



भारत सरकार
केंद्रीय लोक निर्माण विभाग
कार्यालय - कार्यपालक अभियंता
अमृतसर (पंजाब)

NIT No /निविदा आमंत्रण सं. 35/EE-AMRITSAR/2026-27

Name of work : A/R & M/O TO RESIDENTIAL &
कार्य का नाम TECHNICAL BUILDINGS AT NO. 1FBSU,
AIRFORCE RAJASANSI, AMRITSAR DG.
2026-27. SH: OPERATION OF SEWERAGE
TREATMENT PLANT..

Estimated Cost : Rs. 14,59,728/-
अनुमानित लागत

Earnest Money : Rs. 29,195/-
धरोहर राशि

Time for Execution : 12 Months
कार्य पूरा करने की अवधि

DATE AND TIME OF : 15.30 Hrs. on 17.07.2026
OPENING OF BID

निविदा खोलने की तारीख
और समय

Performance Guarantee / : 5% of Estimate cost put to tender (ECPT) or
निष्पादन प्रत्याभूति Contract amount whichever is higher.

Where the tendered amount is less than eighty percent (80%) of the Estimated Cost Put to Tender (ECPT), the bidder shall be required to submit Additional Performance Guarantee (APG) equivalent to the difference between the 80% amount of ECPT and Quoted amount.

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NIT approved for **Rs. 14,59,728/- (Rs. Fourteen Lakh Fifty Nine Thousand Seven Hundred Twenty Eight only)** and containing page **1 to 83**.

वरिष्ठ नक्शानवीस

सहायक अभियंता (यो.)

कार्यपालक अभियंता
के.तो.नि.वि. अमृतसर

INFORMATION AND INSTRUCTIONS FOR BIDDERS FOR E-TENDERING

The Executive Engineer-Amritsar, CPWD, 2/1, Ram Tirath Road, Amritsar (e-mail: eeace.asr@cpwd.gov.in) on behalf of the President of India invites online percentage rate bids from approved and eligible (Building & Roads) category contractors of CPWD for the following work:

S. No.	NIT No.	Name of work & Location	Estimated Cost put to bid (Rs.)	Earnest Money	Stipulated Period of Completion of work (in months)	Last date of online submission of bid, copy of receipt of deposition of original EMD and other documents as specified in the bid document.	Date & time of opening of bid
1	2	3	4	5	6	7	8
1	_35/EE-AMRITSAR/2026-27	A/R & M/O TO RESIDENTIAL & TECHNICAL BUILDINGS AT NO. 1FBSU, AIRFORCE RAJASANSI, AMRITSAR DG. 2026-27. SH: OPERATION OF SEWERAGE TREATMENT PLANT...	Rs.14,59,728/-	Rs.29,195/-	12 Months	Up to 15.00 Hrs. on 17.07.2026	At 15.30 Hrs. on 17.07.2026

- On behalf of the President of India invites online percentage rate bids from approved and eligible (Building & Roads) category contractors of CPWD.
- 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.
- Information and Instructions for bidders posted on website shall form part of bid document.
- 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.etender.cpwd.gov.in** or **www.cpwd.gov.in** **free of cost.**
- 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 Demand draft or Pay order or Bankers Cheque or Deposit at call Receipt or Fixed Deposit Receipts and Bank Guarantee of any scheduled Bank towards EMD in favour of **Executive Engineer, Amritsar Central Division, CPWD, Amritsar**, receipt for deposition of original EMD to division office of any Executive Engineer (including NIT issuing EE/AE), CPWD and other documents as specified. ***While submitting the EMD the bidders should ensure that any insertion/ addition/ deletion in the FDR/TDR issued by the bank should be properly authenticated/ stamped by the issuing bank. In the absence of which the EMD shall not be***

Correction—Nil Deletion—Nil Insertion—Nil Overwriting—Nil

considered in proper form and bid of the bidder shall be rejected by the Engineer-in-charge.

6. Those contractors not registered on the website mentioned above, are required to get registered beforehand. If needed they can be imparted training on online bidding process as per details available on the website.
7. The intending bidder must have valid class-III digital signature to submit the bid.
8. On opening date, the contractor can login and see the bid opening process. After opening of bids he will receive the competitor bid sheets.
9. Contractor can upload documents in the form of **JPG** format and **PDF** format.
10. Contractor must ensure to quote rate in the prescribed column(s) meant for quoting rate in figures appears in pink 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/ sub head in percentage rate tender, the tender shall be treated as invalid and will not be considered as lowest tenderer. **Contractor must ensure to quote his percentage rate (above/below) in the attached schedules.**
11. The contractor shall get receipt of deposition of original EMD either in the office of Executive Engineer inviting bids or division office of any Executive Engineer, CPWD in the prescribed format annexed and also upload it along with the bid document.
12. The department reserves the right to reject any prospective application without assigning any reason and to restrict the list of qualified contractors to any number deemed suitable by it, if too many bids are received satisfying the laid down criterion.
13. The tenderer should also read the **General Conditions of Contract for CPWD Works 2023 Maintenance Works** amended upto previous day of last date of receipt of Tender (**available on CPWD above websites**), which is available as Govt. of India Publications.
14. Tenders with any condition including that of conditional rebates in the tender document shall be rejected forthwith.
15. If a tenderer does not quote any percentage above/ below/ at par 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.
16. The bids will be submitted at **15.00 Hrs. on 17.07.2026**. The bid submitted shall be opened at **15.30 Hrs. on 17.07.2026**
17. Online bid documents submitted by intending bidders shall be opened only of those bidders, who have deposited Earnest Money.
18. GST, purchase tax, turn over tax, Excise duty, work contract tax or any other tax as applicable shall be paid by the contractor himself. The contractor shall quote his rates considering all such taxes. The TDS (tax deduction at source) shall be done from bill payments to the contractor as per Government law and rules.
19. If any information furnished by the applicant is found incorrect at a later stage, he shall be liable to be debarred from tendering/ taking up of works in CPWD. The Department reserves the right to verify the particulars furnished by the applicant independently.

Correction—Nil Deletion—Nil Insertion—Nil Overwriting—Nil

20. The tenderer should not have been blacklisted or penalized by any Central Government/ State Government Offices/PSUs. A self certificate/ declaration in this effect is required to be scanned and uploaded while participation in tendering process.

21. **List of Documents to be scanned and uploaded by bidder within the period of bid submission:**

I. Insurance Surety Bond, Demand Draft /Account Pay Banker's Cheque/ FDR/ Bank Guarantee of any Commercial Bank against **EMD in favour of "Executive Engineer, Amritsar Central Division, CPWD, Amritsar"**.

II. **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-III** of this section)

III. **Enlistment Order** of the Contractor in CPWD.

IV. **GST Registration Certificate, if already obtained by the bidder.**

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". (Form-A)

V. **ERP Certificate**

VI. Undertaking on structural stability and soundness as per prescribed format Form 'B'.

Note: 1. Under Sno. IV it is informed that "GST registration certificate" is to be of "Punjab" state. In case the bidder has certificate of registration of GST of some other state then that registration shall not be considered and thus the bidder must upload the undertaking to avoid disqualification

2. All affidavits and undertaking shall be made in current date after the date of invitation of tender.

VII. **Elegible contractors**

Contractor participating in the bid should have experience of completion of STP work having capacity of minimum 50 KLD or he should have experience of maintaining STP of capacity of minimum 50 KLD. Contractor will upload his experience certificate.

22. The contractor has to follow "Standard Operating Procedures (SOPs) and Guidelines for Construction Site for COVID-19 Outbreak" issued vide DG, CPWD, New Delhi O.M. No. 2/9/2020-WII/DG/169 dated 05.05.2019 and any other Govt. directions in this regard from time to time until the effect of COVID-19. Therefore, it is suggested to go through the above said guidelines before submitting the tender.

Executive Engineer CPWD, Amritsar

Receipt of Deposition of Original EMD

Receipt No.:

Date:

1. Name of Work :- **A/R & M/O TO RESIDENTIAL & TECHNICAL BUILDINGS AT NO. 1FBSU, AIRFORCE RAJASANSI, AMRITSAR DG. 2026-27. SH: OPERATION OF SEWERAGE TREATMENT PLANT...**
2. NIT No. :- **_35/EE-AMRITSAR/2026-27**
3. Estimated Cost :- **Rs. 14,59,728/-**
4. Amount of Earnest Money Deposit :- **Rs. 29,195/-**
5. Last date of submission of bid :- **Upto 15.00 Hrs. on 17.07.2026**

-
1. Name of Contractor :-
 2. Form of EMD :-
 3. Amount of Earnest Money Deposit :-
 4. Date of submission of EMD :-

Signature, Name and Designation
of EMD receiving officer (EE / AE(P) /AAO)
Alongwith Office stamp

Note :-

1. *The Executive Engineer of all divisions including NIT issuing division / sub-division of CPWD should receive the original EMD for tender of other division.*
2. *The NIT approving authority / EE at the time of issue of NIT shall also fill and upload the above prescribed format of receipt of deposition of original EMD along with NIT.*
3. *The Executive Engineer receiving EMD in original form shall examine the EMD deposited by the bidder and shall issue a receipt of deposition of earnest money to the agency in a given format uploaded by tender inviting EE. The receipt may be issued by the AE(P)/AE/AAO.*
4. *The Executive Engineer receiving original EMD shall also intimate tender inviting Executive Engineer above deposition of EMD by the agency by email/fax/telephonically.*
5. *The original EMD receiving Executive Engineer shall release the EMD after verification from the e-tendering portal website (www.etender.cpwd.gov.in) > tender free view > advance search > awarded tenders) that the particular contractor is not L-1 tenderer and work is awarded.*
6. *The tender inviting Executive Engineer will call for original EMD of the L-1 tenderer from EMD receiving Executive Engineer immediately.*

FORM “A”

Undertaking regarding obtaining GST registration Certificate

To

**Executive Engineer-Amritsar,
CPWD, 2/1, Ram Tirath Road
Amritsar**

NAME OF WORK: A/R & M/O TO RESIDENTIAL & TECHNICAL BUILDINGS AT NO. 1FBSU, AIRFORCE RAJASANSI, AMRITSAR DG. 2026-27. SH: OPERATION OF SEWERAGE TREATMENT PLANT...

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 the 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.

**Signature of Bidder(s) or an authorized
Officer of the firm with stamp**

FORM-‘B’

Undertaking on structural stability and soundness of already completed building and infrastructure projects

To

**Executive Engineer Amritsar,
CPWD, 2/1 Ram Tirath Road,
Amritsar.**

Name of work: A/R & M/O TO RESIDENTIAL & TECHNICAL BUILDINGS AT NO. 1FBSU, AIRFORCE RAJASANSI, AMRITSAR DG. 2026-27. SH: OPERATION OF SEWERAGE TREATMENT PLANT..

I/We undertake and confirm that any buildings/ infrastructure constructed by our firm / partnership firm / company has not suffered any failure, making it unfit for intended use , either due to structural design and defects or due to use of sub-standard material or execution of sub- standard work , poor workmanship or any other reason during the last 25 (twenty five) years.

I/We, further, undertake that if such information comes to the notice of CPWD, then Engineer-in-Charge shall free to terminate the bid / agreement and forfeit the entire amount of earnest money deposit, performance guarantee and security deposits.

I /We, also undertake that in addition to above , the Engineer-in-Charge shall be free to debar us forever from tendering in CPWD.

The decision of Engineer-in-Charge or any higher authority shall be final and binding.

Signature of notary

Signature of bidder or
with seal of an authorized person of
the firm with stamp

Note :- Affidavit to be furnished on a ‘Non - judicial’ stamp paper of Rs. 200/- (Scanned copy of the notarized affidavit to be uploaded at the time of submission of bid) .

CPWD-6 FOR E-TENDERING

1. Percentage rate bids are invited on behalf of President of India from approved and eligible (Building & Roads) category contractors of CPWD for the Work of " **A/R & M/O TO RESIDENTIAL & TECHNICAL BUILDINGS AT NO. 1FBSU, AIRFORCE RAJASANSI, AMRITSAR DG. 2026-27. SH: OPERATION OF SEWERAGE TREATMENT PLANT...**

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.14,59,728/-**. This estimate, however, is given merely as a rough guide.
2. Agreement shall be drawn with the successful bidders on prescribed Form No. **CPWD 7** which is available as a Govt. of India Publication and also available on website **www.cpwd.gov.in**. bidders shall quote his rates as per various terms and conditions of the said form which will form part of the agreement.
3. The time allowed for carrying out the work will be **12 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. (i) The site for the work is available.
(Renovation work is being executed in functional institutional building. The agency has to ensure that there is no difficulty to the occupants due to renovation works.)

The architectural and structural drawings shall be made available in phased manner, as per requirement of the same as per approved programme of completion submitted by the contractor after award of work. **All services/ other required drawings will have to be prepared by the contractor at his own cost.**
5. The bid document consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents except Standard General Conditions of Contract Form can be seen on website **www.etender.cpwd.gov.in** or **www.cpwd.gov.in** or in the office of **Executive Engineer, CPWD, Amritsar** free of cost.
6. After submission of the bid the contractor can re-submit revised bid any number of times but before last time and date of submission of bid as notified.
7. While submitting the revised bid, contractor can revise the rate of one or more item(s) any number of times (he need not re-enter rate of all the items) but before last time and date of submission of bid as notified.
8. Earnest Money in the form of Treasury Challan or Demand Draft or Pay order or Banker's Cheque or Deposit at Call Receipt or Fixed Deposit Receipt (drawn in favour of **Executive Engineer, Amritsar Central Division, CPWD, Amritsar**) shall be scanned and uploaded to the e-Tendering website within the period of bid submission. The original EMD should be deposited

Correction—Nil Deletion—Nil Insertion—Nil Overwriting—Nil

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) uploaded by tender inviting EE in the NIT.

The receipt shall also be uploaded to the e-tendering website by the intending bidder upto the specified bid submission date and time.

9. 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 of any scheduled bank having validity for six months or more from the last date of receipt of bids which is to be scanned and uploaded by the intending bidders.

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

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 Hrs. on 17.07.2026**

10. The bid submitted shall become invalid:
- (i) The bidder is found ineligible.
 - (ii) The bidder does not deposit original EMD with division office of any Executive Engineer, CPWD.
 - (iii) The bidder does not upload all the documents (including GST Registration or undertaking as applicable) as stipulated in the bid document **including the copy of receipt for deposition of original EMD.**
 - (iv) If any discrepancy is noticed between the documents as uploaded at the time of submission of bid and hard copies as submitted physically by the lowest bidder in the office of bid opening authority.
 - (v) If a tenderer quotes nil rates against each item in item rate tender or does not quote any percentage above/below on the total amount of the tender or any section / sub head in percentage rate tender, the tender shall be treated as invalid and will not be considered as lowest tenderer.
11. **The contractor whose bid is accepted, will be required to furnish performance guarantee of 5% (Five Percent) of the estimate cost put to tender (ECPT) or contract amount whichever is higher within the period specified in Schedule F. If quoted bid amount is lesser than 80% of estimate cost put to tender (ECPT) then contractor will be required to furnish Additional Performance Guarantee (APD) i.e. 80% of ECPT – Quoted amount.** This guarantee shall be in the form of cash (in case guarantee amount is less than Rs. 10,000/-) or Deposit at Call receipt of any scheduled bank/Banker's cheque of any scheduled bank/Demand Draft of any scheduled bank/Pay order of any Scheduled Bank of any scheduled bank (in case guarantee amount is less than Rs. 1,00,000/-) or Government Securities or Fixed Deposit Receipts or Guarantee Bonds of any Scheduled Bank or the State Bank of India in accordance with the prescribed form and **shall remain valid for minimum period of six months beyond the date of completion of work.** In case the contractor fails

to deposit the said performance guarantee and Additional 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 contractor whose bid is accepted will also be required to furnish either copy of applicable licenses/ registrations or proof of applying for obtaining labour licenses, registration with EPFO, ESIC and BOCW Welfare Board including Provident Fund Code No. If applicable and also ensure the compliance of aforesaid provisions by the sub contractors, if any engaged by the contractor for the said work within the period specified in Schedule F.

12. The description of the work is as follows:

A/R & M/O TO RESIDENTIAL & TECHNICAL BUILDINGS AT NO. 1FBSU, AIRFORCE RAJASANSI, AMRITSAR DG. 2026-27. SH: OPERATION OF SEWERAGE TREATMENT PLANT...

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

13. The competent authority on behalf of the President of India does not bind itself to accept the lowest or any other bid and reserves to itself the authority to reject any or all the bids received without the assignment of any reason. All bids in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the bidder shall be summarily rejected.
14. Canvassing whether directly or indirectly, in connection with bidders is strictly prohibited and the bids submitted by the contractors who resort to canvassing will be liable for rejection.
15. The competent authority on behalf of President of India reserves to himself the right of accepting the whole or any part of the bid and the bidder shall be bound to perform the same at the rate quoted.
16. The contractor 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 a 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 contractor would render him liable to be removed from the approved list of contractors of this

Correction—Nil Deletion—Nil Insertion—Nil Overwriting—Nil

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 had not obtained the permission of the Government of India as aforesaid before submission of the bid or engagement in the contractor's service.
18. The bid for the works shall remain open for acceptance for a period of **Thirty (30) days** from the date of opening of bids in case of single bid system. Further (i) If any tenderer withdraws his tenders or makes any modifications in the terms & conditions of the tender which is not acceptable to the department within 7 days after last date and time (24 hours basis) 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 tenders or makes any modifications in the terms & conditions of the tender which is not acceptable to the department after expiry of 7 days after last date and time (24 hours basis) 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) Withdrawal of tender, by the tenderer, shall only be made through e tender portal. Any other method i.e. through letter/e mail etc shall not be considered. (iv) 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 bidder/contractor, on acceptance of his bid by the Accepting Authority shall within 15 days from the stipulated date of start of the work, sign the contract consisting of:
 - (a) The Notice Inviting Bid, all the documents including additional conditions, specifications and drawings, if any, forming part of the bid as uploaded at the time of invitation of bid and the rates quoted online at the time of submission of bid and acceptance thereof together with any correspondence leading thereto.
 - (b) Standard C.P.W.D. Form 7 (**GCC for CPWD works 2023 Maintenance Works**) amendments upto previous day of last date of receipt of tender.

