Air Conditioners, Geysers & Fire Extinguishers at ICAR - NBAIR, Hebbal, Bangalore.

ADDITIONAL SPECIFICATIONS, CONDITIONS FOR INTERNAL E.I WORKS

1. The work shall be carried out strictly in accordance with CPWD specification for electrical works 2023 (Internal) and 2023 (External) and amended up to date and in accordance with Indian Electricity Rules, 2005, India Electricity Act, 2003 amended up to date, ECBC 2017 as 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 will be paid extra.
2. The contractor shall therefore employ Supervisory staff as per NIT provision who will be constantly in touch with the department and will sign site order book.
3. 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.
4. The work shall be carried out according to approved drawing/details which shall be subsequently issued to the successfully qualified bided tenderer for execution, in stages as per instruction of the Engineer-in-Charge who will have the right to change the layout as per requirement at site and the contractor shall not have any claim due to change in layout.
5. 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.
6. 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 are to be coordinated in accordance with the building work.
7. 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.
8. Cement for this benefited work is to be arranged and used by the contractor himself and nothing extra will be paid on this account.
9. 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.
10. The size of conduit and wiring shall be got approved from the Engineer-in-Charge before the execution of work.

11. 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 bonafide use of work at the risk & cost of the contractor.
12. 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.
13. 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.
14. 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.
15. 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.
16. Nothing extra shall be paid for inter connections with thimbles/Wires/Tapes strips etc. used on the work.
17. The contractor has to make his own arrangements for stores and watch and ward and no extra claim for this will be entertained.
18. The contractor shall make his own arrangements for electrical power supply for the construction activities. No extra payments for the same will be made.
19. The wiring and conduit route shall be marked by the contractor in the drawing first, and shall be got approved from the Engineer-in-charge.
20. The rupturing capacity of the MCB's shall be 10KA. The MCB's shall have ISI mark.
21. The insulated copper wire to be used on this work shall be FRLS type of multi stranded.
22. Make of MCB/MCCB shall be the same as the make of MCB DB.
23. 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.

24. All 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.
25. 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.
26. 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.
27. 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.
28. The connection between incoming switch/isolator and bus bar shall be made with suitable size of thimble and cable at no extra cost.
29. Copper conductor of insulated cables of size 1.5 Sq.mm and above shall be stranded and terminals provided with crimped lugs.
30. 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.
31. All hardware items such as nuts/bolts/screws/washers etc. to be used in work shall be zinc/cadmium plated iron.
32. While laying conduit, suitable size junction boxes shall be provided for pulling the wire as per the decision of the E-in-C.
33. Materials to be used in work are to be ISI marked. The make of the materials have been indicated in the list of acceptable 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 E-in-C shall reserve the right to instruct the contractor to remove the material which, in his opinion, is not acceptable.
34. 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.
35. The materials used in the work shall be of approved make as per List of preferred makes.

36. Defect Liability Period: All the installations other than LED fittings shall be guaranteed for a period of 12 months from the date of completion. LED fittings shall be guaranteed for 5 years. Any defective materials and equipment shall be replaced free of cost at the direction of the Engineer-in-Charge.
37. In the preferred makes of fitting model No. of one of the acceptable make has been mentioned for guidance. However, the contractor is free to supply any of the makes, provided the parameters of the fittings match with the fitting model No. mentioned in NIT. The decision of Engineer-in-charge shall be final.
38. 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 and products from the manufacturer.
39. Wiring for Fire alarm system shall be done with MS conduit or FRLS PVC insulated armoured cable (Red colour) as per requirement.
40. The contractor shall have to work as per the convenience of the concerned Department.
41. LED fittings, as a whole including driver are guaranteed for 5 years. All the LED fittings are to be suitably engraved/ stickered inside with for date of handing over.
42. The guarantee for LED fittings is to be got submitted from the manufacturer also in addition to the guarantee from the contractor. The manufacturer should give undertaking that in case of discontinuation of model and non-availability of spares, they will replace the fittings with equivalent/ high end model in case of manufacturing defect during the warranty period of 5 years in Annexure – X.
43. 5% of the total quantity of each type of LED fittings shall be extra supplied at site within quoted rates without claiming any extra cost (minimum qty not less than 1 No.)
44. The agency shall stand guarantee/ warranty for 5 years of all the LED fittings and provide certificate from the manufacturer to attend the complaints for repairing / replacement of all LED fittings on the basis of complaints of defective LED fittings.
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.

1.0 SPECIAL CONDITIONS

1.1 GENERAL

- 1.2 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.
- 1.3 Before tendering, the contractor shall inspect the site of work and shall fully acquaint himself about the conditions prevailing at site, availability of materials, availability of land and suitable location for construction of godowns, stores and camp, transport facilities, the extent of leads and lifts involved in execution of work.
- 1.4 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. However, the departmental land to the extent available may be allowed to be used for these purposes free of rent without accepting any responsibility for the delay, if any, on this account. 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.
- It shall be deemed that the contractor has satisfied himself as to the nature and location of the work, transport facilities, availability of land for setting up of camp, etc. The department will bear no responsibility for lack of such knowledge and the consequences thereof.
- 1.5 The contractor shall have to make approaches to the site, if so required and keep them in good condition for transportation of labour and materials as well as inspection of works by the Engineer-in-Charge. Nothing extra shall be paid on this account.
- 1.6 The contractor shall carry out true and proper setting out of the work in co-ordination with the Engineer-in-Charge or his authorized representatives and shall be responsible for the correctness of the positions, levels, dimensions and alignments of all parts of the structure. If at any time during the progress of the work any error appears or arises in the position, level, dimensions or alignment of any part of the work, the contractor on being asked to do so by the Engineer-in-Charge, shall rectify such error to the entire satisfaction of Engineer-in-charge. The checking by the Engineer-in-Charge or his authorized representatives shall not relieve the contractor of his responsibility for the correctness of any setting out of any line or level. The contractor shall carefully protect and preserve all bench marks, pegs and pillars provided for setting out of works.

- 1.7 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.
- 1.8 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 eg. Packaging, sealing, transportation, loading, unloading etc including testing charges shall be borne by the contractor.
- 1.9 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 CPWD. 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.
- 1.10 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.
- 1.11 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.
- 1.12 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.

- 1.13 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.
- 1.14 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.
- 1.15 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.
- 1.16 The contractor will have to make his own arrangement for obtaining electricity connection from the State Electricity Board and make necessary payment directly to the department concerned and/or install generators at the site of work, if required and nothing extra whatsoever will be payable on this account.
- 1.17 The drawings for the work issued by the Engineer-in-Charge during execution of work shall at all times be properly correlated before executing any work and no claim whatsoever shall be entertained for discrepancies in the drawings.
- 1.18 The contractor shall maintain in good condition all work executed till the completion of entire work entrusted to the contractor under this contract.
- 1.19 No payment shall be made to the contractor for damage caused by rain, whatsoever during the execution of works and any damage to the work on this account shall have to be made good by the contractor at his own cost.
- 1.20 The rates for all items of work, unless clearly specified otherwise, shall include the cost of all labour, materials, de-watering required, if any, and other inputs involved in the execution of the items.
- 1.21 Unless otherwise provided in the schedule of quantities, the percentage rates tendered by the contractor shall be all inclusive and shall apply to all heights, depths, leads and lifts, except for additional height in centring and shuttering over a height of 3.5m.
- 1.22 No claim whatsoever for idle labour, additional establishments, costs of hire and labour charges for tools and plants etc, would be entertained under any circumstances.

- 1.23 For the safety of all labour directly or indirectly employed in the work the contractors shall, in addition to the provision of CPWD safety code and directions of the Engineer-in-Charge, make all arrangements to provide facility as per the provision of Indian Standard Specifications (Codes) listed below & nothing extra shall be paid on this account.
1. IS 3696 Part I : Safety Code for scaffolds and ladders
 2. IS 3696 Part II : Safety Code for scaffolds and ladders Part II ladders
 3. IS 764 : Safety Code for excavation work
 4. IS 4138 : Safety Code for working in compressed air
 5. IS 7293 : Safety Code for working with construction machinery
 6. IS 7969 : Safety Code for storage and handling of building materials
 7. IS 4130 : Safety Code for demolition of buildings
- 1.24 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.
- 1.25 Royalty if any payable and all other incidental expenditure shall have to be paid by the contractor on all the boulders, metal shingle, earth, sand bajri, etc. collected by him for the execution of the work, direct to the concerned Revenue Authority of the State or Central Govt. and the amount paid shall not be reimbursed in any form whatsoever.
- 1.26 Other agencies working at site will also simultaneously execute the works entrusted to them and to facilitate their working, the contractor shall make necessary provisions e.g. holes, openings, etc. for laying/burying pipes, cables, conduits, clamps, hooks, etc. as may be required from time to time. The contractor shall extend full co-operation to other agencies for smooth execution of works by other agencies. The final finishing of the work is to be executed in co-ordination with other agencies as directed by the Engineer-in-Charge.
- 1.27 (i) On account of security considerations, there could be some restrictions on the working hours, movement of vehicles for transportation of materials and location of labour camp. The contractor shall be bound to follow all such restrictions and adjust the programme for execution of work accordingly. Nothing extra shall be paid on this account.
- (ii) The contractor shall scrupulously follow all the security regulations of work site that would be in force from time to time, during the period of execution of the work. He shall obtain necessary entry gate passes for bringing in the materials and work force inside work site for execution of the work and he shall furnish full details of materials collected at site of work with supporting documentary evidence. He shall be permitted to take out surplus materials from the site of work, from the work site, after obtaining necessary

gate pass, from the Engineer in charge or his authorized representative.

(iii) The contractor shall not be permitted to construct labour hutments in work site. He shall also not be permitted to allow his work men or his authorized representatives, etc., to stay in work site beyond office hours.

- 1.28 Unless otherwise specified in the schedule of quantities the rates for all items of work shall be considered as inclusive of working in or under water and/or liquid mud and/or foul conditions including pumping or bailing out liquid mud or water accumulated in excavations during the progress of the work from springs, tidal or river seepage, rain, broken water mains or drains and seepage from subsoil aquifer.
- 1.29 In case of any difference in the Hindi version and English version in any of the condition of contract, English version shall prevail.
- 1.30 It is the responsibility of the contractor to obtain necessary no objection certificate, wherever required for approval of drawings, water supply, sanitary connection, electricity connection, completion certificate, occupation certificate, clearance from fire department etc. from Central Govt. / State Govt. / Development Authority / Municipal Corporation / Zilla Parishad / Local Bodies / Village Panchayat or any other organization as applicable.

Nothing extra shall be paid to the contractor for obtaining such sanctions / approval / clearance from the above bodies. However, necessary requisition and letters required in this regard shall be given by the Department. The required fees and other statutory deposits as may be prescribed by the above bodies shall be borne by the Department.

1.31 BAR CHART

- 1.31.1 The Contractor shall submit a Programme Chart (Time and Progress) for each mile stone along with performance guarantee and get it approved from the Department. The chart shall be prepared in direct relation to the time stated in the contract documents for completion of the items of the work. It shall indicate the forecast of the dates of commencement and completion of various trades of sections of the work and may be amended as necessary by agreement between the Engineer-in-charge and the contractor within the limitations of time imposed in the contract documents, and further to ensure good progress during the execution of the work. The contractor shall in all cases in which time allowed for any work exceeds one month (save for special jobs for which a separate program has been agreed upon) complete the work as per milestones given in Schedule 'F'.
- 1.31.2 While preparing the above detailed bar chart, effort shall be made to take all possible items of work simultaneously.
- 1.31.3 Separate bar chart should be prepared exclusively for procurement of materials. The detailed bar chart should distinctly bifurcate the items of work and of materials required for the execution of that item. Both should not be clubbed together. For example, for internal plumbing work the bar chart should show the procurement of pipe and other fittings with start and finish

dates and items of work with start and finish dates separately. Both items should be interlinked preceeding and succeeding activity. The bar chart not indicating procurement items separately will not be accepted.

1.31.4 Similarly, bar chart should be prepared separately for arrangement of labour.

1.31.5 The bar chart so finalized and accepted by department should be got reviewed by the department, once in a month regularly. Modified / revised bar chart shall be prepared in the event of not adhering to the targets mentioned in the earlier bar chart. The contractor shall augment additional resources, materials and man power for achieving the targets, so submitted in the revised bar chart.

1.31.6 **In addition to the above bar chart, the contractor shall submit detailed programme of activities using MS projects software. He shall furnish the details both in hard copies as well as soft copies. Nothing extra shall be paid on this account.**

1.32 **Prevention of Nuisance and Pollution Control:**

The contractor shall take all necessary precautions to prevent any nuisance or inconvenience to the occupants of the adjacent properties and to the other public in general and to prevent any damage/ inconvenience to them from noise, dust, smoke and other pollutants. The contractor shall make good at his cost and to the satisfaction of Engineer-in-charge any damage to roads, paths, cross drainage works, and or any other properties whatsoever caused due to execution of work or by the traffic brought there on by the contractor.

1.33 **SAFETY PRACTICES**

(i) **WARNING / CAUTION BOARDS:** All temporary warning / caution boards / glow signage display such as “Construction Work in Progress”, “Keep Away”, “No Parking”, Diversions & protective Barricades etc. shall be provided and displayed during day time by the Contractor, wherever required and as directed by the Engineer-in-Charge. These glow signage and red lights shall be suitably illuminated during night also. The Contractor shall be solely responsible for damage and accident caused, if any, due to negligence on his part. Also he shall ensure that no hindrance, as far as possible, is caused to general traffic during execution of the work. This signage shall be dismantled & taken away by the Contractor after the completion of work, only after approval of the Engineer-in-Charge. Nothing extra shall be payable on this account except for protective barricades.

(ii) **SIGN BOARDS:** The Contractor shall provide and erect a display board of size and shape as required and paint over it, in a legible and workman like manner, the details about the salient features of the project, as required by the Engineer-in-Charge. The Contractor shall fabricate and put up a sign board in an approved location and to an approved design indicating name of the project, Client/Owner, Engineer-in-charges, Structural Consultants, Department etc. besides providing space for names of other Contractors, Sub-Contractors and specialized agencies within 15 days from issue of commencement letter. Nothing extra shall be payable on this account. **In case of noncompliance / delay in compliance in this, a non-refundable penalty @ Rs. 2500/- per**

week will be imposed which will be recovered from the immediate next R/A Bill of the Contractor.

- (iii) Necessary protective and safety equipments such as helmet, safety shoes, gloves etc., shall be provided to the inspecting officers of the department, Site Engineers, Supervisory staff, labour and technical staff of the contractor by the Contractor at his own cost and to be used at site.
- (iv) No inflammable materials including P.O.L shall be allowed to be stored in huge quantity at site. Only limited quantity of P.O.L may be allowed to be stored at site subject to the compliance of all rules / instructions issued by the relevant authorities and as per the direction of Engineer-in-Charge in this regard. Also, all precautions and safety measures shall be taken by the Contractor for safe handling of the P.O.L products stored at site. All consequences on account of unsafe handling of P.O.L shall be borne by the Contractor.

1.34 QUALITY ASSURANCE

- (i) The Contractor shall have to engage well-experienced skilled labour and deploy modern T&P and other equipment to execute the work. Many items like exposed finish form work, specialized flooring work, silicon sealant and backer rod fixing in expansion joints, factory made door shutters, proper slope maintaining in toilet units, sanitary- water supply installations will specially require engagement of skilled workers having experience particularly in execution of such items.
- (ii) 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.
- (iii) In addition to the supervision of work by CPWD engineers, the Senior officers of CPWD, CTE Organization, QCTA team of CPWD and Consultants deployed by the work site / CPWD shall also be carrying out regular and periodic inspection of the ongoing activities in the work and deficiencies, shortcomings, inferior workmanship pointed out by them shall be communicated by CPWD engineers to the contractor. Upon receipt of instructions from Engineer-in-Charge these are also to be made good by necessary improvement, rectification, replacement upto his complete satisfaction.
- (iv) 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 item of work in Schedule of Quantity, the same shall be used after getting the same approved from Engineer-In-Charge. Wherever brand / quality of material is not specified in the item of work, the contractor shall submit the samples as per suggested list of brand names given in the tender document / particular specifications for approval of Engineer-In-Charge. 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.

- (v) The Contractor shall procure and provide all the materials from the manufacturers / suppliers as per the list attached with the tender documents, as per the item description and particular specifications for the work. The equivalent brand 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 approval of the Engineer in charge.
 - (vi) All materials whether obtained from Govt. stores or otherwise shall be got checked by the Engineer-in-Charge or his authorized supervisory staff on receipt of the same at site before use.
 - (vii) 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.
 - (viii) 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.
- 1.35 **By uploading schedule of quantities, the bidder is deemed to have read, understood and accepted all terms and condition of this tender document.**
- 1.36 Unless otherwise specified, nothing extra, whatsoever shall be paid for executing the work as per the above SPECIAL CONDITIONS in the NIT.
- 1.37 **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 E-in-C 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 however, the cost of all testing shall be borne by the contractor.

1.38 PREFERRED MAKES (BRANDS) OF MATERIALS:

Preferred makes (brands) of materials for guidance, wherever applicable and in the scope of work, are given in the tender document. Alternate equivalent makes (brands) may also be used subject to:

- a) The contractor submits all documents to the satisfaction of the Engineer-in-charge to prove that the alternate make meets the contract specifications in all respect and is equivalent to the specified make.
- b) The necessary cost adjustments, if any, on account of above change shall be made by the Engineer-in-charge.
- c) The Engineer-in-Charge approves the alternate equivalent make.

GENERAL CONDITIONS FOR ALL E&M PACKAGES

The agency must study various CPWD specifications; get themselves acquainted with site and site conditions. The work shall be executed in close co-ordination with the progress of building work.

The work shall be carried out in the following order of preference.

Additional Technical specifications and list of acceptable makes attached. CPWD general specifications for electrical works Part-I (Internal)-2023, Part-II (External)-2023 amended up to date, CPWD general specifications for electrical works, Local Fire Regulations, CPWD general specifications for air-conditioning / HVAC works-2024, Indian electricity rules 2005 & Indian electricity act 2003 amended up to date. National electrical code 2011 amended up to date and Relevant sections of National building code 2016. (Note: The higher specifications / stringent conditions of CPWD specifications or NBC-2016, ECBC-2017 shall be followed). Relevant BIS with all standards as modified up to date.

Sound Engineering practice as approved by the Engineer-in-charge. Any additional item of work, if taken up subsequently, shall also conform to the relevant specifications mentioned above.

All the equipment shall be delivered with (i) Manufacturer's test certificate, (ii) Manufacturer's technical catalogues and Installation / Instruction (O&M) manuals.

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.

The design layout plans / drawings / other documents pertaining to E & M services shall have to be submitted by the consultant engaged by the contractor for approval within the time period as specified in the table of mile stone.

Inspection before Dispatch: All routine tests shall be conducted before dispatch of equipment. No equipment shall be dispatched out from the manufacturer's 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.

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.

1.1 PROCEDURE FOR APPROVAL OF MATERIALS, SHOP FLOOR DRAWINGS AND COMMENCEMENT OF WORK

Within the time specified in table of milestone, the contractor shall submit the following documents for approval. 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 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.

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 IT handing over, the insurance cover will be suitably extended by the contractor at his own cost.

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 contractor himself.

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.

1.2 Inspection and testing at Factory and site

The department requirement reserves the right to inspect the equipment and get it tested at factory itself for which the Contractor has to give 15 days 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 installation 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.

Completeness of work: The installations shall be completed in all respects and put in to operation even where certain details have not been mentioned / left out in these specifications. Any discrepancy may be brought out in pre-bid meeting.

All E&M services such as Internal Electrical installations, lifts, firefighting system, sprinkler system & Fire alarm system, D.G. sets, substation equipment, street lighting etc., shall be declared as completed after completion of trial run of 1 month or completion of whole work whichever is later. However, maintenance of these installations during the maintenance period of 12 months shall be carried out by the agency at his own cost. DLP / Warranty period of all works / machine / equipment shall commence from date of completion of complete work (project).

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

The CPWD specifications are available at CPWD website "**cpwd.gov.in**". The department shall not be responsible for the lack of knowledge and also the consequences thereof to the Contractor. The information and data mentioned in the tender document have been furnished in good faith and for general information and guidance only. The Engineer-in-Charge in no case shall be held responsible for the accuracy thereof and / or interpretations or conclusions drawn there from by the Contractor and all consequences shall be borne by the Contractor and no claim, whatsoever, shall be entertained from the Contractor, if the data or information furnished in tender document is different from data / drawing after preparation of architectural drawings, design and approved for construction. It is presumed that the Contractor has satisfied himself for all possible contingencies, situations, bottlenecks and acts of coordination, which may be required between different agencies.

INCIDENTAL CHARGES: All incidental charges of any kind including cartage, storage, wastage and safe custody of material etc. shall be borne by the Contractor.

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. Day to day account of receipt of such material shall be maintained at site of work and shall be regulated by the department. Nothing extra shall be payable on this account.

STORAGE OF MATERIALS: Storage and safe custody of all materials shall be the sole responsibility of the Contractor. Nothing extra shall be payable on this account.

1.3 QUALITY CONTROL AND TESTING OF MATERIALS

All the material to be used on works shall bear ISI certification mark unless otherwise the make is specified in the item or special conditions appended to this tender document. In case ISI mark material or the materials mentioned in the tender documents are not available, as per opinion of Engineer-in-charge, which shall be final and binding, the material to be used shall conform to CPWD specifications applicable in this tender or IS Code. In such cases Engineer-in-charge shall satisfy himself about the quality of such material and give his approval in writing. Only articles classified as first quality by the manufacturers shall be used unless otherwise specified. All material not having ISI mark shall be tested as per relevant ISI specification. The Engineer in charge may relax the condition regarding testing if the quantity of the materials required for the work is small. In all cases of use of ISI marked materials proper proof of procurement of materials from authentic manufacturers shall be provided by the contractor to the entire satisfaction of Engineer-in-charge. All materials equivalent to the one specified should be got approved by the Engineer-in-charge before using the said materials in the work.

If the department desires to send any samples of materials for testing in an accredited laboratory, the Contractor at his own expense shall supply all materials, labour for preparing and testing samples as required by the Engineer-in-Charge. The testing shall be carried out in the presence of the representative of the Engineer-in-Charge. The transportation and testing charges shall also be borne by the contractor. No foreign exchange shall be made available by the department for importing (purchase) of equipment, plants, machinery, materials of any kind. No delay and no claim of any kind shall be entertained from the Contractor on account of variation in the foreign exchange rate and/or any Custom duties / charges or any other levies.

NO WAIVING OF LEGAL RIGHTS AND POWERS : The Engineer-in-Charge shall not be precluded or stopped from taking any measurements, and framing of estimates or detaining any certificates made either before or after the completion and acceptance of the work and payment, from showing the true amount and character of the works performed and materials furnished by the Contractor and from showing that any such measurements, estimates or certificates untrue or incorrectly made and that Engineer-in-charge shall not be precluded or stopped from recovering from the Contractor such damages as it may be sustained by reason of his failure to comply the terms and conditions of the contract.

The tenderers shall take into account the element of wastage(s) those are likely to be there in all elements of the work and quote his price, taking that into account. The tenderers shall study all the items from the point of view of wastage(s), which are likely to take place. Power supply required for construction, testing & commissioning shall have to be arranged by the bidder at his own costs. Water required for testing of equipment is also in the scope of agency.

The description of E & M service & specification are 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 respects.

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 the contractor for various components of work. No adjustment of rates shall be made for any variation in quantum of incidental works due to variation/change in actual working drawings. Also, no adjustment of rates shall 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.

The scope of works also covers the preparation of layout plans, drawings for E & M schemes and approval of the same from the respective local body's viz. BESCOM/Chief Fire Officer/Lift Inspector/CEA etc. before the commencement of work. During execution, if the local bodies etc. require a modification, the same shall be executed without any extra cost. Finally, after execution, approvals / NOCs / clearances from local bodies etc. shall be the responsibility of successful bidder for which nothing extra is payable. In case any modification / extra work is required by the local bodies necessary for approvals / NOCs / clearances, the same shall be get executed and nothing extra shall be paid on this account. All statutory fees / charges required for obtaining clearances from Fire Officer/Lift Inspector/CEA / Local Bodies etc. shall be paid by the department.

1.4 SUPERVISION OF WORK

The Contractor shall depute Site Engineers & skilled workers as required for the work as per the documents required in technical bids. He shall submit organization chart along details of Engineers and supervisory staff. It shall be ensured that all decision making powers shall be available to the representatives of the Contractor at site of work itself to avoid any likely delay on this account. The Contractor shall also furnish list of persons for specialized works to be executed for various items of work. The Contractor shall identify and deploy key persons having qualifications and experience in the similar and other major works, as per the field of their expertise. If during the course of execution of work, the Engineer-in-Charge is of the opinion that the deployed staff is not sufficient or not well experienced; the Contractor shall deploy more staff or better-experienced staff at site to complete the work with stipulated quality and in stipulated time limit.

1.0 COMMERCIAL CONDITIONS FOR ALL E&M WORKS

Type of Contract: The work be awarded by this tender shall be treated as indivisible works contact.

1.1 Completeness of Tender

All sundry equipment, fittings, unit assemblies, accessories, hardware items, foundation bolts, termination lugs for electrical connections, and all other items which are useful and necessary for efficient assembly and installation of equipment and components of the work shall be deemed to have been included in the tender irrespective of the fact whether such items are specifically mentioned in the tender documents or not

1.2 Storage and Custody of Materials

The agency has to make his own arrangements. No separate storage accommodation shall be provided by the department. Watch and ward of the stores and their safe custody shall be the responsibility of the contractor till the final taking over of the installation by the department.

1.3 Care of The Building

Care shall be taken by the contractor while handling and installing the various equipment and components of the work to avoid damage to the building. He shall be responsible for repairing all damages and restoring the same to their original finish at his cost. He shall also remove at his cost all unwanted and waste materials arising out of the installation from the site of work.

1.4 Completion Period

The completion period indicated in the tender documents is for the entire work of planning, designing, approval of drawings etc., arrangement of materials & equipment, delivery at site including transportation, installation, testing, commissioning and handing over of the entire system to the satisfaction of the Engineer-in-charge.

1.5 Guarantee

- 1.5.1 All equipment shall be guaranteed for a period of 12 months (except LED fittings which shall be guaranteed for minimum 5 years), from the date of taking over the installation by the department, against unsatisfactory performance and/or break down due to defective design, workmanship or material. The equipment or components, or any part thereof, so found defective during guarantee period shall be forthwith repaired or replaced free of cost, to the satisfaction of the Engineer-in Charge. In case it is felt by the department that undue delay is being caused by the contractor in doing this, the same will be got done by the department at the risk and cost of the contractor. The decision of the Engineer-in-charge in this regard shall be final & binding on the contractor.

- 1.5.1.1 LED fittings, as a whole including driver are guaranteed for 5 years. All the LED fittings are to be suitably engraved/ stickered inside with for date of handing over.
- 1.5.1.2 The guaranty for LED fittings is to be got submitted from the manufacturer also in addition to the guarantee from the contractor. The manufacturer should give undertaking that in case of discontinuation of model and non-availability of spares, they will replace the fittings with equivalent / high end model in case of manufacturing defect during the warranty period of 5 years.
- 1.5.2 The contractor shall guarantee among other things, the following vis-à-vis specifications:
- (a) Quality, strength and performance of the materials used as per manufacturers standards.
 - (b) Safe mechanical and electrical stress on all parts under all specified conditions of operation.
 - (c) Satisfactory operation during the maintenance period.
- 1.6 Power Supply:** Shall be arranged by the contractor.
- 1.7 Water Supply:** Shall be arranged by the contractor.
- 1.8 Acceptable makes of Various Equipment**
- The Acceptable makes of various equipment / components / accessories have been indicated in “**List of Preferred Makes**”. The tenderer shall work out the cost of the offer on this basis.
- 1.9 Data Manual and Drawings to be furnished**
- 1.9.1 After award of work**
- The successful tenderer would be required to get approved from department the following drawings within 30 days of award of work for approval before commencement of installation.
- (a) General arrangement drawing of all the equipment and services.
 - (b) Any other drawings necessary for the job, statutory approvals etc.
- 1.9.2 The successful tenderer should furnish well in advance three copies of detailed instructions and manuals of manufacturers for all items of equipment regarding installation, adjustments operation and maintenance including preventive maintenance & trouble shooting together with all relevant data sheets, spare parts catalogue etc. all in triplicate.

1.10 Extent of Work

- 1.10.1 The work shall comprise of entire labour including supervision and all materials necessary to make a complete installation and such tests and adjustments and commissioning, as may be required by the department. The term complete installation shall not only mean major items of the plant and equipment covered by the specifications but all incidental sundry components necessary for complete execution and satisfactory performance of installation with all layout charts whether or not those have been mentioned in details in the tender document in connection with this contract as this is a turnkey job.

1.11 Inspection and Testing

- 1.11.1 All major equipment shall be offered for initial inspection at manufacturers works. The contractor will intimate the date of testing of equipment at the manufacturer's works before dispatch. The Successful tenderer shall give advance notice of minimum two weeks regarding the dates proposed for such tests to the department's representative to facilitate his presence during testing. The Engineer-in-charge may witness such testing. The cost of the Engineer's visit to the factory will be borne by the department. Equipment will be inspected at the manufacturer / Authorized dealers premises, before dispatch to the site by the contractor if so desired by the Engineer-in-charge.
- 1.11.2 Copies of all documents of routine and type test certificates of the equipment, carried out at the manufacturers premises shall be furnished to the Engineer-in-charge and consignee.
- 1.11.3 After completion of the work in all respects the contractor shall offer the installation for testing and operation.

1.12 COMPLIANCE WITH REGULATIONS AND INDIAN STANDARDS

- 1.12.1 All works shall be carried out in accordance with relevant regulation, both statutory and those specified by the Indian Standards related to the works covered by this specification. In particular, the equipment and installation will comply with the following:
- Factories Act
 - Indian Electricity Rules
 - B.I.S. & other standards as applicable
 - Workmen's compensation Act
 - Statutory norms prescribed by local bodies like CEA, Power Supply Co., etc
- 1.12.2 After completion of the installation, the same shall be offered for inspection by the representatives of the Central Electricity Authority / ESCOM/ Fire department / Pollution control board as reqd. The contractor will extend all help including test facilities to the representatives of CEA / ESCOM. The observations of Statutory bodies shall be attended by the contractor. The installation will be commissioned only after getting clearance from the local Bodies as above.

1.12.3 Nothing in this specification shall be construed to relieve the successful tenderer of his responsibility for the design, manufacture and installation of the equipment with all accessories in accordance with currently applicable statutory regulations and safety codes.

1.12.4 Successful tenderer shall arrange for compliance with statutory provisions of safety regulations and departmental requirements of safety codes in respect of labour employed on the work by the tenderer. Failure to provide such safety requirement would make the tender liable for penalty of Rs. 200/- (or as may be decided by the competent / local authority / labour welfare officer) for each default. In addition, the department will be at liberty to make arrangement for the safety requirements at the cost of tenderer and recover the cost thereof from him.

1.13 Indemnity

The Successful tenderer shall at all times indemnify the department, consequent on this works contract. The successful tenderer shall be liable, in accordance with the Indian Law and Regulations for any accident occurring due to any cause and the contractor shall be responsible for any accident or damage incurred or claims arising there from during the period of erection, construction and putting into operation the equipments and ancillary equipments under the supervision of the successful tenderer in so far as the latter is responsible. The Successful tenderer shall also provide all insurance including third party insurance as may be necessary to cover the risk. No extra payment would be made to the successful tenderer on account of the above.

1.14 Erection Tools

No tools and tackles either for unloading or for shifting the equipments for erection purposes would be made available by the department. The successful tenderer shall make his own arrangement for all these facilities.

1.15 Cooperation with other Agencies

The Successful tenderer shall co-ordinate with other contractors and agencies engaged in the construction of buildings, if any, and exchange freely all technical information so as to make the execution of this work/contract smooth. No remuneration should be claimed from the department for such technical cooperation. If any unreasonable hindrance is caused to other agencies and any completed portion of the work has to be dismantled and re-done for want of cooperation and coordination by the tenderer during the course of work, such expenditure incurred will be recovered from the successful tenderer if the restoration work to the original condition or specification of the dismantled portion of the work was not undertaken by the tenderer himself.

1.15.1 Insurance and Storage:

All consignments are to be duly insured upto the destination from warehouse at the cost of the contractor. The insurance covers shall be valid till the equipment is handed over duly installed, tested and commissioned.

1.16 Verification of Correctness of Equipment at destination

The contractor shall have to produce all the relevant records to certify that the genuine equipments from the manufacturers has been supplied and erected.

1.17 Painting

This shall include cost of painting of the entire installation. The major equipments 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, supports etc. 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.

1.18 Training

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.

1.19 Maintenance

1.19.1 Sufficient trained and experienced staff shall be made available to meet any exigency of work during the guarantee period of one year from the handing over of the installation.

1.19.2 The maintenance, routine as well as preventive, for one year from the date of taking over the installation as per manufacturers recommendation shall be carried out on quarterly basis.

1.20 Interpreting Specifications

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

- a) Schedule of quantities
- b) Technical specifications
- c) Drawing (if any)
- d) CPWD General specifications

Additional conditions and Technical Specifications for AC units

The work shall be carried out as per the following Specifications for Air Conditioning works and generally in accordance with the following:

- a. CPWD General Specifications for Air conditioning works – 2024, amended upto date.
- b. CPWD General Specifications for Electrical Works Part I Internal – 2023, amended upto date.
- c. CPWD General Specifications for Electrical Works Part II External – 2023, amended upto date.

Scope:

The scope of work shall include supply installation, testing & commissioning, at site of split type air conditioners.

Split AC Units:

Air conditioners shall be suitable for 230V, 50 Hz single phase AC supply, capable of performing the functions such as Cooling, Dehumidifying, Air circulating and Filtering, and of inverter technology.

The air conditioners shall be fitted with discharge cooled rotary compressor, compressor unit operating on Refrigerant R410a with suitable rated capacitor start electric motor. It shall be equipped with overload protection. These shall be mounted on resilient mountings for quiet operation. The compressor shall conform to IS: 10617. part (1)- 1983 (Reaffirmed 2001) incorporating amend No 1 & 2.

The air conditioners shall be complete with automatic temperature control and cut-in and cut-out etc. for temperature range 16 degrees to 30 deg. C. The differential of the thermostat for cut-in and cut-out shall not be greater than ± 1.75 deg C. The Air conditioners may either be provided with adjustable step less type mechanical thermostat or electronic thermostat as per IS: 11338:1985.

The Filter Pads provided shall be washable:

The cabinet of the evaporator unit and condensing unit shall be made from galvanized steel sheet of 1.0mm thick with galvanized coating thickness of 120 gm / sq. mt and shall be of robust construction and shall have rounded corners, steel parts / front panel etc. shall have stove-enameled finish preceded by undercoat of anti-corrosive primer paint phosphating and through cleaning of the surface. Alternate methods of corrosion protection like plastic powder coating, electrostatic painting is also acceptable in lieu of stove enameled finish. Both evaporator coil/condenser coil shall be copper with corrosion producted aluminium fins Overall power factor of the unit shall be at least 0.85 at capacity rating test conditions.

Galvanized sheet shall conform to IS: 277/2003:

The indoor units made of ABS / HIPS shall be of flame retardant and impact resistant life. ABS / HIPS indoor unit cabinet shall pass inflammability test requirement for Grade V-0 as per UL-94. For impact resistance the unit duly packed, when dropped from a height of 1 Mt. shall show no damage.

Display shall be LED / LCD and provided on indoor unit and on Handset. These displays shall be selectable.

Remote control (Cordless) with LCD Display shall be provided with one On/Off timer, selecting Fan speed (Three speeds) and setting up of temperature.

Piping, insulation and cables:

- i) Suction line copper pipe of 0.70mm thickness.
- ii) Liquid line copper pipe of 0.70mm thickness.
- iii) Expanded polyethylene foam insulation tubing for suction line copper pipe.
- iv) Drain pipe (25mm dia. flexible PVC pipe).
- v) 4 core PVC insulated copper wire 2.5 sq.mm to electrically connect both the units with each other.

Installation of the AC unit:

The installation at site shall comprise the following:

- i) Mounting / Fitting indoor & outdoor units at the respective locations.
- ii) Laying refrigerant piping of standard length and connecting both the units after drilling hole / holes in the wall, if required.
- iii) Insulating the suction pipe with expanded polyethylene foam 5mm tubing.
- iv) Laying 25mm drain pipe to throw out the condensate- water being formed in the indoor unit.
- v) Leak testing the entire system.
- vi) Charging Refrigerant gas in the unit.

Suitable electric wiring between indoor and outdoor units is included in the scope of supply.

TECHNICAL SPECIFICATION FOR ALL E&M WORKS

CPWD General Specifications for electrical works Part-I (Internal)-2023, Part-II (External)-2023 amended up to date, CPWD general specifications for electrical works, CPWD general specifications for air-conditioning / HVAC works – 2024, Indian electricity rules 2005 & Indian electricity act 2003 amended up to date. National electrical code 2011 amended up to date and Relevant sections of National building code 2016. (Note: The higher specifications / stringent conditions of CPWD specifications or NBC-2016, ECBC-2017 shall be followed). Relevant BIS with all standards as modified up to date.

Sound Engineering practice as approved by the Engineer-in-charge. Any additional item of work, if taken up subsequently, shall also confirm to the relevant specifications mentioned above.

All the equipment shall be delivered with (i) Manufacturer's test certificate, (ii) Manufacturer's technical catalogues and Installation / Instruction (O&M) manuals.

The design layout plans / drawings / other documents pertaining to E & M services shall have to be submitted by the consultant engaged by the contractor for approval within the time period as specified in the table of mile stone.

FORM – C**PROPOSAL FOR ELIGIBLE ASSOCIATING AGENCIES FOR MAJOR 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						
2						
3						
4						

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

CONSENT LETTER FROM ELIGIBLE ASSOCIATE AGENCY OF MAJOR COMPONENT OF WORK

Name of work: **Renovation of Guest Houses, Toilets, Hostel rooms including Wiring, IEL, Air Conditioners, Geysers & Fire Extinguishers at ICAR - NBAIR, Hebbal, Bangalore...**

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 Associate/

Contractor Address

Signature with date of

Minor Component Contractor Address

Witness with address
(From major component contractor side)
contractor side)

Witness with address
(From minor component

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: Renovation of Guest Houses, Toilets, Hostel rooms including Wiring, IEI, Air Conditioners, Geysers & Fire Extinguishers at ICAR - NBAIR, Hebbal, Bangalore..

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 (CPWD) 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, CPWD, Bangalore. 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)

LOWEST BIDDER TO SUBMIT THIS MAF ALONG WITH PG
Manufactures' Authorization Certificate (MAF) (to be filled by OEMs)

To,

Executive Engineer(E) -I
CPWD, Bangalore

Subject: Manufactures' Authorization Certificate for Bid Number:

Sir,

We.....**OEM Name**..... having our registered officewho are established and reputed original equipment manufacturers (OEMs) having factories at { addresses of manufacturing location} do hereby authorize**Bidder name and address**..... who is our {distributor / Channel Partner / retailer / other <please specify>} to bid, negotiate and conclude the contract with you against and aforementioned reference for the following Hardware / Software manufactured by us.

We also hereby declare that we will support fully for supply of all genuine spares components and software up gradation for the installed system for five years from the date of commissioning of system and also attend any manufacturing defect for five years on behalf of the bidder.

Yours faithfully,

For and on behalf of M/s

(Authorized signatory)

Name, designation & contact no.

Email Id:

Address:

Seal

ANNEXURE-B

UNDERTAKING FROM MANUFACTURERS OF LED FITTINGS

Name of Work : Renovation of Guest Houses, Toilets, Hostel rooms including Wiring, IEL, Air Conditioners, Geysers & Fire Extinguishers at ICAR - NBAIR, Hebbal, Bangalore..

We hereby agree that

1. All the LED fittings, including drivers, supplied by us for the above work are guaranteed for five years from the date of recording of Completion Certificate by CPWD.
2. In case of discontinuation of model and non-availability of spares, we will replace the fittings with equivalent/ high end model during the five year warranty period.

For M/s

.....

Name :

.....

Designation:

.....

(Authorised signatory of manufacturer of LED
luminaries) With company seal

Counter Signature contractor

(with seal)

List of Preferred Makes (Brands) of Materials

- 1) List of Preferred Makes (Brands) of materials and names of specialized agencies is attached for usage in execution of work. However, approved equivalent material of any other specialized companies / firms may also be used, in case it is established that the Brands specified are not readily available in the market or in other unavoidable circumstances subject to approval of alternate Brand by the Engineer in Charge.
- 2) It must be ensured, in general, that all materials to be used in the works shall bear BIS Certification mark. In cases where for a particular material / product, BIS Certification Mark is not available, then the material proposed to be procured can be used subject to the conditions that it should conform to CPWD Specifications and relevant BIS codes. In such cases written approval of the Engineer in Charge shall be obtained before use of such material in their works.
- 3) The list given below does not absolve the Executing Agency from their responsibility for using these products. It is only after, they have satisfied about the quality and performance, the products shall be used. To achieve this, proper check on the quality of the products, actually to be used, should be exercised.
- 4) The contractor shall obtain prior approval from the Engineer in charge before placing order for any specific material or engaging any of the specialized agencies. The contractor shall make a detailed submittal as per the contract with catalogues and proposed specifications (duly highlighting relevant matter). In case of specialized agencies, they will also submit full details of the works executed by the specialized agencies.
- 5) In case any make included in the preferred makes (brands) list is found to be below the standards of quality and specifications and/or is deficient in any other manner, that make shall be considered as deleted by the Engineer in charge from the list.
- 6) Public procurement (Preference to Make in India) Order (PPP-MIII)-2017 - Revision dated 29.05.2019 and DoT Public Procurement (Preference to Make in India) Order (PPP-MII Order) dated 29.08.2018 with upto date amendments / latest order till the last date of receipt of tender will prevail and shall be complied with.
- 7) The contractor will submit relevant documents to enable the Engineer in charge to verify that manufacturers have valid IS Certification as on date for materials, wherever applicable.
- 8) In case, make for any material to be used in work is not specified in the list, the Engineer in charge may approve the make.
- 9) The above make shall be used if not otherwise mentioned in the nomenclature of respective items.

Decision of Engineer in charge in case of any discrepancy shall be final and binding on all above points

NIT No. 86/EE(E)-I/Bangalore/2026-27

Name of work: Renovation of Guest Houses, Toilets, Hostel rooms including Wiring, IEI, Air Conditioners, Geysers & Fire Extinguishers at ICAR - NBAIR, Hebbal, Bangalore.

SL. NO.	DESCRIPTION	PREFERRED MAKE
1	WIRES (PVC INSULATED COPPER CONDUCTOR CABLE FRLS/ HFFR -ISI MARKED)	UNIVERSAL / HAVELLS / KEI / POLYCAB / ANCHOR / RALLISON / ASHIRVAD CAB/BONTON
2	PVC CONDUITS AND ACCESSORIES (ISI MARKED)	PANASONIC / AVON PLAST / PRECISION / KONSEAL / ATUL / AKG
3	MODULAR SWITCHES/ SOCKETS/ TV SOCKET/ TELEPHONE SOCKETS/ DATA SOCKET/ ELECTRONIC REGULATORS ETC.	LEGRAND (ARTEOR) / SCHNEIDER (ZENVELO) / PANASONIC (VISION)/ ABB (IVIE)
4	CABLE MANAGEMENT SYSTEM / MINI TRUNKING AND ACCESSORIES / FLOOR TRUNKING / RACE WAYS AND ACCESSORIES	LEGRAND / MK HONEYWELL / SCHNEIDER ELECTRIC / ABB / OBO BETTERMAN
5	CALLING BELL/ BUZZER	ANCHOR/ LEADER/ RIDER/ POLYCAB
6	1.1 KV GRADE ALUMINIUM & COPPER CONDUCTOR, XLPE INSULATED ARMOURED UG CABLES	UNIVERSAL / HAVELLS / KEI / POLYCAB / ANCHOR/ GLOSTER / RALLISON / ASHIRVAD CAB/BONTON
7	MCB DBS / MCBS / RCCBS / MCCBS / INDUSTRIAL SOCKET OUTLETS	LEGRAND / SIEMENS / SCHNEIDER / LK / ABB / HAGER / C&S
8	CAT-6 / 6A / CAT-5E LAN CABLE	LEGRAND / KLOTZ / KRAMER / COMMScope
9	CEILING FAN (5 STAR RATED) BLDC	USHA / CROMPTON / ALMONARD / BAJAJ / ATOMBERG / ORIENT / HAVELLS
10	EXHAUST FAN	USHA / CROMPTON / ALMONARD / ATOMBERG / ORIENT / HAVELLS
11	WALL FAN	USHA / CROMPTON / ORIENT / HAVELLS

12	LED FITTINGS (Indoor)	PHILIPS/ WIPRO/ HAVELLS/ PANASONIC/ CROMPTON / LIGHTING TECHNOLOGIES
13	LED FITTINGS (Outdoor)	PHILIPS / WIPRO / CROMPTON / BAJAJ / K-LITE / LIGHTING TECHNOLOGIES
14	A/C UNITS	HITACHI / TOSHIBA / DAIKIN / MITSUBISHI / O-GENERAL / LG / VOLTAS / BLUESTAR
15	CPVC / UPVC PIPES	SUDHAKAR/ ASHIRVAD/ASTROL
16	HDPE PIPE / DWC (ISI MARKES)	SUPEREME / REX / DURALINE
17	WALL MOUNTING/ NETWORK RACK	NETWORK / VALRACK / D-LINK
18	GEYSERS	HAVELLS/ CROMPTON/ RACOLD/ V- GUARD/ AO SMIT
19	FIRE EXTINGUISHER	CEASE FIRE / MINIMAX / SAFEX / AGNI
20	STABILIZERS	V - GUARD / ITL / BLUE STAR / EATON/ EVEREST / LUMINOUS / SERVOMAX
21	ALL OTHER ITEMS NOT COVERED ABOVE	AS PER APPROVAL OF THE ENGINEER- IN-CHARGE

NOTE: LM-79 and LM-80 certificate shall submitted along with LED fittings and also test certificates shall be submitted from third party NABL accredited lab. The Engineer-in-charge, CPWD reserves the right to add or delete any materials and makes / brands in the list of preferred makes of materials / brands.

**Executive Engineer (E)-I,
CPWD, Bangalore**

Preference to PPP-M – II Policy (Make in India):

- i. The Government has issued public procurement policy (Preference to Make in India) vide Ministry of Commerce and Industry Development of industrial policy and promotion (PPS) vide order No. P-45021/2/2017-PP BE-II dated 28.05.2018, to “Encourage Make in India” and to promote manufacturing and production of Goods and services in India with a view to enhancing income and employment. CPWD has decided to implement this policy.
- ii. The agency shall submit list of makes of materials proposed to be used on the work from local suppliers (as defined in the above order dated 28.05.2018) along with minimum local content as specified below for approval of the department out of the approved makes kept in the tender.
- iii. The department will be approving only makes of the materials having a minimum local content of 50% for use on this work, out of the preferred makes list.
- iv. The minimum local content of 50% is considered for the complete item including labour component.
- v. The agency shall obtain the certificate for all items except for sundry items.

// Contractor //

Executive Engineer (E)-I, Bangalore

ANNEXURE- I

Location and Addresses of Officers

Location:

The work shall be carried out at the premises of **at ICAR - NBAIR, Hebbal, Bangalore.**

Addresses:

The Address of the Officers of the CPWD connected with this work is given below:-

- A) The Executive Engineer (E) -I
Central P. W.D,
Bangalore-34
Tel.(O) No: 080-25521181,
Fax No: 080-25500930.
- B) The Assistant Engineer (E),
Bangalore Central Electrical Sub Division - II
Central Public Works Department
Bangalore – 560034

\$\$\$\$\$\$\$\$\$\$\$\$\$\$

**EXECUTIVE ENGINEER (E) -I
Central P.W.D, Bangalore-34**

PART C

CIVIL WORKS

Name of the Work: Renovation of Guest Houses, Toilets, Hostel rooms including Wiring, IEL, Air Conditioners, Geysers & Fire Extinguishers at ICAR - NBAIR, Hebbal, Bangalore..

**PROFORMA OF SCHEDULES
(FOR CIVIL COMPONENT)**

SCHEDULE 'A'

**SCHEDULE OF QUANTITIES FOR CIVIL WORKS AS PER PART-C
FROM PAGE No.**

SCHEDULE 'D'

Extra schedule for specific requirements/document for the work, if any:

SR. NO.	DESCRIPTION OF ITEM	QUANTITY	RATES IN FIGURES & WORDS AT WHICH THE MATERIAL WILL BE CHARGED TO BE CONTRACTOR	PLACE OF ISSUE
1	2	3	4	5
→ NIL ←				

SCHEDULE 'E'

Reference to General Conditions of contract including CON Circular.

General Conditions of Contract 2023 Maintenance works as modified and corrected upto previous day of last date of submission of the tender

NAME OF WORK:

Renovation of Guest Houses, Toilets, Hostel rooms including Wiring, IEI, Air Conditioners, Geysers & Fire Extinguishers at ICAR - NBAIR, Hebbal, Bangalore.

Estimated cost of work (Civil) : **Rs. 83,51,893/-**
(Elect: Rs. 42,87,581/- + Civil: - Rs. 40,64,312/-)

(i) Earnest Money : As per part 'A' of NIT
(ii) Performance Guarantee : As per part 'A' of NIT
(iii) Security Deposit : As per part 'A' of NIT

SCHEDULE 'F'

GENERAL RULES & DIRECTIONS

(i) Officer inviting tender : **Executive Engineer (E)-I,
CPWD, Bangalore.**

DEFINITIONS: -

2(vi)	Engineer -in- Charge	:	Executive Engineer II, CPWD Bangalore (civil works)
2(vii)	Accepting Authority	:	As per part 'A' of NIT
2(x)	Percentage on cost of materials and Labour to cover all overheads and profits	:	As per part 'A' of NIT
2(x)(b)	Standard Schedule of Rates	:	DSR-2023 with amendments up to last date of submission of bid
2(xi)	Department	:	As per part 'A' of NIT
2(v)	Standard CPWD Contract Form	:	As per part 'A' of NIT

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 : As per part 'A' of NIT
- (ii) **Maximum allowable extension with late fee @ 0.1% per day of performance Guarantee amount beyond the period provided in (i) above (1 to 15 days to be filled by NIT approving authority)** : As per part 'A' of NIT

Clause 2

Authority for fixing compensation under Clause- 2 : As per part 'A' of NIT

Clause 2A

(Modified OM No. DG/CON/307 dated 19.11.2019) No.

Clause 5

Number of days from the date of issue of letter of acceptance for reckoning date of start mile stone.as per table given below : As per part 'A' of NIT

Mile Stone Table (Civil):

Sr. No.	Description of Milestone (Physical Progress)	Period for Completion from date of start in months	Amount to be with held In case of non achievement of mile stone
1.	As per Part-A of NIT		

Time allowed for execution of work : As per part-A

Authority to decide:

- (i) Authority to convey the decision of shifting of mile stone and extension of time : As per part 'A' of NIT
- (ii) Authority to decide rescheduling of mile stone and extension of time : As per part 'A' of NIT
- (iii) Shifting of date of start in case of delay in handing over of site. : As per part 'A' of NIT

PROFORMA OF SCHEDULES (Clause 5)

Schedule of handing over of site

Part	Portion of site	Description	Time period for handing over reckoned from date of issue of letter of intent
Part A	Portion without any hindrance	100% of site	
Part B	Portions with encumbrances	---	---
Part C	Portions dependent on work of other agencies	---	---

Clause 6

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. 8,20,000/-**

Clause 7 A

Whether Clause 7 A shall be applicable : Yes

Clause 8

Competent authorities to inspect and issue completion certificate. As per part 'A' of NIT

Clause 10A

List of testing equipment to be provided By the contractor at site lab : Nil

Clause 10B(ii)

Whether Clause 10 B (ii) shall be applicable : As per part 'A' of NIT

Clause 10 C

Component of labour expressed as percentage value of the work : Not applicable

Clause 10 CC & 10CA : Not applicable

Clause 11

Specifications to be followed : CPWD Specifications 2019 Vol I & II (With up to date correction slips)

Clause 12 : As per Part 'A' of NIT

Clause 16

Competent Authority for deciding reduced rates	As per Part 'A' of NIT
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Clause 18

List of mandatory machinery, tools & plants to be deployed by the contractor at site:-	Nil
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Clause 19 C

Authority for decide penalty for each default	As per Part 'A' of NIT
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Clause 19 D

Authority for decide penalty for each default	As per Part 'A' of NIT
---	-------------------------------

Clause 19 G

Authority for decide penalty for each default	As per Part 'A' of NIT
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Clause 19 K

Authority for decide penalty for each default	As per Part 'A' of NIT
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Clause 25 **As per part 'A' of NIT**

Conciliator As per Part 'A' of NIT

Arbitrator Appointing Authority As per Part 'A' of NIT

Place of Arbitration As per Part 'A' of NIT

Clause 32

Requirement of Technical Representative(s) and recovery rate for Civil works: **As per part 'A' of NIT**

CLAUSE – 38 **As per part 'A' of NIT**

Specific Conditions for all components of work

- 1.0 The rate quoted by the agency shall be for all the provisions of the bid document. Nothing extra shall be paid for compliance of the provisions mentioned in the bid document. Extra payment for compliance of any provision shall be made only when it is specifically provided that it shall be paid extra.

The rates quoted by the bidder shall be for all the provisions of the bid document irrespective of the fact whether “Nothing extra shall be paid” is specifically mentioned against any provision or not.

This is applicable for all components of work.

- 2.0 Any dispute arising out of this tender including dispute related to encashment of any Bank Guarantee/ FDR etc., shall be subject to the jurisdiction of courts of Karnataka State only.
- 3.0 In case of reduction in scope of work or no work is possible to carry out or delay in work on account of any reason/ issue, no compensation on any account i.e. due to reduction in value of work, loss of expected profit, over heads, idling of men & machinery, etc shall be payable.
- 4.0 The contractor should make temporary arrangement for sewage disposal, water supply, electricity etc. for completed building to make them functional in case permanent arrangements are not ready for which nothing extra shall be payable.
- 5.0 In case the works related to lifts, substation, firefighting, fire alarm, HVAC, CCTV, EPABX, LAN, BMS, Pumps, STP, etc. have been completed but the handing over of the building project is delayed due to any reason, the agency shall remain responsible for attending to all works required for the commissioning/ recommissioning of these systems until the actual date of handing over or for a period of three years from the date of completion, whichever is earlier. If the agency fails to fulfill this obligation, the required works shall be carried out at the risk and cost of the agency, and the expenses incurred shall be recovered from any dues payable to the agency under this contract or any other agreement with the department.
- 6.0 The fee payable to statutory authorities for obtaining local body approvals and various permanent service connections shall be reimbursed to the contractor unless specifically provided otherwise elsewhere in the tender document. The reimbursement shall be made only upon production of proof of payment. However, any penalty imposed for the above activities shall not be reimbursed and will have to be borne by the contractor.
- 7.0 A site laboratory with the minimum equipment as specified in CPWD specifications and in this bid document shall be established, made functional and maintained within one month from the award of work without any extra cost to the department.

The site laboratory will be a well furnished and ventilated laboratory of area as

decided by the Engineer in charge, for which nothing extra shall be paid.

- 8.0 A Site Office along with Air conditioner, Electrical installations, Furniture, Computers, Printers, Photocopier etc. as per details below shall be constructed/ provided by the contractor. Nothing extra shall be payable on this account:

The Contractor shall design and construct/ provide one site office at his own cost on the construction site consisting of three rooms including 1 (one) toilet and 1 pantry with total built up area not less than 30 (thirty) sqm for CPWD staff or as decided by Engineer-in-charge.

The location and plan shall be got approved from Engineer in charge. Specification for the site office shall be portable type and/ or any other specifications as per approval of Engineer in charge.

- 9.0 Intending Bidders are advised to get familiarized with all the concerned local body including Fire authorities, Environmental clearance authorities, Tree cutting authorities, Urban Planning authorities, orders passed by any court on the environment issues, Ministry of Defence, Environment rules to get the NOC, CFE & CFO from Karnataka State Pollution Control Board and any other issues related to obtaining commencement certificate & occupancy certificate and satisfy themselves before submitting their bids as to the status, nature of the rules and regulations and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their bid. Bidder shall be deemed to have full knowledge of such rules and regulations whether he has read it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed. Submission of a bid by the bidder implies that he has read this notice and all other documents and has made himself aware of the local body bye-laws, statutory authority regulations etc. and any other factors having a bearing on the execution of the work.

- 10.0 In the case of discrepancy between the schedule of quantities, the specifications and / or the drawings or any other provision of the bid document, the following order of preference shall be observed.

- (i) Description of schedule of Quantities
- (ii) Particular & Technical Specifications and Additional, Commercial & Special Conditions etc.
- (iii) Tender drawings attached
- (iv) CPWD Specifications
- (v) National Building Code (NBC) & Indian Standard Specifications of the Bureau of Indian Standards (BIS)
- (vi) ASTM, BS, or other foreign-origin codes wherever required
- (vii) As per Directions of Engineer in Charge, Manufacturer's specifications, Sound engineering practices, well-established local construction practices, etc.