**Executive Engineer
CPWD, Amritsar**

GOVERNMENT OF INDIA
CENTRAL PUBLIC WORKS DEPARTMENT
Percentage Rate Tender & Contract for Works

Tender for the work of " A/R & M/O TO RESIDENTIAL & TECHNICAL BUILDINGS AT NO. 1FBSU, AIRFORCE RAJASANSI, AMRITSAR DG. 2026-27. SH: OPERATION OF SEWERAGE TREATMENT PLANT... "

- (i) To be uploaded by **15.00 Hrs. on 17.07.2026** to Executive Engineer, CPWD, Amritsar/upload at www.etender.cpwd.gov.in
- (ii) To be opened in presence of tenderers who may be present at **15:30** hours on **17.07.2026** in the office of Executive Engineer, CPWD, Amritsar.

TENDER

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

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

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

A sum of **Rs. 29,195/-** is hereby forwarded in Insurance Surety Bond/ Demand Draft/ Account payee Banker Cheque/ Bank Guarantee of a commercial bank/fixed deposit receipt/ issued by a commercial bank as earnest money.

A copy of earnest money in Insurance Surety Bond, Demand Draft /Account Pay Banker's Cheque / FDR/ Bank Guarantee of any Commercial Bank is scanned and uploaded (strike out as the case may be). If I/We, fail to furnish the prescribed Performance Guarantee and Additional 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 and additional performance guarantee absolutely. The said Performance Guarantee and Additional Performance Guarantee shall be a guarantee to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.3 of the tender form.

Correction—Nil Deletion—Nil Insertion—Nil Overwriting—Nil

Further, I/We agree that in case of forfeiture of Performance Guarantee and Additional Performance Guarantee as aforesaid, I/We shall be debarred for participation in the re-tendering process of the work.

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

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

Dated
Witness:

Signature of Contractor
PostalAddress

Address:
Occupation:

ACCEPTANCE

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

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

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

Dated:

For & on behalf of the President of India.
Signatures.....
Designation.....

PROFORMA OF SCHEDULES

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

SCHEDULE 'A'

Schedule of quantities (as per CPWD-3) **Schedule of Quantities attached**

SCHEDULE 'D'

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

.....NIL.....

SCHEDULE 'E'

Reference to General Conditions of contract: **General Conditions of Contract for Central PWD Works 2023 Maintenance Works incorporating all amendments issued upto previous day of last date of receipt of tender.**

Name of work: **A/R & M/O TO RESIDENTIAL & TECHNICAL BUILDINGS AT NO. 1FBSU, AIRFORCE RAJASANSI, AMRITSAR DG. 2026-27. SH: OPERATION OF SEWERAGE TREATMENT PLANT...**

Estimated cost of work:

Rs. 14,59,728/-

(i) Earnest money:

Rs. 29,195/- (to be returned after receiving performance guarantee)

(ii) Performance Guarantee:

5% of Estimate cost put to tender (ECPT) or Contract amount whichever is higher.

(iii) **Additional Performance Guarantee (APG):**
(For abnormally low bid)
If quoted bid amount is lesser than 80% of Estimate cost put to tender (ECPT)

Amount of APG:

(80% of ECPT – Quoted amount)

(iv) **Validity of PG**

PG shall remain valid for minimum period of six months beyond the date of completion of work.

(v) Security Deposit:

2.5% (Two & Half percent) of accepted tendered amount.

SCHEDULE 'F'

GENERAL RULES & DIRECTIONS :

Officer inviting tender

Executive Engineer CPWD, Amritsar 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

Definitions:

2(v) Engineer-in-Charge

Executive Engineer CPWD, Amritsar or successor thereof

2(viii) Accepting Authority

Executive Engineer CPWD, Amritsar, Amritsar or successor thereof

- 2(x) Percentage on cost of materials and labour to cover all Overheads and profits. **7.5 %**
- 2(xi) Standard Schedule of Rates **DSR-2023 / CLC Rates**
- 2(xii) Department **Central Public Works Department**
- 9(ii) Standard CPWD Contract Form **GCC for CPWD Works 2023 Maintenance Work** CPWD Form 7 as modified and amended upto previous day of last date of receipt of tender.

Clause 1

- (i) Time allowed for submission of Performance Guarantee, and Additional Performance Guarantee, Programme Chart (Time and Progress) and Applicable labour licenses, Registration with EPFO, ESIC and BOCW Welfare Board including Provident Fund Code No. or proof of applying thereof from the date of issue of letter of acceptance **10 days**
- (ii) Maximum allowable extension with late fee @ 0.1% per day of Performance Guarantee and Additional Performance Guarantee amount beyond the period provided in (i) above **05 days**

Clause 2

Authority for fixing compensation under clause 2.

Superintending Engineer
CPWD, Jalandhar or Successor thereof

Clause Applicable : - 5 or 5A

Clause 5A
(The contract period will not be extended.)

Number of days from the date of issue of letter of acceptance for reckoning date of start

15 days

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	Full site for the work	On the day of issue of letter of commencement of work by the Engineer-in-Charge.

Correction—Nil Deletion—Nil Insertion—Nil Overwriting—Nil

Time allowed for execution of work.

12 Months

Authority to decide:

- | | | |
|-------|---|--|
| (i) | Authority to convey the decision of shifting of milestone and Extension of Time | Engineer-in-charge (Major component) |
| (ii) | Authority to decide Rescheduling of milestones and Extension of Time | Superintending Engineer CPWD, Jalandhar or Successor thereof |
| (iii) | Shifting of date of start in case of delay in handing over of site | Superintending Engineer CPWD, Jalandhar or Successor thereof |

Clause 5.2,5.3,5.5

Applicable

Mile stone(s) as per table given below:-

Sl. No.	Description of Milestone	Time Allowed in days (from date of start)	Amount to be withheld in case of non achievement of milestone
1	1/8 of tendered amount	¼ of total period	1.25 % of accepted tendered amount.
2	3/8 of tendered amount	½ of total period	1.25 % of accepted tendered amount.
3	1/2 of tendered amount	¾ of total period	1.25 % of accepted tendered amount.
4	Completion of all the works and cleaning of site and including handing over	Full period	1.25 % of accepted tendered amount.

Note : Mile stones shall be applicable both for Major component (Civil work) as well as for Minor component (Electrical work) of the work. The amount will be withheld (in case of non achievement of milestone) component wise by Engineer in charge of both components with respect to their component. The tendered amount (as referred in table above) will be taken as per the tendered amount of their respective component.

Clause-6 :- Clause 6 applicable :-

Applicable (ERP Electronic

Measurement book (e-MB) to be submitted by agency)

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. 05.00 Lakh/as decided by Engineer in Charge (for Civil Work)

CLAUSE 7A

Whether Clause 7A shall be

Yes

Applicable

CLAUSE 7B

Payment to Third Party

Applicable

(Authority letter to be given as per Annexure-VII)

Clause 10A

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

All necessary equipment for conducting all necessary tests shall be provided at the site in the well furnished site laboratory by the contractor at his own cost with proper light and ventilation. The following minimum laboratory equipment shall be set up at site office laboratory:

Sl. No.	Equipment	Numbers (Minimum)
1.	Slump cone, steel plate, tamping rod, steel scale, scoop etc.	1
2.	Weighing scale platform type 100 Kg capacity	2
3.	Graduated glass measuring cylinder	As per requirement (Min 6 nos)
4.	Sets of sieves of 450mm internal dia for coarse aggregate [100mm, 80mm, 63mm, 50mm, 40mm; 25mm, 20mm; 12.5mm, 10mm; 6.3mm, 4.75mm complete with lid and pan]	1
5.	Sets of sieves of 300mm internal dia for fine aggregate [4.75mm; 2.36mm; 1.18mm; 500 microns; 425 microns; 300 microns, 150 micron 90 micron; 75 micron, with lid and pan]	1
6.	Motorized sieve shaker	As per requirement
7.	Cube moulds size 150mmx150mmx150mm	As per requirement (Min 12 Nos)
9.	Hot air oven temp. Range 50°C to 300°C sensitivity 1 degree	1
10.	Electronic balance 600gx0.1g. and 10kg	1 each
11.	Physical balance weight up to 5 kg	1
12.	Measuring jars 100ml, 200ml, 500ml	As required (Min 2 each)
13.	Gauging trowels 100mm & 200mm with wooden handle	As required (Min 4nos.)
14.	Spatula 100mm & 200mm with long blade wooden handle	As required (Min 4nos.)
15.	Vernier calipers 12" & 6" size	1 each
16.	Digital paint thickness meter for steel 500 micron range	1
17.	GI/ MS tray 600x450x50mm, 450x300x40mm, 300x250x40mm	2 No each
18.	Screw gauge 0.1mm-10mm, least count 0.05	2
19.	Enamel Tray	3
20.	Distant reading thermometer	2
21.	Compaction apparatus (proctor test)	1
22.	Density test apparatus (sand cone cylinder)	1
23.	Bitumen extraction test apparatus for bitumen content	1
24.	Core cutter apparatus	1
25.	Floor Brushes, hair dusters, scrappers, wire brush, paint brushes, shutter steel plat oil, kerosene with stove etc.	6 each

Correction—Nil Deletion—Nil Insertion—Nil Overwriting—Nil

26.	Any other equipment for site tests as outlined in BIS codes and as directed by the Engineer-in-charge.	
27	Computer and Laser Printer	1 Set

Clause 10B(ii).

Whether Clause 10 B (ii) shall be applicable

Not Applicable

Clause10C

Component of labour expressed as percent of value of work

Applicable

Clause10CC

Not Applicable

(Clause 10 CC to be applicable)

Sr. No.	Relevant component of Material/ Labour for price-escalation	Percentage of total value Work- (civil plus electrical)
1	Cement Component	1.00%
2	Labour Component(civil)	15.00%
3	Labour Component (Elect.)	6.00%
4	Civil Component of other construction Materials	33.50%
5	Reinforcement Steel bars/TMT bars/ structural Steels (including stand and cables) Component	2.00%
6-	Bitumen	9.50%
7	Material Component Electrical	33.00%
	Total	100%

Clause 11

Specifications to be followed for execution of work

CPWD Specification **2019 (Vol. I & II)** with correction slips upto previous day of last date of receipt of tender.

Clause12

Maintenance Work

(The overall Deviation shall be as per O.M. No. DG/CON/Maintenance 2023/03 dated 18.12.2023)

Clause16

Competent Authority for Deciding reduced rates.

Superintending Engineer CPWD, Jalandhar or Successor thereof

Clause 18

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

S.No.	Equipment	Numbers (Minimum)
1.	Fully Automatic Concrete Batching plant (Min. 3-cum./hr.)	1
2.	Concrete pump	As per Requirement of work
3.	DG set of suitable capacity.	As per Requirement of work

4.	Transit Mixer	As per Requirement of work
5.	Needle Vibrators.	1
6.	Plate Vibrator	1
8.	JCB, Excavator, Dumper, Tipper	As per Requirement of work
9.	Reinforcement cutting & Bending machines	1
10.	Screed Vibrator	As per requirement
11.	Total station.	As per Requirement of work
12.	Auto level & staff.	1
13.	Water tanker (Minimum capacity of 5000 litres)	As per requirement
14.	Welding machine 400 Ampere	1
16.	Centrifugal mono block water pump minimum capacity 2 HP	1
19.	Any other machinery required for completion of the work as per decision of Engineer-in-charge.	As per Actual requirement

Note: The list is an indicative list and the contractor is to bring and keep the required machinery on just on time concept basis. No idling of machinery is to be done and the contractor will be free to use the machinery elsewhere as per his own requirement.

Clause 19

Clause 19C to decide penalty

For each default

Superintending Engineer CPWD, Jalandhar
or Successor thereof

Clause 19D to decide penalty

For each default

Superintending Engineer CPWD, Jalandhar
or Successor thereof

Clause 19G to decide penalty

For each default

Superintending Engineer CPWD, Jalandhar
or Successor thereof

Clause 19K to decide penalty

For each default

Superintending Engineer CPWD, Jalandhar
or Successor thereof

Clause 25 Settlement of disputes by Conciliation and Arbitration

- 1.0 Conciliator: SDG (Chandigarh) or Successor thereof
- 2.0 Arbitrator Appointing Authority: SE-Jalandhar or Successor thereof
- 3.0 Place of Arbitration: As decided by Arbitrator.

Clause 32

Requirement of Technical Representative(s) and recovery Rate (Applicable for work costing more than Rs. 15.00 Lakh upto Rs. 1.50 Crore)

Sl No.	Minimum Qualification of Technical Representative	Discipline	Designation (Principal Technical/ Technical representative)	Minimum Experience	Number	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of Clause 32	
1	Graduate Engineer or Diploma Engineer	Civil	Project Manager cum Planning cum quality / Site / Billing Engineer	2 or 5 Years Respectively	1 No	Rs. 15,000/- per month	Rs. Fifteen Thousand only per month

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.

Clause 38

- (i) (a) Schedule/ statement for determining theoretical quantity of cement & bitumen on the basis of Delhi Schedule of Rates DSR- 23

- (ii) Variations permissible on theoretical quantities:

- (a) Cement

For works with estimated cost put to tender not more than Rs.25 lakh. 3% plus/minus.

For works with estimated cost put to tender more than Rs.25 lakh. 2% plus/minus.

- (b) Bitumen All Works 2.5% plus & only & 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

RECOVERY RATES FOR QUANTITIES BEYOND PERMISSIBLE VARIATION

SI No.	Description of Item	Rates in figures and words at which recovery shall be made from the Contractor	
		Excess beyond permissible variation	Less use beyond permissible variation
1.	Cement (PPC)	Nil	Rs. 7,000 per M.T.
2.	Cement (OPC)	Nil	Rs. 7,200 per M.T.
3.	Reinforcement Bars TMT-500		
(i)	Primary Manufacturer	Nil	Rs. 75,900 per M.T.
(ii)	Secondary Manufacturer	Nil	---
4.	Structural Steel	Nil	Rs. 84,614 per M.T.

Note: Recovery rates of Cement & Steel including applicable GST (i.e. 18% for Cement & 18% for Steel).

ADDITIONAL CONDITIONS FOR CIVIL WORK

1.0 General Conditions for Civil Works

1.1 The work in general shall be carried out in accordance with the CPWD Specifications **2019** Vol. I & II (corrected up to previous day of last date of receipt of tender) hereinafter referred as CPWD Specifications. Quantities indicated in schedule of work are tentative. Contractor shall procure the material carefully after referring to drawings etc and no claim for loss of profit due to non-execution of any scheduled quantity shall be accepted at any stage.

1.2 Order of Preference: In case of any difference or discrepancy between the description of items as given in the schedule of quantities, specifications for individual items of work, contract conditions and/or I.S. Codes etc., the following **order of preference** shall be observed:

- (i) Description of items as given in Schedule of quantities
- (ii) Particular specifications, if any, for the item in agreement
- (iii) Special conditions, if any, in agreement
- (iv) Additional conditions, if any, in the agreement
- (v) Tender drawings attached/ issued during execution
- (vi) CPWD Specifications including correction slips up to previous day of last date of receipt of tender.
- (vii) **General Conditions of Contract 2023 Maintenance Works** for CPWD works with correction slips upto previous day of last date of receipt of tender.
- (viii) Indian Standards Specifications of B.I.S.
- (ix) ASTM, BS or other foreign origin code mentioned in agreement.
- (x) Manufacturer's specifications for the item, as decided by Engineer-in-charge.
- (xi) Sound Engineering practices or well established local construction practices.

1.3 Source of Material:

- a. The water for construction work shall be arranged by contractor. In case, contractor takes water from government source, which shall be done only with prior approval of Engineer in charge, free of cost then recovery of water charges shall be made at the rate as specified in GCC. The contractor shall get the water tested with regard to its suitability of use in the works and get written approval from the Engineer-in-charge before he proceeds with the use of same of execution of works. If the tubewell water is not suitable, the contractor shall arrange Municipal water or from any other sources at his own cost and nothing extra shall be paid to the contractor on this account. The water shall be got tested at frequency specified in latest CPWD specifications/BIS code. The Contractor, may be required to install industrial RO plant at site of appropriate capacity at his own cost, for treating water to make it compliant for construction purpose.
- b. Stone for stone masonry, stone aggregates and stone ballast shall be of hard stone variety mined from Govt. approved mines. The contractor shall submit source(s) of material along with samples of material from that source. Based on stipulated specifications, source and sample shall be approved by the Engineer-in-Charge.
- c. Coarse and fine aggregates to be used for concrete work, mortar for masonry, plaster etc shall be sourced from Govt. approved mines or manufacturer(s) as approved by Engineer-in-charge. The contractor shall submit source(s) of material along with samples of material from that source which conform to CPWD specification. Based on stipulated specifications, source and sample shall be approved by the Engineer-in-Charge.
- d. In schedule of quantity, wherever provision for coarse sand and fine sand is specified in any item, use of crushed stone sand or manufactured sand shall also be permissible as per CPWD specification provisions. Nothing extra shall be payable or recoverable on this account, over & above the quoted rate(s) of respective item. However decision of the Engineer-

Correction—Nil Deletion—Nil Insertion—Nil Overwriting—Nil

in-charge w.r.t. selection of material i.e. natural sand, crushed stone sand, manufactured sand etc. shall be final and binding on contractor.

- e. Special Conditions regarding Royalty of Materials to be used in Construction work: The contractor has to follow the provision of Mining Act in accordance with statutory orders of state Government and Central Government.