Notes

- (a) Above provisions supersedes para 8.1 of relevant General Conditions of Contract.
- (b) Whether specifically mentioned or not, all the IS codes & other documents referred in this bid document are to be used with latest edition and amendments issued upto the previous day of last date of submission of bid.
- (c) The agency is not allowed to take benefit out of any clerical/ grammatical mistake in the standard clauses/ Schedule of Quantities/ Specifications/ any other provisions of tender document, etc., being used in the agreement.
- (d) All documents forming part of the contract shall be considered mutually complementary. Any requirement in one document is deemed to be required across all documents unless explicitly excluded. Nothing extra shall be payable to the contractor on this account.
- (e) In the event that any work (including but not limited to items, details, features, specifications, conditions) is specified in only one document of the contract and not in any other contract document, such work shall be deemed to have been included in the scope of the contract, irrespective of the document's position in the order of precedence. Nothing extra shall be payable to the contractor on this account.
- (f) In the event that any work (including but not limited to items, details, features, specifications, conditions) is not explicitly mentioned or shown in any of the contract documents, but is required to meet functional or codal requirements, such work shall be deemed to have been included in the scope of the contract. The Contractor shall execute the work as directed by the Engineer in charge. Nothing extra shall be payable to the contractor on this account.
- (g) In the event that the specifications or details mentioned in the tender document are found to be inadequate or improper for meeting functional or codal requirements, the work shall be executed in accordance with the actual requirements or as directed by the Engineer-in-charge. Nothing extra shall be payable to the contractor on this account.
- (h) In the event that the specified details of any item, including but not limited to size, thickness, diameter, material, quantity, etc. are not in accordance with functional requirements or the manufacturer's specifications, the item shall be provided as per the necessary requirements and/ or as directed by the Engineer in charge. Nothing extra shall be payable to the contractor on this account.

11.0 Contract document interpretation and conflict resolution

- 11.1 If there are varying or conflicting provisions, the Contractor shall bring this to the notice of the Engineer in charge. The Engineer in charge will clarify the discrepancy and his decision shall be final, binding and conclusive. The Contractor shall execute the work without any dispute following this decision, and no claims regarding this issue will be entertained at any point of time.
- 11.2 If the Contractor fails to bring the discrepancy or variation to the notice of the

Engineer in charge and proceeds with the work, any claims raised by the Contractor regarding the discrepancy after the work's completion will not be entertained under any circumstances.

- 11.3 Any changes in the scope of work or execution of additional works carried out by the Contractor without prior notification to and approval from the Engineer in charge will result in such claims being disallowed in the future. The Contractor is responsible for obtaining formal approval before proceeding with any deviations or additional work.
- 11.4 In case of discrepancies in dimensions (e.g. Length, Width, Height etc.) mentioned in different contract documents, the dimensions decided by the Engineer-in-charge will prevail for which nothing extra shall be paid.
- 12.0 ~~If the contractor does not possess electrical license in his own name, he shall submit an undertaking to associate an agency having valid electrical license of appropriate voltage in its name issued by the State Government concerned (ESCOM/ KPTCL/ Licensing Board) under Section 45 of the Indian Electricity Rules, 1956 as amended from time to time for execution of work which requires such a license. Such associate agency shall keep valid electrical license throughout the period of execution of work by getting it renewed at suitable intervals. In the event of any default on the part of the contractor in this regard, he/ she is liable to be debarred.~~

~~If the contractor possess electrical license in his own name, he also has to follow the requirements prescribed above for associate agency.~~

~~13.0 Minimum Eligibility Criteria for the Specialized Agency(S) to be Associated~~

- ~~13.1 Sub-head wise total cost is taken for the purpose of Eligibility Criteria only, which is rough cost and should not be used or interpreted for any other purpose.~~
- ~~13.2 SITC means: Supplying, Installation, Testing & Commissioning.~~
- ~~13.3 The lowest tenderer shall submit an undertaking from the OEM regarding:~~
- ~~13.3.1 Authorization certificate.~~
- ~~13.3.2 The OEM shall unconditionally support the lowest tenderer technically throughout the execution of contract as well as for maintenance/ comprehensive maintenance contract for the useful life of the system.~~
- ~~13.3.3 OEM shall provide all the spares required for healthy functioning of the equipment for at least seven years from the date of supply of equipment.~~
- ~~13.4 The Main contractor has to associate agency(s) for the following specialised component(s) conforming to the eligibility criteria of having successfully completed following similar works during last seven years ending last date of the month previous to the month in which tenders are invited.~~

~~Work completion certificate in Form-D to be signed by the authority not below the rank of Executive Engineer is to be submitted by the main contractor/ associated agencies for all the works.~~

14.0 Supervision of work

The Contractor shall depute Site Engineer & skilled workers as required for the work. He shall submit organization chart along with details of Engineers and supervisory staff. It shall be ensured that all decision making powers shall be available to the representatives of the Contractor at Bangalore itself to avoid any likely delays on this account. The Contractor shall also furnish list of persons for specialized works to be executed for various items of work. The Contractor shall identify and deploy key persons having qualifications and experience in the similar and other major works, as per the field of their expertise. If during the course of execution of work, the Engineer in charge is of the opinion that the deployed staff is not sufficient or not well experienced; the Contractor shall deploy more staff or better-experienced staff at site to complete the work with quality and in stipulated time limit. Principle Technical representative of the Contractor having minimum experience in similar nature of work as mentioned in the relevant clause of the General Conditions of the Contract, shall always be available at the site during the actual execution of the work. The rate of recovery shall be as specified in schedule "F" of this bid document and the same shall be effected from the Contractor in the event of not fulfilling this provision.

Additional Conditions

1. General

- 1.1 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, general ground/ subsoil conditions etc. or any other circumstances which may affect or influence submission of their bids. The contractor shall carry out survey of the work area, at his own cost, setting out the layout and fixing of alignment of the building as per architectural and structural drawings in consultation with the Engineer in charge and proceed further ensuring full structural continuity and integrated construction. Any discrepancy between the architectural drawings and actual layout at site shall be immediately brought to the notice of the Engineer in charge.
- 1.2 The Contractor shall, if required by him, before submission of the tender, inspect the drawings in the Office of the concerned Executive Engineer. The department shall not bear any responsibility for the lack of knowledge and also the consequences, thereof to the Contractor. The information and data shown in the drawings and mentioned in the bid documents have been furnished, in good faith, for general information and guidance only. The Engineer in charge, in no case, shall be held responsible for the accuracy thereof and/ or interpretations or conclusions drawn there from by the Contractor and all consequences shall be borne by the Contractor. No claim, whatsoever, shall be entertained from the Contractor, if the data or information furnished in bid document is different or in-correct otherwise or actual working drawings are at variance with the drawings available for inspection or attached to the bid document. It is presumed that the Contractor shall satisfy himself for all possible contingencies, incidental charges, wastages, bottlenecks etc. likely during execution of work and acts of coordination, which may be required between different agencies.
- 1.3 The work shall be carried out, all in accordance with true intent and meaning of the specifications, the drawings and other terms & conditions in the bid documents all 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 bid document but will be necessary to complete the work in all respects. All these incidental works/ costs which are not mentioned in bid document but are necessary to complete the work in all respects shall be deemed to have been included in the rate quoted by the contractor. No adjustment of rates shall be made for any variation in quantum of incidental works due to variation/ change in actual working drawings. Also, no adjustment of rates shall be made due to any change in incidental works or any other deviation in such element of work (which is incidental to the work and are necessary to complete the work in all respects) on account of the directions of Engineer in charge.

- 1.4 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 fees, taxes and charges which may be leviable on account of these operations in executing the contract. He shall make good any damage to the adjoining property whether public or private and shall supply and maintain lights either for illumination or for cautioning the public at night.
- 1.5 The Contractor/ Architects to make the built environment Barrier free and accessible to all. Bidders are instructed to strictly adhere to the provisions contained in relevant guidelines on barrier free and accessibility and corresponding provisions of NBC while incorporating such features in the building. Bidders should visit CPWD website www.cpwd.gov.in. (Provision of lift for vertical movement shall be as per drawings).
- 1.6 The contractor shall take all precautions to avoid accidents by exhibiting necessary caution boards day and night. In case of any accident to labours/ contractual staff the entire responsibility will rest on the part of the contractor and any compensation under such circumstances, if becomes payable, shall be entirely borne by the contractor.
- 1.7 The work shall generally be carried out in accordance with the applicable CPWD Specifications with amendments, Additional/ Particular/ Technical Specifications, Architectural/ Structural drawings and as per instructions of Engineer in charge. Any additional item of the work, if taken up subsequently, shall also conform to the relevant CPWD specifications as mentioned above.
- 1.8 The several documents forming the tender are to be taken as mutually complementary to one another. Detailed drawings shall be followed in preference to small scale drawings and figured dimensions in preference to scale dimensions.
- 1.9 The works to be governed by this contract shall cover delivery and transportation up to destination, safe custody at site, insurance, erection, testing and commissioning of the entire work.
- 1.10 The works to be undertaken by the contractor shall inter-alia include the following:
- (i) Preparation of detailed Structural drawings, Shop drawings, As Built drawings etc. Applicable for the works where the preparation of structural drawings, Shop drawings and As Built drawings are in the scope of contractor.
 - (ii) Obtaining of Statutory permissions wherever applicable and required
 - (iii) Pre-commissioning tests as per relevant standard specifications, code of practice, Acts and Rules wherever required
 - (iv) Warranty obligation for the equipment's and/ or fittings/ fixtures supplied by the contractor: Contractor shall provide all the shop drawings or layout drawings for all the co-ordinated services before starting any work or placing any order of any of the services etc. These shop drawings/ layout drawings shall

be got approved from Engineer in charge before implementation and this shall be binding on the contractor. The contractor shall submit material submittals along with material sample for approval of Engineer in charge prior to delivery of material at site.

- 1.11 The work shall be carried out in accordance with the approved architectural drawings and structural drawings & service drawings. Before commencement of any item of work, the contractor shall correlate all the relevant architectural and structural drawings, Specifications etc. issued for the work and satisfy himself that the information available from there is complete and unambiguous. The figure and written dimension of the drawings shall be superseding the measurement by scale. The discrepancy, if any, shall be brought to the notice of the Engineer in charge before execution of the work. The contractor alone shall be responsible for any loss or damage occurring by the commencement of work on the basis of any erroneous and or incomplete information and no claim whatsoever shall be entertained by the department on this account. The delay caused on account of non-timely action by the contractor in resolution of the differences whatsoever shall not be considered as valid ground for extension of time unless otherwise accepted by Engineer in charge.
- 1.12 The contractor shall take instructions from the Engineer in charge regarding collection and stacking of materials at suitable place. No stacking of materials or 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.
- 1.13 The contractor shall bear all incidental charges for cartage, storage and safe custody of materials, if any, issued by department as well as to those materials also arranged by the contractor.
- 1.14 Any cement slurry added over base surface (or) for continuation of concreting for better bond is deemed to have been built in the execution of work and nothing extra shall be payable or extra cement considered in consumption on this account.
- 1.15 The scope of work includes doing hacking on the existing/ proposed RCC/ cement concrete surface wherever required as per the directions of Engineer in charge. The cost of hacking shall be deemed to be inclusive in the rates quoted by the agency/ contractor.
- 1.16 The contractor shall give performance test of the entire installation(s) as per the specifications in the presence of the Engineer in charge or his authorized representative before the work is finally accepted and nothing extra whatsoever shall be payable to the contractor for such test.
- 1.17 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.

1.18 Use of Manufactured sand (M-sand) is allowed without any cost adjustment i.e. without any extra payment to contractor or without any recovery from contractor. For plastering P-Sand should be used.

1.19 Water tanks, taps, water supply & drainage pipes, fittings & accessories should conform to bye-laws of local body/ corporation, where CPWD specifications are not available. The Contractor should engage approved, licensed plumbers for the work and get the materials (fixtures/ fittings) tested, by the municipal Body/ Corporation authorities wherever required at his own cost. The Contractor shall submit for the approval of the Engineer in charge, the name of the plumbing agency (along with their working experience in recent past) proposed to be engaged by him.

1.20 The contractor shall make his own arrangements for providing water for construction and drinking purpose. He shall make his own arrangements for obtaining electric connections, if required and make necessary payments directly to the State Govt. departments concerned. Contractor shall get the water tested from laboratory approved by the Engineer in charge at regular interval as per the CPWD Specifications.

1.21 Prevention of Nuisance and Pollution Control

(i) 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 from pollutants like smoke, dust, noise. The contractor shall use such methodology and equipment so as to cause minimum environmental pollution of any kind during construction and minimum hindrance to road users and to occupants of the adjacent properties or other services running adjacent/ near vicinity. The contractor 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 due to the execution of the work or by traffic brought 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.

(ii) 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 nearby occupants/ users of building(s), if any.

1.22 Security and Traffic arrangements

In the event of any restrictions being imposed by the Security agency of Client Department/ CPWD/ Local Traffic or any other local authority having jurisdiction in the area on the working or movement of labour/ material, the contractor shall strictly follow such restrictions. The loss of time on these accounts, if any, shall have to be made up by augmenting additional resources whatever required.

- 1.23 As the site is restricted, the huts for labour are not to be erected at the site of work by the contractors. However, if the client department permits with/without charges, the contractor may erect the huts for labour.
- 1.24 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 the work for which 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.
- 1.25 The contractor shall construct suitable godowns, yard at the site of work for storing all other materials so as to be safe against damage by sun, rain, damages, fire, theft etc. at his own cost and also employ necessary watch and ward establishment for the purpose at his cost.
- 1.26 All materials obtained from contractor shall be got checked by the representative of Engineer in charge on receipt of the same at site before use.
- 1.27 The contractor shall be responsible for the watch and ward/ guard of the buildings, safety of all fittings and fixtures including all equipment, services provided by him against pilferage and breakage during the period of Installations and thereafter till the building is physically handed over to User/ Client/ Owner Department. No extra payment shall be made on this account and no claim shall be admissible on this account.
- 1.28 The contractor shall keep himself fully informed of all acts and laws of the Central & State Governments, all orders, 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 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 local authorities. The extra sewerage charges (onetime charges for commencement of work) required to be paid to the Municipal Corporation/ other statutory bodies shall be paid by the department and need not be considered by the contractor.

All statutory taxes, levies, charges (including water and sewerage charges, charges for temporary service connections and/ or any other charges) payable to such authorities for carrying out the work, shall be borne by the Contractor. The water charges (for municipal water connection as well as tanker water)

shall be borne by the contractor. Also, if the contractor obtains water connection for the drinking purposes from the municipal authorities or any other statutory body, the consequent sewerage charges shall be borne by the contractor. The contractor shall arrange to give all notices as required by any statutory/regulatory authority and shall pay to such authority all the fees that is required to be paid for the execution of work. 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.

- 1.29 For works below ground level the contractor shall keep that area free from water. If dewatering or bailing out of water is required, the contractor shall do the same at his own cost.
- 1.30 The contractor shall make all necessary arrangements for protecting works already executed from rains, fog or likewise extreme weather conditions and for carrying out further work, during monsoon including providing and fixing temporary shelters, protections etc. No claims for hindrance shall be entertained on this account.
- 1.31 In case of flooding of site on account of rain or any other cause and any consequent damage, whatsoever, no claim financially or otherwise shall be entertained notwithstanding any other provisions elsewhere in the bid document. Also, the contractor shall make good, at his own cost, the damages caused, if any. Further, no claim for hindrance shall be entertained on this account.
- 1.32 The contractor will take reasonable precautions to prevent his workman and employees from removing and damaging any flora (plant/ vegetation) from the project area.
- 1.33 **Setting out**
 - (i) The contractor shall carry out survey of the work area, at his own cost, setting out the layout of building in consultation with the Engineer in charge & proceed further. Any discrepancy between architectural drawings and actual layout at site shall be immediately brought to the notice of the Engineer in charge. It shall be responsibility of the contractor to ensure correct setting out of alignment. Total station survey instruments only shall be used for layout, fixing boundaries, and centre lines, etc.
 - (ii) The contractor shall establish, maintain and assume responsibility for grades, lines, levels and benchmarks. He shall report any errors or inconsistencies regarding grades, lines, levels, dimensions etc. to the Engineer in charge before commencing work. Commencement of work shall be regarded as the contractor's acceptance of such grades, lines, levels, and dimensions and no claim shall be entertained at a later date for any errors found.

- (iii) If at any time, any error appears due to grades, lines, levels and benchmarks during the progress of the work, the contractor shall, at his own expense rectify such error, if so required, to the satisfaction of the Engineer in charge.
- (iv) The contractor shall ascertain and confirm the site levels with respect to benchmark from the concerned authorities. The contractor shall protect and maintain temporary/ permanent benchmarks at the site of work throughout the execution of work. These benchmarks shall be got checked by the Engineer in charge or his authorized representatives. The work at different stages shall be checked with reference to bench marks maintained for the said purpose.
- (v) The approval by the Engineer in charge, of the setting out by the contractor, shall not relieve the Contractor of any of his responsibilities and obligation to rectify the errors/ defects, if any, which may be found at any stage during the progress of the work or after the completion of the work.
- (vi) The contractor shall be entirely and exclusively responsible for the horizontal, vertical and other alignments, the level and correctness of every part of the work and shall rectify effectively any errors or imperfections therein. Such rectifications shall be carried out by the Contractor at his own cost to the entire satisfaction of the Engineer in charge.
- (vii) The rate quoted by the contractor is deemed to be inclusive of site clearance, setting out work (including marking of reference points, centre lines of buildings), construction and maintenance of reference bench mark(s), taking spot levels, construction of all safety and protection devices, barriers, barricading, signage, labour safety, labour welfare and labour training measures, preparatory works, working during monsoon, working at all depths, height and location etc. and any other incidental works required to complete this work.

1.34 The rate offered is inclusive of providing sunken flooring in bathrooms, kitchen etc.

1.35 **Integrated Service drawings**

Before taking up the work, the contractor shall also provide integrated drawings for various civil and electrical services showing details of lay out plan including sectional elevations. Contractor shall plan and mobilize his resources as per the integrated drawings and as per the site conditions to facilitate convenient execution, installation as well as maintenance of these services.

1.36 **Tools and plants**

The contractor should have own constructions equipment required for the proper and timely execution of the work. No tools and plants including any special T&P etc. shall be supplied by the department and the contractor shall have to make his own arrangements at his own cost. No claim of hindrance (or any other claim) shall be entertained on this account.

1.37 **Scaffolding**

Wherever required for the execution of work, all the scaffolding shall be provided and suitably fixed, by the contractor. It shall be provided strictly with steel double scaffolding system, suitably braced for stability, with all the accessories, gangways, etc. with adjustable suitable working platforms to access the areas with ease for working and inspection. Single scaffolding system is strictly prohibited and shall invite necessary action. It shall be designed to take all incidental loads. It should cater to the safety features for workmen. It shall be ensured that no damage is caused to any structure due to the scaffolding.

- 1.38 The contractor shall do proper sequencing of the various activities by suitably staggering the activities so as to achieve early completion. The contractor is to deploy adequate equipment, machinery and labour as required for the completion of the entire work within the stipulated period as specified. Also, ancillary facilities shall be provided by contractor commensurate with requirement to complete the entire work within the stipulated period. Adequate number/ sets of equipment in working condition, along with adequate stand-by arrangements, shall be deployed during entire construction period.

It shall be ensured by the contractor that all the equipment, Tools & Plants, machineries etc. provided by him are maintained in proper working condition at all times during the progress of the work and till the completion of the work. Further, all the constructional tools, plants, equipment and machineries provided by the contractor, on site of work or his workshop for this work, shall be exclusively intended for use in the construction of this work and they shall not be shifted/ removed from site without the permission of the Engineer in charge.

- 1.39 The contractor shall maintain all the work in good condition till the completion of entire work. The contractor shall be responsible for and shall make good, all damages and repairs, rendered necessary due to fire, rain, traffic, floods or any other causes. The Engineer in charge shall not be responsible for any claims for injuries to person/ workmen or for structural damage to property happening from any neglect, default, want of proper care or misconduct on the part of the contractor or of any other of his representatives, in his employment during the execution of the work. The compensation, if any, shall be paid directly to the department/ authority/ persons concerned, by the contractor at his own cost.

1.40 Royalty

Royalty at the prevalent rates shall have to be paid by the contractor or the RMC supplier as per the terms of supply between them on all materials such as boulders, metals, shingles, moorum, gravels, all size stone aggregates, brick aggregates sand, bajri etc. collected by him for the execution of the work, direct to the Revenue authority or authorized agent of the State Government concerned or Central Government. If pursuant to or under any law, notification or order any royalty, cess or the like becomes payable by the Government of India and does not any time become payable by the contractor to the State Government, Local authorities in respect of any material used by the contractor

in the works, then in such a case, it shall be lawful to the Government of India and it will have the right and be entitled to recover the amount paid in the circumstances as aforesaid from dues of the contractor.

1.41 Preservation and Conservation Measures

- (i) Existing drains, pipes, cables, over-head wires, sewer lines, water lines and similar services, if any, 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, expenditure incurred in doing so shall be payable to the contractor. The contractor shall work out the cost, get the same approved by Engineer in charge before taking up actual execution. 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.
- (ii) All fossils, coins, articles of value of antiquity, structures and other remains or things of geological or archaeological interest discovered on project location during excavation/ construction shall be the property of the Government, and shall be dealt with as per provisions of the relevant Act. The contractor will take reasonable precaution to prevent his workmen or any other persons from removing and damaging any such article or thing. He will, immediately upon discovery thereof and before removal acquaint the Engineer in charge of such discovery and carry out the official instructions of Engineer in charge for dealing with the same, till then all work shall be carried out in a way so as not to disturb / damage such article or thing.

1.42 Responsibility

- (i) The contractor shall protect and indemnify the CPWD 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.
- (ii) The contractor shall assume all liability, financial or otherwise in connection with this contract and shall protect and indemnify the CPWD from any and all damages and claims that may arise on any account. The Contractor shall indemnify the department CPWD 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.

1.43 Co-operation with other Contractors/ Specialized Agencies/ Sub-Contractors

- (i) The Contractor shall take all precautions to abide by the environmental related restrictions imposed by any statutory body having jurisdiction in Karnataka as well as prevent any pollution of streams, ravines, river bed and waterways. All waste or superfluous materials shall be transported by the Contractor, entirely

to the satisfaction of the Engineer in charge and disposed at designated places only. 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 adjoining buildings. No claim what so ever on account of site constraints mentioned above or any other site constraints, lack of public transport, inadequate availability of skilled, semi-skilled or unskilled workers in the near vicinity, non-availability of construction machinery spare parts and any other constraints not specifically stated here, shall be entertained from the Contractor. Therefore, the tenderers are advised to visit site and get first-hand information of site constraints. Accordingly, they should quote their tenders.

- (ii) The Contractor shall cooperate with and provide the facilities to the sub-Contractors and other agencies working at site for smooth execution of the work. The contractor shall indemnify the Department (CPWD) against any claim(s) arising out of such disputes. The Contractor shall:
 - (a) Allow use of scaffolding, toilets, sheds etc.
 - (b) Properly co-ordinate their work with the work of other Contractors.
 - (c) Provide control lines and benchmarks to his Sub-Contractors and the other Contractors.
 - (d) Provide electricity and water at mutually agreed rates
 - (e) Provide hoist and crane facilities for lifting material at mutually agreed rates
 - (f) Co-ordinate with other Contractors for leaving inserts, making chases, alignment of services etc. at site
 - (g) Adjust work schedule and site activities in consultation with the Engineer in charge and other Contractors to suit the overall schedule completion.
 - (h) Resolve the disputes with other Contractors/ sub-contractors amicably and the Engineer in charge shall not be made intermediary or arbitrator.
- (iii) The work should be planned in a systematic manner so as to ensure proper co-ordination of various disciplines viz., sanitary & water supply, drainage, rain water harvesting, electrical, fire-fighting, information technology, communication & electronics and any other services
- (iv) Other agencies will also simultaneously execute and install the works of sub-station/ generating sets, air-conditioning, lifts, etc. for the work and 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 (for which inserts, sleeves, brackets, conduits, base plates, clamps etc. shall be supplied free of cost by the department unless otherwise specifically mentioned) and the contractor shall fix the same at time of casting of concrete, stone work and brick work, if required.
- (v) The contractor shall conduct his 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 off 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 in a proper coordination manner and shall perform it in proper sequence to the complete satisfaction of others.

1.44 Specialized Agencies

The list of specialized items for all components of works which are to be got executed through specialized agencies are as below:

- (a) Water proofing treatment works
- (b) Any other work mentioned in the tender document and/ or as per directions of Engineer in charge.

1.45 Rates

The rates quoted by the Contractor shall be deemed to be inclusive of;

- (a) The cost of all scope of works mentioned in the bid document.
- (b) Site clearance, setting out work, profile, setting lay out on ground, establishment of reference bench mark(s), installing various signage, taking spot levels, survey with total station, construction of all safety and protection devices, compulsory use of helmet and safety shoes, and other appropriate safety gadgets by workers, imparting continuous training for all the workers, barriers, preparatory works, construction of clean, hygienic and well ventilated workers housings in sufficient numbers as per drawing approved by Engineer in charge, working during monsoon or odd season, working beyond normal hours, working at all depths, height, lead, lift, levels and location etc.
- (c) No foreign exchange shall be made available by the Department for importing (purchase) of equipment, plants, machinery, materials of any kind or any other items required to be carried out during execution of the work. No delay and no claim of any kind shall be entertained from the Contractor, on account of variation in the foreign exchange rate.
- (d) Ancillary and incidental facilities required for execution of work like labour camp, stores, fabrication yard, offices for Contractor, watch and ward, temporary ramp required to be made for working at the basement level, temporary structure for plants and machineries, water storage tanks, installation and consumption charges of temporary electricity, telephone, water etc. required for execution of the work, liaison and pursuing for obtaining various No Objection Certificates, completion certificates from local bodies etc., protection works, testing facilities/ laboratory at site of work, facilities for all field tests and for taking samples etc. during execution or any other activity which is necessary (for execution of work and as directed by Engineer in charge), shall be deemed to be included in rates quoted by the Contractor, for various items in the schedule of quantities. Nothing extra shall be payable on these accounts.
- (e) For completing the work in time, the Contractor shall be required to work in two or more shifts (including night shifts) as per the directions of Engineer in charge.

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 labourers and other staff engaged directly or indirectly on the work according to the provisions of the labour and other statutory bodies regulations and the agreement entered upon by the Contractor with them.

- (f) The scope of work includes cost of all materials, manpower, equipments, T&P, fixtures, accessories, royalties, taxes, watch & ward and all other essential elements for completion and maintenance of works as aforesaid whatsoever.
- (g) 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 the payment for this account shall not be paid by the department.
- (h) The approval accorded by CPWD before acceptance of tender is only for tender evaluation. Any changes, modifications, revisions etc. required to be done by CPWD, client, local bodies, proof consultants etc. in accordance with applicable standards will have to be done at contractor's cost and nothing extra shall be payable.
- (i) The rates quoted by the tenderer, shall be firm and inclusive of all taxes and levies (including works contract tax, GST, construction labour welfare cess or any other tax/ levy/ cess).
- (j) The cost incurred in compliance of all provisions of the contract documents.

1.46 **Safety Practices**

- (i) **Warning / Caution Boards:** All temporary warning/ caution boards/ glow signage display such as "Construction Work in Progress", "Keep Away", "No Parking", Diversions & protective Barricades etc., shall be provided and displayed during day time by the Contractor, wherever required and as directed by the Engineer in charge.

These glow signage and red lights shall be suitably illuminated during night also. The Contractor shall be solely responsible for damage and accident caused, if any, due to negligence on his part. Also, he shall ensure that no hindrance, as far as possible, is caused to general traffic during execution of the work. This signage shall be dismantled & taken away by the Contractor after the completion of work, only after approval of the Engineer in charge. Nothing extra shall be payable on this account.

- (ii) Nylon net (50x50mm aperture and 4mm dia) at site shall be fixed to hooks etc., along periphery of building at various levels required and as directed by Engineer in charge for safety of the working staff for which nothing extra will be paid on this account.
- (iii) No inflammable materials including P.O.L shall be allowed to be stored in huge quantity at site. Only limited quantity of P.O.L may be allowed to be stored at site subject to the compliance of all rules/ instructions issued by the relevant authorities and as per the direction of Engineer in charge in this regard. Also, all

precautions and safety measures shall be taken by the Contractor for safe handling of the P.O.L products stored at site. All consequences on account of unsafe handling of P.O.L shall be borne by the Contractor.

1.47 Quality Assurance

- (i) The proposed work is a prestigious work and quality of work is of paramount importance. Contractor shall have to engage well-experienced skilled labour and deploy modern T&P and other equipment to execute the work. Many items like exposed finish form work, specialized flooring work, silicon sealant and backer rod fixing in expansion joints, factory made door window shutters, proper slope maintaining in toilet units, sanitary water supply installation, water proofing treatment, will specially require engagement of skilled workers having experience particularly in execution of such items.
- (ii) 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.
- (iii) In addition to the supervision of work by CPWD engineers, the Consultants deployed by CPWD shall also be carrying out regular and periodic inspection of the ongoing activities in the work and deficiencies, shortcomings, inferior workmanship pointed out by them shall be communicated by CPWD engineers to the contractor. Upon receipt of instructions from Engineer in charge these are also to be made good by necessary improvement, rectification, replacement upto his complete satisfaction.

Special attention shall be paid towards line and level of internal and external plastering, exposed smooth surface of RCC members by providing fresh shuttering plates, rubberized linings to all the shuttering joints, accurate joinery work in wooden doors and windows, thinnest joints in stone/ tiling/ cladding work, non-hollowness in floor and dado tiles work, protection of scratches over flooring by impounding layer of plaster of Paris, water tight pipe linings, absence of hollow vertical joints in brick masonry, proper compaction of filled up earth etc. to achieve an Institution of International standards and up keeping of quality assurance shall be of paramount importance, as such.

- (iv) 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 item of work in Schedule of Quantity, the same shall be used after getting the same approved from Engineer in charge. Wherever brand/ quality of material is not specified in the item of work, the contractor shall submit the samples as per suggested list of brand names given in the tender document/ particular specifications for approval of Engineer in charge. 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.

- (v) The Contractor shall procure and provide all the materials from the manufacturers/ suppliers as per the list attached with the tender documents, as per the item description and particular specifications for the work. The equivalent brand 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.
- (vi) All materials whether obtained from Govt. stores or otherwise shall be got checked by the Engineer in charge or his authorized supervisory staff on receipt of the same at site before use.
- (vii) 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.
- (viii) 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.
- (ix) 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.
- (x) All expenditure to be incurred for testing of samples e.g. collection, packaging, sealing, transportation, loading, unloading etc. including testing charges shall be borne by the contractor.**

The cost of material used for testing shall also be borne by the contractor.

- (xi) All the hidden items such as water supply lines, drainage pipes, conduits, sewers etc. are to be properly tested as per the design conditions before covering and their measurements in computerized measurement book duly test checked shall be deposited with Engineer in charge or his authorized representative, prior to hiding these items.
- (xii) Water tanks, taps, sanitary, water supply and drainage pipes, fittings and accessories should confirm to bylaws 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.
- (xiii) 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.
- (xiv) The contractor shall have to execute guarantee bonds in respect of water proofing works and all other works as decided by the Engineer-in-charge (as per Performa enclosed).
- (xv) The Contractor shall arrange electricity at his own cost for testing of the various electrical installations as directed by Engineer in charge and for the consumption by the contractor for executing the work. Also, all the water required for testing various electrical installations, fire pumps, wet riser/ fire-fighting equipment, fire sprinklers etc. and also testing water supply, sanitary and drainage lines, water proofing of underground sump, overhead tanks, water proofing treatment etc. shall be arranged by the contractor at his own cost. Nothing extra shall be payable on this account.

1.49.1 Minimum Quality Assurance Plan

- (i) Mandatory Tests shall be conducted as per CPWD specifications mentioned in Schedule A to F modified and corrected upto previous day of the last date of submission/ uploading of bid.
- (ii) Machinery and other tools & plants shall be deployed as specified in Schedule F.
- (iii) A field laboratory has to be set up by the contractor with all testing equipments as specified in Schedule F.
- (iv) The agency shall submit a shuttering schedule showing quantity of shuttering to be brought at site and its use. The schedule shall be approved by the Engineer-in-charge after review. If any changes are required by the Engineer-in-charge, the same shall be carried out by the agency.
- (v) Maintenance of Register of Tests –
 - (a) All the registers of tests to be carried out at Construction Sites or in outside laboratories shall be maintained by the contractor, which will be issued to the contractor by Engineer-in-Charge.

- (b) All Samples of materials including Cement Concrete Cubes are taken jointly with Contractor by CPWD staff, as per percentage stipulated in the bid document or as decided by the Engineer-in-charge. All the necessary assistance shall be provided by the contractor. Cost of sample of materials including testing charges shall be borne by the contractor and he/ she shall be responsible for safe custody of samples to be tested at site.
- (c) All the test in field lab setup at Construction Site shall be carried out by the Engineering Staff deployed by the contractor. The percentages of tests to be witnessed by the field officers shall be decided by the Engineer-in-charge. In case, it is not decided by the Engineer-in-charge, provisions of CPWD Quality Assurance Manual for building works 2022 shall be applicable.
- (d) All the entries in the registers shall be made by the designated Engineering Staff of the contractor and same shall be regularly reviewed by the field officers as well as the Engineer-in-Charge. Contractor shall be responsible for safe custody of all the test registers.
- (vi) Proforma for Mandatory tests as per Appendix-B2 shall be attached with each Running bill. Submission of all test registers and material at site register along with each alternate Running Account Bill and Final Bill is mandatory for works costing more than 10 Cr. In case of works costing less than or equal to Rs 10 Crore, all test registers and MAS registers shall be submitted along with final bill.

If all the test registers and MAS register are not submitted along with each alternate R/A Bill & Final Bill as per above provision, no payment shall be released to the contractor.

- (vii) Maintenance of Materials at Site (MAS) Registers –
 - (a) All MAS Registers including Cement and Steel Registers shall be maintained by the Contractor which shall be issued to the contractor by Engineer-in-Charge.
 - (b) Each entry of receipt of material at site shall be 100% test checked by JE or by AE if there is no JE. If both JE & AE are available, AE should test check at least 50% of the entries.
 - (c) Each MAS Register shall be checked by JE & AE at least once a week.
 - (d) Cement Register shall be reviewed by EE at least once in a month for work at same station and alternate months for work at outstation.
 - (e) It shall be mandatory for the field staff to retain the self-attested (by agencies/ contractors) copies of Tax paid bills of the materials entered in the MAS Register viz., Steel, Cement, Bitumen, Paint, Primer, Distemper, Varnishes, Tile Adhesive, Admixture, Anti termite chemical, Water proofing compound material and any other item as decided by the Engineer-in-charge.
 - (f) Self-attested copies of Tax paid bills of materials taken in MAS Register shall be obtained by the field staff from the agencies/ contractors before settling the payments. In case of any doubt the same can be verified by the field staff.

However, onus of genuiness of Tax paid bills rests with the agencies/ contractors.

- (viii) The contractor shall enure that the work is of required specifications and also the workmanship as per bid document and sound engineering practices.
- (ix) While sending samples of the material for testing in the external laboratories, the following shall be ensured:
 - (a) Letter for sending sample for testing of material shall be sent through e-mail to the Lab along with name (s) of test (s) to be done on the material by AE/ EE concerned with the work. The Lab shall preferably generate QR/ Bar Code for each test of the work, and it will be pasted on the box at the time of receipt of sample mentioning the number and type of material, lab tests required etc. The labs shall invariably acknowledge receipt of sample and intimate through e-mail to AE, EE and contractor. The test reports shall be emailed by the lab to the AE, EE and contractor. The bill of the testing shall be sent to the contractor for payment with a copy to the AE/ EE for information.
 - (b) The agency shall collect the sample & send it to the lab, make the necessary payment for the testing at the time of submitting the samples of material to the testing lab. If, he fails either to collect the samples or to submit to the lab, within the time mentioned in the specifications or within three working days, whichever is earlier, the department will make arrangement to collect and submit sample(s) and make the necessary payment to lab, the recovery on account of collection, submission and testing charges of samples shall be done from next R/A bill/ final bill of the agency.
 - (c) If the agency fails three times in collection and submission of samples for materials or fails to make payments of testing to the testing labs at each occasion within seven days of receipt of bill from the concerned lab, the Engineer-in-Charge will send the case along with all documents and his recommendations to the CE/ SE (as the case may be) for initiating disciplinary action against the agency. CE/ SE will take action in the matter as under:
 - i. In case of non-enlisted contractors, CE/ SE will give an opportunity to the agency to submit his version within 15 days. After considering the reply of the agency, CE/ SE will take decision on debarment of the agency from participation in tendering in CPWD for a period of two years. However, running contracts shall remain unaffected by the debarment order,
 - ii. In case of CPWD enlisted contractors, CE/ SE will send the case to the Enlisting Authority along with his recommendations. As per directions of the Enlisting Authority, disciplinary action shall be initiated by the Empowered Committee as per extant enlistment rules. After considering the recommendation of the Empowered Committee, Enlisting Authority will take decision on debarment of the agency for a period of two years. However, running contracts shall remain unaffected by the debarment order.

- (x) CPWD's Quality Assurance Manual for building works 2022 shall be used for minimum assurance plan. In case of any discrepancy between CPWD specifications and Manual, the decision of Engineer in charge shall be final and binding.
- (xi) The Contractor shall submit, within 20 days after the date of award of work, a detailed and complete method statement for the execution, testing and Quality Assurance, of such items of works, as directed by the Engineer in charge. All the materials to be used in the work, to give the finished work complete in all respects, shall comply with the requirements of the specifications and shall pass all the tests required as per specifications as applicable or such specifications/ standards as directed by the Engineer in charge. However, keeping the Quality Assurance in mind, the Contractor shall submit, on request from the Engineer in charge, his own Quality Assurance procedures for basic materials and such items, to be followed during the execution of the work, for approval of the Engineer in charge.

1.49.2 Submission and Documentation

- (i) The Contractor shall display all permissions, licenses, registration certificates, bar charts, other statements etc under various labour laws and other regulations applicable to the works, at his site office. He should also keep at site at least one set of BIS Codes and other relevant codes at site and produce the same if asked for by Engineer in charge. In case of non compliance, these codes will be purchased from the Market and actual cost of purchase will be recovered from the next RA Bill of the Contractor.
- (ii) The Contractor shall make available four (04) sets of completed Building Drawings, "As Built Drawings" along with literatures, manuals, warranty certificates etc. of various installed fittings, fixtures and equipment for the completed projects. This shall be the prerequisite for payment of final bill.
- (iii) The Contractor shall make available three (03) sets of all drawings of internal and external services i.e. Water Supply, Sanitary line and Drainage lines. This shall be the prerequisite for payment of final bill. These drawings shall have the following information.
 - Run off for all piping and their diameters including soil, waste pipes and vertical stacks.
 - Ground and invert level of all drainage pipes together with locations of all manholes and connections, up to outfall.
 - Run off for all water supply lines with diameters location of control valves, access panels etc.
- (iv) The contractor shall submit all measurements pertaining to the work timely through Electronic Measurement Book (EMB).
- (v) The Performance Guarantee shall not be released to the contractor until the aforesaid drawings are submitted to the Engineer in charge.

- (vi) The contractor will submit computerized measurement sheet/ EMB for the work carried out by him for making payment as per Clause-6 of the applicable GCC for CPWD with amendments upto the previous day of last date of submission of tender. For casting of RCC members and other hidden items the corrected and duly test checked measurement sheets of reinforcement or that of other hidden items shall be deposited with Engineer in charge or his authorized representative, before casting of RCC or other hidden items. The delay in submission of corrected and duly checked measurement sheet may, therefore, delay casting of RCC or execution of hidden item for which no hindrance shall be recorded.
- (vii) To avoid delay, contractor should submit all samples well in advance so as to give timely orders for procurement.

1.50 Time and progress chart and revised programme:

The Contractor shall prepare an integrated program chart before start of work including civil as well as E & M activities for the execution of work, showing clearly all activities from the start of work to completion, with details of manpower, equipment and machinery required for the fulfilment of the program within the stipulated period and submit the same for approval of the Engineer in charge within the period specified in applicable GCC. These shall be submitted by the contractor through electronic media besides forwarding hard copies of the same. The integrated program chart so submitted should not have any discrepancy with the physical milestones attached in the contract agreement. The program chart should include the following:

- (i) Descriptive note explaining sequence of various activities.
- (ii) Construction Program shall be prepared on **MS PROJECT/ PRIMAVERA Software** or any other software as decided by Engineer in charge which will indicate resources in financial terms, manpower and specialized equipment for every important stage.
- (iii) Program for procurement of materials by the contractor.
- (iv) Program for arranging and deployment of manpower both skilled and unskilled so as to achieve targeted progress.
- (v) Program of procurement of machinery/ equipment having adequate capacity, commensurate with the quantum of work to be done within the stipulated period, by the contractor.
- (vi) Program for achieving fortnightly micro milestones and periodic milestones.
- (vii) If at any time, it appears to the Engineer in charge that the actual progress of work does not conform to the approved program referred above, the contractor shall produce a revised program showing the modifications to the approved program by additional inputs to ensure completion of the work within the stipulated time.

- (viii) The submission for approval by the Engineer in charge of such program or the furnishing of such particulars shall not relieve the contractor of any of his duties or responsibilities under the contract. This is without prejudice to the right of Engineer in charge to take action against the contractor as per terms and conditions of the agreement.

1.51 Submission of Progress Reports

Apart from the above integrated program chart, the contractor shall be required to submit progress report of the work in a computerized form. The progress report shall contain the following, apart from whatever else may be required as specified above:

- (a) Construction schedule of the various components of the work through a bar chart for the next two fortnights (or as may be specified), showing the micro-milestone/ milestones, targeted tasks (including material and labour requirement) and up to date progress. At least 10 (ten) digital photographs showing all the parts of construction site along with at least 5 (five) minutes video of executions of different items in soft copy has to be submitted in every fortnightly progress report.
- (b) Progress chart of the various components of the work that are planned and achieved, for the fortnight as well as cumulative up to the fortnight under reckoning, with reason for deviations, if any in a tabular format.
- (c) Plant and machinery statement, indicating those deployed in the work.
- (d) Man-power statement indicating:
 - Individually the names of all the staff deployed on the work, along with their designations.
 - No. of skilled workers (trade wise) and total no. of unskilled workers deployed on the work and their location of deployment i.e. blocks.
- (e) Financial statement, indicating the broad details of all the running account payment received up to date, such as gross value of work done, advances taken, recoveries effected, amount withheld, net payments details of cheque payment received, extra/ substituted/ deviation items if any, etc.
- (f) In case of noncompliance/ delay in compliance in submission of progress report, recovery as specified in applicable GCC shall be made.

1.52 Project Review Meetings

- (i) The contractor, immediately on award of work shall submit details of his key personnel to be engaged for the work at site as per relevant Clause of applicable General Conditions of Contract and other contract conditions. In addition, he shall furnish the Engineer in charge a detailed *organogram* involved with the work. The contractor shall present the programme and status at various review meetings as required.

- (ii) **Weekly Review Meetings:** Shall be attended by Local Team headed by Project in Charge along with PMC team and client representative for every alternative week's

Agenda	a) Weekly programme v/s actual achieved in the past week and programme for next week b) Remedial actions and hold up analysis c) Any decision on quarries raised either by contractor/ PMC
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Monthly Review Meetings: Shall be attended by Project in Charge and the Management Representative who can take independent decisions along with PMC team and client's representatives.

Agenda	a) Progress Status/ Statistics b) Completion Outlook c) Major hold ups/ slippages d) Assistance required e) Critical issues f) Any decision on queries raised either by Contractor/ PMC g) Anticipated cash flow requirement for next two months
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1.53 Temporary Water/ Electricity/ Telephone Connection

- (i) Arrangement of temporary telephone connection, water and electricity required by Contractor, shall be made by him at his own cost and also necessary permissions shall be obtained by him directly from concerned authorities, under intimation to the Department. Also, all initial cost and running charges, and security deposit, if any, in this regard shall be borne by him. The Contractor shall abide by all the rules/ bye laws applicable in this regard and he shall be solely responsible for any penalty on account of violation of any of the rules/ byelaws in this regard. Nothing extra shall be payable on this account. The contractor can use ground water by digging bore well from the site premises if permissible. He shall maintain the bore log details, static water table, yield, and drawdown level of the bore well and the same shall be handed over to the department. After completion of work he can take out the submersible pump and the bore will become property of employer.
- (ii) The Contractor shall be responsible for maintenance of watch and ward of the complete installation and water/ electricity meter and shall also be responsible for any pilferage, theft, damage, penalty etc. in this regard. The Contractor shall indemnify the Department against any claim arising out of pilferage, theft, damage, penalty etc. whatsoever on this account. Security deposit for the work shall be released only after No Dues Certificates are obtained from the local

Authorities from whom temporary electric/ water/ telephone connection have been obtained by the Contractor. Nothing extra shall be payable on this account.

- (iii) The Department shall in no way be responsible for either any delay in getting electric and/ or water and/ or telephone connections for carrying out the work or not getting connections at all. No claim of delay or any other kind, whatsoever, on this account shall be entertained from the Contractor. Also, contingency arrangement of stand-by water & electric supply shall be made by the Contractor for commencement and smooth progress of the work so that work does not suffer on account of power failure or disconnection or not getting connection at all. No claim of any kind whatsoever shall be entertained on this account from the Contractor. Nothing extra shall be payable on this account.

1.54 Cleanliness of Site

- (i) 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 as directed by the Engineer in charge, 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.

- (ii) 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.
- (iii) 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 waste water, slush etc. shall not be allowed to be collected at site. It may be directly pumped into the creek with prior approval of the concerned authorities. 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 in such 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.

1.55 Inspection of Work

- (i) In addition to the provisions of relevant clauses of the contract, the work shall also be open to inspection by Officers of CPWD/ CTE/ vigilance unit/ TPQA/ User Department and their representatives. The contractor shall at times during the usual working hours and at all times at which reasonable notices of the intention of the Engineer in charge or other officers as stated above to visit the works shall have been given to the contractor, either himself be present to receive the orders and instructions or have a responsible representative duly accredited in writing, to be present for that purpose.
- (ii) Inspection of the work by Committee/ Consultant appointed by the CPWD.
 - a. The committee/ consultant appointed by CPWD, shall be inspecting the works including workshops and fabrication factory to ensure that the works are in general being executed according to the design, drawings and specifications laid down in the contract. His observations shall be communicated by CPWD Engineering staff and compliance is to be reported to CPWD.
 - b. The consultant appointed by CPWD shall certify on completion of particular building that it has been constructed according to the approved drawings design and specifications.
- (iii) Officers of CPWD, Dignitaries from Central Ministry/ Department, User Department shall be inspecting the on-going work at site at any time with or without prior intimation. The contractor shall, therefore, keep updated the following requirements and detailing.
 - a. Display Board showing detail of work, weekly progress achieved with respect to targets, reason of shortfall, status of manpower, wages being paid for different categories of workers.
 - b. Entrance and area surrounding to be kept cleaned.
 - c. Display layout plan key plan, Building drawings including plans, elevations and sections.
 - d. Upto date displays of Bar chart, CPM and PERT etc.
 - e. Keep details of quantities executed, balance quantities, deviations, possible Extra item, substituted Item etc.
 - f. Keep plastic/ cloth mounted one sets of building drawings.
 - g. Set of Helmets and safety shoes for exclusive use for officers/ dignitaries visiting at site.
- (iv) The work may be inspected by Chief Technical Examiners Organization of Central Vigilance Commission/ Vigilance Unit of CPWD/ Any other authority. In such case the contractor shall make all arrangements for providing required details/ documents.

1.56 Final Testing of the Installation

The Contractor shall demonstrate trouble free functioning of all the Civil and E & M installations and services. The Engineer in charge or his authorized representatives shall carry out final inspection of the various Civil and E & M

services and installations. Any defect(s) noticed during demonstration shall be rectified by the Contractor at his own cost to the entire satisfaction of the Engineer in charge. Nothing extra shall be payable on this account.

1.57 Submission of as built drawings and obtaining Occupation Certificate

The contractor shall obtain occupation certificate/ completion certificate from local bodies including getting the required site visits conducted by such authorities with a view to obtain the same.

1.58 General Clarifications

- (i) Unless otherwise specified in the schedule of quantities, the rates for all items of work shall be considered, as inclusive of pumping out or bailing out water, if required throughout the construction period for which no extra payment shall be made. This shall also include water encountered from any source such as rains, floods, sub soil water table being high and/ or due to any other cause whatsoever.
- (ii) All stone aggregate and stone ballast shall be of hard stone variety to be obtained from approved quarries.
- (iii) Coarse sand should be obtained from approved sources. The same shall be clean and sharp angular grit type. The coarse sand shall be screened before using, if required. If the sand brought to site is dirty, it must be washed in clean water to bring the sand to the required specifications. Nothing extra shall be payable on this account.
- (iv) The rates for all items of work, shall unless clearly specified otherwise, include cost of all operations and all inputs of labour, material, T & P, scaffolding, wastages, watch and ward, other inputs, all incidental charges, all taxes, CESS, VAT/ GST, duties, levies etc. required for execution of the work.

1.59 Product delivery, Storage and handling of Chemicals

- (i) The contractor shall construct storage space for Chemicals materials to ensure that the storage conditions are as recommended by the manufactures.
- (ii) All the materials shall be procured and delivered in sealed containers with labels legible and intact.
- (iii) All the chemicals {polymers, epoxy, water proofing compound, plasticizer, Polysulphide, SBR based elastomeric, APP (Atactic Polypropylene Polymer), all exterior and interior paints, polish etc.} shall be procured in convenient packs say 20 litres/ Kg. capacity packing only or as approved by the Engineer in charge, and not in bigger capacity containers, say 200 litre (Kgs.) drums unless otherwise specifically permitted by the Engineer in charge. One sample from each lot of the chemical procured by the contractor shall be tested in a laboratory as approved by the Engineer in charge.

- (iv) All material required for the execution of the work shall be got approved, procured and deposited with the Departmental supervisory staff. The materials shall be kept in joint custody of the contractor and the Department.

The watch and ward of such material shall, however, remain to be the responsibility of the contractor and no claim, whatsoever, on this account shall be entertained. Different containers of each chemical shall be serially numbered on packing and also consumed in that order. Day-to-Day account of receipt, issue and balance shall be regulated by the Department and proper account shall be maintained at site of work in the prescribed form as per the standard practice.

- (v) All the chemicals shall be procured by the contractor directly from the manufacturer. In exceptional circumstances, the contractor may be allowed to procure the materials from the authorized dealers of the manufacturers, if specifically permitted by the Engineer in charge.
- (vi) The original copies of challan/ cash memos towards the quantity of various chemicals procured shall be made available by the contractor at the request from the Engineer in charge and a copy of the same shall be kept in record.
- (vii) The Name of manufacturers, manufacturer's product identification, manufacturer's mixing instructions, warning for handling and toxicity and date of manufacturing and shelf life shall be clearly and legibly mentioned on the labels of the each container.
- (viii) The contractor shall submit for the chemicals procured, manufacturer's and/ or authorized dealer's certificate regarding supplying and verifying conformance to the material specifications, as specified.
- (ix) All filled containers shall be handled in safe manner and in a way to avoid breaking container seals.
- (x) Empty containers of the chemicals should not be removed from site till the completion of work and shall be removed only with the written approval of the Engineer in charge.
- (xi) All arrangements for measuring, dosing and mixing of material / chemicals at site have to be made by the contractor.
- (xii) Contractor shall suitably advise his site Engineer and all the workers as regards safe handling of chemicals. Necessary protective and safety equipment in form of hand gloves, goggles etc. shall be provided by the contractor and be also used at site.
- (xiii) All incidental charges of any kind including cartage, storage and wastage and safe custody of material etc. shall be borne by the contractor and no claim, whatsoever, shall be entertained on this account.
- (xiv) The chemicals shall be tested in an independent laboratory as approved by the Engineer in charge at the frequency as specified. If required, more samples may have to be tested as per the directions of the Engineer in charge. Nothing extra shall be payable on this account.

1.60 De-watering

- (i) De-watering required, if any, shall be done conforming to BIS Code IS: 9759 (guide lines for de-watering during construction) and/ or as per the specifications approved by the Engineer in charge. Design of an appropriate and suitable dewatering system shall be the Contractor's responsibility. Such scheme shall be modified/ augmented as the work proceeds based on fresh information discovered during the progress of work, at no extra cost. At all times during the construction work, efficient drainage of the site shall be carried out by the Contractor and especially during the laying of plain cement concrete, taking levels etc. The Contractor shall also ensure that there is no danger to the nearby properties and installations on account of such lowering of water table. If needed, suitable precautionary measures shall be taken by the Contractor. Also, the scheme of dewatering adopted shall have adequate builtin arrangement to serve as stand-bye to attend to repair of pumps etc. and disruption of power/ fuel supply. Nothing extra shall be payable on this account.
- (ii) In trenches where surface water is likely to get into cut/ trench during monsoons, a ring bund of puddle clay or by any other means shall be formed outside, to the required height, and maintained by the Contractor. Also, suitable steps shall be taken by the Contractor to prevent back flow of pumped water into the trench. Nothing extra shall be payable on this account.

1.61 Third Party Quality Assurance (TPQA):

- (a) In order to achieve a high standard of quality, a separate agency if required shall be appointed by CPWD who will carry out independent testing of materials and checking and ensure overall quality procedures. The Contractor shall be required to fully cooperate with the agency and facilitate them in taking samples, transportation and examination of various activities including documentation at no extra time and cost. In case of any adverse findings by the agency, the Contractor shall do the needful rectifications at no extra time and cost. The Engineer in charge shall be at liberty for ensuring quality work done through agencies like IITs/ NITs/ IIITs/ Govt. Engineering College or Institute of repute. The successful Bidder shall include the provisions of Quality Assurance while framing the proposed methodology for tests. The expenditure towards engaging TPQA team shall be borne by the department.
- (b) The Contractor shall allow access to Third Party Quality Assurance (TPQA) engaged by Engineer in charge to have a control on quality and methodology of execution. All the arrangements required for sampling, transporting and getting them tested including testing charges shall be borne by the agency/ Contractor for which nothing extra shall be payable. The Contractor shall extend full cooperation to Third Party Quality Assurance Agencies engaged by the department for the Project during their field visits for arranging the necessary quality assurance tests for materials and the construction works.

1.62 Preferred Makes (Brands) of materials:

Preferred makes (brands) of materials, wherever applicable and in the scope of work, are given in the tender document for guidance. Alternate equivalent makes (brands) may also be used subject to:

1.62.2 The contractor submits all documents to the satisfaction of the Engineer in charge to prove that the alternate make meets the contract specifications in all respect and is equivalent to the specified make.

1.62.3 The necessary cost adjustments, if any, on account of above change shall be made by the Engineer in charge.

1.62.4 The Engineer in charge approves the alternate equivalent make.

1.63 Defect liability period:

- (i) Defect liability period shall be as per conditions laid down in applicable General Conditions of Contract for CPWD from the date of handing over the building to the User/ Owner/ Client complete in all respects & fit for occupation. During this period, the defects noticed in the work shall be rectified by the contractor at his own cost. In case he fails to do so after intimation to him in writing by the Engineer in charge, the same shall be carried out by the Department at his risk and cost.
- (ii) However, maintenance of other building activities such as cleaning, sweeping of pocket & desilting of sewer lines, S.W. Drain shall be done only once, at the time prior to handing over the building.

1.64 Compliance of directives of Hon'ble National Green Tribunal (NGT) dated 04.12.2014 and 10.04.2015 and EIA Guidance Manual issued in February 2010.

The contractor shall comply with following guidelines on the matter in pursuance of orders passed by Hon'ble National Green Tribunal.

- (i) The contractor shall not store/ dump construction material or debris on metalled road.
- (ii) The contractor shall get prior approval from Engineer in charge for the area where the construction material or debris can be stored beyond the metalled road. This area shall not cause any obstruction to the free flow of traffic / inconvenience to the pedestrians. It should be ensured by the contractor that no accidents occur on account of such permissible storage.
- (iii) The contractor shall take appropriate protection measures like raising wind breakers of appropriate height on all sides of the plot/ area using CGI sheets or plastic and/ or other similar material to ensure that no construction material dust fly outside the plot area.
- (iv) The contractor shall ensure that all the trucks or vehicles of any kind which are used for construction purposes/ or are carrying construction material like cement, sand and other allied material are fully covered. The contractor shall take every necessary precautions that the vehicles are properly cleaned and

dust free to ensure that enroute their destination, the dust, sand or any other particles are not released in air/ contaminate air.

- (v) The contractor shall provide mask to every worker working on the construction site and involved in loading, unloading and carriage of construction material and construction debris to prevent inhalation of dust particles.
- (vi) The contractor shall provide all medical help, investigation and treatment to the workers involved in the construction of building and carry of construction material and debris relatable to dust emission.
- (vii) The contractor shall ensure that C&D waste is transported to the C&D waste site only and due record shall be maintained by the contractor.
- (viii) The contractor shall compulsorily use of wet jet in grinding and stone cutting.
- (ix) The contractor shall comply all the preventive and protective environmental steps as started in the MoEF guidelines, 2010.
- (x) The contractor shall carry out on-road-inspection for black smoke generating machinery. The contractor shall use cleaner fuel.
- (xi) The contractor shall ensure that all DG sets comply emission norms notified by MoEF.
- (xii) The contractor shall use vehicles having pollution under control certificate. The emissions can be reduced by a large extent by reducing the speed of a vehicle to 20 kmph. Speed bumps shall be used to ensure speed reduction. In cases where speed reduction cannot effectively reduce fugitive dust, the contractor shall divert traffic to nearby paved areas.
- (xiii) The contractor shall ensure that the construction material is covered by tarpaulin. The contractor shall take all other precaution to ensure that no dust particles are permitted to pollute air quality as a result of such storage.
- (xiv) Nothing shall be paid extra for fulfilling of all the above conditions except for the items existing in the schedule of quantities. For such items, work done shall be paid on the basis of the agreement rates.

1.65 The scope of work includes submission of three set of hard copies of all drawings (in A1 size or any other size as directed by the Engineer in charge) i.e., Architectural, Structural, Service drawings and any other drawings related to this work to the Engineer in charge. The cost shall be deemed to be inclusive of rate quoted by the agency/ contractor and nothing extra shall be paid separately to the agency/ contractor for this item.