- 1.4 The work is to be executed inside a guarded campus which is a high security zone and imposes restricted access and restricted movement being an education institute. The contractor should acquaint himself about the security restrictions at entry gates and within the institute. The Contractor shall take all necessary precautions to prevent any nuisance or inconvenience to the user and occupants of the adjacent properties, military establishment and to the public in general. The Contractor shall take all care, as not to damage any other adjacent property in the campus or other services running adjacent to the plot. If any damage is done, to any property, the same shall be made good by the Contractor at his own cost and to the entire satisfaction of the Engineer-in-Charge. The Contractor shall use such methodology and equipment for execution of the work, so as to cause minimum environmental pollution of any kind during construction, to have minimum construction time and minimum inconvenience to occupants/ workmen in the campus and also to the occupants of the buildings on the adjacent plot and public in general, etc. He shall make good at his own cost and to the entire 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. Further, the Contractor shall take all precautions to prevent any pollution of streams and waterways. All waste or superfluous materials shall be carted away by the Contractor, entirely to the satisfaction of the Engineer-in-Charge. Utmost care shall be taken to keep the noise level to the barest minimum so that no disturbance as far as possible is caused to the occupants/users of adjoining buildings. No claim whatsoever on account of site constraints mentioned above or any other site constraints not specifically stated here, shall be entertained from the Contractor. Therefore, the Contractors are advised to visit the site and get first hand information of site constraints and working restrictions before they quote their tenders. Nothing extra on this account shall be payable.

- 1.5 **A) Testing of Materials:** Regarding testing of civil & electrical materials, which cannot be tested in site laboratory and/or to be tested at an independent laboratory, the testing of materials shall be conducted in Govt. Laboratory/ Govt. colleges/ IITs/NITs or from the NABL laboratory approved by the SDG Chandigarh. The charges of testing of materials in approved laboratory shall be borne as below:

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.

The samples for testing shall be supplied free of cost by the contractor. The contractor shall also make all arrangements for transportation and delivery of samples of materials to the testing laboratory and nothing extra shall be payable for the same.

- 1.5 **B) Temporary barricading, if required for the construction site/work, shall be provided with colour coated MS corrugated sheets & MS frame work by the contractor at their own cost.** The barricading physically defines the boundaries of the work site for restricted entry to only those involved in the work and also to prevent any accident and also not causing any inconvenience to the adjoining people and traffic. The barricading panels shall be painted with "CPWD" mark in suitable size, shapes and number as directed by Engineer-in-charge without any extra cost. It shall be dismantled and taken away by the contractor after completion of the work at his own cost with the permission of Engineer-in-charge.

1.6 Program Chart:

Correction—Nil Deletion—Nil Insertion—Nil Overwriting—Nil

- a. The Contractor shall prepare an integrated program chart and action there of as per GCC **2023 Maintenance Works-** Clause 5.1 of Contract.
- b. The integrated program chart 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 fulfillment of the program within the stipulated period and submit the same for approval of the Engineer-in-Charge within seven days of the award of the work. 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.
- c. The program chart should include the following:
 - i) Descriptive note explaining sequence of various activities.
 - ii) Network (PERT/ CPM/ BAR CHART) prepared on MS project 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 monthly milestones and periodic milestones.
- d. 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.
- e. 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.
- f. The contractor shall also be required to submit 2 sets of monthly progress report of the work in a computerized form, every month.
- g. The **monthly progress report** shall contain the following:
 - i) Construction schedule of the various components of the work through a bar chart for the next month (or as may be specified), showing targeted tasks (including material and labour requirement) and up to date progress.
 - ii) Progress chart of the various components of the work that were planned and achieved, for the month as well as cumulative up to the month under reckoning, with reason for deviations, if any in a tabular format
 - iii) Plant and machinery statement, indicating those deployed in the work.
 - iv) Man-power statement indicating:
 - v) Individually the names of all the staff deployed on the work, along with their designations.
 - vi) No. of skilled workers (trade wise) and total no. of unskilled workers deployed on the work and their location of deployment i.e. blocks.
 - vii) 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.
 - viii) Few photos of the months activities.

- ix) The progress report must reach to Division office upto 5th of each month failing which recovery @ Rs. 500/- per day (subject to maximum 10000/-per report not submitted) shall be deducted from the running/final bill of the agency.

1.7 QUALITY ASSURANCE/TESTING OF MATERIALS: -

- 1.7.1 Water tanks, taps, sanitary, water supply & drainage pipes, fittings & accessories should conform to bye-laws of local body/ corporation, where CPWD specifications are not available. The Contractor (s) 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.
- 1.7.2 With each Running Bill, the details of test carried out shall be submitted by the contractor as per Performa given in the tender document.
- 1.7.3 Samples of materials required for testing shall be provided free of charge by the contractor. The contractor shall provide at his own cost suitable weighing and measuring arrangements at site for checking the weight dimension as may be necessary. The sealed samples are to be handed over to the testing lab by the contractor in the presence of representative of Engineering in charge. The cost of other than steel & Ultrasonic pulse velocity tests, to be carried out in approved labs shall be borne by the contractor.
- 1.7.4 The Contractor shall at his own risk and cost make all arrangements and shall provide all like 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.
- 1.7.5 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.
- 1.7.6 The tests can be got done from all govt. Institutes, Indian Institutes of Technology, National Institutes of Technology, Central and State research Centers, Centrally and State funded laboratories and private NABL testing labs as approved by the SDG-Chandigarh or successor thereof.
- 1.7.7 **Maintenance of Register of Tests:**
- (i) All the registers of tests carried out at Construction Site or in outside laboratories shall be maintained by the contractor which shall be issued to the contractor by Engineer-in-Charge.
- (ii) All Samples of materials including Cement Concrete Cubes shall be taken jointly with Contractor by representative of the Engineer in Charge. All the assistance shall be provided by the contractor. Cost of sample materials is to be borne by the contractor and he shall be responsible for safe custody of samples to be tested at site.

- (iii) All the test in field lab setup at Construction Site shall be carried out by the Engineering Staff deployed by the contractor which shall be 100% witnessed by representative of the Engineer in Charge.
 - (iv) All the entries in the registers will be made by the designated Engineering Staff of the contractor and same should be regularly reviewed by Engineer in Charge or his representative.
 - (v) Contractor shall be responsible for safe custody of all the test registers.
 - (vi) Proforma for Mandatory tests as per Annexure-54 CPWD works SOP manual is attached with each Running bill.
 - (vii) Submission of all test registers and material at site register along with each alternate Running Account Bill and Final Bill is mandatory. These registers are duly reviewed by Engineer-in-Charge in Division Office and receipts of registers should also be acknowledged by Accounts branch by signing the copies and register to confirm receipt in Division office. If all the test registers and MAS register are not submitted by the contractor along with each alternate R/A Bill & Final Bill as per above provision, no payment will be released to the contractor.
 - (viii) Maintenance of Materials at Site (MAS) Registers -
 - (a) All MAS Registers for materials to be used in work including Cement and Steel Registers will have to be maintained by Contractor which will be issued to the contractor by Engineer-in-Charge.
 - (b) The Engineer in charge will issue the registers and also inform the important work-related materials for which MAS has to be maintained by the contractor.
 - (c) Each entry of receipt of material at site is 100% test checked by JE incharge or by AE in charge of work if there is no JE. If both JE & AE are available AE should test check at least 50% of the entries.
 - (d) Each MAS Register is checked by JE & AE at least once a week.
 - (f) Cement Register is reviewed by EE at least once in a month for work at same station and alternate months for work at outstation.
 - (ix) The work will be measured, checked and paid only if it is of the required quality and standard, both in respect of ingredients as well as the intended functions it is supposed to perform. In other words, the work should meet the required specifications and also the workmanship as per sound engineering practices for being eligible to be paid.
- 1.7.8 Extensive testing of the materials used for construction is a pre-requisite for attaining high quality of the work. This shall also require specialized tests, physical, chemical, ultrasonic, x-ray and various other types of tests which cannot possibly be carried out in a site laboratory. These tests also require specialized personnel who regularly deal in such testing. Therefore, the need arises for carrying out the tests in outside laboratories. These laboratories may be in the Govt. sector, Semi Govt. or Private sector. All Govt. Institutes, Indian Institute of Technology, National Institute of Technology, Central and State funded laboratories stands approved. No approval is required for testing in these laboratories/institutes. Also private NABL testing labs as approved by the SDG-Chandigarh or successor thereof also stand approved for conducting testing.
- 1.7.9 Ultrasonic pulse velocity test shall be conducted on all RCC columns and at least 5% of the total number of other RCC members in each category i.e. beam, slab and footing for ensuring quality of concrete as per directions of Engineer- in charge. The cost of the same shall be borne by the contractor.
- 1.7.10 In case there is any discrepancy in frequency of testing as given in list of mandatory tests and that in individual sub-heads of work as per CPWD Specifications higher of

the two frequencies of testing shall be followed and nothing extra shall be payable on this account.

- 1.7.11 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.
- 1.7.12 In addition to the supervision of work by CPWD engineers, the Architects deployed by the Client/CPWD, CPWD Quality Control/ Assurance Team and Third-party Quality Control/ Assurance Team 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.
- 1.7.13 The Contractor shall submit, within 7 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.

1.7.14 FIELD LABORATORY

The contractor has to establish within 30 days from the award of work a field laboratory at site including all necessary equipments and skilled manpower for the **Field Tests as indicated in the tender document** at his own cost to have proper quality control. Rs.2,000/-per day shall be recovered from the contractor (subject to a max of Rs 50000/-) for any delay beyond the specified period. If contractor fails to establish lab within additional period of 15 days, the Engineer in charge shall initiate action as deemed fit under relevant clauses of the agreement.

For performing the above tests, the **Field-Testing Equipment and Instruments as indicated in the tender document** are to be arranged and maintained by the contractor at his own cost.

- 1.7.15 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.

- 1.7.16** The list of Laboratory/ Field equipment referred above is to be arranged and maintained by the contractor at the site of work. In case the equipment required for any test is not available at site the department shall get the test conducted from the third party without prejudice to any other related clause. However, in that event, besides providing free materials of sample, the cost of taking of sample, packing, transportation, **testing charges payable to the Laboratory etc. shall be borne by the contractor irrespective of the results.**

All test charges are to be borne by the contractor and no reimbursement will be made by the engineer-in-charge absolutely whatsoever irrespective of the fact that the materials tested have passed or failed.

- 1.7.17 Contractor should prepare a “Quality Assurance Plan” (applicable only for works value more than 10 crore) and obtain approval of Engineer-in-charge before proceeding with the Execution of work. The quality assurance plan prepared by the contractor should broadly conform to the Handbook on Total Quality Management Plan-2019 a CPWD publication freely available on CPWD website. www.cpwd.gov.in https://cpwd.gov.in/Publication/Handbook_On_Total_Quality_Management.pdf

Quality assurance policy and checklist for E & M services –2016 (Available at cpwdweb site www.cpwd.gov.in) https://cpwd.gov.in/Publication/Quality_Assurance_poilcy.pdf

1.7.18 SAMPLE OF MATERIALS:-

- 1.18.1 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 List of Approved Makes given in the tender document for approval of Engineer-in-Charge. For all other items, ISI Marked materials and fittings 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 for the approval of Engineer-in-Charge.
- 1.18.1 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.

- 1.18.1 To avoid delay, contractor should submit samples/ as stated above well in advance so as to give timely orders for procurement. 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. Samples including brand/ quality of materials and fittings to be used in the work shall be got approved from the Engineer-in-Charge, well in advance of actual execution and shall be preserved till the completion of the work.
- 1.18.1 BIS marked materials except otherwise specified shall also be subjected to quality test besides testing of other materials as per the specifications described for the item/material. Wherever BIS marked materials are brought to the site of work, the contractor shall, furnish manufacturer's test certificate or test certificate from approved testing laboratory to establish that the material procured by the contractor for incorporation in the work satisfies the provisions of specifications relevant to the material and/ or the work done.
BIS marked items (except cement & steel for which separate provisions have been made) required on the work shall be got tested, for only important tests, which govern the quality of the product, as decided by the Engineer-in-Charge. The frequency of such tests (except the mandatory test) shall be 5% of the frequency as specified in BIS. For mandatory tests, the frequency of testing shall be as specified in the CPWD Specifications.
- 1.18.1 For certain items, if frequency of tests is neither mentioned in the CPWD Specifications nor BIS, then tests shall be carried out as per directions of Engineer-in-Charge.
- The contractor shall allow access to Third Party Quality Assurance agency (TPQA), if engaged by Engineer-in-charge to have a control on quality and methodology of execution. At least 25% of Samples of materials including Cement Concrete Cubes shall be taken jointly by contractor and TPQA/ Engineer-in-charge or his authorised representative. All arrangements for transporting and getting them tested shall be made by the contractor.
 - All the test in field lab setup at construction site shall be carried out by the Quality control team/ engineer to be engaged by the contractor which can be witnessed by Engineer-in-charge or his/her representative. A daily intimation of tests to be conducted on a day shall be given to Engineer-in-charge or his/her representative.
 - All the entries in the registers will be made by the designated Engineering Staff of the contractor.
 - Contractor shall be responsible for safe custody of all the test registers.
 - Submission of original/copy of all test registers, material at site register and hindrance register along with each alternate Running Account Bill and with the Final Bill shall be mandatory.
 - All material received at site shall be entered in MAS Register and copy of Supply order, MTC & Bill-invoice shall be maintained in order. The MAS Registers including Cement and Steel Registers shall be maintained by a qualified staff of contractor which may be inspected by Engineer-in-charge or his/her representative at any time. The intimation of receipt of material shall be sent to Engineer-in-charge or his/her representative on day to day basis for his approval.
 - 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.
 - All the hidden items such as reinforcement, water supply lines, drainage pipes, conduits,

sewers, putty, primers 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.

- i. Water tanks, taps, sanitary, water supply and drainage pipes, fittings and accessories should conform to byelaws and municipal body / corporation where CPWD Specifications are not available. The contractor should engage licensed plumbers for the work and get the materials (fixtures/fittings) tested by the Municipal Body/Corporation authorities wherever required at his own cost.
- j. 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.
- k. 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 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.
- l. 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.

1.8 Pour card, check-list for Execution of work

- a. As and when any important item is taken up for execution, the Contractor shall develop and submit a checklist and/or pour card. This sample checklist should be got approved from the Engineer-in-charge and should be used at site. This check list should be shown to the Engineer-in-charge or his/her designee during inspection. This procedure is to be followed for all hidden items, CC/RCC work, Steel-reinforcement, shuttering, cast-in-situ mosaic flooring, doors & windows, plumbing, including water supply pipe lines, roof treatment, earth filling etc.
- b. The Contractor shall maintain documentation of the total sequence of this project by way of photography, video recording etc. and submit to Engineer-in-charge for record. Nothing extra shall be payable to the contractor on this account.

SAMPLE POUR CARD FOR RCC WORK

Name of work:

- 1.0 GENERAL
- 1.1. Name of Contractor
- 1.2. Structural Element
- 1.3. Location
- 1.4. Architectural drawing No.
- 1.5. Structural drawing No.
- 1.6. Approximate quantity and grade of concrete
- 1.7. Expected start time

Correction—Nil Deletion—Nil Insertion—Nil Overwriting—Nil

1.8.	Expected finish time	
1.9.	Name of Contractor's Engineer	
2.0	CENTERING TYPE	
2.1	Adequate vertical supports	Y/N
2.2	Adequate lateral supports	Y/N
3.0	SHUTTERING TYPE	
3.1	Cleaned	Y/N
3.2	Oiled	Y/N
3.3	Leveled	Y/N
3.4	Holes plugged	Y/N
4.0	REINFORCEMENT TYPE	
4.1	Cover blocks	Y/N
4.2	Conform to Drawings	Y/N
4.3	Couplers Tied Properly	Y/N
4.4	Space Bars/chairs	Y/N
4.5	Re-inforced properly	Y/N
4.6	Laps proper	Y/N
5.0	CONCRETE TYPE	
5.1	Plant informed about mix and type	Y/N
5.2	Transit mixer ready	Y/N
5.3	Tower crane ready	Y/N
5.4	Concrete pump ready	Y/N
5.5	Vibrators (Electrical & Diesel Ready)	Y/N
5.6	Predetermined Holes left wherever required	Y/N
5.7	Boards for construction joints	Y/N
5.8	Conduits placed in position	Y/N
5.9	Fan clamps placed in position	Y/N
5.10	Steel templates	Y/N
5.11	Cement slurry	Y/N

Dated:

The above information filled by me after proper verification

(AUTHORISED SITE ENGINEER OF FIRM)

The above information checked by me

(ASSISTANT ENGINEER)

1.8 Sample of Work/ Items:

- The contractor shall invariably prepare the samples of finishing items i.e. flooring of different types, external & internal finishing i/c colour scheme of paint, tiles in dado, flooring in platforms & staircase, water supply & sanitary fittings and any other item as per direction of Engineer-in-charge. The contractor shall proceed with further finishing items only after getting the samples of these items approved in writing from Engineer-in-charge.
- In the schedule of quantities/BOQ/preferred make list of items, brand/make of material is mentioned. The contractor shall be required to provide the same brand/make as mentioned in the item/list. If the same are not available in the market or the suppliers adopts monopolistic practice then the approval of other equivalent brand/make are to be obtained from Engineer-in-charge. The contractor will submit such a case at least three months before the materials is required at site. If the rate of other equivalent brand/make are less than the brand/make mentioned in the item, than necessary cost adjustment will be made for difference in rates.
- During actual execution of item(s) at site, due to change/updation of product specification(s)

Correction—Nil Deletion—Nil Insertion—Nil Overwriting—Nil

by manufacturers, there may be minor variation in manufacturer's specifications viz-a-viz specification mentioned in item(s) in Schedule of Quantity (civil, furniture well as electrical work). Such variations shall be allowed with prior permission of Engineer-in-charge for execution of work at site and nothing extra shall be payable to the contractor on this account. The decision of Engineer- in-charge in this matter shall be final and binding on contractor.

1.9 INSPECTION OF WORK

1.9.1 In addition to the provisions of relevant clauses of the contract, the work shall also be open to inspection by senior officers of CPWD in addition of the Engineer-in-charge and his authorized representative. 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.

1.9.2 Inspection of the work by Architects and other officials

1.9.2.1 The consulting architect for this work 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 to the contractor by Engineer- in-charge or his authorized representative and compliance of same by contractor shall be reported to Engineer-in-charge.

1.9.2.2 The consulting architect shall certify on completion of particular building that it has been constructed according to the approved drawings design and specifications.

1.9.2.3 Senior Officers of CPWD, Dignitaries from Central Ministry/ Department, State Government and client 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.

1.9.2.3.1 Display Board showing detail of work, monthly progress achieved with respect to targets, reason of shortfall, status of manpower, wages being paid for different categories of workers.

1.9.2.3.2 Entrance and area surrounding to be kept clean.

1.9.2.3.3 Display layout plan key plan, Building drawings including plans, elevations and sections.

1.9.2.3.4 Up to date displays of Bar chart, CPM and PERT etc.

1.9.2.3.5 Keep details of quantities executed, balance quantities, deviations, possible Extra item, substituted Item etc.

1.9.2.3.6 Keep plastic/ cloth mounted one sets of building drawings.

1.9.2.3.7 Set of Helmets and safety shoes for safety.

1.9.3 Design and Execution of Sewerage, Drainage, Water supply services, development works and other minor misc. works.

The agency will be provided the concept architectural drawings for above services. Based on above drawings and the finer details and detailed Planning and Designing of all the above services is in the scope of agency. The agency is required to appoint a consultant/Qualified Engineer in consultation with Engineer in charge to develop these detailed drawings of the work as per site requirements in line with Schedule items. The cost of consultant is to be included in the rate quoted by the agency and nothing extra is payable on this account.

1.10 RESPONSIBILITY

a. The Contractor shall keep himself fully informed of all relevant acts and laws of the Central & State Governments, 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 District Collector/ Municipal Corporation/ Urban Development Authority 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 water charges (for municipal water connection as well as tanker water) shall be borne by the

Correction—Nil Deletion—Nil Insertion—Nil Overwriting—Nil

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. 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 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/ client 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. Nothing extra shall be payable on these accounts.

- b. The fee payable to statutory authorities for obtaining the various permanent service connections and Building Use Certificate for the building shall be borne by the Department/ client.
- c. The contractor shall assume all liability, financial or otherwise in connection with this contract and shall protect and indemnify the Department from any and all damages and claims that may arise on any account. The Contractor shall indemnify the Department against all claims in respect of patent rights, royalties, design, trademarks of name or other protected rights, damages to adjacent buildings, roads or members of public, in course of execution of work or any other reasons whatsoever, and shall himself defend all actions arising from such claims and shall indemnify the Department in all respect from such actions, costs and expenses. Nothing extra shall be payable on this account.
- d. No residential accommodation shall be provided to any of the staff engaged by the contractor. The contractor shall also not be allowed to erect any temporary set up for his staff in the campus. However labour camps shall be constructed at site as per General conditions of contract.
- e. No claim of the labourers shall be entertained including that of providing employment, regularization of services etc.
- f. Site Engineer/Supervisor shall carry mobile telephone (s) to enable the Engineer- in-Charge/ occupants to have easy and quick communication. Nothing extra shall be paid to the contractor on this account and his quoted rates for various items under this contract will be inclusive of this obligation.
- g. The staff employed by the contractor should be well behaved and any complaint of misbehavior shall be taken very seriously and such staff will have to be removed by the contractor immediately from the site.
- h. Contractor shall be fully responsible for any damages caused to government property or allottee's property by him or his labour in carrying out the work and shall be rectified by the contractor at his own cost.

1.11 Specialized Agencies

The tenderer must associate with himself, agencies of the appropriate eligibility to tender for each of specialized nature of items / work listed in the tender documents, individually. Such works shall be got executed only through associated agencies specialized in these fields. The contractor shall submit name(s) of his associated specialized agencies those fulfilling the eligibility criteria laid down in contract document, at least 60 days before commencement of such items/ work for the approval of the Engineer in charge whose decision shall be final and binding. If the tenderer himself fulfils the eligibility criteria laid down for associated specialized agencies, then the tenderer shall not require associating with himself the associated specialized Contractor.

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.

1.12 SECURITY

- a. The campus is now occupied. Contractor shall take all measures and precautions so as to cause no inconvenience to the occupants. He shall barricade the construction site/ designated area of construction through the barriers as specified in the BOQ and as approved by the Engineer-in-charge. No material shall be stored/ dumped outside the designated area.
- b. The movement of the construction vehicles and the labours shall be restricted to the designated routes which will be decided by the client.
- c. All the vehicles carrying the material to the work site shall be subject to check and entries to be made at the gates by security post. No material shall be taken out without proper gate pass issued by the Engineer-in-Charge or his authorized representative.
- d. Any labour engaged by the contractor shall be in possession of photo ID card failing which they are liable to be disengaged from the work and shall not be allowed to enter into the campus.
- e. In case of any nuisance caused by activities attributed to contractors staff, workmen and movement of vehicle, and reported to CPWD by client (an officer of the rank not lower than EE) commensurate penalty not exceeding Rs. 5000/- for each nuisance shall be imposed on the contractor by CPWD in consultation with client.
- f. The movement of the labour shall be restricted to the barricaded work site area only.
- g. The contractor will take reasonable precaution to prevent his workmen and employees from removing and damaging any flora (plant/vegetation) from the project area.
- h. The Contractor shall be responsible for the watch and ward/ guard of the buildings safety, fittings and fixtures provided by him against pilferage and breakage during the period of installations and thereafter till the building is physically handed over to the department. No extra payment shall be made on this account.

1.13 SAFETY PRACTICES

- a) No Entry/exit/roads other than specified by the **Engineer-in-charge** for purpose of construction activities will be allowed to be used for construction activity purposes or movement of trucks/lorries/ load-carriers and nothing extra/ delay whatsoever will be accounted for on this part.
- b) The contractor shall take all necessary precautions to prevent any nuisance or inconvenience to the students and staff in campus, owners, tenants or occupiers of adjacent properties and to the public in general and to prevent any damage to such properties and any pollution of smoke, streams and water-ways. He shall make good at his cost and to the satisfaction of the Engineer-in-Charge, any damage to roads, paths, cross drainage works or public or private property whatsoever caused thereon by the contractor. All waste or superfluous materials shall be removed by the contractor without any reservation entirely to the satisfaction of the Engineer-in-Charge.
- c) In the event of any restrictions being imposed by the Client, Security, CPWD, Traffic police or any other authority having jurisdiction in the area on the working or movement of labour/ material, the contractor shall strictly follow such restrictions and nothing extra shall be payable to the contractor on this account.

- d) **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.
- e) **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, architects, structural consultants, Department, salient features of project etc. besides providing space for names of other Contractors, Sub-Contractors and specialized agencies. **These sign board(s) shall have QR code also with link to CPWD website, if required.** Nothing extra shall be payable on this account.
- f) Necessary protective and safety equipments shall be provided to the Site Engineer, Supervisory staff, labour and technical staff of the contractor by the contractor at his own cost and to be used at site.
- g) 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.
- h) The contractor shall comply with the safety procedures, norms and guidelines (as applicable) as outlined in the "Constructional practices and safety- 2005", National Building code of India, Bureau of Indian Standards. A copy of all pertinent regulations and notices concerning accidents, injury and first-aid shall be prominently exhibited at the work site. Depending upon the scope & nature of work, a person qualified in first-aid shall be available at work site to render and direct first-aid to casualties. A telephone may be provided to first-aid assistant with telephone numbers of the hospitals displayed. Complete reports of all accidents and action taken thereon shall be forwarded to the competent authorities.
- i) The contractor shall ensure the following activities for construction workers safety, among other measures:
- Guarding all parts of dangerous machinery.
 - Precautionary signs for working on machinery
 - Maintaining hoists and lifts, lifting machines, chains, ropes, and other lifting tackles in good condition.
 - Durable and reusable formwork systems to replace timber formwork and ensure that formwork where used is properly maintained.
 - Ensuring that walking surfaces or boards at height are of sound construction and are provided with safety rails or belts.
 - Provide protective equipment; helmets etc.
 - Provide measures to prevent fires. Fire extinguishers and buckets of sand to be provided in the fire-prone area and elsewhere.
 - Provide sufficient and suitable light for working during night time.

1.14 TRAFFIC ARRANGEMENTS

- a. The whole plot of land designated for client is vast in size wherein certain identified traffic routes need to be followed by contractor to cart materials in the campus. Haphazard plying of vehicles shall be avoided. Horticultural activities, tree plantation, Nursery plantation shall be taken up in the campus along with constructional activities, as such, care shall be taken to avoid damages to these. Certain existing trees, recently planted trees including tree guards and irrigation water supply piping system can be located nearby work site, hence, while taking up excavation activities, trees as well as their root zones be protected and the stacking of excavated earth shall be made in such a way that neither plants are buried nor damaged. The initial survey, demarcation of roads and various buildings have been made in the campus and pickets etc are fixed at locations which shall not be disturbed or damaged by vehicular movement or manual tampering, else the same shall be made good by the contractor at his own. In case of failure to comply with the above requirements the damage caused shall be made good at cost of contractor and the cost so incurred and assessed by Engineer-in-Charge shall be recovered from running account bill of contractor.
- b. In event of any restriction being imposed by the Department, traffic or any other statutory authority having control over the project, on the working or movement of Labour, materials, etc, the contractor shall strictly follow all such restrictions or instructions issued regarding the same and nothing extra shall be payable to

The contractor on account of such restrictions or instructions. No delay or claims of any kind shall be entertained from the contractor on this account. The loss of time on this account, if any, shall have to be made up by the contractor by generating and deploying additional resources etc. Nothing extra shall be payable on this account.

1.15 PREVENTION OF NUISANCE AND POLLUTION CONTROL

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 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.

1.16 PROTECTION OF FLORA

The contractor will take reasonable precautions to prevent his workman and employees from removing and damaging any flora (plant/vegetation) from the project area.

1.17 General Cleanliness of site:

- a. The contractor shall provide for adequate number of garbage bins around the construction site and the workers facilities and will be responsible for the proper utilization of these bins for any solid waste generated during the construction. The contractor shall ensure that the site and the workers facilities are kept litter free. Separate bins should be provided for wet and dry waste and labeled in both Hindi and English with suitable symbols.
- b. Contractor should spray curing water on concrete structure and shall not allow free flow of water. Concrete structures should be kept covered with thick cloth/gunny bags and water should be sprayed on them. Contractor shall do water ponding on all sunken slabs using cement and sand mortar. Use of curing compound as per approval of

- engineer-in-charge in areas where wet water curing not feasible shall be permissible and nothing extra shall be paid for the same.
- c. The Contractor shall remove from site all rubbish and debris generated by the works and keep works clean and tidy throughout the Contract Period. All the serviceable and non-serviceable (malba) material shall be segregated and stored separately. Construction waste, malba and other rubbish generated out of execution of work by contractor, shall be disposed of as directed by Engineer in Charge for which no extra payment shall be made to contractor.
 - d. 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 and Additional Performance Guarantee in respect of this contract agreement.
 - e. 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.
 - f. 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.

1.18 PRESERVATION AND CONSERVATION MEASURES

- a. Existing drains, pipes, cables, over-head wires, sewer lines, water lines and similar services encountered in the course of the execution of work shall be protected against the damage by the contractor, at his own expense, for which nothing is payable. 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.
- b. 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 legislation. 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.
- c. Excavated earth shall be property of client and shall not be disposed off without approval

of Engineer in charge. Any legal or financial implications resulting out of disposal of earth shall be sole responsibility of the contractor.

1.19 Conditions of National Green Tribunal

- a. The Contractor shall not store/ dump construction material or debris on the metalled road. 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.
- b. 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.
- c. 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 material like cement, sand and other allied material are fully covered. The Contractor shall take every necessary precaution 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.
- d. The Contractor shall provide mask to every working on the construction site and involving in loading, unloading and carriage of construction material and construction debris to prevent inhalation of dust particles.
- e. The Contractor shall compulsory use of wet jet in grinding and stone cutting.
- f. The Contractor shall comply all the preventive and protective environmental steps as stated in the MoEF guidelines, 2010.
- g. The Contractor shall carry out on- Road-Inspection for black smoke generating machinery. The Contractor shall use cleaner fuel.
- h. The Contractor shall ensure that all DG set comply emission norms notified by MoEF.
- i. 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 case where speed reduction cannot effectively reduce fugitive dust, the Contractor shall divert traffic to nearby paved areas.
- j. 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.
- k. 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. This shall be in addition to provision of barricading as per BOQ item. Barricading shall only be payable as per BOQ item.
- l. Any violation of orders of MoEF including guidelines of State Government, SPCB or any officer of any department shall lead to stoppage of work for which Contractor shall be responsible and no hindrance shall be accounted in this regard.
- m. The contractor shall ensure that no construction leachate (e.g. cement slurry etc.), is allowed to percolate into the ground. Adequate precautions are to be taken to safeguard against this including, reduction of wasteful curing processes, collection, basic filtering and reuse. The contractor shall follow requisite measures for collecting drainage water run-off from construction areas and material storage sites and diverting water flow away from such polluted areas. Temporary drainage channels, perimeter dike/swale, etc. shall be constructed to carry the pollutant-laden water directly to the treatment device or facility (municipal sewerline)

1.20 Responsibility during Extreme Weather/Site Conditions:

- (a) The Contractor shall make all necessary arrangements for protecting from rains, fog or likewise extreme weather conditions, the work already executed and for carrying out the further work, during monsoon including providing and fixing temporary shelters, protections etc. Nothing extra shall be payable on this account. Also, no claims for hindrance shall be entertained on this account.
- (b) 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 contract agreement. Also, the Contractor shall make good, at his own cost, the damages caused, if any. Further, no claims for hindrance shall be entertained on this account.
- (c) The contractor shall be fully responsible for any damage to the work for which the payment has been advanced to him under the contract and he shall make good the same at his risk and cost. The contractor shall be fully responsible for safety and security of his labour, material, T&P, Machinery brought to the site by him.

1.21 SETTING OUT

- a. 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 the architectural drawings and actual layout at site shall be 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., along with theodolites. Nothing extra shall be payable on this account.
- b. 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.
- c. 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. Nothing extra shall be payable on this account.
- d. Though the site levels are indicated in the drawings 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. Nothing extra shall be payable on this account.
- e. 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.
- f. 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.

- g. Contractor(s) shall provide permanent bench marks, flag tops and other reference points for the proper execution of work and these shall be preserved till the end of the work. All such reference points shall be in relation to the levels and locations, given in the Good for Construction drawings.
- h. The rates quoted by the Contractor are deemed to be inclusive of site clearance, setting out work (including marking of reference points, center lines of buildings), construction and maintenance of reference benchmark(s), taking spot levels, construction of all safety and protection devices, signage, laboursafety, labourwelfare and labour training measures, preparatory works, working during monsoon and location etc. and any other incidental works required to complete this work. Nothing extra shall be payable on this account.

1.22 RECESS, HOLES, OPENINGS, JOINTS ETC

- a) The contractor shall leave such recesses, holes, openings, etc. as may be required for the electric, air-conditioning and other related works for which inserts, sleeves, brackets, conduits, base plates, clamps etc. shall be payable separately by the department unless otherwise specifically mentioned and the contractor shall fix the same at the time of casting of concrete, stone work & brick work or at any similar location if required, and nothing extra shall be payable on this account.
- b) Chases, holes, etc shall be done using power operated tools.
- c) Nothing extra shall be paid for core cutting & sealing of joint with approved material (non-shrink grout) for taking out of sanitary/ water supply/ fire-fighting cables, pipes etc. if any, unless otherwise specifically mentioned.
- d) The construction joints shall be provided in predetermined locations only as decided by Engineer-in-charge. The cost of shuttering for these construction joints shall be included in item of Concrete work / RCC work and nothing extra shall be payable on this account to the contractor
- e) Any cement slurry/ epoxy based bonding agent such as in to bond or equivalent etc. added over base surface for continuation of concreting for better bond is deemed to have been in-built in the items and nothing extra shall be payable.

1.23 SCAFFOLDING/ SHUTTERING

Wherever required for the execution of work, all the scaffolding shall be provided and suitably fixed by the contractor. It shall be designed to take all incidental loads. It should cater to the safety features for workmen. Nothing extra shall be payable on account of scaffolding except when specifically provided in BOQ. It shall be ensured that no damage is caused to any structure due to the scaffolding.

Generally only steel shuttering, unless otherwise specified, with suitably designed steel frame supporting system is to be used in the work. The contractor shall ensure that there shall be no leakage at form work joints and there shall be no movement at joints or bending of the formwork under pressure of the concrete. Nothing extra shall be paid on this account.

1.24 PRODUCT DELIVERY, STORAGE AND HANDLING OFCHEMICALS

- (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

Correction—Nil Deletion—Nil Insertion—Nil Overwriting—Nil

20 litres/Kgs.} 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 or the authorized dealers of the manufacturers.
- (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 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 equipments 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.

1.25 Other Conditions w.r.t Execution of work:

- a. The work shall be carried out in accordance with the architectural drawings and structural drawings, to be issued from time to time, by the Engineer-in-Charge. Before commencement of any item of work the contractor shall correlate all the relevant architectural and structural drawings, nomenclature of items and specifications etc. issued for the work and satisfy himself that the information available there from 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 on this account. The work shall be carried out in accordance with the Good

for Construction/ working Architectural, Civil and Electrical drawings as issued by the Engineer-in-Charge.