1.66 Recycling, Reuse and Management of C&D Waste

The contractor shall use recycled construction and demolition (C&D) waste materials in the execution of work, subject to availability of a C&D waste processing plant and the following materials in the near vicinity. The Engineer in charge shall find out whether C&D waste processing plant is available in the near vicinity or not. In case the Engineer in charge finds that the plant is

available in the near vicinity, the materials which are found available in the plant shall be used. The decision of Engineer in charge in writing shall be final and binding on all issues related to it.

- (a) Fly ash bricks/ blocks of recycled C&D Waste/ AAC blocks may be used in masonry work for non-structural members.
- (b) 20% recycled sand and 20% recycled aggregate conforming to IS: 383-2016 may be used in non-structural elements.
- (c) RMC plants may use 20% recycled sand and 20% recycled aggregate conforming to IS: 383-2016 in RMC supply for non-structural elements.
- (d) Precast tiles manufactured by using 20% of recycled materials from C&D plants containing recycled sand and aggregate conforming to IS: 383-2016 may be used.
- (e) RMC plant may be approved which have MoU/ agreement with the C&D waste processing plant, for use of recycled coarse and fine aggregates conforming to IS: 383-2016 in the manufacturing of lean concrete.
- (f) For sand filling (e.g. sand filling under floors, behind retaining walls, approach roads etc.), only manufactured sand obtained from C&D waste processing plant conforming to IS: 383-2016 may be used.
- (g) CC blocks, Paver blocks, Kerb Stones, Concrete tiles on footpaths etc to be used in the works, may utilize recycled materials obtained from C&D waste processing plants conforming to IS: 383-2016.
- (h) For cement plaster, the manufactured sand obtained from C&D waste processing plant conforming to IS: 383-2016 may be used.
- (i) Quarterly demands should be shared in advance with operators for planning and scheduling plant operations by the contractors.
- ~~(j) C & D waste processing unit shall be installed at site in redevelopment projects costing more than Rs. 500 crores.~~

All materials used shall comply with relevant IS codes and shall be executed as per the technical specifications, bid document requirements, and the direction of the Engineer-in-Charge.

Special Conditions for Cement brought by the Contractor

1. The contractor shall procure 43 grade ordinary Portland cement conforming to IS:8112 or Portland Pozzolana Cement conforming to IS:1489 (Part-I) as required in the work, from reputed manufacturers of cement such as **ACC, BIRLA, Ultratech, Ambuja cement**.
2. The cement shall be brought at site in bulk supply of approximately 50 tonnes or as decided by the Engineer in charge. The cement godown of the capacity to store a minimum of 2000 bags of cement or as decided by Engineer in charge in case less than 100 MT cement is required for the work, shall be constructed by the contractor at site of work for which no extra payment shall be made. For small maintenance works, Engineer in charge shall decide the requirement of the storage/ godown.
3. The contractor shall be responsible for the watch and ward and safety of the cement godown. The contractor shall facilitate the inspection of the cement godown by the Engineer in charge at any time.
4. The 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 material required for testing. 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.
5. The actual issue and consumption of cement on work shall be regulated and proper accounts maintained as provided in relevant clause of the contract. The theoretical consumption of cement shall be worked out as per procedure prescribed in relevant clause 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 needs to made.
6. 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.
7. 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 brought by the Contractor

1. The Contractor shall procure IS marked low alloy TMT bars of various grades from;
The steel Manufacturers such as SAIL, TATA steel Ltd., RINL, JINDAL steel & power Ltd, and JSW steel Ltd
2. The contractor shall have to obtain and furnish test certificates to the Engineer in charge in respect of all supplies of steel brought by him to the site of work.
3. Samples shall also be taken and got tested by the Engineer in charge as per the provisions in this regard in relevant BIS codes. In case the test results indicate that the steel arranged by the contractor does not conform to the specifications as defined under para 1 above, the same shall stand rejected, and it shall be removed from the site of work by the contractor at his cost within a week's time of written orders from the Engineer in charge to do so.
4. The steel reinforcement bars shall be brought to the site in bulk supply of 10 tonnes or more or as decided by the Engineer in charge.
5. The steel reinforcement shall be stored by the contractor at site of work in such a way as to prevent distortion and corrosion, and nothing extra shall be paid on this account. Bars of different sizes and lengths shall be stored separately to facilitate easy counting and checking.
6. For checking nominal mass, tensile strength, bend test, re-bend test, etc., specimen of sufficient length shall be cut from each size of the bar at random, and at frequency given in applicable CPWD specifications.
7. The contractor shall supply free of charge the material required for testing. 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.
8. The actual issue and consumption of steel on work shall be regulated and proper accounts shall be maintained as provided in relevant clause of the contract. The theoretical consumption of steel shall be worked out as per procedure prescribed in relevant clause of the contract and shall be governed by conditions laid therein. In case the consumption is less than theoretical consumption including permissible variations, recovery at the rate so prescribed shall be made. In case of excess consumption, no adjustment needs to be made.
9. The steel brought to site and steel remaining unused shall not be removed from site without the written permission of the Engineer in charge.

Particular Specifications

1) Form work

The work shall be done in general as per CPWD Specifications.

- (a) Only M.S. Centering/ Shuttering and Scaffolding material unless & otherwise specified shall be used for all R.C.C. work to give an even finish of concrete surface. However, marine-ply shuttering in exceptional cases as per site requirement may be used on specific request from contractor to be approved by the Engineer in charge.
- (b) Double steel scaffolding having two sets of vertical supports shall be provided for external wall finish, cladding etc. The supports shall be sound and strong, tied together with horizontal pieces over which scaffolding platform shall be fixed. Scaffolding shall have steel staircase for inspection works at upper levels.
- (c) In order to keep the floor finish as per architectural drawings and to provide required thickness of the flooring as per specifications, the level of top surface of RCC shall be accordingly adjusted at the time of its centring, shuttering and casting for which nothing extra shall be paid to the Contractor.
- (d) As per general engineering practice, level of floors in toilet/ bath, balconies, shall be kept 12 to 20mm, lower than general floors as required shuttering should be adjusted accordingly. The landing level of mumty/ Staircase cabin shall be kept one riser level higher than adjoining slab level so as to accommodate water proofing treatment over terrace slab. In case of kitchen slab the portion of floor trap below kitchen platform be kept at lower level as per drawings. Nothing extra is payable on this account.
- (e) Steel shuttering as approved by the Engineer in charge only shall be used by the contractor. Minimum size of shuttering plates shall be 600mm x 900mm except for the case when closing pieces required to complete the shuttering panels. Dented, broken, cracked, twisted or rusted shuttering plates shall not be allowed to be used on the work. The shuttering plates shall be cleaned properly with electrically driven sanders to remove any cement slurry or cement mortar or rust. Proper shuttering oil or de-bonding compound shall be applied on the surface of the shuttering plates in the requisite quantity before assembly of steel reinforcement.
- (f) For the execution of centring and shuttering, the contractor shall use propriety 'Reebole" chemical mould release agent of FOSROC or equivalent as shuttering oil as approved by Engineer in charge and nothing extra shall be paid on this account.

2) RCC work (Design Mix Concrete)

The Mix Design shall be got done by the contractor from a NABL accredited laboratory/ IIT/ NIT laboratory with the approval of Engineer in charge. The RCC Work shall be carried out as per the Mix Design approved by the Engineer in charge before start of RCC work.

2.1 General

The RCC work shall be done with RMC or Design Mix Concrete, unless otherwise specified in the nomenclature of items, wherever letter M has been indicated, the same shall imply for the Design Mix Concrete. The Ready Mix Concrete shall be as per IS:4926 and as per CPWD Specification and guide lines. For the nominal mix in RCC, CPWD specification shall be followed. The Design Mix Concrete will be designed based on the principles given in IS:456, 10262 and SP 23. The contractor shall carry out design mixes for each class of concrete indicating that the concrete ingredients and proportions will result in concrete mix meeting requirements specified. The cement shall be actually weighed as presumption of each bag having 50 kg shall not be allowed. In case of use of admixture, the mix shall be designed with these ingredients as well. The specification mentioned herein below shall be followed for Design Mix Concrete.

A. Ingredients

- i) Coarse Aggregate: As per CPWD Specifications
- ii) Fine Aggregate: As per CPWD Specifications.
- iii) Water: As per requirements laid down in IS 456-2000 and CPWD specifications.
- iv) Cement: Cement arranged by the contractor will be OPC (Confirming to IS 8112)/ PPC (in bags) conforming to IS:1489:2015 (Part-I & Part-II)

B. Admixture

The type of Admixture shall be got approved from Engineer in charge. Admixtures of approved quality shall be mixed with concrete to achieve the desired workability within specified water cement ratio. The admixture shall conform to IS:9103. The chloride content in the admixture shall satisfy the requirement of BS:5075. The total amount of chlorides in the admixture mixed concrete shall also satisfy the requirements of IS:456-2000.

The department shall not be paid anything extra to the contractor/ agency for cost of admixture required for achieving desired workability without any change in specified water cement ratio for RCC/ CC work.

C. Grade of Concrete:

The characteristic compressive strength of various grades of concrete shall be given as below:

Sl. No	Grade Designation	Compressive strength on 15cm cubes min 7 days (N/mm ²)	Specified characteristic compressive strength at 28 days (N/mm ²)	Minimum cement content* (kg per cum) ratio	Maximum water cement ratio
(i)	M-30	As per Design	As per IS 456	As per IS 456	As per IS 456
(ii)	M-25	As per Design	As per IS 456	As per IS 456	As per IS 456
(iii)	M-20	As per Design	As per IS 456	As per IS 456	As per IS 456
(iv)	M-15	As per Design	As per IS 456	As per IS 456	As per IS 456
(v)	M-10	As per Design	As per IS 456	As per IS 456	As per IS 456

In the designation of concrete mix letter M refers to the mix and the number to the specified characteristic compressive strength of 15 cm Cube at 28 days expressed in N/mm².

D. Workability of Concrete:

Followings are the required workability of concrete, unless otherwise specified elsewhere or as decided by Engineer in charge.

Placing Conditions	Degree of Workability	Slump (mm)
(1)	(2)	(3)
Lightly reinforced sections in slabs, beams, walls, columns	Low	25-75
Heavily reinforced section in slabs, beams, walls, columns.	Medium	50-100
Pumped concrete	Medium	75-100

The recommended values of slump for various members to confirm IS 456:2000.

The Concrete mix shall be designed for minimum workability as specified in IS:456-2000.

E. Testing of Design Mix in Lab:

- (i) The concrete design mix with or without admixture will be got cementitious material carried out by the contractor by any reputed NABL accredited laboratory as per direction of Engineer in charge.

- (ii) For such approval various ingredients for mix design as submitted by contractor shall be sent to the lab/ test houses through the Engineer in charge of the project and got it tested in approved laboratories as may be decided by the Engineer in charge. Sample of aggregate sent shall be preserved at site by the department for each different set of Coarse aggregates & Fine aggregates, fresh design shall be done and got approved by the Department. The admixture if used by contractor shall be at his own cost without any extra payment.
- (iii) Note: For RMC OPC shall be used in combination with GGBS as follows:
Part of OPC 43 grade cement (conforming to IS8112) can be substituted with Ground Granulated Blast furnace slag (GGBS) to a maximum of 30%. The physical and chemical properties of GGBS shall conform to IS: 12089-1987 (Reaffirmed 2008). Uniform blending with OPC 43 grade cement to be ensured in accordance with clauses 5.2 and 5.2.1 of IS:456-2000.
- (iv) In case of change of source or characteristic properties of the ingredients used in the concrete mix during the work, a revised laboratory mix design report conducted in approved by Engineer in charge shall be submitted by the contractor as per the direction of the Engineer in charge.

F. Approval of Design Mix:

- (i) The mix design for a specified grade of concrete shall be done for a target mean compressive strength $T_{ck} = F_{ck} + 1.65s$

OR

$T_{ck} = F_{ck} + X$ whichever is higher as per

IS:10262 (latest version)

Where F_{ck} = Characteristic Compressive Strength at 28 days

s = Standard deviation which depends on degree of quality control

X = Factor based on the grade of concrete

- (ii) The degree of quality control for this work is “good” for which the standard deviation (s) obtained for different grades of concrete shall be as per IS relevant IS Standards/ Codes.
- (iii) Out of the six specimen of each set, three shall be tested at seven days and remaining three at 28 days. The preliminary tests at seven days are intended only to indicate the strength to be attained at 28 days.

G. Charges For Design Mix:

All cost of mix designing and testing connected therewith including charges payable to the laboratory shall be borne by the contractor.

2.2 Design Mix Concrete from Fully Automatic Computerised Concrete Batching and Mixing Plant

A. Proportioning Concrete

In proportioning cement concrete, the quantity of both cement and aggregates shall be determined by weight. The cement shall be weighed separately from the aggregates. Water shall either be measured by volume in calibrated tanks or weighed. All measuring equipment shall be maintained in a clean and serviceable condition. The amount of mixing water shall be adjusted to compensate for moisture content in both coarse and fine aggregates. The moisture content of aggregates shall be determined in accordance with IS:2386 (Part III). Suitable adjustments shall also be made in the weights of aggregates to allow for the variation in weight of aggregates due to variation in moisture content.

B. Production of Concrete

The concrete shall be RMC produced in a central batching and mixing plant with, computerized printing for contents and admixture dosage. The batching plant shall be fully automatic. Automatic batcher shall be charged by devices which, when actuated by a Single starter switch will automatically start the weighing operation of each material and stop automatically, when the designated weight of each material has been reached. The batching plant shall have automatic arrangement for dispensing the admixture and shall also be capable of discharging water in more than one stage. A print out from the batching plant for every lot shall be submitted. A batching plant essentially shall consist of the following components: Separate storage bins for different sizes of aggregates, silo for cement; and water storage tank.

- a) Batching equipment
 - b) Mixers
 - c) Control panels
 - d) Mechanical material feeding and elevating arrangements
 - e) The Contractor shall arrange for inspection of automatic batching plant within seven days of issue of letter of award to facilitate inspection and approval of same by Engineer in charge. Nothing extra will be paid for this.
- (i) The compartments of storage bins for aggregates shall be approximately of equal size. The cement compartment shall be centrally located in the batching plant. It shall be watertight and provided with necessary air vent, aeration fittings for proper flow of cement & emergency cement cut off gate. The aggregate and sand shall be charged by power operated centrally revolving chute. The entire plant from mixer floor upward shall be enclosed and insulated. The batch bins shall be constructed so as to be self-cleansing during drawdown. The batch bins shall in general conform to the requirements of IS:4925.
 - (ii) The batching equipment shall be capable of determining and controlling the prescribed amounts of various constituent materials for concrete accurately i.e. water, cement, sand, individual size of coarse aggregates etc. The accuracy of the measuring devices shall fall within the following limits.

Measurement of Cement	±2% of the quantity of cement in each batch
Measurement of Water	±3% of the quantity of water in each batch
Measurement of Aggregate	±3% of the quantity of aggregate in each batch
Measurement of Admixture	±3% of the quantity of admixture in each batch

C. Mixing Concrete

The mixer in the batching plant shall be so arranged that mixing action in the mixers can be observed from the operator's station. The mixer shall be equipped with a mechanically or electrically operated timing, signalling and metering device which will indicate and assure completion of the required mixing period. The mixer shall have all other components as specified in IS:4925.

D. Transportation, Placing and Compaction of Concrete

- (i) Mixed concrete from the batching plant shall be transported to the point of placement by transit mixers or through concrete pumps or steel closed bottom buckets capable of carrying 6 cum concrete. In case the concrete is proposed to be transported by transit mixer, the mixer speed shall not be less than 4 rev/ min. of the drum nor greater than a speed resulting in a peripheral velocity of the drum as 70 m/ minute at its largest diameter. The agitating speed of the agitator shall be not less than 2 rev/ min. nor more than 6 rev/ min. of the drum. The number of revolutions of the mixing drum or blades at mixing speed shall be between 70 to 100 revolutions for a uniform mix, after all ingredients, have been charged into the drum. Unless tempering water is added, all rotation after 100 revolutions shall be at agitating speed of 2 to 6 rev/ min. and the number of such rotations shall not exceed 250. The general construction of transit mixer and other requirements shall conform to IS: 5892.
- (ii) In case concrete is to be transported by pumping, the conduit shall be primed by pumping a batch of mortar/ thick cement slurry through the line to lubricate it. Once the pumping is started, it shall not be interrupted (if at all possible) as concrete standing idle in the line is liable to cause a plug. The operator shall ensure that some concrete is always there in the pump-receiving hopper during operation. The lines shall always be maintained clean and shall be free of dents.
- (iii) Materials for pumped concrete shall be batched consistently and uniformly. Maximum size of aggregate shall not exceed one-third of the internal diameter of the pipe. Grading of aggregate shall be continuous and shall have sufficient ultrafine materials (materials finer than 0.25mm). Proportion of fine aggregates passing through 0.25mm shall be between 15 & 30% and that passing through 0.125 mm sieve shall not be less than 5% of the total volume of aggregate. When pumping long distances and through hot weather, set-retarding admixtures may be used. Admixtures to improve workability can be added. Suitability of concrete shall be through pumping shall be verified by trial mixes and by performing pumping tests.

2.3 Preparation of Mixes as per Approved Design Mix and conducting confirmatory test at Field Lab.

- (i) The contractor shall make the cubes of trial mixes as per approved Mix design at site laboratory for all grades, in presence of Engineer in charge using sample of approved materials proposed to be used in the work prior to commencement of concreting and get them tested in his presence to his entire satisfaction for 7 days and 28 days. Test cubes shall be taken from trial mixes as follows.
- (ii) For each mix, a set of six cubes shall be made from each of the three consecutive batches. Three cubes from each set of six shall be tested at age of 7 days and remaining three cubes at age of 28 days. The cubes shall be made, cured, transported and tested strictly in accordance with specifications. The average strength of nine cubes at age of 28 days shall exceed the specified target mean strength for which design mix has been approved, the evaluation of test results will be done as per IS : 456-2000.

2.4 Work Strength Test

A. Test Specimen

Work strength test shall be conducted in accordance with IS: 516 on random sampling. Each test shall be conducted on six specimen, three of which shall be tested at 7 days and remaining three at 28 days. Additional samples shall be prepared, if required, as per direction of Engineer in charge for testing samples cured by accelerated method as described in IS:9103.

B. Test Results of Sample

The test results of the sample shall be the average of the strength of three specimen. The individual variation shall not be more than ± 15 percent of the average. If more, the test results of the sample are invalid. 90% of the total tests shall be done at the laboratory established at site by the contractor and remaining 10% in the laboratory of Government Engineering colleges, or in any other approved laboratory as directed by the Engineer in charge.

C. Standard For Acceptance

- (i) Standard of acceptance shall be same as specified in clause 16 of IS 456-2000.
- (ii) In order to keep the floor finish as per direction of Engineer in charge and as per Architectural drawings and to provide required thickness of the flooring as per specification, the level of top surface of RCC shall be accordingly adjusted at the time of its centring, shuttering and casting for which nothing extra shall be paid to the contractor.

2.5 Ultrasonic Pulse Velocity Method of Test for RCC

- (i) The underlying principle of assessing the quality of concrete is that comparatively higher velocities are obtained when the quality of concrete in terms of density, homogeneity and uniformity is good. The consistency of the concrete as regards its general quality gets established. In case of poorer quality lower velocities are obtained. If there are cracks, voids or flaws inside the

concrete which come in the way of transmission of pulse, lower velocities are obtained.

- (ii) The quality of concrete in terms of uniformity, incidence or absence of internal flaws, cracks and segregation etc. indicative of the level of workmanship employed, can thus be assessed using the guidance given in table below, which have been evolved for characterizing the quality concrete in structure in term of the ultrasonic pulse velocity.

Velocity criterion for Concrete Quality Grading;

Sl. No.	Pulse velocity by Cross Probing (km/sec)	Concrete Quality Grading
1	Above 4.40	Excellent
2	3.75 to 4.40	Good
3	3.0 to 3.75	Doubtful
4	Below 3.0	Poor

(Note: In Case of “doubtful” quality it may be necessary to carry further tests. Poor shall be rejected)

- (iii) Pulse velocity method of test of concrete is to be conducted for CPWD works as a routine test. The acceptance criteria as per the above table will be applicable which is as per IS:516 (Part-5 Sec-I) 2018. From the above “Good” and “Excellent” grading are acceptable and below these grading the concrete will not be acceptable.
- (iv) 5% of the total number of RCC members in each category i.e. beam, column, slab and footing may be tested by UPV test method for establishing quality of concrete. It is suggested that test be conducted on RCC beam near joint with column, on RCC column near joint with beam, on RCC footings and rafts. On RCC rafts a suitable grid can be worked out for determining number of tests. In addition doubtful areas such as honeycombed locations, locations, where continuous seepage is observed, construction joints and visible loose pockets will also be tested.
- (v) The test results are to be examined in view of the above acceptance criteria “Good” and “Excellent” and wherever concrete is found with less than required quality as per acceptance criteria, repairs to concrete will be made. Honeycombed areas and loose pockets will be repaired by grouting using Portland Cement Mortar/ Polymer Modified Cement Mortar/ Epoxy Mortar, etc., after chipping loose concrete in appropriate manner. In areas where concrete is found below acceptance criteria and defects are not apparently visible on surface, injecting approved grout in appropriate proportion using epoxy grout/ acrylic Polymer modified cements slurry made with shrinkage compensating cement/ plain cement slurry etc will be resorted to for repairs (refer relevant chapters from CPWD Hand Book on Repairs and Rehabilitation of RCC Buildings). Repair to concrete will be done till satisfactory results are obtained

as per the acceptance criteria by retesting of the repaired area. If satisfactory results are not obtained dismantling and relaying of concrete will be done at the cost of contractor.

2.6 Measurement

As per applicable CPWD specifications

2.7 Tolerances

As per applicable CPWD specifications

2.8 Rate

- (i) The rate includes the cost of materials and labour involved in all the operations described above.
- (ii) In case of actual average compressive strength being less than specified strength which shall be governed by para “Standard of Acceptance” as above the rate payable shall be worked out accordingly on the basis of analysis.
- (iii) In case of rejection of concrete on account of unacceptable compressive strength, governed by para ‘Standard of Acceptance’ as above, the work for which samples have failed shall be redone at the cost of contractors. However, the Engineer in charge may order for additional tests (like cutting cores, ultrasonic pulse velocity test, load test on structure or part of structure etc) to be carried out at the cost of contractor to ascertain if the portion of structure wherein concrete represented by the sample has been used, can be retained on the basis of results of individual or combination of these tests.

The contractor shall take remedial measures necessary to retain the structure as approved by the Engineer in charge without any extra cost. However, for payment, the basis of rate payable to contractor shall be governed by the 28 days cube test results and reduced rates shall be regulated in accordance with para 5.4.13.2 of CPWD specification 2019 Vol-I.

2.9 Cover / Spacer Block

The contractor shall provide approved type of support for maintaining the bars in position and ensuring required spacing and correct cover of concrete to reinforcement as called for in the drawings, spacer blocks of required shape and size. Chairs and spacer bars shall be used in order to ensure accurate positioning of reinforcement. Spacer blocks shall be cast well in advance with approved proprietary pre-packed free flowing mortars (Conbextra as manufactured by M/s Fosroc Chemicals India Ltd. Or equivalent as approved by the Engineer in charge at his discretion) of high early strength and same colour as surrounding concrete, Pre-cast cement mortar/ concrete blocks/ blocks of polymer shall not be used as spacer blocks unless specially approved by the Engineer in charge, rate of RCC items is inclusive of cost of such cover blocks.

Flooring

- a) All the work in general shall be carried out as per applicable CPWD Specifications.
- b) The vitrified tiles shall be as specified. The tiles shall be of specified colours as shown in the drawings or as decided by the Engineer in charge and will be laid in pattern as per architectural drawings or as decided by the Engineer in charge. Nothing extra shall be paid for laying tiles in specific pattern. The tiles shall be of first quality of approved make.
- c) Proper gradient shall be given to flooring for toilets, veranda, kitchen, courtyard etc. so that the wash water flows towards the direction of floor trap. Any reverse slop if found, these shall be made good by the contractor by ripping open the floor/ grading concrete and nothing extra shall be paid for such rectifications.
- d) The flooring and skirting will be executed as per pattern shown in the Architectural drawings and/ or as per approval of Engineer in charge.
- e) Single piece stone shall be used in treads, risers etc. of staircase and platform of kitchen, pantry etc. and other similar places.
- f) There shall be a level difference in the finished floor of following areas:

Sl. No.	Higher area	Lower area	Level Difference
1	Rooms	Corridor	10 mm
2	Staircase lobby/ landing	Terrace	50 mm
3	Room/ Corridor	Balcony	25 mm
4	Corridor	Toilet floor	10 mm
5	Toilet floor	WC & Bathroom	10 mm

The level difference shall be finished with at least 100mm wide strip of granite with nosing. However, final decision on Level difference, width of strip, type of material, higher area, lower area etc., will be as decided by Engineer in Charge.

Any screed concrete/ cement mortar required to maintain the level of different types of flooring and to create level difference as mentioned in the above table shall be provided by the contractor for which nothing extra shall be payable.

3) Stone Flooring

- (i) All work in general shall be carried out as per applicable CPWD Specifications.

- (ii) Whenever flooring is to be done in patterns of stones, the contractor shall get samples of each pattern laid and approved by the Engineer in charge before final laying of such flooring. Nothing extra shall be payable on this account.
- (iii) The samples shall not be of a size less than 400mm x 400mm or as required by Engineer in charge.
- (iv) The sample produced shall be fully supported by the details of location/ quarry and the same shall not be removed except with the written permission of Engineer in charge. Samples for Flame burnt/ finish granite shall be produced separately. Flame burning shall be carried out after the selection of the basic granite sample. Flame burning shall be uniform and with a uniform texture across the entire surface of the slab. The Flame burning of the stone slab shall be inspected by the Engineer in charge as and when found necessary and full support for the inspection shall be provided. Full width stone over kitchen platform shall be provided except to adjust for closing pieces. The marble/ any stone flooring in treads and risers of stair case is to be laid in single piece. 40 mm wide sand blasted strip at a distance of 50mm from the edge of the tread to create contrasting colour shall be provided, if required by the Engineer in charge. Nothing extra shall be paid on these accounts.
- (v) The plinth area rate, wherever applicable, offered is inclusive of providing sunken flooring in bathrooms, kitchen etc. Proper gradient shall be given to flooring for toilets, veranda, kitchen, courtyard, etc. as per the directions of Engineer in charge.
Nothing extra shall be paid on these account.
- (vi) The stone flooring will be laid in pattern as per the Architectural drawings and/ or as decided by the Engineer in charge and nothing extra shall be paid for providing flooring in specific pattern.

4) Wood work:

The wood work in general shall be carried out as per applicable CPWD Specifications.

- (i) The samples of species of timber to be used shall be deposited by the contractor with the Engineer in charge before commencement of the work. The contractor shall produce cash vouchers and certificates from standard kiln seasoning plant operator about the timber to be used on the work having been kiln seasoned by them, failing which it would not be accepted as kiln seasoned.
- (ii) Specified timber shall be of good quality and well-seasoned. It shall have uniform colour, reasonably straight grains and shall be free from knots, cracks, shakes and sapwood.
- (iii) Wood work shall not be painted, oiled or otherwise treated before it has been approved by the Engineer in charge.

- (iv) All fittings and fixtures shall be got approved from the Engineer in charge before procurement well in advance and the approved samples shall be kept at site till completion of the work.
 - (v) Factory made wooden shutter, as specified shall be obtained from factories to be approved by the Engineer in charge, shall conform to relevant IS Code. The contractor shall inform well in advance to the Engineer in charge the name and address of the factory where from he intends to get the shutters manufactured. The contractor will place order for manufacturing of shutters only after written approval of the Engineer in charge in this regard is given. The contractor is bound to recommend name(s) of another factory from the approved list in case the factory already proposed by the contractor is not found competent to manufacture quality shutters. Shutters will however, be accepted only if they meet the specified tests. The contractor will also arrange stage wise inspection of the shutters at factory by the Engineer in charge or his authorized representative. The contractor will have no claim if the shutters brought at site are rejected by the Engineer in charge in part or in full lot due to bad workmanship/ quality. Such shutters will not be measured and paid. The contractor shall remove the same from the site of work within 7 days after the written instructions in this regard are issued by the Engineer in charge.
 - (vi) The shutters should be brought at site without primer/ painting.
 - (vii) Inspection of shutters shall be carried out for dimensions & tolerances, size & type, general construction & workmanship, finish & glazing at the frequency specified in applicable CPWD Specifications.
 - (viii) **Criteria for conformity**
As per applicable CPWD Specifications
 - (ix) **Testing**
As per applicable CPWD Specifications
 - (x) **Finish:**
 - a. All components of door shutter shall have smooth finish.
 - b. Panels of the door shutters shall be flat and well sanded to a smooth and level surface.
 - c. All the surfaces of door shutters which are required to be painted or polished or varnished shall be got approved from the Engineer in charge before applying protective coat of primer, polish or varnish.
- 5) Specification for Aluminium Fittings for doors:**
- (a) The aluminium fittings and fixtures shall be machine made and free of fabrication marks, residual effects of welding/ riveting etc., with anodic coating not less than grade AC 10 as per IS.1868 transparent or dyed to required colour or shade with necessary screws.

- (b) The fitting shall be finished in a Satin finish (brushed finish-satin's commercial purpose) except wherever specified otherwise. The brush effect shall be uniform and without any variations.
- (c) Irrespective of the stipulations contained above, the contractor shall produce samples for all the fitting in advance and a written approval for the chosen sample shall be obtained from the Engineer in charge. The decision of the Engineer in charge in respect of the specification, quality and make of fitting to be used at site shall be final and binding on the contractor. Nothing extra shall be payable on this account.
- (d) All the fittings shall be provided with all such accessories as are required to complete the item in working condition whether specifically mentioned or not in the schedule of quantities, specification & elsewhere in this bid document. The quoted rates shall be deemed to be all inclusive for a complete item fit for use including all material. Labour, T & P, Specials, fixing arrangements, nuts, bolts, screws, bushes, all required connection pieces etc. as well as making good the surface wherever required.

6) Finishing:

- (i) The work shall be carried out as per applicable CPWD Specifications.
- (ii) The plastering work shall be carried out as per applicable CPWD Specifications.
 - (a) Necessary Geo-synthetic fibre/ GI chicken wire mesh of minimum 200 mm wide shall be provided at junctions of dissimilar materials (i.e. masonry walls with RCC members etc.) before plastering on inner and outside of junctions.
 - (b) Necessary grooves shall be provided at the junction of dissimilar materials (on inner and outer side of junctions) and shall be neatly finished wherever directed by Engineer in Charge. Necessary drip course shall be provided in Chajjas, Balcony, Projecting Roof, Beams etc.

Nothing extra shall be payable for the items mentioned at (a) & (b) above.
- (iii) The Primer, Synthetic Enamel paint, distemper, acrylic emulsion paint, etc., of makes as approved by the Engineer in charge and of low VOC, shall only be used and brought to the site of work in the original sealed containers. The material brought to the site of work shall be sufficient for at least 60 days of work or as decided by the Engineer in charge. The material shall be kept under the joint custody of contractor and representative of the Engineer in charge. The empty containers shall not be removed from the site till the completion of the work without permission of the Engineer in charge.

7) Water Supply, Sanitary Installations, Drainage etc.,

- (i) The contractor shall furnish all labour, material and equipment, transportation and incidental necessary for supply, installation, testing and commissioning of

the complete Plumbing/ system as described in the Specifications and as shown on the drawings. This also includes any material, equipment, appliances and incidental work not specifically mentioned herein or noted on the Drawings/ Documents as being furnished or installed, but which are necessary and customary to be performed under this contract.

- (ii) The Plumbing/ Sanitary system shall comprise of following:
 - (a) Sanitary and water supply Fixtures and Fittings
 - (b) Internal and External Water Supply
 - (c) Internal and External Drainage
 - (d) Approval from Local Authorities
 - (e) Balancing, testing & commissioning
 - (f) Test reports and completion drawings
- (iii) The contractor shall procure and install all pipes, Sockets/ Nipples including shut-off valve etc as specified.
- (iv) The contractor shall ensure that senior and experienced plumbers are assigned exclusively for this work. Such plumber(s) should have valid license from the local authorities. The project management shall be done through modern technique. For quality control & monitoring of workmanship, contractor shall assign at least one engineer who would be exclusively responsible for ensuring strict quality control, adherence to specifications and ensuring top class workmanship for the installation.
- (v) The work shall be in conformity with the Bye-laws, Regulations and Standards of the local authorities concerned. But if these Specifications and drawings call for a higher standard of materials and/ or workmanship than those required by any of the above regulations and standards, then these Specifications and drawings shall take precedence over the said regulations and standards. However, if the drawings and specifications require something which violates the Bye-laws and Regulations, then the Bye-laws and Regulations shall govern the requirement of this installation.
- (vi) The contractor shall obtain all permits/ licenses and pay for any and all fees required for the inspection, approval and commissioning of their installation. However, all receipted amount shall be reimbursed on production of proof of payment.
- (vii) The Plumbing drawings are to be given by the contractor for obtaining approval from Engineer in charge. The Plumbing/ Sanitary Drawings given by the Engineer in charge or issued with tenders are diagrammatic only and indicate arrangement of various systems and the extent of work covered in the contract. These Drawings indicate the points of supply and of termination of services and broadly suggest the routes to be followed. Under no circumstances shall dimensions be scaled from these Drawings. The contractor shall follow these drawings in preparation of his shop drawings, and for subsequent installation work.

- (viii) The contractor shall examine all architectural, structural, plumbing, electrical and other services drawings and check the as-built works before starting the work, report to the Engineer in charge any discrepancies and obtain clarification. Any changes found essential to coordinate installation of his work with other services and trades, shall be made with prior approval of the Engineer in charge without additional cost to the department.
- (ix) All the shop drawings shall be prepared on computer through AutoCAD System based on Architectural drawings and site measurements. Contractor shall furnish, for the approval of Engineer in charge, the two sets of detailed shop drawings of complete work and materials including layouts for Plant room, Pump room, Typical toilets drawings showing exact location of supports, flanges, bends, tee connections, reducers, detailed piping drawings showing exact location and type of supports, valves, fittings etc; external insulation details for pipe insulation etc.
- (x) These shop drawings shall contain all information required to complete the work. These drawings shall contain details of construction, size, arrangement, operating clearances, performance characteristics and capacity of all items of equipment, also the details of all related items of work by other contractors.

Each shop drawing shall contain tabulation of all measurable items of equipment/ materials/ works and progressive cumulative totals from other related drawings to arrive at a variation-in-quantity statement at the completion of all shop drawings. Minimum 4 sets of drawings shall be submitted after final approval along with CD. When he makes any amendments in the above drawings, the contractor shall supply two fresh sets of drawings with the amendments duly incorporated along with check prints, for approval. The contractor shall submit further four sets of shop drawings to the Engineer in charge for the exclusive use by the Engineer in charge and all other agencies. No material or equipment may be delivered or installed at the job site until the contractor has in his possession, the approved shop drawing for the particular material/ equipment/ installation.

- (xi) Shop drawings shall be submitted for approval four weeks in advance of planned delivery and installation of any material to allow the Engineer in charge ample time for scrutiny. No claims for extension of time shall be entertained because of any delay in the work due to his failure to produce shop drawings at the right time, in accordance with the approved programme.
- (xii) Samples of all materials like valves, pipes and fittings etc. shall be submitted to the Engineer in charge prior to procurement for approval and retention by Engineer in charge and shall be kept in their site office for reference and verification till the completion of the Project. Wherever directed a mock-up or sample installation shall be carried out for approval before proceeding for further installation without any extra cost.
- (xiii) Approval of shop drawings shall not be considered as a guarantee of measurements or of building dimensions. Where drawings are approved, said approval does not mean that the drawings supersede the contract

requirements, nor does it in any way relieve the contractor of the responsibility or requirement to furnish material and perform work as required by the contract.

- (xiv) All materials and equipment shall conform to the relevant Indian Standards and shall be of the approved make and design. Makes shall be in conformity with list of approved manufacturers.
- (xv) Balancing of all water systems and all tests as called for the CPWD Specifications shall be carried out by the contractor through a specialist group, in accordance with the Specifications and ASPE/ ASHRAE Guidelines and Standards. The installation shall be tested and shall be commissioned only after approval by the Engineer in charge. All tests shall be carried out in the presence of the representatives of the Engineer in charge and nothing extra shall be payable on this account.
- (xvi) The contractor shall submit “completion plans of services” for water supply, internal installations and building drainage work within 15 days of the date of completion. These drawings shall be submitted in the form of two sets of CD's and four portfolios (300 x 450 mm) each containing complete set of drawings on approved scale indicating the work as - installed. These drawings shall clearly indicate complete plant room layouts, piping layouts and sequencing of automatic controls, location of all concealed piping, valves, controls and other services. In case the contractor fails to submit the completion plans as aforesaid, security deposit shall not be released and these shall be got prepared at his risk and cost.
- (xvii) The CCI/ CI/ PVC pipe and GI pipe etc. wherever necessary shall be fixed to RCC columns, beams etc. with rawl plugs and nothing extra shall be paid for this.
- (xviii) The variation in consumption of material shall be governed as per CPWD Specification and clauses of the contract to the extent applicable.
- (xix) Rates quoted shall be inclusive of all work and items given in the above mentioned specifications and Schedule of Quantities and applicable for the work under floors, in shafts or at ceiling level at all heights and depths. All rates are inclusive of cutting holes and chases in RCC and masonry work and making good the same. Rates are inclusive of pre testing and onsite testing of the installations, materials and commissioning.

8) Cleaning and Disinfection of Pipelines

On completion of hydraulic tests and before a pipe is disinfected, it shall be proved to be free from obstruction, debris and sediment by scouring or by any other process which the Engineer in charge may prescribe. Upon satisfactory completion of testing and cleaning, the pipelines shall be disinfected as order. Chlorine solution shall be applied at the charging point as the pipeline is being filed and dosing shall be continued until the pipeline is full and at least 50 parts of chlorine per million parts of water have been made available and distributed evenly. If ordinary bleaching power is used, proportions will 150 gms of power to 1000 litre of water. If a proprietary brand is used, the proportion shall be as specified by the manufacturer. The treated water shall be left in pipeline for a

period as directed but not exceeding 24 hours chlorine residual tests shall be taken at various points along the pipeline. The disinfection process shall be repeated until the sample of water taken from the pipeline are declared fit for human consumption by a recognized laboratory.

9) Stainless Steel Hand Rail

Providing, fabricating and fixing in position welded built-up section using stainless steel section/ pipes and connecting plates, of Grade SS 304 (SS 316 Grade shall be used for exterior applications) and of required diameter & thickness as per the Engineer in charge. Drawings and details, at the junctions of doors, on walls, other locations as directed etc. including cutting, welding, grinding, bending to required profile and shape, finish, hoisting, buffing and polishing, cutting chase/ embedding in RCC/ Masonry, fixing using stainless steel screws, nuts, bolts and washers or stainless steel fasteners as required to make it rigidly fixed & stable and making good the plaster/ flooring etc. all complete, at all floors and all levels as directed by the Engineer in charge. Prototype samples to be approved by Engineer in charge before mass fabrication.

Rate includes cost of all inputs of materials, labour, T&P, etc. involved in the work and all incidental charges to execute this item.

10) Construction Joints

Construction joints in PCC, RCC and Light Weight Concrete works etc., shall be provided only at places as per approved structural drawings. It shall not in any manner structurally or functionally affect the structure. If, any additional construction joint is required to be provided, it shall be done with approval of the Engineer in charge. The centring, shuttering, strutting etc., required for the construction joint in PCC, RCC and Light Weight Concrete works shall be provided as per the CPWD Specifications. Nothing extra shall be payable on this account.

11) Treatment to the construction joints and rectification of defects

All care shall be taken to minimize the number of construction joints in the basement raft and walls as well as in the levelling course of PCC at base. Still, wherever the construction joints are provided, these shall be slightly opened up and then suitably filled with cement mortar 1:3 (1 cement: 3 fine sand) after applying a bond coat of cement slurry. The aluminium nipples shall be fixed in the cavity and crevices, if required. Then cement slurry of w/c ratio 0.5 shall be pressure grouted through these nipples as required, which shall then be suitably cut. Nothing extra shall be payable on this account.

All care shall be taken to avoid any honey combed concrete or any cavity. Still, if any honey combed concrete or cavity in RCC wall is encountered the same shall be rectified by removing all loose concrete by chiselling. The chipped concrete surface shall be cleaned and made dust free by blowing compressed air and then washed clean with water (but without excess water). Then a bond coat of polymer modified cement slurry @ 2.2 kg of cement per sqm of concrete surface, in two coats, shall be applied as specified. The second coat shall be applied immediately within 15-20 minutes of application of the first coat. A coat of polymer modified cement plaster of mix 1:3 (1 cement: 3 fine sand) of the

required thickness shall be applied as specified to fill the cavity if the required thickness is less than 20 mm. If the required thickness is more than 20 mm. the cavity shall be filled by concrete of relevant grade after providing the required centering and shuttering. The surface shall then be moist cured for minimum 7 days. Nothing extra shall be payable on this account.

12) Expansion Joint

- (a) General Seismic/ separation joints shall be provided where shown on the drawings. They shall be constructed with in gap between the adjoining parts for the works of the width specified in the drawings.
- (b) The contractor shall ensure that no debris is allowed to enter and be lodged in seismic and separation joints.
- (c) Seismic or separation joints shall be provided with approved 50mm thickness of compressible filler board, backer rod and polysulphide sealant compound etc.,
- (d) Board to be used in expansion joint shall be of best approved quality and shall be got approved before use. It shall have minimum density of 95 kg/cum, Non staining with less than 1% water absorption and compression recovery of 93% minimum as per the specifications.

Method of Application

- (e) 150mm thick expansion board having sufficient width directed by Engineer in charge shall be provided in expansion joint before filling and finishing the expansion joint with sealant.
- (f) The expansion joint shall be cleaned and made dry completely. All loose materials shall also be removed. The joints gap shall be made uniform in width and depth after cleaning the joints. The backup materials of best quality shall be provided in position in order to produce the size of joint i.e. width and depth. The primer part of I and II shall be mixed thoroughly together in required proportion as prescribed by manufacture specification, so that a uniform mixture obtained. The mixed solution shall be applied to two sides of the joint that it covers the sides complete.
- (g) Disturbed edges of RCC members near expansion joints shall be finished with rich mortar without any extra work includes providing required width of expansion board in the joints and measurement of expansion board only shall be taken.
- (h) Sampling criteria
Following test carried out at every 100 sqm:
 - (i) Density
 - (ii) Water absorption
 - (iii) Compression recovery

13) Gang saw cut granite floor slabs

The schedule provide for mirror polished/ leather finished granite slab flooring using Gang saw cut granite slabs. The size of such gang saw cut granite slabs shall not be less than 1.5m x 2.4m. The granite block shall be gang saw cut using water cutting process. The polishing of the cut stone slabs should be automatic machine polished to highly even surface without any undulations. Manual polished and kerosene cutting process slabs shall not be accepted and shall be rejected.

14) Solid cement concrete masonry block works

The cement concrete blocks shall strictly conform to the standards of IS 2185 (Part-I):2005, CPWD Specifications etc. for manufacturing process as well as for physical requirements and tests.

15) Water proofing treatment works

1. General

1.1 The work shall be got executed as per CPWD Specifications and as per the manufacturer's specification through specialized agency as approved by the Engineer in charge.

1.2 The contractor shall furnish the following particulars immediately after the issue of letter of acceptance by the department.

- (a) The name of the specialized firm
- (b) The trade names of the product, which would be used
- (c) List of works where the treatment has been used
- (d) Quantity of chlorides and sulphides used in the product

1.3 The main contractor shall submit the credential of specialized agency well in advance as per the direction of Engineer in charge. After verification of the same, written approval will be conveyed to main contractor in this regard. The quantum of credentials will be broadly in line with CPWD guidelines. The main contractor shall not change the specialized agency. However, if the change is warranted, he may do so, with permission of Engineer in charge. However before making any such change he has to enter into similar agreement as with previous agency & submit the same to Engineer in charge for approval. This shall however be without any change in the accepted rates of the contract agreement and without any cost implications to the Department.

1.4 It shall be the responsibility of main contractor to sort out any dispute/ litigation with the Specialized Agencies without any time & cost overrun to the

Department. The main contractor shall be solely responsible for settling any dispute/ litigation arising out of his agreement with the Specialized Agencies. The contractor shall ensure that the work shall not suffer on account of litigation/ dispute between him and the specialized agencies/ sub-contractor(s). No claim of hindrance in the work shall be entertained from the Contractor on this account. No extension of time shall be granted and no claim what so ever, of any kind, shall be entertained from the Contractor on account of delay attributable to the selection/ rejection of the Specialized Agencies or any dispute amongst them.

2. Guarantee for water proofing treatment

The contractor shall be fully responsible for and shall guarantee proper performance of the entire waterproofing system for a period of 10 (Ten) years from the final completion of works. In addition, specific 10 years written guarantee (to be furnished in a non-judicial stamp paper of value not less than Rs.200/-) in approved proforma shall be submitted for the performance of the system, before final payment and shall not in any way limit any other rights the Employer may have under the contract. Guarantee for water proofing shall comprises of all the items described above in particular specification.

All water-proofing work shall be carried out through approved specialist agency as per method of working approved by the Engineer in charge. However, the contractor shall be solely responsible for waterproofing treatment until the expiry of the above guarantee period.

Ten years guarantee in prescribed proforma attached shall be given by the contractor for the water proofing treatment. Towards that 10% (ten percent) of the cost of these items of water proofing under this sub head **worked out on quoted rate** shall be retained as guarantee to watch the performance of the work executed. However, half of this amount (withheld) would be released after five years from the date of completion of the work, if the performance of the waterproofing works is satisfactory. The remaining withheld amount shall be released after completion of ten years from the date of completion of work, if the performance of the waterproofing work is satisfactory. If any defect is noticed during the guarantee period, it should be rectified by the contractor within seven days of issuing of notice by the Engineer in charge and, if not attended to, the same shall be got done through other agency at the risk and cost of the contractor and recovery shall be effected from the amount retained towards guarantee. In any case, the contractor and the specialist agency, during the guarantee period, shall inspect and examine the treatment once in every year and make good any defect observed and confirm the same in writing. The security deposit can be released in full, if bank guarantee of equivalent amount, valid for the duration of guarantee period, is produced and deposited with the department.

3. Guarantee to Be Executed by Contractor for Removal of Defects After Completion of Work in Respect of Water Proofing Works

This agreement made this ___day of _____two thousand ____ and between_____(Name of the contractor, hereinafter call Guarantor of the one part) and the PRESIDENT OF INDIA (hereinafter called the Government of the other part).

WHEREAS this agreement is supplementary to a contract (hereinafter called the Contract) dated_____and made between the GUARANTOR of the one part and the GOVERNMENT of the other part where by the Contractor inter alia, undertook to render the buildings and structures in the said contract recited completely water and leak proof.

AND WHEREAS THE GUARANTOR agreed to give a guarantee to the effect that the said structures will remain water/ leak proof for ten years from the date of completion of work.

NOW THE GUARANTOR hereby guarantees that water proofing treatment given 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 completion of work.

Provided that the Guarantor will not be responsible for leakage caused by earthquakes or structural defects or misuse of roof or alterations and for such purpose.

- a) Misuse of roof shall mean by operation, which will damage roofing 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 roof or construction adjoining to existing roof, where by roofing treatment is removed in parts.
- c) The decision of the Engineer in charge with regard to cause of leakage shall be final.

During this period of guarantee, the Guarantor shall make good all defects and in case of any defects being found, render the building water proof at his own cost, to the satisfaction of the Engineer in charge and shall commence the work for such rectification within seven days from the date of issue of the notice from the Engineer in charge calling upon him to rectify the defects, failing which the work shall be got done by Department through 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 GUARANTOR fails to execute the necessary rectification or commits breach there under then the Guarantor will indemnify the Principal and his successors against all loss, damage, cost expense or otherwise which may be incurred by him by reasons of any default on the part of 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 the parties

.

IN WITNESS WHERE OF these presents has been executed by the Obligator _____ and by _____ and for and on behalf of the PRESIDENT OF INDIA on the day month and year first above written.

Signed, sealed and delivered by (OBLIGOR) in the presence of:

1.

2.

Signed for and on behalf of THE PRESIDENT OF INDIA BY _____ in the presence of:

1.

2.

(Guarantee to be signed and delivered on a Non-Judicial stamp paper worth not less than Rs.200/-)

16) Miscellaneous

- (a) Mixer having arrangement of weighing water for controlling W.C. ratio should only be used in all PCC and RCC works where there is no provision for Ready Mix Concrete.
- (b) Only factory-made M-30 grade cover blocks shall be used. No other type of cover blocks shall be permitted.
- (c) Any cement slurry if added over base surface (or for continuation of concreting) for bond, its cost shall be deemed to have been included in the respective items, unless otherwise, explicitly stated and nothing extra shall be payable nor extra cement considered in the cement consumption on this account.
- (d) Centring and shuttering for all concrete and reinforced concrete wherever required shall be in steel and/ or plywood to produce a smooth and uniform finish on all exposed surfaces. However, all props, bracings, scaffolding etc., shall be in steel. The entire responsibility of planning, design, erection and safety of formwork shall lie with the Contractor.
- (e) Shuttering in curved profile
For shuttering curved in elevation the steel/ ply shuttering shall be fabricated to achieve the curved profile as per the architectural drawings.
- (f) The contractor shall arrange and provide at the site of work all the equipment for field testing as required like balances, sieves, slump cone, dial gauges, compression testing machines (still the samples shall be tested in an independent laboratory as approved by the Engineer in charge), graduated measuring cylinders, steel tapes, vernier calipers, micrometer screw gauges, plumb bobs, spirit levels, Schmidt rebound hammer, total station survey equipment, magnifying glass, screw drivers, plastic bags for samples, etc. Allowing establishing the site laboratory by the contractor shall not absolve the contractor from fulfilling the criteria of getting the tests done in an independent laboratory. The decision of the Engineer in charge of allowing any test in the site laboratory or any other laboratory shall be final and binding on the contractor and no claim of any kind whatsoever shall be entertained from the contractor on this account.
- (g) Even if the certain items of work are carried out by the specialized contractors the responsibility for the work shall however rest with the contractor only.
- (h) Unless otherwise specified for the item, the maximum water cement ratio for any grade of concrete shall not be more than 0.5. The contractor shall within 15 days of issue of letter for commencement of the work, submit the mix design for various grades of concrete along with 7days crushing strength reports and within 40 days submit 28 days crushing strength reports, for the samples for the mix. Nothing extra shall be payable on account of admixing any chemical admixture for achieving any characteristic for the concrete.

Concreting shall be commenced only after the approval of the mix design by the Engineer in charge.

- (i) Wherever required the M.S. inserts shall be provided during the casting of RCC / PCC for which nothing extra shall be payable. As far as possible the contractor shall plan that the concreting is carried out during day shift.

- (j) Reinforcement Placing

The contractor shall provide approved type of support for maintaining the bars in position and ensuring required spacing and correct cover of concrete to reinforcement as called for in the drawings, spacer blocks of required shape and size. Chairs and spacer bars shall be used in order to ensure accurate positioning of reinforcement. Spacer blocks shall be cast well in advance with approved proprietary pre-packed free flowing mortars (Conbextra as manufactured by M/s Fosroc Chemicals India Ltd., or equivalent as approved by the Engineer in charge at his discretion) of high early strength and same colour as surrounding concrete, Pre-cast cement mortar/ concrete blocks/ blocks of polymer shall not be used as spacer blocks unless specially approved by the Engineer in charge, rate of RCC items is inclusive of cost of such cover blocks.

List of Preferred Makes (Brands) of materials and Names of Specialized Agencies (for Civil works)

- 10) List of Preferred Makes (Brands) of materials and names of specialized agencies is attached for usage in execution of work. However, approved equivalent material of any other specialized companies/ firms may also be used, in case it is established that the Brands specified are not readily available in the market or in other unavoidable circumstances subject to approval of alternate Brand by the Engineer in Charge.
- 11) It must be ensured, in general, that all materials to be used in the works shall bear BIS Certification mark. In cases where for a particular material/ product, BIS Certification Mark is not available, then the material proposed to be procured can be used subject to the conditions that it should conform to CPWD Specifications and relevant BIS codes. In such cases written approval of the Engineer in Charge shall be obtained before use of such material in their works.
- 12) The list given below does not absolve the Executing Agency from their responsibility for using these products. It is only after, they have satisfied about the quality and performance, the products shall be used. To achieve this, proper check on the quality of the products, actually to be used, should be exercised.
- 13) The contractor shall obtain prior approval from the Engineer in charge before placing order for any specific material or engaging any of the specialized agencies. The contractor shall make a detailed submittal as per the contract with catalogues and proposed specifications (duly highlighting relevant matter). In case of specialized agencies, they will also submit full details of the works executed by the specialized agencies.
- 14) In case any make included in the preferred makes (brands) list is found to be below the standards of quality and specifications and/ or is deficient in any other manner, that make shall be considered as deleted by the Engineer in charge from the list.
- 15) Public procurement (Preference to Make in India) Order (PPP-MIII)-2017 - Revision dated 29.05.2019 and DoT Public Procurement (Preference to Make in India) Order (PPP-MII Order) dated 29.08.2018 with upto date amendments / latest order till the last date of receipt of tender will prevail and shall be complied with.
- 16) The contractor will submit relevant documents to enable the Engineer in charge to verify that manufacturers have valid IS Certification as on date for materials, wherever applicable.
- 17) In case, make for any material to be used in work is not specified in the list, the Engineer in charge may approve the make.
- 18) The above make shall be used if not otherwise mentioned in the nomenclature of respective items.
- 19) Decision of Engineer in charge in case of any discrepancy shall be final and binding on all above points.