- b. Before commencement of any item of work the Contractor shall correlate all the relevant architectural, civil and electrical drawings, BOQ items and specifications etc. and satisfy itself that the information available is complete and unambiguous. The Contractor alone shall be responsible for any loss or damage occurring by the commencement and execution of work based on any erroneous and or incomplete information and no claim whatsoever shall be entertained on this account.
- c. The execution of items shall be carried out in accordance to relevant CPWD specifications (amended upto date of receipt of tenders). For the items which are not covered under CPWD Specifications, the Particular Specifications / B.I.S. Specifications shall have to be followed. The decision of Engineer-in-Charge shall be final in this regard.
- d. Wherever any reference is made to any Indian Standard, it shall be taken as reference to the latest edition with all amendments / revision issued thereto upto the date of receipt of tenders.
- e. The contractor is required to deploy resources as per availability of site. However no claim will be entertained for idle labour, idle machinery, idle technical/no- technical staff, idle T&P etc.
- f. The Contractor shall procure the required materials in advance so that there is sufficient time to testing of the materials and clearance of the same before use in the work. The Contractor shall provide at his own cost suitable weighing and measuring arrangements at site for checking the weight / dimensions as may be necessary for execution of work.
- g. The terms machine batched, machine mixed and machine vibrated concrete used elsewhere in agreement shall mean the concrete produced in concrete batching and mixing plant and if necessary transported by transit concrete mixers, placed in position by the concrete pumps, tower crane and vibrated by surface vibrator/ needle vibrator/ plate vibrator, as the case may be to achieve required strength and durability.
- h. Escalation under clause 10 CA shall not be payable on cement consumed in FlyAsh Bricks, AAC blocks.
- i. The work of services will be executed simultaneously. The Contractor shall minimize the scope of making recesses, holes, opening etc. as the same shall be planned in advance and necessary grooves/niches shall be provided in shuttering of RCC.
- j. 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 of the materials being used or removed, so as not to interfere with the operations of other Contractor simultaneously working or he shall arrange his work with that of the others in an acceptable and coordinated manner and shall perform it in proper sequence to the complete satisfaction of others.
- k. Gypsum plaster shall be executed using pneumatic spray machine preferably of reputed make.

1.26 RATES

- a. The rates quoted by the contractor are deemed to be inclusive of 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, preparatory works, construction of clean, hygienic and well ventilated workers housings in sufficient numbers as per drawing supplied by Engineer-in-charge, working during monsoon or odd season, working beyond normal hours etc. and any other unforeseen but

essential incidental works required to complete this work. Nothing extra shall be payable on this account.

- b. TDS against various taxes shall be deducted at source as per statutory orders and Govt. rules and regulation and labour cess as per BOCW act shall be deducted from bill payments to be made to the contractor by Engineer-in-charge.
- 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 anykind shall be entertained from the Contractor, on account of variation in the foreign exchange rate.
- d. All 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 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. Before start of the work, the Contractor shall submit to the Engineer-in-Charge, a site/ construction yard layout, specifying areas for construction, site office, positioning of machinery, material yard, cement and other storage, steel fabrication yard, site laboratory, water tank, etc.
- e. For completing the work in time, the contractor might be required to work in two or more shifts (including night shifts). No claim whatsoever shall be entertained on this account, not with-standing 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. All material shall only be brought at site as per program finalized with the Engineer-in-Charge. Any pre-delivery of the material not required for immediate consumption shall not be accepted and thus not paid for.
- g. Nothing extra shall be payable to the contractor for compliance of various additional conditions, special conditions, general terms & conditions, additional /general specifications, etc. as prescribed in bid document except specifically stated therein, on and above the quoted rate(s) of various items of schedule of quantities (civil as well as electrical work) of the bid document.
- h. Anywhere in the bid document/ NIT, BOQ shall mean **Schedule of Quantities**.

1.27 **ROYALTY:** Contractor shall comply with all statutory rules and regulations w.r.t royalty and other levies and taxes. Royalty at the prevalent rates shall be paid by the contractor or his associate supplier as per Government rules, on all materials such as boulders, metals, all sizes stone aggregates, brick aggregates, coarse and fine aggregates, moorum, river sand, gravels and bajri etc. collected by him for the execution of the work, directly to the revenue authority of the state government concerned. Further, contractor needs to submit proof of submission of full royalty to the state government or local authority. Nothing extra shall be payable on this account.

1.28 **ALL HEIGHTS, LIFTS, LEADS AND DEPTHS**

Unless otherwise provided/ specified in the Schedule of quantities (BoQ) or in CPWD Specifications or in the tender document, the rates tendered by the contractor shall be inclusive and shall apply to all heights, lifts, leads and depths of the building and nothing extra shall be payable to him on this account.

1.29 **Site office establishment:** In order to ensure smooth, timely and proper management of work by department's project team under the Engineer-in-charge, the contractor shall provide following arrangements at project site, for the entire duration of the contract agreement i/c extension, if any (applicable for works of tendered value greater than 5 crore). Nothing extra shall be paid to the contractor for providing these arrangements at site:

- a. For site related works by the Engineer-in-charge and his project team, Contractor shall maintain a site office (Prefabricated/built up) of approx 10 sqm area, with furniture, all civil & electrical fittings & fixtures i/c AC in all rooms. The site office shall have engineers room, support staff office rooms, meeting room, toilet, pantry, sample room, store room, record room etc. The electricity and day today maintenance i/c cleaning, sweeping, (one multitasking staff to be provided) security etc..all shall be within the scope of the Contractor. Nothing extra shall be paid for the same.
- b. The Contractor shall also provide computer and printer facility and internet connection (wi fi) at the site office as per direction of Engineer-in-Charge to facilitate checking and preparation of measurements, bill, records, progress reports and other work related documents at site.
- c. The contractor shall provide clean and safe drinking water for the workers employed at site, his technical staffs and site staff of Department free of charge.
- d. On completion of work the site office will be dismantled and taken away by the contractor.

1.30 SUBMISSION AND DOCUMENTATION

- a. 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.
- b. The contractor shall make available three (03) 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.
- c. 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:
 - For all piping, 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.
 - For all water supply lines, diameter of pipes, location of control valves, access panel etc.
- d. The contractor shall make available four (04) sets of computerized Standard Measurement Books (SMBs) having measurement of all the permanent standing in a building.
- e. **The Performance Guarantee and Additional Performance Guarantee shall not be released to the contractor until the aforesaid drawings are submitted to the Engineer-in-Charge.**
- f. The contractor will submit computerized measurement sheet for the work carried out by him for making payment as per Clause-6A of the CPWD General Conditions of Contract **2023 Maintenance Works** (with correction slips upto previous day of last date of receipt 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.
- g. **To avoid delay, contractor should submit all samples well in advance so as to give timely orders for procurement.**

Correction—Nil Deletion—Nil Insertion—Nil Overwriting—Nil

1.31 TEMPORARY WATER/ ELECTRICITY/ TELEPHONE CONNECTION

- a. 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.
- b. The contractor shall be responsible for maintenance and 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.
- c. 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.

1.32 Other Conditions w.r.t Payment of Bills to Contractor:

- a. The full nomenclature of the items shall be adopted in preparing abstract of final bill in the measurement book and also in the bill form for final bill.
 - b. In the case of items of which abbreviated nomenclature is not available in the above cited publication and also in case of extra and substituted items of works for which abbreviated nomenclature is not provided in the agreement, the full nomenclature of items shall be reproduced in the measurements books and bill forms for running account bill.
 - c. All running account bills preferred by the contractor for advance payments shall be processed only if Engineer-in-charge is satisfied that upto date investments (excluding security deposit & performance guarantee and Additional Performance Guarantee, which are not considered as investments) made by the contractor against contracted work are more than the payments received. Accordingly, all running account bills shall be supported with an account of up-to-date payments received vis-à-vis upto date investments made on the work to enable engineer-in-charge to check to his satisfaction that the payments made by engineer-in-charge are properly utilised only on the work and no where else.
 - d. Contractor should hand over the warranty of all the specialized items and non specialized items, if any such warranty provided by manufacturer, which have been installed in the constructed building to the department.
 - e. Contractor shall give performance test of the water supply, sanitary, sewer and electrical 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 the test.
 - f. Contractor shall not divert any RA bill payments and advance payments or part thereof
- Correction—Nil Deletion—Nil Insertion—Nil Overwriting—Nil

for any work other than that needed for completion of the contracted work. All advance payments received as per terms of the contract (i.e. mobilisation advance, secured advance against materials brought at site, secured advance against plant & machinery and/or for work done during interim stages, etc) are required to be re-invested in the contracted work to ensure advance availability of resources in terms of materials, labour, plant & machinery needed for required pace of progress for timely completion of work.

- g. The contractor shall have to execute guarantee bonds in respect of water supply and sanitary installation works, UPVC Window work and water proofing works as per performa annexed in this bid document.

1.33 JURISDICTION OF COURT

Courts at Amritsar shall have the jurisdiction to decide any dispute arising out of or in respect of this contract.

1.34 Guidelines for COVID-19 Outbreak:

- 1.35.1 "Standard Operating Procedures (SOPs) and Guidelines for Construction Site for COVID-19 Outbreak" issued vide DG, CPWD, New Delhi O.M. No. 2/9/2020-WII/DG/169 dated 05.05.2019 shall be followed.**

Additional Specifications for Civil Works

1.0 Cement

- 1.1 Agency shall procure PPC Cement conforming to IS : 1489 (Part 1) as required in the work from cement manufacturers mentioned in the list of Preferred makes for civil works or from any other reputed cement manufacturer having a production capacity not less than 1 million tons per annum as approved by SE, CPWD, Jalandhar. Uses of GGBS /Fly ash with OPC as an alternative to PPC is not permitted.
- 1.2 The supply of cement shall be taken in 50 kg. bags bearing manufacturer's name and ISI marking. Samples of cement arranged by the Contractor shall be taken by the Engineer-in-charge and got tested in accordance with provisions of relevant BIS codes. In case the test results indicate that the cement arranged by the Contractor does not conform to the relevant BIS codes, the same shall stand rejected, and it shall be removed from the site by the Contractor at his own cost within a week's time of written order from the Engineer-in-charge to do so. Supply of cement shall be taken in 50-kg bags bearing manufacturer's name, or his registered trademarks if any and grade and type of cement as well as ISI marking. The packing of the cement bags shall be as per CPWD specifications 2019.
- 1.3 The cement shall be brought at site in bulk supply of approximately 25 ton or more as decided by the Engineer-in-charge. The cement godown of minimum 500 bags capacity to store the cement shall be constructed by the Contractor at site of work for which no extra payment shall be made.
- 1.4 Double lock provision shall be made to the door of the cement godown. The keys of one lock shall remain with the engineer-in-charge or his authorised representative and the keys of other lock shall remain with the contractor. The contractor shall be responsible for the watch and ward and safety of cement godown. The contractor shall facilitate the inspection of cement godown by the Engineer-in-charge at anytime.
- 1.5 The cement shall be got tested by the Engineer-in-charge and shall be used on the work only after satisfactory test results have been received. The Contractor shall supply free of charge the cement required for testing including its transportation cost to testing laboratories.
- 1.6 The actual issue and consumption of cement on work shall be regulated and proper accounts maintained as provided in clause 10 of the contract. The theoretical consumption of cement shall be worked out as per procedure prescribed in clause 42 of the contract and shall be governed by conditions laid therein. In case the cement consumption is less than theoretical consumption including permissible variation, recovery at the rate so prescribed shall be made. In case of excess consumption, no cost adjustment shall be made.
- 1.7 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.
- 1.8 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.

2.0 Steel Reinforcement Bars

The Contractor shall procure IS marked TMT bars only of brands **SAIL, TATA steel Ltd., RINL, Jindal Steel & Power Ltd, JSW steel Ltd.** either direct from yards of these Steel Manufacturers or their authorized dealers.

- 2.1 **The reinforcement/TMT bars shall be of Bar Set-1 type i.e.** it must comply with the requirements given in the latest version of IS 1786 and additional requirement (e.g. Chemical Composition Requirement for Manganese and Copper, Tempered Martensite (TM) Ring Requirement, Marking Requirement and compliance of the provisions of ISO 9001:2015 and ISO 14001 :2004).

2.2 Testing requirement for individual reinforcement bar diameter of Particular Grade of steel:

Correction—Nil Deletion—Nil Insertion—Nil Overwriting—Nil

Tests required for Fe 415D, Fe500D, Fe550D grade of steel and Low alloy steel reinforcement bars:

A. FOR BAR SET I

1. Tests as per IS 1786 (latest version) and specified therein

1.1 Chemical Properties

Ladle analysis of steel for above grades for maximum percentage of constituents Carbon (C), (ii) Sulphur (S) and (iii) Phosphorous (P) and (iv) Nitrogen and Carbon Equivalent

1.2 Physical Properties

(a) 0.2 percent proof stress / yield stress, minimum, N/mm².

(ii) Ratio of Tensile Strength (Ts) to Actual Yield Strength (or 0.2 % of yield stress (Ys)) of the test piece N/mm².

(iii) Elongation, percent, Minimum, on gauge length 5.65 square root A, where A is the cross-sectional area of the test piece.

(iv) Total elongation at maximum force, percentage, minimum on gauge length 5.65 square root A, where A is the cross-sectional area of the test piece.

(v) Bend test and re-bend test.

(vi) The mean area of ribs (in mm²) per unit length (in mm) above the core of the bar, projected on a plane normal to the axis of the bar.

(vii) Pull-out testing in accordance with IS 2770 (Part 1)

2. Additional requirement: Four additional requirement as specified hereunder (As per **Annexure-I (d)** in OM No. CSQ/SE(TAS)/STEEL/2024/262 H Dated 14.08.2024 enclosed herewith for information)

:

2.1 Chemical Composition requirement: Permissible limit for Manganese and Copper as follows:

Constituent	Permissible Limit (% of cast metal quantity)	
	Fe-500 D	Fe-550 D
Manganese (Mn)		
Maximum	1.60	1.60
Copper (Cu)		
Maximum	0.80	0.80
Minimum	0.20	0.20
Note: The above composition shall be obtained as per latest version of IS 228 1. Manganese using Periodate Spectrophotometric Method (Part'12), and 2. Copper using Thiosulphate Iodide Method (Part'15) or Spectrophotometric (Diethyl Dithiocarbonate) Method (Part 21)		

2.2 TM Ring requirement: Tempered Martensite Ring Test as per **Annexure-I (d)** (Enclosed for information as per OM No. CSQ/SE(TAS)/STEEL/2024/262 H Dated 14.08.2024)

The following two requirements shall be met with:

(1) Does the Tempered Martensite (TM) Ring satisfy the visual analysis as per Step 1 of Table 2; and

(2) The thickness of the TM Ring obtained as per Step 2 of Table 2 shall be between 0.07f and 0.15f, where f is the original nominal diameter of the bar.

2.3 Marking requirement: All bars shall have marks introduced during rolling, which indicate the name of manufacturer or brand name, and grade of steel.

2.4 Manufacturing process requirement:The process of manufacturing steel shall comply with the provisions of ISO9001: 2015 and ISO14001: 2004.

Annexure 1d as per OM No. CSQ/SE(TAS)/STEEL/2024/262 H Dated 14.08.2024

Annexure-I(d)

1. CRITERIA FOR CLASSIFICATION OF BARS

The steel bars manufactured in India shall be classified as specified hereunder for the purposes of their use in works of CPWD.

1.1 Process of Classification

Steel Bars shall be classified as *Bar Set I* and *Bar Set II*. The bars shall be placed under one of these categories based on *Type Test* (the test performed to select the bars) performed as specified hereunder. These tests to be performed are those specified in the latest version of **IS 1786** published by the Bureau of Indian Standards, and the additional tests mentioned in Para 2 of this document.

The *Type Test* shall be performed at any one of the National Test Houses, IITs, NITs, and NCCBM, subject to:

- (a) The test samples being collected from the manufacturing facility by the representative engineer of CPWD,
- (b) The availability of the required test facility at the said laboratory, and
- (c) The test being witnessed by representative engineer of CPWD.

1.2 Classification of Steel Bars

The bar shall be classified as:

- (1) *Bar Set I*, if it complies with the requirements given in the latest version of **IS: 1786**, and those given in Para 2 of this document, and
- (2) *Bar Set II*, if it complies with the requirements given in the latest version of **IS 1786**.

2. ADDITIONAL REQUIREMENTS

Four additional requirements as specified hereunder.

2.1 Chemical Composition Requirement

The permissible limits of additional elements shall be as per **Table 1**.



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Table 1: Permissible limits of additional elements

Constituent	Permissible Limit (% of cast metal quantity)		
	Fe 415 D	Fe 500 D	Fe 550 D
Manganese (Mn)			
Maximum	1.60	1.60	1.60
Copper (Cu)			
Maximum	0.80	0.80	0.80
Minimum	0.20	0.20	0.20
Notes: The above composition shall be obtained as per latest version of IS 228 : (1) Manganese using Periodate Spectrophotometric Method (Part 12), and (2) Copper using Thiosulphate Iodide Method (Part 15) or Spectrophotometric (Diethyl Dithiocarbonate) Method (Part 21).			

2.2 TM Ring Requirement

The following two requirements shall be met with:

- (1) Does the *Tempered Martensite(TM) Ring* satisfy the visual analysis as per **Step 1** of **Table 2**; and
- (2) The thickness of the TM Ring obtained as per **Step 2** of **Table 2** shall be between $0.07f$ and $0.15f$, where f is the *original nominal diameter* of the bar.

(a) Test Procedure

The following is the procedure:

- (1) The test setup to capture the *Cross-Sectional Phase Distribution (CSPD)* of the TMT bars shall be as shown in **Figure 1**.
- (2) Steel bars may be cut using handsaw or an abrasive cutter with continuous supply of coolant to limit the temperature of steel, and thereby avoid any transition or changes in *Tempered Martensite(TM)* and *Ferrite-Pearlite (FP)* phases (**Figure 2**). The sharp edges of cut bars should be smoothened using

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silicon carbide abrasive sheets. A metal polishing machine can be used to achieve effective smoothening.