Sl. No.	Materials	Preferred Make
1	WHITE CEMENT	J.K. WHITE, BIRLA WHITE, ASIAN PAINTS, ULTRATECH
2	DAMP PROOF MATERIAL	ARDEX ENDURA, ACCO PROOF OF ACC CEMENT LIMITED, ASIAN PAINTS, BIRLA OPUS
3	CHEMICAL ADMIXTURES	FOSROC, SIKA, BASF, PIDILITE,
4	EXPANSION JOINT BOARD	SUPREME INDUSTRIES, SIL FILL OR EQUIVALENT, STP LTD
5	INJECTION GROUTING	ARDEX ENDURA, FOSROC, SIKA, BASF, CICCOC, ASIAN PAINTS
6	RMC / DMC	ULTRATECH, LAFARGE, ACC, RMC INDIA,
7	STEELWORK / TMT BARS	IS MARKED TMT BARS OF TATA SAIL, JSPL, JSW, RINL
8	AAC BLOCKS	XTRALITE FROM ULTRATECH, AEROCON FROM HIL, NCL
9	CC BLOCKS / FLYASH BLOCKS	SIPOREX, SUNVIK, HIL, ULTRATECH
10	FRP DOOR FRAME	RAWJI, FIBERTECH, ASTRALWIN DOORS
11	FRP DOOR SHUTTERS	RAWJI, FIBERTECH, ASTRALWIN DOORS
12	PVC DOOR SHUTTER AND DRAPE	RAJSHREE, SINTEX, POLYLINE
13	WOODEN FLUSH DOORS	KITPLY, CENTURY, GREENPLY, ARCHID PLY
14	WATER PROOF PLY	KITPLY, CENTURY, ARCHID PLY, GREENPLY
15	COMMERCIAL PLY	KITPLY, CENTURY, ARCHID PLY, GREENPLY
16	LAMINATE	CENTURY, GREENLAM, MERINO, ARCHID LAM
17	HIGH PRESSURE LAMINATES	MERINO, GREENLAM, CENTURY, ARCHID
18	PRELAMINATED PARTICLE BOARD	KITLAM, ARCHID PLY, CENTURY

19	NATURAL WOOD VENEER	ARCHID, ANCHOR, KITPLY, ACTION TESA
20	GYPSUM BOARD	SAINT GOBAIN, BORAL BOARD, ARMSTRONG
21	DOOR HARDWARE	DORMA, HAFELE, KICH, OZONE, GODREJ, GEZE
22	HYDRAULIC DOOR CLOSERS/ FLOOR SPRINGS	DORMA, KICH, GODREJ, HAFELE, OZONE
23	LOCKS/ LATCHES	GODREJ, DORMA, HAFELE, GEZE, YALE
24	FIRE CHECK DOOR	SHAKTI HOEMANN, ASAHI(AB) NAVAIR, KENWOOD, VEROTECH
25	FIRE RATED HARDWARE	DORMA, GEZE, SHAKTI HOEMANN, ASAHI(AIS)
26	STAINLESS STEEL SCREWS FOR FABRICATION AND FIXING OF WINDOWS	KUNDAN, PUJA, ATUL, GRIPWELL, NAKODA
27	BUTT/ BALL BEARING HINGES	HAFFLE, DORMA, GODREJ, GEZE
28	NUTS BOLTS/ SCREWS	KUNDAN, PUJA, ATUL, IT, BOLT MASTER, GRIPWELL, NAKODA
29	ACOUSTIC INSULATION	LLOYD INSULATION, SAINT GOBAIN, ARMSTRONG
30	GLASS/ REFLECTIVE GLASS	MODI FLOAT, SAINT GOBAIN, ASAHI
31	UPVC WINDOWS/ VENTILATION	FENESTA, REHAU, NCL VEKA
32	SOURCE FOR TEMPERING REFL. GLASS/ CLEAR	FUSO, SAINTGOBAIN, IMPACT SAFETY
33	FIRE RATED GLASS	PYOSWISS OF SAINT GOBAIN, PYRAN OF SCHOTT, ASAHI
34	ENGINEERED WOOD/ LAMINATE FLOORING	ARMSTRONG, ACTION TESA, GREENLAM
35	MIRROR GLASS	MODIGUARD, SAINT GOBAIN, ASAHI
36	STAINLESS STEEL FITTINGS	DORMA, KICH, GEZE
37	ACOUSTIC PANELS FOR WALL PANELING	ARMSTRONG, SAINT-GOBAIN, USG BORAL
38	STRUCTURAL STEEL	IS MARKED OF TATA, SAIL, JSPL, JSW, RINL

39	MS PIPES	TATA, JINDAL, APOLLO, SAIL
40	METAL DECK SHEET	TATA, JINDAL, JSW, ARCELOR MITTAL
41	SHEAR STUD/ CONNECTOR	KOCO, STUD CRAFT, L&J TECHNOLOGIES, ARS INFRA SOLUTIONS
42	CLAMP. REBAR, CHEMICAL FASTENER	HILTI, FISCHER, WUERTH
43	ANCHOR FASTENERS/ BOLTS	HILTI, FISHER, BOSCH, WUERTH
44	DASH FASTENERS	HILTI, FISHER, BOSCH, WUERTH
45	STAINLESS STEEL BOLTS, WASHERS AND NUTS	ATUL/ HILTI/ GRIPWELL/ NAKODA, WURTH
46	STAINLESS STEEL (SS 304)	JINDAL, SAIL, TATA
47	VITRIFIED TILES	KAJARIA, JOHNSON, RAK CERAMICS, SOMANY
48	GLAZED CERAMIC TILES	JOHNSON, SOMANY, KAJARIA, RAK
49	CEMENT CONCRETE PARKING TILES	NITCO, NTC, PAVIT
50	INTERLOCKING CONCRETE BLOCKS	NITCO - (ROCKARD), NTC, PAVIT
51	CLAY TILES ON ROOF	KENJAI, JOHNSON, COMMON WEALTH TRUST (IND) LTD
52	TILE ADHESIVE	ARDEX ENDURA, CICO, PIDILITE, FOSROC, SIKA, ASIAN PAINTS
53	CHEQUERED TERRAZO TILES	NITCO, BHARAT, PODDAR, JOHNSON, SOMANY, KAJARIA
54	GLASS MOSAIC TILES	ITALIA, PALLADIO, BISAZZA, CORAL
55	FALSE CEILING CALCIUM SILICATE	ARMSTRONG, AEROLITE, USGKNAUF
56	FALSE CEILING MINERAL FIBRE	SAINT GOBAIN, ARMSTRONG, USGKNAUF
57	FALSE CEILING MEMBERS (PER IMETER, CEILING SECTION, TERMEDATES, ANGLES ETC.)	ARMSTRONG, GYPROC, (SAINT GOBAIN), USGKNAUF, AEROLITE
58	SANDWICH PU PANELLED ROOFING SHEETS	LLOYD INSULATION (INDIA) LTD., JINDAL, TATA

59	GALVALUME SHEET	LLOYD (INDIA) LTD., JSW, TATA BLUESCOPE
60	MELAMINE POLISH	ASIAN PAINTS, MALAMYNE GOLD WUDFIN OF PIDILITE INDUSTRIES TIMBERTONE OF ICI DULUX
61	PAINT/ PRIMER/ OIL BOUND DISTEMPER ACRYLIC PAINT	ASIANPAINTS, ICI DULUX, NEROLAC, BERGER, BIRLA OPUS
62	WATERPROOF CEMENT PAINT	SNOW CEMINDIALTD, ASIAN PAINTS, ICI DULUX, BIRLA, JK
63	SYNTHETIC ENAMEL PAINT	BERGER, NEROLAC, ASIAN, ICI DULUX
64	ACRYLIC TEXTURED PLASTER	ASIAN PAINTS, ICIDULUX, NEROLAC, BERGER, BIRLA OPUS
65	FIRE RETARDANT PAINT	HILTI, AKZONOBEL, NIPPON
66	ANTI CORROSIVE BITUMASTIC PAINT	ASIAN/ BERGER/ SHALIMAR
67	EPOXY PAINT	BERGER PAINTS, ASIAN PAINTS, MRF, ARDEX ENDURA, FOSROC
68	EPOXY COATING	ARDEX ENDURA, BASF, FORSOC, LATICRETE, MRF, ASIAN PAINTS
69	ACRYLIC EXTERIOR PAINT	ASIANPAINTS, ICI DULUX, BERGER, NEROLAC, NIPPON PAINTS
70	BITUMEN	INDIAN OIL, HINDUSTAN PETROLEUM, MANGALORE REFINERIES, BHARAT PETROLIUM, BIRLA OPUS
71	VITREOUS WC / WASH BASIN	JAQUAR, HINDWARE, CERA
72	GULLY TRAPS	PARRY
73	STAINLESS STEEL SINKS	NEELKANTH, NIRALI, DIAMOND, HINDWARE, CARYSIL
74	C. P. BRASS FITTINGS	JAQUAR, KOHLER, GROHE, ROCA
75	GI PIPES	TATA, JINDAL (HISSAR), ZRNITH, SURYA
76	GI PIPE FITTINGS	ZOLOTO, UNIK, HB, ICS
77	RCC PIPES	INDIAN HUME PIPE, MOHAN HUME PIPE, BANGALORE CEMENT PIPES
78	SPUN CAST IRON COVERS & GRATINGS	NECO, SKF, BENGAL IRON CORPORATION
79	SPUN CAST IRON PIPES & FITTINGS	NECO, SKF, BENGAL IRON CORPORATION

80	SOIL, WASTE & VENTPIPES & FITTINGS (A) HUBLESS CENTRIFUGAL CAST IRON	BIC, NECO, KAPILANSH, HEPCO, SKF, RPMF
81	SWR PVC PIPES AND FITTINGS	SUPREME, FINOLEX, PRINCE, ASTRAL
82	C.I. MAN HOLE COVER	NECO, BIC, HEPCO
83	SFRC COVER AND GRATING	TULSHI CONCRETE, KK, ADVENT, NEW TECH
84	PLASTIC ENCAPSULATED FOOT REST	KK INDIA, KGM, ACCURATE BUILDCON
85	CPVC PIPE AND FITTINGS	SUPREME, ASHRIVAD, FINOLEX, PRINCE, FLOWGARD, ASTRAL
86	UPVC PIPES	SUPREME, PRINCE, FINOLEX
87	WATER SUPPLY VALVES	ZOLOTO, LEADER, ARCO
88	AIR RELEASE VALVES	KIRLOSKAR, RBM, KARTAR
89	CI DOUBLE FLANGE SLUICE VALVE	KIRLOSKAR, RBM, KARTAR
90	GUN METAL VALVES	ZOLTO, LEADER, SANT, ANDCO INDIA
91	CI DOUBLE F LANGED SLUICE VALVES	KIRLOSKAR, IVS, BURN, ZOLOTO, LEADER
92	CI DOUBLE FLANGED NON-RETURN VALVES	KIRLOSKAR, FLUIDTEH, ZOLOTO
93	POLYSTER POWDER COATED SHADES	NEROLAC, BERGER, AKZONOBEL, ASIAN
94	STRUCTURAL SILICON/ WEATHER SILICON	DOW CORNING/ WACKER/ GE
95	ALUMINIUM SYSTEMS/ ANODIZED ALUMINUM FITTINGS FOR DOORS/ WINDOWS	HARDIMA, EVERITE, SIGMA (ISI MARKED) JYOTHI
96	ALUMINIUM SECTIONS	JINDAL, HINDALCO, INDALCO
97	FRICTION STAY HINGES	EBCO, HAFELE, SEVAX
98	E.P.D.M GASKETS	ANAND/ ROOP/ BOHRA/ HANU/ AMEERUBBER
99	WATERPROOFING COMPOUND	SIKA, FOSROC PIDILITE, BERGER, ASIAN PAINTS, MYK ARMENT

100	INTEGRAL CRYSTALLINE ADMIXTURE	KRYTON, PENETRON/ XYPEX, JSW, MYK ARMENT
101	INTEGRAL CRYSTALLINE SLURRY	KRYTON, PENETRON/ XYPEX, MYK ARMENT
102	FIBRE REINFORCEMENT ELASTOMERIC LIQUID WATER PROOFING MEMBRANE	KRYTON, PENETRON/ XYPEX, ASIAN PAINTS, MYK ARMENT
103	MEMBRANE WATER PROOFING SYSTEM	BASF, TEXSA, WRGRACE, PIDILITE, HYDRO TECHLTD. ARDEX ENDURA, BOSTIK, FOSROC, ASIAN PAINTS, MYK ARMENT
104	POLYMER BASED CONTENTIOUS WATER PROOF COATINGS	ARDEX ENDURA, BASF, MC-BAUCHEMIE, SIKA, FOROC, PIDILITE, BERGER, ASIAN PAINTS, MYK ARMENT, BIRLA OPUS
105	ALUMINIUM COMPOSITE PANEL (ACP)	ALUCOBOND, EUROBOND, DURABUILD, ALSTONE, VIRGO
106	NON METALIC SURFACE HARDNER	ARDEX ENDURA, FOSROC, SIKA, PIDLITE
107	EPOXY MORTAR	ARDEX ENDURA, FOSROC, SIKA, BASF, ULTRATECH, BOSTIK, PIDILITE, ASIAN PAINTS
108	SMOKE SEAL STRIP	WURTH PROMAT/ ASTRO FLAME
109	WATER STOPS	ARDEX ENDURA, HYDROTITE, BASF, HYDROSWELL, PIDILITE, BOSTIK, ASIAN PAINTS
110	PVC PERFORATED PIPES	REXPOLY EXTRUSION LTD, AKASHE NTERPRISES, ZENPLAS PIPES PVT.LTD
111	POLY SULPHIDE SEALANT	PIDILITE, CHEMETALL-RAJ, FOSROC, CHOKSEY CHEMICALS, TUFF SEAL, MYK ARMENT
112	BITUMEN IMPREGNATED BOARD	SHALI TEXOR EQUIVALENT
113	POLY ETHYLENE BACKERROD	SUPREME IND.LTD.OR EQUIVALENT
114	GRC JALI	TERRAFIRMA, ECOVISION, BIRLA WHITE GRC, EVEREST GRC
115	POLY CARBONATE SHEET	DANPALON, ALCOX, POLYGAL, V.A. CORPORATION, ALFA, GE, LEXON, TUFLITE
116	PT STRANDS	DPWIRES, TATA, USHAMARTIN

117	ADHESIVE (MANUFACTURE SPECS)	ARDEX ENDURA, DUNLOP, VAMORGANIC, SIKA, FOSROC, PIDLITE, BOSTIK, MYK ARMENT
118	GROUTS	KERAKOLL, WEBER, ARDEX ENDURA, BOSTIK, FOSROC, PIDILITE, ASIAN PAINTS, MYK ARMENT
119	SOLAR STUDS/ MEDIAN MARKERS	3M, AVERY DENNISON, NIKKALITE
120	POLY CARBONATE CONVEX MIRRORS, RUBBERISED ROAD HUMPS	UNIQUE SAFETY SOLUTIONS, LAOWA
121	AIR TRANSFER GRILLS	COOLGRILLS PUNE, SYSTEM AIR INDIA
122	THERMAL INSULATION TREATMENT	PIDILITE, BASF, BERGER, ARDEX ENDURA
123	PEB FABRICATORS	LLOYD INSULLATIONS (INDIA) LTD, M/S KIRBY BUILDING SYSTEM, TATA BLUESCOPE, PEBSPENNAR
124	INTERLOCKING CONCRETE PAVER BLOCKS	DAZZLE, ULTRA, SHREE BHARAT, HINDUSTAN TILES, VYRA TILES, NITCO, BHARAT, REGENCY, BASANT BETONS

APPENDIX-B2**Proforma for Mandatory Tests to be attached with Running Bills**

Name of the work: Name of Contractor..... Agreement
no. and date R/A Bill No.....

Sl. No.	Item	Quantities as per agreement	Frequency as per specification	No. of tests required	Upto date Quantity	No. of tests required	No. of tests actually done	Remarks
1	2	3	4	5	6	7	8	9

PART D

Name of the Work: Renovation of Guest Houses, Toilets, Hostel rooms including Wiring, IEI, Air Conditioners, Geysers & Fire Extinguishers at ICAR - NBAIR, Hebbal, Bangalore.

SCHEDULE OF WORK (ELECTRICAL)					
Name of work: Renovation of Guest Houses, Toilets, Hostel rooms including Wiring, IEI, Air Conditioners, Geysers & Fire Extinguishers at ICAR NBAIR, Bangalore.					
S.No	Description of Item	Qty	Rate	Unit	Amount
	(Wiring, IEI, Air Conditioners & Geysers)				
1	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS/HFFR 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/HFFR PVC insulated copper conductor single core cable etc. as required.				
1.1	Group A	170.00	1 391.00	Point	2 36 470.00
1.2	Group C	153.00	1 994.00	Point	3 05 082.00
2	Supplying and drawing following sizes of FRLS/HFFR PVC insulated copper conductor, single core cable in the existing surface/ recessed steel/ PVC conduit as required.				
2.1	3 x 1.5 sq. mm	400.00	122.00	Mtr	48 800.00
2.2	6 x 1.5 sq. mm	150.00	228.00	Mtr	34 200.00
2.3	3 x 4 sq. mm	1000.00	260.00	Mtr	2 60 000.00
2.4	6 x 4 sq. mm	500.00	496.00	Mtr	2 48 000.00
2.5	3 x 6 sq. mm	400.00	381.00	Mtr	1 52 400.00
2.6	6 x 6 sq. mm	200.00	750.00	Mtr	1 50 000.00
2.7	4 X 10 sq. mm + 2 X 6 sq. mm earth wire	150.00	1 852.00	Mtr	2 77 800.00
3	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.				
3.1	20 mm	500.00	177.00	Mtr	88 500.00
3.2	25 mm	1000.00	197.00	Mtr	1 97 000.00
3.3	32 mm	150.00	245.00	Mtr	36 750.00

4	Supply and fixing of Mini UPVC integral cable management system of following size alongwith cover including accessories such as endcaps, elbows,T-joints etc., on surface etc., complete as required.				
4.1	32 mm x 12.50 mm	100.00	236.00	Mtr	23 600.00
4.2	50 mm x 50 mm	200.00	596.00	Mtr	1 19 200.00
4.3	100 mm x 50 mm	100.00	1 433.00	Mtr	1 43 300.00
5	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.				
5.1	5/6 amps switch	72.00	142.00	Each	10 224.00
5.2	15/16 amp switch	94.00	206.00	Each	19 364.00
5.3	3 pin 5/6 amp socket outlet	92.00	159.00	Each	14 628.00
5.4	6 pin 15/16 amp socket outlet	84.00	256.00	Each	21 504.00
5.5	Telephone socket outlet	9.00	197.00	Each	1 773.00
5.6	TV antenna socket outlet	9.00	197.00	Each	1 773.00
5.7	Bell push	29.00	186.00	Each	5 394.00
6	Supplying and fixing following size/ modules, GI box along with modular base & cover plate for modular switches in recess etc as required.				
6.1	3 Module (100mmX75mm)	72.00	449.00	Each	32 328.00
6.2	6 Module (200mmX75mm)	37.00	541.00	Each	20 017.00
6.3	8 Module (125mmX125mm)	10.00	605.00	Each	6 050.00
7	Supplying and fixing call bell/ buzzer suitable for single phase, 230 volts, complete as required.	29.00	131.00	Each	3 799.00
8	Supplying and fixing two module stepped type electronic fan regulator on the existing modular plate switch box including connections but excluding modular plate etc. as required.	58.00	470.00	Each	27 260.00

9	Supply and fixing of 25 Amps 6 pin Power socket outlet with two module Surface/recessed- GI/PVC box adjacent to Indoor AC unit/ for Geyser in Toilet and providing 25 A Switch with two module Surface/recessed -GI/PVC box below the Indoor AC unit/ for Geyser outside the Toilet at prescribed level of height, Plug-top for AC unit/Geyser including accessories and connections etc. complete as required.	21.00	2 368.00	Each	49 728.00
10	Supply and fixing of RJ 45 UTP cat 6 with shutter including connections and terminations, crimping but excluding modular plate etc. complete as required.	9.00	1 006.00	each	9 054.00
11	Supplying and fixing of 1 Modular USB Charger point with 5.0/5.5 Volts Output having capacity of 1000 mA including connections but excluding modular plate etc. complete as required.	9.00	2 068.00	each	18 612.00
	(LED fittings & fans)				
12	Brush Less Direct Current (BLDC) Fan without Remote				
	Supply, Installation, Testing and Commissioning of ceiling fan with Brush Less Direct Current (BLDC) Motor, class of insulation: B, 3 nos. metal(Aluminium alloy) blades, 30 cm long down rod, 2 nos. canopies, shackle kit, safety rope, copper winding, steel/Al body Power Factor not less than 0.9, Service Value (CM/M/W) minimum as below, 350 RPM (tolerance as per IS : 374-2019), THD (Total Harmonic Distortion)less than 10%, suitable for operation with regulator for speed control and all remaining accessories including safety pin, nut bolts, washers, temperature rise=75 0C (max.), insulation resistance more than 2 mega ohm, suitable for 230 V, 50 Hz, single phase AC supply, Ceiling Fan compliant to IS 374:2019 fan i/c external connections with 1.5 sq.mm FRLS/HFFR, PVC insulated copper conductor single core cable and earthing etc. as required.				
12.1	1200mm, service value ≥ 6.0 CM/Min/Watt, air delivery 210 CM/Min (Minimum)	58.00	3 153.00	Each	1 82 874.00

13	Supplying, Installtion, testing and commissiong of High Flow air Wall mount fan of size 400 mm sweep suitable for operation on 1-Phase 230V, 50 Hz A/C Supply and to be mounted on the existing wall with necessary accessories such as screws, nuts & bolts etc., including connections etc., complete as required.	15.00	3 690.00	Each	55 350.00
14	Supplying, Installtion, testing and commissiong of Plastic body Exhaust fan of size 150/ 200/ 250 mm sweep according to the size of the frame to be fixed at site and usage and suitable for operation on 230V , 50 Hz Single Phase A/C Supply in the existing opening on the existing wall/Window frame arrangement including accessories such as screws, nuts & bolts etc., and connections etc., complete as required.	10.00	3 568.00	Each	35 680.00
15	Supplying, Installtion, testing and commissiong of Metal Body Exhaust fan of size 230/ 300 mm sweep according to the size of the frame to be fixed at site and usage and suitable for operation on 230V , 50 Hz Single Phase A/C Supply in the existing opening on the existing wall/Window frame arrangement including accessories such as screws, nuts & bolts etc., and connections etc., complete as required.	2.00	3 869.00	Each	7 738.00
16	LED Batten light (System lumen efficacy $\geq 105 < 120$ lm/Watt) Supplying, installation, Testing & Commissioning of LED surface mounted Batten light of following body material and construction as per IS: 10322 with driver (Replaceable) as per the requirement with Driver efficiency $> 85\%$,Operating voltage AC 140-270 Volt, freq 50/60 hz, Operating temp range -5 deg to 40 deg centigrade, internal surge protection of 2.5 KV with Short & Open circuit protection, THD $< 10\%$, P. F. ≥ 0.95 , IP20, CRI ≥ 80 , Flicker free, (flicker should be below 5 %), life time (LED, Driver & electrical circuitry), of minimum 50000 Burning Hours with, 70% of initial Lumen maintained till life ends, CCT 3000°K / 4000°K / 5700°K / 6500°K (As per ANSI Bin), SDCM (Standard Deviation Colour Matching) < 3 , Maximum power consumption should not more than the specified rating and Fixture shall be of relevant BIS standard and trade mark certificate (T.C.).				

	Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing. complete in all respect i/c external connections with 1.5 sq. mm FRLS/HFFR, PVC insulated copper conductor single core cable and earthing etc. as required with Minimum 5 year OEM warranty. System lumen efficacy $\geq 105 < 120$ lm/Watt output. LM79 & LM80 Test report and all testing required for LED fixtures as per BIS shall be submitted. Shape size and CCT shall be as approved by Engineer-in-Charge as per requirement. (Thermal management: heat sink of aluminium housing such that LED junction temperature shall not rise above 90°C).				
	Powder coated die cast /Extruded aluminium Body (Thickness ≥ 1.20 mm)				
16.1	18-22 watt	15.00	797.00	Each	11 955.00
16.2	40 watt	42.00	844.00	Each	35 448.00
17	LED Down lighter (SMD Type) (System lumen efficacy $\geq 105 < 120$ lm/Watt)				
	Supplying, Installation, Testing & Commissioning of LED Recessed/ surface Down lighter (Round/square/ Rectangular) SMD type of following body material with PMMA and prismatic diffuser and construction as per IS : 10322 with driver as per the requirement with Driver efficiency $> 85\%$, Operating voltage AC 140-270 Volt, frequency 50/60 hz, Operating temp range -50C to 400C, internal surge protection of 2.5 KV with Short & Open circuit protection ,THD $< 10\%$, P. F. ≥ 0.95 , IP20, CRI > 80 , UGR (Unified Glare Rating) < 19 , Flicker free (flicker should be below 5%), life time (LED, Driver & electrical circuitry), of minimum 50000 Burning Hours with 70% of initial Lumen maintained till life ends, CCT 3000°K /4000°K / 5700°K / 6500°K (As per ANSI Bin), SDCM (Standard Deviation Colour Matching) < 3 , Maximum power consumption should not more than the specified rating and Fixture shall be confirming to relevant BIS standards.				

	Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing Complete in all respect i/c external connections with 1.5 sq.mm FRLS/HFFR, PVC insulated copper conductor single core cable and earthing etc. as required with Minimum 5 year OEM warranty. System lumen efficacy ≥ 105 and < 120 lm/Watt output . LM79 & LM80 Test report and all testing required for LED fixtures as per BIS shall be submitted. Shape size and CCT shall be as approved by Engineer-in-Charge as per requirement. (Thermal management: heat sink of aluminium housing such that LED junction temperature shall not rise above 90°C) Powder coated die cast /Extruded aluminium Body including trim				
17.1	18 watt	25.00	1 076.00	Each	26 900.00
18	LED Panel light 2x2 ft. (System lumen efficacy ≥ 105 < 120 lm/Watt)				
	Supplying, installation, Testing & Commissioning of Panel light 2x2 ft., of following body material and construction as per IS : 10322 with driver as per the requirement with Driver efficiency $> 85\%$, Operating voltage AC 140-270 Volt, frequency 50/60 hz, Operating temp range -5 0C to 40 0C, internal surge protection of 2.5 KV with Short & Open circuit protection, THD $< 10\%$, P. F. ≥ 0.95 , IP20, CRI > 80 , UGR (Unified Glare Rating) < 19 , Flicker free, (flicker should be below 5 %), life time (LED, Driver & electrical circuitry), of minimum 50000 Burning Hours with, 70% of initial Lumen maintained till life ends as per LM80 extrapolation IES TM-21-11 report, CCT 3000°K / 4000°K/ 5700°K /6500°K (As per ANSI Bin), SDCM(Standard deviation Colour Matching) < 3 , Maximum power consumption should not more than the specified rating and Fixture shall be of relevant BIS standard.				

	Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing. complete in all respect i/c external connections with 1.5 sq mm FRLS/HFFR, PVC insulated copper conductor single core cable and earthing etc. as required with Minimum 5 year OEM warranty. System lumen efficacy $\geq 105 < 120$ lm/Watt output .LM79 & LM80 Test report and all testing required for LED fixtures as per BIS shall be submitted. Shape size and CCT shall be as approved by Engineer-in-Charge as per requirement. (Thermal management: heat sink of aluminium housing such that LED junction temperature shall not rise above 90°C).				
	Powder coated die cast /Extruded aluminium Body (Thickness > 1.20 mm)				
18.1	36 watt	51.00	2 934.00	each	1 49 634.00
19	LED Flood Light, powder coated pressure die cast aluminium (System lumen efficacy $\geq 105 < 120$ lm/Watt).				
	Supplying, Installation, Testing & Commissioning of Flood Light, powder coated pressure die cast aluminium body with built in or separate driver as per the requirement with Driver efficiency >85%, Input voltage: Input voltage: 140-270 Volt AC, frequency 50/60 hz, Operating temp range -5 0C to 50 0C, internal surge protection of 5 KV L,N,E as per IEC 61000-4-5, Driver efficiency >85%,THD < 10% as per IEC 61000-3-2, P. F. $\geq$ 0.95, IP-66,IK-10, CRI >70, under voltage and over voltage protection, EMI-EMC as per CISPR -15, lenses for beam angle 30 deg-120deg as per the application and the project requirement, suitable tilt able fitting, life time (LED, Driver & electrical circuitry) of minimum 50000 Burning Hours with 70% of initial Lumen maintained till life ends as per LM80 extrapolation IES TM-21-11 report, CCT 3000°K / 4000°K / 5700°K /6500°K (As per ANSI Bin) , SDCM(Standard Deviation Color Matching) <5,				

	Maximum power consumption should not more than the specified rating and Fixture shall be of relevant BIS standard complete in all respect i/c external connections with 1.5 sq mm FRLS/HFFR, PVC insulated copper conductor single core cable and earthing etc. as required with Minimum 5 year OEM warranty. System lumen efficacy $\geq 105 < 120$ lm/Watt output .LM79 & LM80 Test report and all testing required for LED fixtures as per BIS shall be submitted.. Shape size and CCT shall be as approved by Engineer-in Charge as per requirement. (Thermal management: heat sink of aluminium housing such that LED junction temperature shall not rise above 90°C).				
19.1	100 watt	2.00	2 651.00	each	5 302.00
20	Supply Installation Testing and Commissioning of SUFACE mounted 2 feet LED batten Extruded Aluminium fitting having system output not less than 800 Lumens and wattage not more than 10W and latest LED technology of consistent light output, stable color performance and colour temperature not less than 5700K and energy saving, suitable for use on 230V, 50Hz, A.C supply including making connections with 1.5sq.mm. FRLS PVC insulated copper conductor single core cable as required.	30.00	720.00	each	21 600.00
21	Supply, installation, testing and commissioning of LED Skirt light/ Foot lamp including connections but excluding modular plate etc. complete as required.	9.00	1 304.00	each	11 736.00
22	Supply, installation, testing and commissioning of Surface mounted Decorative wall light, gold finish fixture with white glass diffuser suitable for (7 to 10) Watt LED Bulb or LED filament lamp E27 colour temperature (5700-6500) K, complete with LED modules, driver unit, built in 2KV surge protector duly wired, duly suspended from the ceiling or on wall with Anchor/ Dash fastneres including connections with 1.5 Sq.mm FRLS PVC insulated copper conductor single core cable in flexible metal conduit and earthing etc, as required.				

22.1	Decorative wall light with 01 Bracket and LED Bulb ; Make: Havells; Model: GOBLETO WL 1LS E27 GLD or Equivalent in Preferred make list	30.00	2 771.00	each	83 130.00
22.2	Decorative wall light with 02 Bracket and LED Bulb; Make: Havells; Model: GOBLETO WL 2LS E27 GLD or Equivalent in Preferred make list	22.00	5 000.00	each	1 10 000.00
23	Supply & laying of following size XLPE insulated Copper conductor armoured UG cable of 1.1 KV grade confirming to IS: 7098 (Part-I) 1988 as amended upto date duly ISI marked in the existing PVC Conduit/ DWC pipe / RCC pipe/ Hume pipe/ Conduit or on the wall surface with necessary accessories such as screws, nuts & bolts, clamps etc., complete as required.				
23.1	3 Core x 4.0 Sq.mm (MCB/MCCB's&DB's)	50.00	571.00	Mtr	28 550.00
24	Supplying and fixing of following ways surface/ recess mounting, vertical type, 415 volts, FP MCCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 100 amps tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCB's (but without MCCB's and incomer) as required.				
24.1	6 way (4 + 18), Double door	2.00	14 150.00	Each	28 300.00
25	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)				
25.1	6 way (4 + 18), Double door	4.00	6 200.00	Each	24 800.00
25.2	8 way (4 + 24), Double door	4.00	7 414.00	Each	29 656.00
26	Supplying and fixing following rating, four pole, (three phase and neutral), 415 volts, residual current circuit breaker (RCCB), having a sensitivity current upto 300 milliamperes in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
26.1	40 amps	4.00	4 039.00	Each	16 156.00

26.2	63 amps	4.00	4 208.00	Each	16 832.00
27	Providing and fixing following rating and breaking capacity and pole MCCB in existing cubicle panel board including drilling holes in cubicle panel, making connections, etc. as required.				
27.1	100 Amp, 30KA, FPMCCB	2.00	9 509.00	Each	19 018.00
28	Supplying and fixing following rating, "C" curve, miniature circuit breaker suitable for inductive load of following poles, 415 volts, MCB in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
28.1	63 A, 10 KA Triple Pole	12.00	3 113.00	Each	37 356.00
29	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.				
29.1	Single pole	224.00	333.00	Each	74 592.00
	(Air Conditioners, Geysers & Fire Extinguishers)				
	HI - WALL SPLIT SYSTEMS				
30	Supplying , Installation, Testing and Commissioning of Air Cooled Hi Wall split type Air conditioners complete with Indoor unit(IDU), Out door unit (ODU), surface / concealed copper Refrigerant piping with insulation (closed cell elastomeric nitrile rubber tubular pipe section) upto 3 Mtr (IDU to ODU), copper power cable upto 3.5 Mtr (IDU to ODU) i/c drain pipe R-32/R-410/ R-407 Green Refrigerant, wireless Remote control, suitable for working between 180 260V with low & high voltage cutoff and 50 hz ,1 phase AC supply capable of performing cooling, dehumidification, air circulation of following capacity with Scroll / rotary compressor. The system shall be able to deliver 100% of the rated capacity upto 42 OC. Min 5 year Original Equipment Manufacturer (OEM) warranty both compressor and Printed Circuit Board (PCB).				