- (3) The smoothened steel specimen shall be moulded in cold setting epoxy with good surface finish. Setting time of epoxy is about 10-15 minutes.
- (4) The moulded specimen surface shall be course polished using abrasive sheets of 80, 150, 220, 320, and 600 grit sizes in sequence. Specimens shall be micro-etched using Nital (5% Nitric acid in alcohol) to capture the CSPD.

(b) Measurements

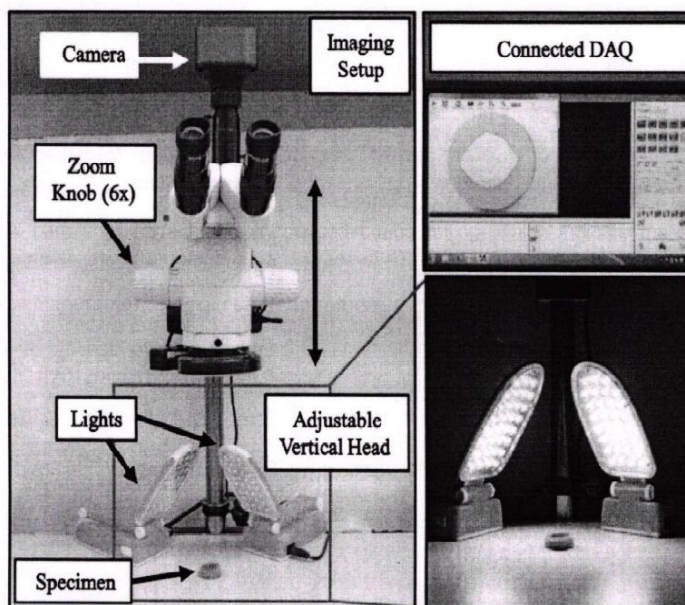
The procedure for obtaining the CSPD of the TM Ring along the perimeter shall be as per **Table 2**.

2.3 Marking Requirement

All bars shall have marks introduced during rolling, which indicate the *name of manufacturer or brand name, and grade of steel*.

2.4 Manufacturing Process Requirement

The process of manufacturing steel shall comply with the provisions of ISO 9001:2015 and ISO 14001:2004.



(a)



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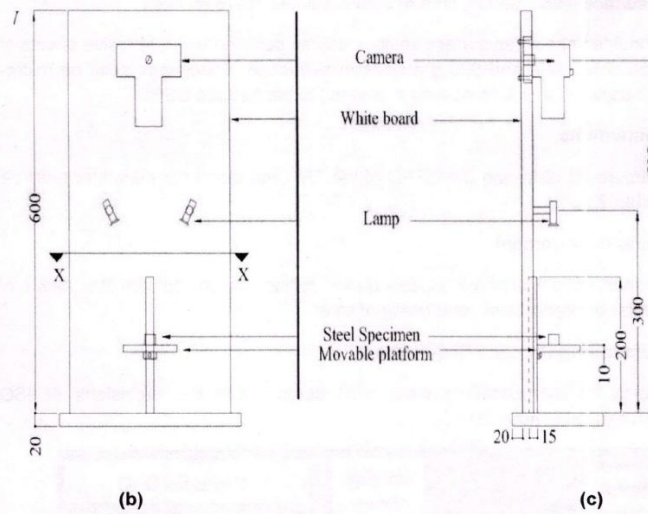


Figure 1: Test setup for CSPD of the TMT bars: (a) Imaging Setup, (b) Schematic Front View (c) Schematic Side View

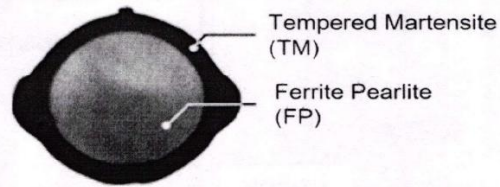


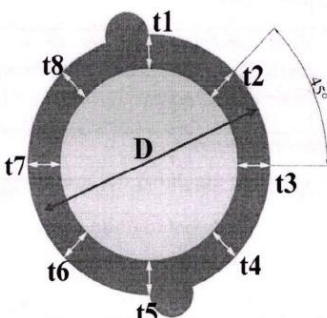
Figure 2: Cross-section of the steel bar showing the TM and FP areas

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Table 2: Method of obtaining CSPD of TM Ring

Step 1: Visual Analysis of etched Cross-Section			
			
	A	B	C
	Acceptable	Not acceptable	Not acceptable
1.	Is a dark grey peripheral region and light grey core seen as in Case A?		Yes/No
2.	Does the dark grey peripheral region form a continuous outer ring?		Yes/No
Step 2: Dimension Analysis of TM-Ring thickness			
3.	Diameter D (mm) of the steel bar		
4.	Geometry	t_1	
		t_2	
		t_3	
		t_4	
		t_5	
		t_6	
		t_7	
		t_8	
		Measured t_{min} (mm)	
		Measured t_{max} (mm)	
5.		Is the measured $t_{min} \geq 0.07 f$?	Yes / No
	Is the measured $t_{max} < 0.15 f$?	Yes / No	

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2.3 Only low alloy steel Corrosion resistant steel (CRS) reinforcement shall be used.

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

2.5 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

Correction—Nil Deletion—Nil Insertion—Nil Overwriting—Nil

the contractor does not conform to the specifications, the same shall stand rejected, and it shall be removed from the site of work by the contractor at his cost within a week time or written orders from the Engineer-in- Charge to do so.

- 2.6** 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.

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

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

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

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

- 2.8** The actual issue and consumption of steel on work shall be regulated and proper accounts maintained as provided in clause 10 of the contract. The theoretical consumption of steel shall be worked out as per procedure prescribed in clause 42 of the contract and shall be governed by conditions laid therein. In case the consumption is less than theoretical consumption including permissible variations, recovery at the rate so prescribed shall be made. In case of excess consumption no adjustment need to be made.

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

- 2.10** Reinforcement including authorized spacer bars and lappings shall be measured in length for different diameters as actually (not more than as specified in the drawings) used in the work nearest to a centimetre. Wastage and unauthorized overlaps shall not be measured.

- 2.11** The standard sectional weights referred to shall be as in Table 5.4 in para 5.3.4 in revised CPWD specifications 2019 Vol. I will be considered for conversion of length of various sizes of TMT bars in to standard weight.

- 2.12** Record of actual sectional weights shall also be kept diwise and lot wise. The average sectional weight for each diameter shall be arrived at from samples from each lot of steel received at site. The decision of the Engineer in Charge shall be final for the procedure to be followed for determining the average sectional weight of each lot. Quantity of each diameter of steel received at site of work each day will constitute one single lot for the purpose. The weight of steel by conversion of length of various sizes of bars based on the actual weighted average sectional weight shall be termed as Derived Actual Weight.

- 2.13** If the derived weight is less than the standard weight, then the Derived Actual Weight shall be

taken for payment.

- 2.14** If the derived actual weight is found more than the standard weight, than standard weight as worked out as per para above shall be taken for payment. Nothing shall be paid extra for the difference in Derived/Actual Weight and standard weight.
- 2.15** Every care should be taken to avoid mixing different types of grades of bars in the same structural members as main reinforcement to satisfy relevant clause of IS: 456. In case of buildings, wherever the situation necessitates, the change over shall be permitted only from any one level onwards. In case of foundations, all foundation elements (footings and grade beams) shall have the same kind of steel. In the case of columns, all structural elements up to the level of change, where the change over is taking place should have the same kind of steel as those in columns.
- 2.16** The reinforcing steel brought to site of work shall be stored on brick / timber platform of 30/40-cm height, nothing extra shall be paid on this account.
The contractor shall have to obtain and furnish manufacturer test certificates to the Engineer-in-charge in respect of steel brought by him to the site of work.

3.0 Design Mix Concrete from Batch Mix Plant or RMC.

- 3.1** Design mix is to be carried out as per IS 10262, IS 456 and other relevant IS codes / CPWD Specifications amended upto last date of receipt of tender.
- 3.2** The Contractor shall install fully automatic Batch Mix Plant (of capacity as mentioned in the NIT document) at site or in nearby area wherever permissible. If required, Contractor may arrange concrete required from a suitable RMC (Ready Mix Concrete) producing plants (located within 30 km distance or max. 2 hour delivery from the site of work) with prior approval from Engineer-in-charge. Nothing extra shall be payable for sourcing concrete from RMC plant.
- 3.2.1** For all purposes, the Contractor shall carry out fully, the responsibilities of the “placement Contractor” and the “manufacturer of concrete”.
- 3.3** The Engineer-in-Charge will reserve the right to inspect at any stage and reject the concrete if he is not satisfied about quality of product at the user’s end.
- 3.4** The Engineer-in-charge reserves the right to exercise control over the:-
- 3.4.1** Ingredients, water and admixtures purchased, stored and to be used in the concrete including conducting of tests for checking quality of materials, recording of test results and declaring the materials fit or unfit for use in production of mix.
- 3.4.2** Calibration check of the RMC / Fully Automatic Batching plant.
- 3.4.3** Weight and quantity check on the ingredients, water and admixtures added for batch mixing.
- 3.4.4** Time of mixing of concrete.
- 3.4.5** Testing of fresh concrete, recordings of results and declaring the mix fit or unfit for use. This will include continuous control on the workability during production and taking corrective action, if required.
- 3.5** For exercising such control, the Engineer-in-charge shall periodically depute his authorized representative at the RMC/Fully automatic batching plant. It shall be responsibility of the Contractor to ensure that all necessary equipment, manpower & facilities are made available to Engineer-in-Charge and/or his authorised representative at RMC/Fully automatic batching plant.
- 3.6** All required relevant records of produced and used concrete shall be made available to the Engineer-in-Charge or his authorised representative. Engineer-in-Charge shall, as required, specify guidelines & additional procedures for quality control & other parameters in respect of materials, production & transportation of concrete mix which shall be binding on the Contractor. Only concrete as approved in design mix by Engineer-in-Charge shall be produced and transported to the site.
- 3.7** The concrete mix design with and without admixture will be carried out by the Contractor, at his own cost. The Contractor shall engage one of the following approved laboratories / test house for designing the concrete mix in accordance with relevant IS Code and to conduct laboratory tests to

ensure the target strength & workability criteria for a given grade of concrete: -

- i) **Technical Teacher Training Institute, Sector 26, Chandigarh.**
- ii) **NIT, Jalandhar. (Formerly known as REC, Jalandhar.)**
- iii) **(UIT) Guru Nanak Dev University, Amritsar**
- iv) **Guru Nanak Dev Engineering College, Ludhiana.**
- v) **CBRI, Delhi.**
- vi) **Any other IITs, NITs or any Govt. Engineering or Govt. Polytechnic College.**
- vii) **Any other Govt test Lab.**

The various ingredients for mix design / laboratory tests shall be sent to the lab / test houses through the Engineer-in-charge and the samples of such aggregates sent shall be preserved at site by the department.

In the event if all the above laboratories are unable to carry out the requisite design / testing, the contractor may have it done from any other laboratory with prior approval of the Engineer-in-charge.

In the event of use of materials from the same source which has been designed earlier for CPWD work, the contractor can be allowed to use the earlier design mix with the approval of Engineer-in-Charge. However, **design mix charges @ Rs. 25000/- per design mix** shall be recovered from the agency in that case.

Note:- Admixture / Plasticizer to be used in concrete should be PCE (Poly Carboxy lEther) based.

4.0 Water proofing

4.1 In case, contractor does not possess requisite eligibility and experience in water proofing work as per NIT condition, he shall associate specialized agency for water proofing work, duly approved by the Engineer-in-Charge.

4.2 The water proofing compounds shall be in accordance to approved make of materials annexed in the contract agreement. Contractor shall get the water proofing product and its make approved from Engineer-in-charge. However, this approval shall not exempt the contractor from responsibility for success of water proofing treatment done by him.

4.3 Total quantity of the water proofing compound required shall be arranged only after obtaining the prior approval of the make by Engineer-in-charge in writing. Materials shall be kept under double lock and key and proper account of the water proofing compound used in the work shall be maintained. It shall be ensured that the consumption of the compound is as per specified requirements.

4.4 Specialised labour shall prepare a mock up sample to demonstrate to engineer-in-charge the success of water proofing treatment.

4.5 The finished surface after water proofing treatment shall have adequate smooth slope as per the direction of the Engineer-in-charge.

4.6 Before commencement of treatment on any surface, it shall be ensured that the outlet drain pipes / spouts have been fixed and the spout openings have been eased and rounded off properly for easy flow of water.

4.7 The contractor shall get water proofing work done checked by engineer-in-charge or his authorized representative by flooding of water for sufficient duration as directed by Engineer-in-charge. However, this approval shall not exempt the contractor from responsibility for success of water proofing treatment done by him.

4.8 The Contractor, for the work of water proofing, will have to execute a guarantee bond in the prescribed proforma provided in this bid document for removing any defects in water proofing done by it in this contract for 10 years after completion of entire work in the contract agreement.

- 4.9** 10% of total cost of water proofing item (excluding cost of external plaster on masonry, if water proofing compound added in external plaster also) shall be retained as additional security deposit and the amount so withheld would be released after ten years from the date of completion of the entire work under the agreement. If the performance of the work done is found unsatisfactory and any defects noticed during the guarantee period, they shall be rectified by the Contractor within 10 days of receipt of intimation of defects in the work. If the defects pointed out are not attended to within the specified period, the same will be got done from another Contractor at the risk and cost of the Contractor.

5.0 ALUMINIUM WORK

- 5.1** The material for the work shall be procured from the approved manufacturer as per preferred make list for materials in this contract agreement. The Contractor shall procure and submit samples of various materials to be used in the work for the approval of Engineer-in-Charge and no work shall commence before such samples are approved. Samples of un-anodized as well as polyester powder coated aluminium sections, microwave cured EPDM gaskets, glass, stainless steel screws, anchor fasteners, hardware and any other material or components requiring approval of samples, in opinion of Engineer-in-Charge, shall be submitted for the approval as mentioned above. The above samples shall be retained as standards of materials and workmanship.
- 5.2** The Contractor shall prepare a finished sample of the aluminium window along with glazing panel and fittings etc. for approval of workmanship and material. Nothing extra shall be payable on this account.
- 5.3** Only after the approval of the material samples and sample windows by the Engineer-in-Charge, the Contractor shall procure the material for the work. All materials brought to the site by the Contractor, for use in the work, as well as fabricated components shall be subject to inspection and approval by Engineer-in-Charge. The Contractor shall produce manufacturer's test certificates for any material or particular batch of materials supplied by him.
- 5.4** Aluminium sections to be used for various works shall be appropriate to meet technical, structural, functional and aesthetic considerations. The polyester powder coatings shall be carried out in a factory/workshop approved by engineer-in-charge.
- 5.5** **Fabrication :** The factory for fabrication and anodizing/polyester coating of aluminum windows/doors/frameworks shall be got approved from Engineer-in-charge.
The fabrication unit should have experience of having done similar work of similar cost in 7 years prior to date of submission of proposal by contractor.
- 5.6** All joints shall be accurately fabricated and be hairline in appearance. The finished surface shall be free from visible defects. All the aluminium windows/ventilators/doors shall be factory made and shall be brought to site for assembly and fixing.
- 5.7** All hardware used shall conform to the relevant specifications and as per samples approved by the Engineer-in-Charge. Design, quality, type, number and fixing of hardware shall be generally in accordance with architectural drawings and as approved by the Engineer-in-Charge before use.
- 5.8** All doors, windows, ventilators and glazing etc. shall be made water tight with microwave cured EPDM gaskets and weather silicone sealants to the satisfaction of the Engineer-in-Charge.
- 5.9** The frames shall be strictly as per Architectural drawings, the corners of the frame being fabricated to the true right angles. Both the fixed frames and openable shutter frames shall be fabricated out of sections cut to required length, mitered and mechanically jointed for satisfactory performance. All members shall be accurately machine milled and fitted to form hair line joints. The jointing accessories such as aluminum cleats, stainless steel screws etc. shall not to cause any bi-metallic reaction by providing separators, wherever required. Vertical members of the aluminum frame work shall be embedded in the floors, wherever required, by cutting and making good of the floor.

5.10 FIXING OF ALUMINIUM FRAME WORK

- 5.10.1 The screws used for fixing fixed aluminum frames of the aluminum windows to masonry walls / RCC members and aluminum members to other aluminum members shall be of stainless steel of approved make and quality and of stainless steel grade 304. Threads of machine screws used shall conform to requirement of I.S. 4218.
- 5.10.2 For the aluminium windows, the gap between the aluminium frames and the R.C.C / Masonry and also any gaps in the various sections shall be filled with weather silicone sealant DC 795 of Dow Corning or equivalent in the required bite size, to ensure water tightness including providing and fixing backer rod , wherever required. The weather silicone sealant shall be of such approved colour and composition that it would not stain or streak the masonry / R.C.C. work. It should not sag or flow and shall not set hard or dry out under any conditions of weather and shall be tooled properly. The weather silicone sealant shall be used as per the manufacturer's specifications and shall be of approved colour and shade. Any excess sealant shall be removed /cleared.
- 5.10.3 Fixing of glass panes shall be designed in such a way that replacing damaged / broken glass panes is easily possible without having to remove or damage any members or interior finishing materials.

5.11 PROTECTIONS AND CLEANING

- 5.11.1 All glass panes shall be retained within aluminium framing by use of exterior grade microwave cured EPDM gaskets. Use of glazing or caulking compounds around the perimeter of glass will not be permitted. There shall be no whistling or rattling. Before installation of glass, Contractor shall ensure the following:
- All glazing rebates shall be square, to plumb, true to plane, dry and free from dust.
 - Glass edge shall be clean and cut to exact size and grounded
 - Low 'E' – Heat strengthened glass of specified thickness in doors, windows, ventilators and fixed glazing etc. shall be of approved make and standard quality conforming to C.P.W.D. Specifications.

6.0 MEASUREMENT AND RATES:

- 6.1 Aluminium frame work shall be measured as per CPWD specifications.
- 6.2 For glazing, the actual area of the glass panels excluding the portion in the beading shall be measured in sqm upto two decimal places, for payment.
- 6.3 Stainless steel adjustable heavy duty friction hinges and the aluminium handles for the openable side hung windows shall be of "Earl Bihari" Ebco, make or equivalent as approved by the Engineer-in-Charge. 2 nos. friction hinges shall be provided per shutter.
- 6.4 The cost of designing and preparation of shop drawings, all the samples, mockup of window etc. is deemed to be included in the cost of the relevant items. Nothing extra shall be payable on this account.
- 6.5 The item for aluminium for fixed portions for aluminium windows and frame work for partitions shall include cost of all inputs of labour, polyester powder coated (anodized aluminium sections, including cleats, other fixtures, stainless steel screws, nuts, bolts, rawl plugs, backer rods, polyethylene tapes etc. which shall be required for fabrication and erection of aluminium work, T & P, all incidental charges, wastages etc. involved in the work. However, for the purpose of payment, the weight of aluminium sections for the fixed window frame and frame work for partitions shall be measured in Kg.
- 6.6 The aluminium cleats, stainless steel screws, nuts, bolts, separators etc. shall not be measured separately for payment and their cost is deemed to be included in the cost of this item. The item for aluminium for frame work for fixed partitions shall also include cost of providing and fixing stainless steel anchor fasteners as required.
- 6.7 The item of aluminium for the openable aluminium shutters for windows and doors etc., shall include cost of all inputs of labour, material (polyester powder coated aluminium sections,

including such as cleats / angles, other fixtures, stainless steel screws nuts, bolts, stainless steel hinges etc. which shall be required for fabrication of aluminium work) T & P, all incidental charges, wastages etc. involved in the work. However, for the purpose of payment, the weight of aluminium sections for the window shutter (sash frame) shall be measured in Kg. The aluminium cleats, stainless steel anchor fasteners, screws, nuts, bolts, separators, stainless steel hinges, etc. shall not be measured separately for payment and their cost is deemed to be included in the cost of this item. The anodized aluminium snap beading for fixing glass panels in the openable shutters of the windows shall be measured separately (on weight basis) and paid under this item of aluminium frame work for window shutters.

6.8 The glass shall be paid for separately under relevant item. The cost providing and fixing Microwave cured EPDM gasket, felt etc. is included in the cost of this item and shall not be measured separately for payment.

6.9 The item for the aluminium frame work includes cost of making provision for fixing fittings, wherever required, as per the item description (The cost for providing fitting i.e. handle, lock and buffer, silicon sealant shall be paid for separately).

7.0 GUARANTEE FOR ALUMINIUM WORK

7.1 The contractor shall guarantee about proper design and performance of aluminium work for a period of 02 years from the date of completion of work entire work.

7.2 The design and installation shall be to the best international standards and shall specially take account of wind and seismic loads, storms, thermal stresses, building movements and the like.

7.3 **The 02 year Guarantee, shall be furnished in non-judicial stamp paper of value Rs.100/- or more, in prescribed performa for performance of glazed units, anodizing, EPDM/silicon gaskets and sealants. The guarantees shall be submitted before final payment and shall not in any way limit any other rights to correct which the Employer may have under the Contract.**

7.4 In addition to above, 5 % (Five percent) of the cost of all the items under the subhead aluminium work, as mentioned in schedule of quantities, shall be withheld from the bills towards guarantee as specified above. This amount to be withheld towards guarantee shall be in addition to the other amounts to be withheld as mentioned elsewhere in the contract agreement. The withheld amount shall be released after 2 years from the date of completion of entire work under the agreement, if the performance, as required, is satisfactory. If any defects is noticed during the guarantee period, it shall be rectified by the contractor within seven days of issue of notice to the contractor to the satisfaction of the CPWD/ Client Department or any other authorized representative of client department. If any defect is noticed during the guarantee period, it shall be rectified by the contractor within seven days of receipt of intimation of defects in the work. If the defects pointed out are not attended to within the specified period, the same will be got done from another Contractor at the risk and cost of contractor.

However, the amount withheld as guarantee can be released in full, irrevocable bank guarantee, from a Schedule/Nationalized Banks, of the same amount, for the guarantee period is submitted by the contractor in favour of Engineer- in-charge. The defects, if any, shall be rectified, retaining the same aesthetics and other functional parameters of the original work.

8.0 Additional Conditions for Painting Work:

8.1 Mechanical sanding machine (for scrubbing & preparation of surface) shall be used preferably by the contractor.

8.2 In case of painting over old work / new work, the contractor shall give proper notice to the Engineer-in-charge after the surface is prepared & before applying of primer coat / paint. The Engineer-in-charge shall either approve the surface thus prepared or ask the contractor to rectify the defects pointed. Only after approval by Engineer-in- charge, the priming / painting coat shall be applied.

8.3 Primer coat shall be applied over cement based putty as per specifications of the paint

manufacturers. If the component of primer is not included in the BOQ agreement item for painting, then payment for primer shall be made to the contractor separately.

9.0 Preferred Make & Approval of materials:

- 9.1** Contractor shall adopt materials in work as per preferred make of materials annexed in this contract document. Contractor shall submit samples of materials he propose to use for this work for approval of engineer-in-charge. The approved samples shall be preserved at work site in safe custody till completion of whole work. In case any sample submitted by contractor is not approved by Engineer-in-charge, contractor shall arrange and submit alternate samples for approval of engineer-in-charge. The Contractor should also consider the availability of spares parts/components for maintenance purposes while proposing any brand/manufacturer.
- 9.2** Wherever work is specified to be done or material procured through specialized agencies, their names shall be got approved well in advance from Engineer-in-charge. Failure to do so shall not justify delay in execution of work. It is suggested that immediately after award of work, contractor should negotiate with concerned specialist agencies and send their names for approval to Engineer-in-charge. Any material procured without prior approval of Engineer-in-charge in writing is liable to be rejected. Engineer-in-charge reserves right to get the materials tested in laboratories of his choice before final acceptance. Non standard materials shall not be accepted.
- 9.3** Various factory made materials shall be procured from reputed and approved manufacturers or their authorized dealers and the material shall conform to the make as specified in this contract agreement. However for the items not appearing in the list, preference shall be given to those articles which bear ISI certification marks. In case articles bearing ISI certification marks are not available or where BIS certification system is available for a particular material/product but not even a single producer has so far approached BIS for certification, the material can be used subject to the condition that in such case written approval of Engineer-in-charge be obtained before use of such material in the work.
- 9.4** All materials and articles brought by the contractor to the site for use shall conform to the samples approved, which shall be preserved till the completion of the work. However, such articles which bear ISI mark but stand banned by CPWD will not be used. Notwithstanding the case of materials of "Preferred Make" as given, provisions of Clause 10A of the General Conditions of Contract for Central PWD works shall be applicable on the materials of "Preferred Make" also.
- 9.5** In the schedule of quantities / nomenclature of some items, the make(s) of product / material has been mentioned. The contractor is required to provide the same make(s) as mentioned in the item. Such makes shall supersede any makes specified in preferred make if so specified. If the same however are not available in the market or the suppliers adopt monopolistic practice then the approval of other equivalent brand / make, matching with BOQ items and specification, can be taken from Engineer-in-charge. The contractor will submit such a case at least three months before the materials is required at site. If the rate of other equivalent brand / make are less than the brand / make mentioned in the BOQ item, then necessary cost adjustment will be made for difference in rates.
- 9.6** For items / materials not appearing in the list of preferred make of materials, decision of Engineer-in-charge shall be final and binding.
- 9.7** The list of preferred make of materials for Civil Works is given as **Annexure-II**.
- 9.8** Sanitary and water supply items shall be as per make specified in BOQ item(s) and if no make is mentioned in BOQ item, same shall be as per "Normal Range" in preferred make list of materials.
- 9.9** Sample of building materials, fittings and other articles required for execution of work shall be got approved from the Engineer-in-Charge before use in the work. The quality of samples brought by the Contractor shall be judged by standards laid down in the relevant CPWD/ BIS specifications. In case, samples provided by Contractor are not approved, Contractor shall submit new samples of the materials and other articles for approval of Engineer-in-charge. Decision of Engineer-in-charge w.r.t. approval of samples of materials shall be final and binding on the contractor. All materials and articles 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.

- 9.10** BIS marked materials except otherwise specified shall be subjected to quality test at the discretion of the Engineer-in-Charge besides testing of other materials as per the specifications described for the item/material. Wherever BIS marked materials are brought to the site of work, the Contractor shall, if required, by the Engineer-in-Charge, furnish manufacturer's test certificate or test certificate from approved testing laboratory to establish that the material procured by the Contractor for incorporation in the work satisfies the provisions of contract agreement, specifications / BIS codes relevant to the material and / or the work done.

10.1 GUARANTEE BONDS FOR VARIOUS ITEMS:

The contractor shall be duly responsible for and shall guarantee (as per guarantee bond perform) proper design and performance of the following items for a period of 05/10 years (as applicable) from the date of completion of the work:-

1	All water proofing work (except waterproofing on masonry plaster)	Guarantee bond of 10 years as per guarantee bond perform will be submitted. Further Ten percent of the cost of work of these (i.e. water proofing) items shall be retained as security deposit. The amount of security deposit so withheld would be released after 10 years from the date of completion of the entire work under the agreement, if the performance of the work done is found satisfactory. If any defect / leakage is noticed during the guarantee period, it shall be rectified by the contractor within seven days of receipt of intimation of defects in the work. If the defects pointed out are not attended to within the specified period, the same will be got done from another Contractor at the risk and cost of contractor. However, the security deposit deducted may be released in full against bank guarantee of equivalent amount in favour of Engineer-in-charge, if so decided by the Engineer-in-charge. The Security deposit against this item of work shall be in addition to the security deposit mentioned elsewhere in contract form.
2	Internal water supply and Internal sanitary installation except sanitary fittings*.	(*Manufacturer warranty for sanitary fittings and guarantee bond of two years in perform attached in this tender document shall be submitted to Engineer-in-charge)

SPECIAL CONDITIONS

1.0 General

- 1.1 Except for the items, for which Particular Specifications are given or where it is specifically mentioned otherwise in the description of the items in the schedule of quantities, the work shall generally be carried out in accordance with the “CPWD Specifications” and as per instructions of Engineer-in-Charge. Wherever CPWD Specifications are silent, the latest IS Codes / Specifications shall be followed.
- 1.2 Any reference made to any Indian Standard Specifications, shall imply to the latest version of that standard, including such revisions / amendments as issued by the Bureau of Indian Standards upto previous day of last date of receipt of tenders. The Contractor shall keep at his own cost all such publications including relevant Indian Standard applicable to the work at site.
- 1.3 The work shall be executed and measured as per metric dimensions given in the Schedule of Quantities, drawings etc. (FPS units wherever indicated are for guidelines only).
- 1.4 The work should be planned in a systematic manner so that chase cuttings in the walls, ceilings and floors is minimized. Wherever absolutely essential, the chase shall be cut using chase cutting machines. Chases will not be allowed to be cut using hammer / chisel. The electrical boxes should be fixed in walls simultaneously while raising the brick work. The contractor shall ensure proper co-ordination of various disciplines viz. sanitary & water supply, horticulture & electrical etc.
- 1.5 Equipment like concrete pump excavators/Transit mixer etc. shall be allowed to be moved away from the site when, in written opinion of Engineer-in-Charge, the same are no longer required at site of work.
- 1.6 The contractor, his agents / representative, workman etc. shall strictly observe orders pertaining to fire precautions prevailing in the area.
- 1.7 Contractor(s) shall study the soil investigation report for the site, available in the office of the Engineer-in-Charge and satisfy himself about complete characteristics of soil and other parameters at site. However, no claim on the alleged inadequacy or incorrectness of the soil data supplied by the department shall be entertained.
- 1.8 The tenderer shall see the approaches to the site. In case any approach from main road is required at site or existing approach is to be improved and maintained for cartage of materials by the contractor, the same shall be provided, improved and maintained by the contractor at his own cost.
- 1.9 Contractor shall take all precautionary measures to avoid any damage to adjoining property. All necessary arrangement shall be made at his own cost.
- 1.10 The contractor shall take all precautions to avoid accidents by exhibiting necessary caution boards day and night, speed limit boards, red flags, red lights and providing barriers. He shall be responsible for all damages and accidents caused to work due to negligence on his part. No hindrances shall be caused to traffic, during the execution of the work.
- 1.11 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, compound wall, services etc are to be constructed.
- 1.12 The contractor shall provide at his own cost suitable weighing, surveying and leveling and measuring arrangements as may be necessary at site for checking. All such

equipments shall be got calibrated in advance from laboratory, approved by the Engineer-in-Charge. Nothing extra shall be payable on this account.

- 1.13 The work shall be carried out in accordance with the Architectural drawings and Structural drawings, to be issued from time to time, by the Engineer-in-Charge. Before commencement of any item of work, the contractor shall correlate all the relevant architectural and structural drawings issued for the work, nomenclature of items, specifications etc. and satisfy himself that the information available there from is complete and unambiguous. The figures & the written dimensions of the drawing shall supercede the measurement by scale. The discrepancy, if any, shall be brought to the notice of the Engineer-in-Charge for immediate decision 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 on this account.
- 1.14 The Architectural drawings other than those indicated in nomenclature of items are only indicative of the nature of the work and materials/fittings involved unless and otherwise specifically mentioned.
- 1.15 The contractor should submit the shop drawing of staging and shuttering for approval of Engineer-in-Charge before actually commencing the execution of work under the item. Nothing extra shall be payable on this account.
- 1.16 All material shall only be brought at site as per program finalized with the Engineer-in-Charge. Any pre-delivery of the material not required for immediate consumption shall not be accepted and thus not paid for.
- 1.17 The contractor shall procure the required materials in advance so that there is sufficient time for testing of the materials and approval of the same before use in the work.
- 1.18 Existing drains, pipes, cables, over-head wires, sewer lines, water lines and similar services encountered in the course of the execution of work shall be protected against the damage by the contractor at his own expense. The contractor shall not store materials or otherwise occupy any part of the site in a manner likely to hinder the operation of such services. In case temporary supporting/shifting of such services is required to facilitate the work, the same shall be done by the contractor at no extra cost. In case the existing services are to be shifted permanently, then before dismantling the existing services, alternate/diversion of service lines has to be laid by the contractor so that there is no interruption in use of existing services. The contractor has to plan the alternate suitable route for diversion/shifting of service lines and get the same approved from the Engineer-in-Charge before starting shifting of services. Nothing extra shall be paid except the payment of dismantling and laying of new service lines as per conditions of contract.
- 1.25 The contractor shall be responsible for the watch and ward / guard of the buildings, safety of all fittings and fixtures including sanitary and water supply fittings and fixtures provided by him against pilferage and breakage during the period of installations and thereafter till the building is physically handed over to the department. No extra payment shall be made on this account.
- 1.26 The contractor shall be fully responsible for the safe custody of materials brought by him/ issued to him even though the materials may be under double lock key system.
- 1.27 For construction works which are likely to generate malba / rubbish to the tune of more than a tempo / truck load, contractor shall dispose of malba, rubbish & other unserviceable materials and wastes at his own cost to the notified specified dumping ground and under no circumstances these shall be stacked / dumped even temporarily, outside the construction premises.

- 1.29 In case of extension of agreement due to delay and / or reduction in scope of work due to foreclosure, no claim on account of reduction in value of work, loss of business, loss of profit, consequently overheads, any type of interest etc. shall be entertained.
- 1.29 The contractor shall provide necessary barriers, warning signals, barricading and other safety measures while executing the work or wherever necessary so as to avoid accidents. He shall also indemnify CPWD against claims for compensation arising out of negligence in this respect. Contractor shall be liable, in accordance with the Indian law and Regulations for any accidents occurring due to any cause. The department shall not be responsible for any accidents occurred or damaged incurred or claims arising there from during the execution of work. The contractor 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 contractor due to the above provisions thereof.
- 1.30 The contractor shall have to work in pandemic / epidemic conditions such as COVID 19 for which he has to make safety arrangement / measures for the workers / staff and for the premises meant for them, as per guidelines issued by Government and directions issued by Engineer-in-charge from time to time and nothing extra shall be paid on this account.
- 1.31 Unless otherwise specified in the schedule of quantities or CPWD specifications or in the tender document, the rates for respective items shall be all inclusive and apply to the following:
- (i) All lifts & all heights, floors including terrace, leads and depths.
 - (ii) All labour, material, tools and plants and other inputs involved in the execution of the item.
 - (iii) Any of the conditions and specifications mentioned in the tender documents.
 - (iv) Pumping/ bailing out surface water/ rain water/ sub soil water, if necessary for any reason.
 - (v) Providing sunk flooring in bath-rooms, kitchen, etc.
 - (vi) Any legal or financial implications resulting out of disposal of earth, if any.
 - (vii) Payment of Royalty at the prevailing rates, if any, on the boulders, metal, shingle, sand and bajri etc. or any other material collected by him for the work direct to revenue authorities.
 - (viii) Performance test of the entire installation(s) before the work is finally accepted.
 - (ix) Any cement slurry added over base surface (or) for continuation of concreting for better bond is deemed to have been built in the items.
 - (x) All incidental charges for cartage, storage and safe custody of materials brought to site.

1.32 SECRECY

- 1.32.1 The contractor shall take all steps necessary that all persons employed on any work in connection with the contract have notice that the Indian Official Secrets Act 1923 applies to them & will continue so to apply even after the execution of such works under the contract.
- 1.32.2 The contract is confidential and must be strictly confirmed to the contractor's own use (except so far as confidential disclosure to sub-contractors or suppliers as necessary) and to the purpose of the contract.
- 1.32.3 All documents, copies thereof & extracts there from furnished to the contractor shall be returned to the Engineer-in-Charge on the completion of the work/ works or the earlier determination of the contract.