	Must comply : Electrical cable IS 694 or IS 9968 temperature sensing control IS /International Electrotechnical Commission (IEC) 60730, hermetic compressor IS 10617, heat exchanger IS 11329, capacitor IS 2993 and motor IS 12615. Complete as per CPWD specification and IS : 1391 Part II 2023. The system shall be able to operate up to 50 OC (out door ambient temperature).				
	Inverter Type - Cooling only				
30.1	1.0 TR with 5 Star BEE Rating	2.00	47 479.00	Each	94 958.00
30.2	1.5 TR with 5 Star BEE Rating	2.00	50 941.00	Each	1 01 882.00
30.3	2.0 TR with 5 Star BEE Rating	3.00	67 153.00	Each	2 01 459.00
31	Supply and laying of following size Heavy duty CPVC/UPVC drain pipe alongwith 6mm thick nitrile rubber insulation including necessary clamps, screws and accessories such as bends, couplers,elbows etc., complete as required for the existing indoor AC units as required.				
31.1	25 mm dia rigid UPVC/CPVC pipe	80.00	250.00	Mtr	20 000.00
32	Supplying and drawing of following size FRLS PVC insulated copper conductor cable of 650 volts grade for communication as required.(between indoor & outdoor units and for system control units) on the surface / recessed PVC / CMS / PVC casing and capping etc as required.				
32.1	4 Core x 2.5 Sqmm	100.00	164.00	Mtr	16 400.00
33	Providing and fixing of MS Ready made powder coated wall mount/ floor mount stand for AC outdoor unit including accessories such as screws, nuts, washers etc., complete as required.	7.00	1 107.00	Each	7 749.00
34	Supply, installation, testing and commissioning of 5 KVA stablizer rated suitable for 1.0/1.5/2.0 TR AC units for operation on, 230V, single phase AC supply i/c connections etc., as required.	7.00	3 045.00	Each	21 315.00
35	Supply, installation, testing and commissioning of 4 star rated minimum , 15 Litrs capacity rated 2KW Geyser suitable for operation on, 230V, single phase AC supply i/c Consumables Consumables accessories such as inlet & outlets pipes and connections etc., as required.	9.00	14 634.00	Each	1 31 706.00

	(Fire Extinguishers)				
36	Providing & Fixing of following type duly ISI Marked. The extinguisher shall have pressure gauge for indicating inside pressure with opening & closing lever of squeeze grip type with tamper proof seal, release valve, discharge pipe, locking arrangement, pressure gauge, operation manual and bracket. The extinguisher shall be externally epoxy powder coated with the required shade complete and to be fixed on the wall with suitable wall bracket arrangement. The Fire Extinguisher shall be of following capacity:				
36.1	ABC Fire Extinguisher 6 Kg powder stored pressure type confirming to IS 15683:2006 upto date amendments.	10.00	4 983.00	Each	49 830.00
	(Garden Lighting)				
37	Supply, installation, Testing & Commissioning of LED decorative bollard made of extruded aluminium alloy with die-cast aluminium components and non corrosive SS fasteners made out of die cast aluminium, polycarbonate diffuser, having total system lumens not less than 1000 lumens with system power consumption ranging 11 Watt with suitable driver duly wired and (5700-6500) K colour temperature, making connections with 1.5 sqmm single core copper wire etc., and to work on 230V +/-, single phase, 50Hz, AC supply, i/c connection, earthing, etc., complete as required.	5.00	8 149.00	Each	40 745.00
38	Erection of existing Bollard fitting of height not less than 1.0 mtr on the PCC foundation 1:3:6 (1 Cement : 3 Coarse sand: 6 graded stone aggregated 40mm nominal size) pedestal of size 500mm dia round shape including excavation of soil and refilling the same, providing foundation bolts etc, suitable dia DWC/ HDPE Pipe for cable entry and exit etc., complete as required. Foundation drawing shall be as per manufactures designs and recommendations and approved by the engineer-in-charge.	5.00	1 252.00	Each	6 260.00

39	Supply & laying of following size XLPE insulated PVC outer sheathed aluminium conductor armoured UG cable of 1.1 kV grade confirming to IS: 7098 (Part-I) 1988 as amended upto date duly ISI marked in the existing DWC pipe /RCC pipe/ Hume pipe/ Conduit or on the wall surface with necessary accessories such as screws, nuts & bolts, clamps etc., complete as required.				
39.1	3 Core x 4.0 Sq.mm	50.00	247.00	Mtr	12 350.00
40	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.				
40.1	40 mm dia (OD-40 mm & ID-32 mm nominal)	30.00	257.00	Mtr	7 710.00
	Total				42 87 581.00
	Assistant Engineer (E)(P)	Executive Engineer (E) -I			
	CPWD, Bangalore	CPWD, Bangalore			

SCHEDULE OF WORK (Civil)					
Name of Work:- Renovation of Guest Houses, Toilets, Hostel rooms including Wiring, IEI, Air Conditioners, Geysers & Fire Extinguishers at ICAR - NBAIR, Hebbal, Bangalore					
Sl. No	Description of work	Quantity	Unit	Rate	Amount
1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :				
1.1	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)	17.00	cum	8 553.77	1 45 414.00
2	Providing and fixing 18 mm thick gang saw cut, mirror polished,				
2.1	Granite stone slab colour black, Cherry/Ruby red				
2.1.1	Area of slab upto 0.50 sqm	24.00	Sqm	6 347.87	1 52 349.00
3	Extra for providing opening of required size & shape for wash basin/ kitchen sink in kitchen platform, vanity counter and similar location in marble/ Granite/ stone work, including necessary holes for pillar taps etc. including moulding, rubbing and polishing of cut edges etc. complete.	9.00	each	1 147.62	10 329.00
4	Providing and fixing Ist quality ceramic glazed wall tiles of size 300x600mm 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.	235.00	Sqm	1 486.80	3 49 398.00
5	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).				
5.1	Second class teak wood	.05	Cum	1 67 622.82	8 381.00

6	Providing and fixing ISI marked flush door shutters conforming to IS : 2202 (Part I) decorative type, core of block board construction with frame of 1st class hard wood and well matched teak 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters.				
6.1	30 mm thick including ISI marked Stainless Steel butt hinges with necessary screws	2.10	sqm	3 714.74	7 801.00
7	Providing 40x5 mm flat iron hold fast 400 mm long including fixing to frame with 10 mm diameter bolts, nuts and wooden plugs and embedding in cement concrete block 300x100x150 mm 1:3:6 mix (1 cement: 3 coarse sand : 6 graded stone aggregate 20 mm nominal size).	6.00	each	268.35	1 610.00
8	Providing and fixing aluminium extruded section body tubular type universal hydraulic door closer (having brand logo with ISI, IS : 3564, embossed on the body, door weight upto 36 kg to 80 kg and door width from 701 mm to 1000 mm), with double speed adjustment with necessary accessories and screws etc. complete.	9.00	each	1 152.84	10 376.00
10	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 :				
10.1	300x16 mm	1.00	each	355.59	356.00
11	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 :				
11.1	250x10 mm	2.00	each	135.02	270.00

12	Providing and fixing factory made uPVC glazed/wire mesh windows/doors comprising of lead free uPVC multi-chambered frame, sash and mullion/coupler (where ever required) extruded profiles having minimum wall thickness of 1.70 mm for Series R1 and R2 profiles and 2.10 mm for Series R3 and R4 profiles conforming to EN: 12608 in any shape, colour and design duly reinforced with galvanized mild steel section made of required shape & size as per CPWD Specification, uPVC extruded glazing beads, interlocks and Inline sash adaptor (where ever required) of appropriate dimension, EPDM gasket, hardware, SS 304 grade fasteners of minimum 8 mm dia with countersunk head, comprising of matching polyamide PA6 grade sleeve for fixing frame to finished wall as per IS 1367 : Part 1 to 14, plastic packers, plastic caps and necessary stainless steel screws etc. Profile of frame, sash & mullion (if required) shall be mitred cut and fusion welded/mechanically jointed duly sealed at all corners, including drilling of holes for fixing hardware and drainage of water etc.				
	After fixing frame the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of approved size and quality, all complete as per approved drawing conforming to CPWD specification & direction of Engineer-in-Charge. Section of steel reinforcement and cross sections of uPVC profiles to be as per design approved by Engineer-in-Charge. Wire mesh / Glazing of plain/ toughened/ laminated/ double glass unit with / without high performance coatings as per design requirements and conforming to IS: 3548 & IS: 16231 shall be paid separately.				
12.1	Fixed window / ventilator with mullion / transom.				
12.1.1	Using R3 series with frame (55mm & above) x (45mm & above) & mullion (55mm & above) x (65mm & above). (Height upto 2.5 metre)	13.52	Sqm	9 178.82	1 24 098.00

13	Steel work in built up tubular (round, square or rectangular hollow tubes etc.) trusses etc., including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc. complete.				
13.1	Hot finished welded type tubes	120.00	kg	227.95	27 354.00
14	Providing and fixing stainless steel (Grade 304) railing made of Hollow tubes, channels, plates etc., including welding, grinding, bufing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete, i/c fixing the railing with necessary accessories & stainless steel dash fasteners , stainless steel bolts etc., of required size, on the top of the floor or the side of waist slab with suitable arrangement as per approval of Engineer-in-charge, (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.).	220.00	kg	905.72	1 99 258.00
15	Providing and laying Vitrified tiles in floor in diferent sizes (thickness to be specified by the manufacturer) with water absorption less than 0.08% and conforming to IS:15622, of approved brand & manufacturer, in all colours and shade, laid on 20 mm 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. The tiles must be cut with the zero chipping diamond cutter only . Laying of tiles will be done with the notch trowel, plier, wedge, clips of required thickness, leveling system and rubber mallet for placing the tiles gently and easily.				
15.1	Glazed Vitrified tiles Matt/Antiskid finish of size				
15.1.1	Size of Tile 600 x 600 mm	43.00	sqm	1 717.68	73 860.00

16	Providing and laying Vitrified tiles in floor in different sizes (thickness to be specified by the manufacturer) with water absorption less than 0.08% and conforming to IS:15622, of approved brand & manufacturer, in all colours and shade, laid on 20 mm 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. The tiles must be cut with the zero chipping diamond cutter only . Laying of tiles will be done with the notch trowel, plier, wedge, clips of required thickness, leveling system and rubber mallet for placing the tiles gently and easily.				
16.1	Double charge vitrified tile polished finish of size				
16.1.1	Size of Tile 600 x 1200 mm	239.00	sqm	1 849.37	4 41 999.00
17	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.				
17.1	Size of Tile 600x1200 mm	21.00	Sqm	1 869.01	39 249.00
18	Grouting the joints of flooring tiles having joints of 3 mm width, using epoxy grout mix of 0.70 kg of organic coated filler of desired shade (0.10 kg of hardener and 0.20 kg of resin per kg), including filling / grouting and finishing complete as per direction of Engineer-in-charge.				
18.1	Size of Tile 600x1200 mm	532.00	sqm	362.39	1 92 791.00
19	Deduct for not grouting the joints with white cement and matching pigment in the items of fixing of vitrified tiles.	532.00	sqm	- 15.60	- 8 299.00

20	Providing and laying flamed finish Granite stone flooring in required design and patterns, in linear as well as curvilinear portions of the building all complete as per the architectural drawings with 18 mm thick stone slab over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with cement slurry and pointing with white cement slurry admixed with pigment of matching shade including rubbing, curing and polishing etc. all complete as specified and as directed by the Engineer-in-Charge :				
20.1	Flamed finish granite stone slab Jet Black, Cherry Red, Elite Brown, Cat Eye or equivalent.	48.00	sqm	3 736.72	1 79 363.00
21	Providing and fixing precoated galvanised iron profile sheets (size, shape and pitch of corrugation as approved by Engineer-in-Charge) of total coated thickness 0.50mm (base metal of minimum 0.45mm thickness with total coating thickness of 0.05mm) with zinc coating 120 grams per sqm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns. Sheet should have protective guard film of 25 microns minimum to avoid scratches during transportation and should be supplied in single length upto 12 metre or as desired by Engineer-in-charge. The sheet shall be fixed using self drilling /self tapping screws of size (5.5x 55 mm) with EPDM seal, complete upto any pitch in horizontal/ vertical or curved surfaces, excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.	36.00	Sqm	866.14	31 181.00
22	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.				
22.1	110 mm diameter	36.00	metre	442.54	15 931.00

23	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.				
23.1	Bend 87.5°				
23.1.1	110 mm bend	6.00	each	176.30	1 058.00
23.2	Shoe (Plain)				
23.2.1	110 mm Shoe	6.00	each	154.61	928.00
24	Providing and fixing false ceiling at all height including providing and fixing of frame work made of special sections, power pressed from M.S. sheets and galvanized with zinc coating of 120 gms/sqm (both side inclusive) as per IS : 277 and consisting of angle cleats of size 25 mm wide x 1.6 mm thick with flanges of 27 mm and 37mm, at 1200 mm centre to centre, one flange fixed to the ceiling with dash fastener 12.5 mm dia x 50mm long with 6mm dia bolts, other flange of cleat fixed to the angle hangers of 25x10x0.50 mm of required length with nuts & bolts of required size and other end of angle hanger fixed with intermediate G.I. channels 45x15x0.9 mm running at the spacing of 1200 mm centre to centre, to which the ceiling section 0.5 mm thick bottom wedge of 80 mm with tapered flanges of 26 mm each having lips of 10.5 mm, at 450 mm centre to centre, shall be fixed in a direction perpendicular to G.I. intermediate channel with connecting clips made out of 2.64 mm dia x 230 mm long G.I. wire at every junction, including fixing perimeter channels 0.5 mm thick 27 mm high having flanges of 20 mm and 30 mm long, the perimeter of ceiling fixed to wall/partition with the help of rawl plugs at 450 mm centre, with 25mm long dry wall screws @ 230 mm interval, including fixing of gypsum board to ceiling section and perimeter channel with the help of dry wall screws of size 3.5 x 25 mm at 230 mm c/c,				

	including jointing and finishing to a flush finish of tapered and square edges of the board with recommended jointing compound , jointing tapes , finishing with jointing compound in 3 layers covering upto 150 mm on both sides of joint and two coats of primer suitable for board, all as per manufacturer's specification and also including the cost of making openings for light fittings, grills, diffusers, cutouts made with frame of perimeter channels suitably fixed, all complete as per drawings, specification and direction of the Engineer in Charge but excluding the cost of painting with :				
24.1	12.5 mm thick tapered edge gypsum moisture resistant board	137.00	sqm	1 793.02	2 45 644.00
25	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.	1 001.00	Sqm	182.98	1 83 163.00
26	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.				
26.1	Two coats	1 000.00	sqm	161.17	1 61 170.00
27	Applying priming coats with primer of approved brand and manufacture, having low VOC (Volatile Organic Compound) content.				
27.1	With water thinnable cement primer on wall surface having VOC content less than 50 grams/litre	1 000.00	sqm	86.71	86 710.00
28	Removing dry or oil bound distemper, water proofing cement paint and the like by scrapping, sand papering and preparing the surface smooth including necessary repairs to scratches etc. complete.	1 000.00	Sqm	29.49	29 490.00
29	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade:				
29.1	One or more coats on old work	106.00	sqm	120.54	12 777.00

30	Repair to plaster of thickness 12 mm to 20 mm in patches of area 2.5 sqm and under, including cutting the patch in proper shape, raking out joints and preparing plastering the wall surface with white cement based polymer modified self curing mortar, including disposal of rubbish, all complete as per the direction of Engineer-In-Charge.	50.00	sqm	786.76	39 338.00
31	Dismantling W.C. Pan of all sizes including disposal of dismantled materials i/c malba all complete as per directions of Engineer-in Charge.	18.00	Each	157.25	2 831.00
32	Dismantling 15 to 40 mm dia G.I. pipe including stacking of dismantled pipes within 50 metres lead as per direction of Engineer- in-Charge. (a) Internal Work - Exposed on wall	275.00	metre	3.81	1 048.00
33	Demolishing cement concrete manually/ by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in - charge.				
33.1	Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix)	12.17	cum	2 854.40	34 738.00
34	Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking within 50 metres lead :				
34.1	Of area 3 sq. metres and below	18.00	each	430.58	7 750.00
35	Dismantling steel work in single sections including dismembering and stacking within 50 metres lead in:				
35.1	Channels, angles, tees and flats	120.00	kg	2.70	324.00
36	Dismantling tile work in floors and roofs laid in cement mortar including stacking material within 50 metres lead.				
36.1	For thickness of tiles 10 mm to 25 mm	347.00	sqm	86.07	29 866.00
37	Dismantling C.I. or asbestos rain water pipe with fittings and clamps including stacking the material within 50 metres lead :				
37.1	100 mm dia pipe	27.00	mtr	91.46	2 469.00
38	Dismantling of flushing cistern of all types (C.I./PVC/Vitrious China) including stacking of useful materials near the site and disposal of unserviceable materials within 50 metres lead.	9.00	Each	131.39	1 183.00

39	Dismantling old plaster or skirting raking out joints and cleaning the surface for plaster including disposal of rubbish to the dumping ground within 50 metres lead.	10.00	sqm	64.08	641.00
40	Disposal of building rubbish / malba / similar unserviceable, dismantled or waste materials by mechanical means, including loading, transporting, unloading to approved municipal dumping ground or as approved by Engineer-in-charge, beyond 50 m initial lead, for all leads including all lifts involved.	47.00	Cum	309.51	14 547.00
41	Providing and fixing G.I. inlet connection for flush pipe connecting with W.C. pan.	9.00	each	167.51	1 508.00
42	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply and 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. Internal work - Exposed on wall				
42.1	40 mm nominal dia Pipes	82.00	metre	824.28	67 591.00
42.2	50 mm nominal dia Pipes	95.00	metre	1 095.38	1 04 061.00
43	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.				
43.1	20 mm nominal dia Pipes	36.00	Mtr	630.39	22 694.00
43.2	25 mm nominal dia Pipes	63.00	Mtr	735.51	46 337.00
44	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :				
44.1	40 mm nominal bore	9.00	each	968.68	8 718.00

45	Providing and fixing uplasticised PVC connection pipe with brass unions :				
45.1	30 cm length				
45.1.1	15 mm nominal bore	18.00	each	99.67	1 794.00
46	Providing and fixing C.P. brass angle valve for basin mixer and geyser points of approved quality conforming to IS:8931				
46.1	15 mm nominal bore	18.00	each	673.42	12 122.00
47	Providing and fixing false ceiling at all heights with integral densified calcium silicate reinforced with fibre and natural filler false ceiling tiles of Size 595x595 mm of approved texture, design and patterns as per CPWD Specification 2019, to be laid in true horizontal level suspended on inter- locking metal T-Grid of hot dipped galvanised iron section of 0.33 mm thick (galvanized @ 120 grams per sqm including both sides)comprising of main-T runners of size 24x38 mm of length 3000 mm,cross - T of size 24x32 mm of length 1200 mm and secondaryintermediate cross-T of size 24x32 mm of length 600 mm to formgrid module of size 600 x 600 mm, suspended from ceiling using galvanised mild steel items (galvanizing @ 80 grams per sqm) i.e. 12x50 mm long dash fasteners, 6 mm dia fully threaded hanger rod upto 1000 mm length and L-shape level adjuster of size 76x25x25x1.6 mm fixed with grid and Z cleat of size 25x37x25x1.6 mm thick with precut hole on both 25 mm flange to pierce into 12x50 mm or even bigger size dash fastener if require, fixed with Glavanised iron perimeter wall angle or size 24x24x0.40 mm of length 3000 mm to be fixed on periphey wall / partition with the help of plastic rawl plugs at 450 mm center to center and 40 mm long dry wall S.S screws. The work shall be carried out as per specifications, drawing and as per directionsof the Engineer-in-Charge.				
47.1	With 15 mm thick tegular/butt edged without perforation plain/designer light weight calcium silicate Anti-Microbial Bio-Safe coated false ceiling tiles Confirming to JIS-Z2801 and ASTM G-21	42.00	sqm	2 698.27	1 13 327.00

48	Providing and fixing factory made single extruded WPC (Wood Polymer Composite) solid door/window/Clerestory windows & other Frames/Chowkhat comprising of virgin PVC polymer of K value 58-60 (Suspension Grade), calcium carbonate and natural fibers (wood powder/ rice husk/wheat husk) and non toxic additives (maximum toxicity index of 12 for 100 gms) fabricated with miter joints after applying PVC solvent cement and screwed with full body threaded star headed SS screws having minimum frame density of 750 kg/cum, screw withdrawal strength of 2200 N (Face) & 1100 N (Edge), minimum compressive strength of 58 N/mm ² , modulus of elasticity 900 N/mm ² and resistance to spread of flame of Class A category with property of being termite/borer proof, water/moisture proof and fire retardant and fixed in position with M.S hold fast/lugs/SS dash fasteners of required dia and length complete as per direction of Engineer-In- Charge. (M.S hold fast/lugs or SS dash fasteners shall be paid for separately).				
	Note: For WPC solid door/window frames, minus 5mm tolerance in dimensions i.e depth and width of profile shall be acceptable. Variation in profile dimensions on plus side shall be acceptable but no extra payment on this account shall be made.				
48.1	Frame size 45 x 85 mm	45.00	Mtr	1 086.24	48 881.00

49	Providing and fixing factory made single extruded WPC (Wood Polymer Composite) solid plain flush door shutter of required size comprising of virgin polymer of K value 58-60 (Suspension Grade), calcium carbonate and natural fibers (wood powder/ rice husk/wheat husk) and non toxic additives (maximum toxicity index of 12 for 100 gms) having minimum density of 650 kg/cum and screw withdrawal strength of 1800 N (Face) & 900 N (Edge), minimum compressive strength 50 N/mm ² , modulus of elasticity 850 N/mm ² and resistance to spread of flame of Class A category with property of being termite/borer proof, water/moisture proof and fire retardant and fixing with stainless steel butt hinges of required size with necessary full body threaded star headed counter sunk S.S screws, all as per direction of Engineer-In- Charge.				
49.1	30 mm thick	15.00	Sqm	5 096.94	76 454.00
50	Providing and fixing EWC With Wall Hung Cistern of catalogue No. CNS-WHT-551SNPP184LZ of jaquar make or equivalent along with required accessories as per direction of Engineer-in-charge.	9.00	Each	17 891.00	1 61 019.00
51	Providing and fixing C.P brass Health faucet of jaquar catalogue No.ALD-CHR-577 or equivalent of approved brand and manufacture and as directed by the Engineer-in-charge.	9.00	Each	2 080.00	18 720.00
52	Providing and fixing C.P. brass Two way bib cock of approved quality of Jaquar catalogue No.FLR-CHR-5041N or equivalent along with required accessories as per direction of Engineer-in-charge.	9.00	Each	2 601.00	23 409.00
53	Providing and fixing Soap dispenser with glass bottle (Cat. No.AKP-CHR-35735P) of Jaquar make as per direction of Engineer-in-charge.	9.00	Each	2 243.00	20 187.00
54	Providing and fixing (900 mm long arm)PVC trap of self cleansing design with stainless steel grating complete, including cost of cutting and making good the walls and floors :	18.00	Each	273.00	4 914.00
55	Providing and fixing stain less steel Towel ring square with round flange Cat. No.CPA-CHR-1121 of Jaquar or equivalent of approved brand and manufacture and as directed by the Engineer-in-charge.	9.00	Each	1 728.00	15 552.00

56	Providing and fixing unplasticised rigid UPVC conventional system for soil waste and vent pipes confirming to IS: 13592 Type B 6kg/sq.cm including jointing of pipes with with seal ring and PVC solvent, testing of joints complete as per direction of Engineer-in-charge.				
56.1	110mm	62.00	Mtr	633.00	39 246.00
57	Providing and fixing wash basin of catalogue No.ARS-WHT-39903 of jaquar make or equivalent along with required accessories as per direction of Engineer-in-charge.	9.00	Each	8 032.00	72 288.00
58	Providing and fixing pillar tap for wash basin of catalogue No.FUP-CHR-29001PM of jaquar make or equivalent along with required accessories as per direction of Engineer-in-charge.	9.00	Each	2 723.00	24 507.00
59	Providing and fixing Godrej make Stainless steel 304 grade cylindrical lock (keyless for bath rooms) of godrej product code 9843 or equivalent with necessary screws etc. complete :	9.00	Each	1 665.78	14 992.00
60	Providing and fixing wall mixure of fusion range of 115mm long bend catalogue No. FUP-CHR-29273PM of jaquar make or equivalent along with required accessories as per direction of Engineer-in-charge.	9.00	Each	8 341.00	75 069.00
61	Providing and fixing Overhead shower of rain showers range of 200x200 sqr shape catalogue No. OHS-CHR-35497 of jaquar make or equivalent along with required accessories as per direction of Engineer-in-charge.	9.00	Each	4 460.00	40 140.00
62	Providing and fixing Glass Shelf of Continental Prime Accessories range of 600mm long catalogue No. CPA-CHR-1171 of jaquar make or equivalent along with required accessories as per direction of Engineer-in-charge.	9.00	Each	1 715.00	15 435.00
63	Providing and fixing Brass 600mm long towel rack catalogue No. CPA-CHR-1181 of jaquar make or equivalent along with required accessories as per direction of Engineer-in-charge.	9.00	Each	3 879.00	34 911.00

64	Providing and fixing Soap Dish Holder catalogue No. CPA-CHR-1131 of jaquar make or equivalent along with required accessories as per direction of Engineer-in-charge.	9.00	Each	923.00	8 307.00
65	Providing and fixing Brass toilet Holder with flap catalogue No. CPA-CHR-1153 of jaquar make or equivalent along with required accessories as per direction of Engineer-in-charge.	9.00	Each	1 636.00	14 724.00
66	Providing and fixing SWIVEL MIRROR of Continental Accessories range of 615 X 445mm Oval Shape catalogue No. ACN-CHR-1185 of jaquar make or equivalent along with required accessories as per direction of Engineer-in-charge.	9.00	Each	4 097.00	36 873.00
67	Providing and fixing fly proof stainless steel grade 304 wire gauge, to windows and clerestory windows using wire gauge with average width of aperture 1.4 mm in both directions with wire of dia. 0.50 mm all complete.	81.00	sqm	1 181.60	95 710.00
68	Credit to the department for taking away of C.I. rain water pipe with fittings and clamps of diameter 100mm dia as per the directions of the Engineer - in -charge	36.00	Mtr	- 92.00	- 3 312.00
69	Credit to the department for taking away of G.I. pipes of diameter 15mm to 40mm as per the directions of the Engineer - in -charge	110.00	Mtr	- 71.00	- 7 810.00
70	Credit to the department for taking away dismantled steel work in single sections as per the directions of the Engineer - in -charge	100.00	kg	- 28.00	- 2 800.00
				Total	40 64 312.00

दरों को उद्धृत करने के लिए प्रपत्र
Draft Proforma for quoting the rates

Name of Work: Renovation of Guest Houses, Toilets, Hostel rooms including Wiring, IEI, Air Conditioners, Geysers & Fire Extinguishers at ICAR - NBAIR, Hebbal, Bangalore.

ठेकेदार का नाम Name of the Contractor					
क्रम संख्या Sr.No.	घटक का नाम Name of component	अनुमानित लागत Estimated cost (Rs.)	अनुमानित लागत से ऊपर या नीचे प्रतिशत percentage above or below the estimated cost	% में आंकड़े % in Figures	कुल लागत Total Cost (Rs.)
	इलेक्ट्रिकल कार्य + सिविल कार्य Electrical Work + Civil Work	83,51,893			
1	केवल एक विकल्प का भरा जाना है. एक से अधिक विकल्प अस्वीकार कर दिया जाएगा । Only one of the options is to be filled. More than one option shall be rejected.				
2	किसी भी रूप में भरी दर केवल प्रतिशत में ही मान्य होगी । Rate filled in any form shall be considered only in %age				
3	दस्तावेज़ में किसी अन्य जगह पर भरी दर पर विचार नहीं किया जाएगा । Rate filled at any other place in the document shall not be considered.				
4	कोई भी शर्त स्वीकार नहीं की जायेगी । No condition shall be accepted.				