1.33 Eligible contractors

Contractor participating in the bid should have experience of completion of STP work having capacity of minimum 50 KLD or he should have experience of maintaining STP of capacity of minimum 50 KLD. Contractor will upload his experience certificate.

Annexure-II**LIST SHOWING PREFERRED BRANDS/MANUFACTURERS/MAKES**

Sr. No.	Name of Product/ Material	Preferred Brand Names
1	ORDINARY PORTLAND CEMENT (GREY) (43 GRADE)	ACC, ULTRATECH, VIKRAM, SHREE CEMENT, AMBUJA, JAYPEE CEMENT, CENTURY CEMENT & J.K. CEMENT, LAFARGE.
2	PORTLAND POZZOLONA CEMENT (GREY)	ACC, ULTRATECH, VIKRAM, SHREE CEMENT, AMBUJA, JAYPEE CEMENT, CENTURY CEMENT & J.K. CEMENT, LAFARGE.
3	WHITE CEMENT	J.K. WHITE, JAIPUR SUPREME PACKAGING PVT. LTD., ULTRATECH CEMENT LIMITED.
4	REINFORCEMENT STEEL	SAIL, TATA STEEL LTD., RINL, JINDAL STEEL & POWER LTD. and JSW STEEL LTD.
5	ADMIXTURES	CICO, FAIRMATE, HIND PLAST SUPER, ARDEX SUPAPLAST, SIKAPIDILITE, BASF, PIDILITE
6	WATER PROOFING COMPOUND	FOSROC, CICO, KRYTON, BUILDMATE, PIDLITE, PRIYA ENTERPRISES, FAIRMATE, SIKA, Asian
7	READY MIX CONCRETE	M/S L&T CONCRETE (LAFARGE), ULTRATECH CEMENT LTD., ACC CONCRETE LTD., RMC READY MIX (INDIA) PVT. LTD., PRISM AND ANY OTHER PLANT AS SPECIFICALLY APPROVED BY ENGINEER IN CHARGE SPECIFIC FOR THE WORK
8	AUTOCLAVED AERATED BLOCKS	BILTECH, ECO GREEN, FINECRETE, J.K. LAKSHMI CEMENT LTD., MAX BLOCKS, MAGICCRETE
9	POLYMER MODIFIED ADHESIVE FOR AAC BLOCKS	MYK LATICRETE, ARDEX ENDURA, ULTRATECH, SIKA.
10	FACTORY MADE PANELLED & WIRE GAUGE WOODEN DOOR/ WINDOW SHUTTERS.	M/S JAIN WOOD INDUSTRIES, KUTTY DOORS, SAMRAT PLYWOOD, NEW JAGDAMBA DOORS, NATIONAL, MERINO, KITPLY, AS TIMBER, CENTURY
11	FLUSH DOOR SHUTTERS	KUTTY FLUSH DOOR, SAMRAT LAMINATE, NATIONAL PLYWOODS, JAIN WOOD INDUSTRIES, MERINO, MINIMAX, CENTURY, AS TIMBER.
12	BLOCK BOARD/MDR/HDMR	MERINO, MINIMAX, NATIONAL, ARCHIDPLY, CENT PLY, JAYNA, CENTURY.
13	LAMINATES	SAMRAT, VIRGO, MERINO, ARCHIDPLY, CENTURY LAMINATES, GREENLAM
14	PRE-LAMINATED PARTICLE BOARD/MDR/HDMR	ARCHIDPLY, CENTURY PLY BOARDS, BALAJI ACTION BUILDWELL, ECOBOARD
15	PARTICLE BOARD (MEDIUM DENSITY)/ VENEERED PARTICLE BOARD /HDMR	CENTURY PLYBOARDS (INDIAN) LTD., BALAJI ACTION BUILDWELL, EVERGREEN BOARDLAM, ECOBOARD INDUSTRIES LTD.
16	PRE-LAMINATED MEDIUM DENSITY FIBRE BOARD	CENTURY PLYBOARDS, GREEN PLY, BALAJI ACTION BUILDWELL
17	OMS/ MS DOOR FITTINGS	ASHISH, AGGARWAL STEELS, DOOR DEVICES MANUFACTURING COMPANY, MANU ENGINEERING COMPANY, M.C. MOWJEE & CO., SHRI GANPATI DOORS
18	TOILET CUBICALS	GREELAM, MERINO, DORMA
19	STAINLESS STEEL DOOR/ WINDOW HARDWARE FITTINGS (FIRE RATED)	DORMA, ASSA ABLOY, GEZE, D-LINE, DORSET, OZONE
20	ANODISED/ ZINC ALLOY/ ALUMINIUM HARDWARE DOOR/ WINDOW FITTINGS	PULSE, SAVIO, HOPPE, ALUTECH
21	FRP DOOR FRAMES & SHUTTERS	ASHISH INDUSTRIES, JAYNA, SAINIK (CENTURY PLYWOOD), SELECTED PRODUCTS CO.
22	UPVC WINDOWS/ DOORS	VEKA, FENESTA, REHAU, SCL-CORA, RAJSHRI PLASTIWOOD
23	UPVC WINDOW/ DOOR HARDWARE FITTINGS (ZINC ALLOY)	PULSE, HOPPE, GU, ROTO or the make of approved window manufacturer,
24	WIDOWS BLINDS	VISTA, MAC, HUNTER DOUGLAS, DE-DÉCOR, FENESTA, BOMBAY DYEING, D-DECOR

25	STRUCTURAL STEEL SUCH AS MS PLATES, FLATS, SQ. BARS, ANGLES ETC.	SAIL, TATA STEEL, RINL, JINDAL STEEL & POWER LTD. AND JSW STEEL LTD.
26	FIRE RATED DOORS (METTALIC/ NON METTALIC/WOOD)	KUTTY DOORS, NAVAIR, PROMAT, SYNERGY THRISLINGTON, HORMAN SHAKTIMET, SUKRITI, ROMAT
27	HOT-ROLLED STEEL SECTIONS FOR MS DOORS, WINDOWS AND VENTILATORS (non structural use only)	NAV DURGA STEEL CORPN, CRM STEELS P. LTD, SHYAM ISPAT UDYOG, VIMAL, SHIV, RATHI, RANA
28	MILD STEEL DOOR, WINDOWS & VENTILATORS MANUFACTURERS	FRIENDS MANUFACTURING COMPANY, KOTKAPURA, PD INDUSTRIES, SHAKTI INDUSTRIES, STEELMAN INDUSTRIES, SKS STEEL INDUSTRIES, SHIVAM
29	PRESSED STEEL DOOR FRAMES MANUFACTURERS	KRISHNA STEEL FABRICATOR SIRSA, LAXMI STEEL WORKS BAHADURGARH, ASHISH INDUSTRIES GHAZIABAD, ASHWANI & SONS.
30	HOLLOW STEEL SECTIONS STRCUTURAL	JINDAL-HISAR, TATA STEEL, JSPL, JSW, SAIL, RINL, APL APPOLO LTD.,ESSAR
31	STEEL TUBES FOR STRUCTURAL STEEL	JINDAL- HISAR, TATA STEEL, JSPL, JSW, SAIL, RINL, APL APPOLO LTD.,ESSAR
32	DASH/ ANCHORING FASTENERS, BOLTS, SCREWS AND NUTS.	HILTI , FISCHER, CKW, ANCHOR,ARROW, WURTH
33	HIGH STRENGTH NUTS AND BOLTS	HILTI, ANCHOR, KALOTI, VARUN FASTNERS, HINDSTEEL OR EQUIVALENT
34	CHEQUERRED PRE-CAST CC TILES	NTC, SWASTIK TILE, SHIV , GTC,OSWAL.
35	CERAMIC TILES	SOMANY, KAJARIA, RAK, A.G.L., JOHNSON ,NITCO.
36	VITRIFIED TILES	SOMANY, KAJARIA, RAK, A.G.L., JOHNSON, NITCO.
37	ADHESIVE/ GROUTING FOR USE WITH TILES	MYK LATICRETE, ARDEX EDURA, FAIRMATE, DURA BUILD CARE, SIKKA, FERROUS CRETE OR of tile manufacturer
38	WOODEN LAMINATE FLOORING	PERGO, KRONOTEX, FLORENCE, UNITEX, ACTION TESA, ARMSTRONG, WELSPUN
39	UNPLASTICISED RIGID PVC PIPE & FITTINGS	SUPREME, FINOLEX, PRINCE, KISAN, DIPLAST, ASTRAL.
40	GALVANISED STEEL SHEETS (UNCOATED & PRE-COATED)	SAIL, TATA, JSW, EVEREST, APL APPOLLO, ESSAR (Parent coil sheet to be only of SAIL/TATA/JSW)
41	PUFF PANELS	LLOYDS, INTERACH, TATA, EVEREST, SYNERGY, MECTACH, KIRBI, EPACK, ALFA (PARENT COIL SHEET FOR GALVANUME SHEET TO BE ONLY FROM: JSW, SAIL, TATA, ESSAR, BHUSAN STEE)
42	LOOP TILE CARPET FLOOR	KRONOTEX, FLORENCE, UNITEX, YOUNGMAN, WELSPUN,RAINBOW,INDUS,HEXTON,SHIVA,BOMBAY FOAM
43	ROOFING SHEETS (GALVALUME)	SAIL, TATA, JSW, EVEREST, ESSAR, BHUSAN STEEL
44	HEAT RESISTANT TILES	OSWAL, ULTRATECH, SWASTIK
45	EPOXY FLOORING, ESD FLOORING	FOSROC, ARDEX ENDURE, SIKKA, BIRLA TECH, ASIAN, DR. FIXIT, CICO, ROFF, BASF
46	GRC SCREEN AND MATERIALS	UNISTONE, SWASTIK, BIRLA, KK
47	ALUMINIUM COMPOSITE PANEL	ALSTONE,ALUDECOR,REYNOBOND,REYNOARCHVIVA, VIRGO,VIVA,ALSTRONG, ALUCOBOND
48	WPC DOORS & PRODUCTS	VARDHMAN WPC, GREENLAM, ALSTONE, RAJSHRI PLASTIWOOD, BVW
49	POLYCARBONATE SHEET	ULTRALITE (BAYER), V-LITE, MACROLUX, DPI DAYLIGHT
50	FALSE CEILING- GYPSUM	SAINT GOBAIN, VANS GYPSUM, USG BORAL, GYPTECH, DIAMOND
51	FALSE CEILING- METAL	ARMSTRONG, DEXUNE, NITOBOND, SAINT GOBAIN, HUNTER DOUGLAS, DIMOND
52	FALSE CEILING- CALCIUM	GYPTECH, AEROLITE, ARMSTRONG, ANAKON, DEXUNE

Correction—Nil Deletion—Nil Insertion—Nil Overwriting—Nil

	SILICATE	
53	FALSE CEILING-MINERAL FIBRE	ARMSTRONG, DEIKEN, DEXUNE, SAINT GOBAIN, ANAKON,
54	ACCOUSTIC: GLASS/ WOODEN FIBRE FALSE CEILING AND WOODEN/ FABRIC WALL LINING	ARMSTRONG, HUNTER, GYPTECH, ANUTONE, SAINT GOBAIN, USG
55	FALSE CEILING-ALUMINIUM POWDER COATED	ARMSTRONG, DEXUNE, SAINT GOBAIN, HUNTER DOUGLAS, ANAKON
56	LIGHT WEIGHT GYPSUM PLASTER	SAINT GOBAIN, ULTRATECH, FERROUS CRETE, USG BORAL, JK
57	OIL BOUND DISTEMPER/ ACRYLIC DISTEMPER *	NEROLAC, BERGER, ASIAN PAINTS, ICI DULUX
58	INTERIOR EMULSION/ PLASTIC EMULSION*	NEROLAC, BERGER, ASIAN PAINTS, ICI DULUX
59	ACRYLIC SMOOTH EXTERIOR PAINT*	NEROLAC, BERGER, ASIAN PAINTS, ICI DULUX
60	DRY DISTEMPER*	NEROLAC, BERGER, ASIAN PAINTS, ICI DULUX, JENSON & NICHOLSON (J&N)
61	TEXTURED EXTERIOR PAINT*	NEROLAC, BERGER, ASIAN PAINTS, ICI DULUX
62	SYNTHETIC ENAMEL PAINTS*	DULUX HI-GLOSS (ICI), APCOLITE PREMIUM GLOSS (ASIAN), NEROLAC HIGH GLOSS (NEROLAC), LUXOL HI-GLOSS (BERGER)
63	WOOD/STEEL/EXTERIOR WALL PRIMER*	NEROLAC, BERGER, ASIAN PAINTS, ICI DULUX
64	SFMC TANKS	SINTEX, SFMC, VECTUS, SOVISY, AMITEX
65	EXPANSION JOINT	CONSTRUCTION SPECIALITIES/ MNR ENGG. PRODUCT, MNR Buildtech private Limited
66	WALL PUTTY (WHITE CEMENT BASED)	BIRLA WALL CARE, JK WHITE, FERROUS
67	POLYMER MODIFIED SELF CURING PLASTER	MYK LATICRETE, ARDEX ENDURA, ULTRATECH, FERROUS
68	PAVER/ GRASS PAVER BLOCKS & KERB STONES	NATIONAL TILES CORPORATION, BALAJI TILES, METRO PAVERS, SWASTIK, OSWAL, SHIV SHAKTI, POOJA CONCRETE FABRICATORS, GIAN NIRMAL LIMITED, DO Build, GS TRADERS
69	VITREOUS CHINA SANITARY WARE	HINDWARE, CERA, PARRYWARE, JOHNSON PEDDER, SOMANY, KAJARIA TILES, JAQUAR.
(I)	WHITE VITREOUS CHINA UNDER COUNTER RECTANGULAR BASIN	CERA CAT. NO. S 2030104 (if not specified in item) OR EQUIVALENT MODEL OF HINDWARE, PARRYWARE, JOHNSON PEDDER, SOMANY, KAJARIA, JAQUAR
70	PLASTIC FLUSHING CISTERN FOR WC AND URINALS	STEEL BIRD, SEEMLINE, VIKRAM PLASTIC, PRINCE, SUPREME, PRAYAG POLYMERS (P) LTD.
71	PLASTIC SEAT COVER OF W.C.	STEEL BIRD, SEEMLINE, VIKRAM PLASTIC, PRINCE, SUPREME, PRAYAG POLYMERS (P) LTD AJANTA POLYMERS, JAIN POLYMERS
72	STAINLESS STEEL SINK	ALLEX, JAYNA, SALEM STEEL, NIRALI, STEEL CRAFT, NEELKANTH
73	MIRROR GLASS	ATUL, MODIGUARD, PILKINTON, SAINT GOBIN, AIS
74	CENTRIFUGALLY CAST (SPUN) IRON PIPES	NECO, BENGAL IRON, DURGAPUR ISPAT UDYOG, SINGHAL IRON FOUNDRY (SKF), KAPILANSH DHATU UDYOG PVT. LTD., RIF, RPMF, HIF.HEPCO
75	HUBLESS CENTRIFUGALLY CAST (SPUN) IRON PIPES	NECO, BENGAL IRON, DURGAPUR ISPAT UDYOG, SINGHAL IRON FOUNDRY (SKF), KAPILANSH DHATU UDYOG PVT. LTD., RIF, RPMF, HIF.HEPCO
76	CP FITTINGS & ACCESSORIES	JAQUAR, KOHLER, GROHE, CERA.
69	BRASS STOP & BIB COCK	DHAWAN SANITARY UDYOG, JAINKO, SHAKTI, VARDHMAN INDIA PRODUCTS
70	FERRULES FOR WATER SUPPLY	HIND METAL WORKS, KRITIKA, DRP, SHAKTI
71	BALL COCK WITH ROD	RESP FAUCET INDUSTRIES, DHAWAN SANITARY UDYOG, NEW METAL WORKS, KPR, PRAYAG.
72	POLYETHYLENE WATER STORAGE TANK	SINTEX, VECTUS, RAMPART KAVERI, SUPREME, PLASTO, ASTRAL, AASHIRVAD, KISAN, PRAYAG, FINOLEX

73	STONEWARE PIPES & GULLY TRAPS	SORKHI INDUSTRIES, RK INDUSTRIES, NAVNEET, MOLI CERAMICS, OCR, ANAND, SKF, HEPSCO
74	PRE-CAST CONCRETE PIPES (NON-PRESSURE)	RAMNIK, BFSP, JAGDAMBAY SPUN PIPE, GURKIRPA SPUN PIPES
75	GI PIPE	JINDAL (HISSAR), TATA, PRAKASH SURYA, BHUSHAN POWER STEEL, NVR, APL APPOLO
76	GI FITTINGS	UNIK, AVR, ZOLOTO, SANT, HBI, C-BRAND, NVR
77	C-PVC PIPE	SINTEX, VECTUS, RAMPART KAVERI, SUPREME, PLASTO, ASTRAL, AASHIRVAD, KISAN, PRAYAG, FINOLEX
78	WATER METER	CRESCENT, PRINCE, FEDREL, DASHMESH, NBESON, SANT
79	GUN METAL GATE, GLOBE, CHECK VALVES & NON-RETURN VALVES	LEADER, ZOLOTO, SANT, RAJAN METAL INDUSTRIES, SIR, H.B. METALS, HVI, NVR.
80	CENTRIFUGALLY CAST (SPUN) IRON PIPES (CLASS LA).	TRU FORM ENGINEERS, KAPILANSH, ELECTROSTEEL, HITECH METAL CASTINGS.
81	C.I. SLUICE VALVES & REFLEX VALVES	ZOLOTO INDUSTRIES, SANT VALVES, AMCO INDUSTRIES, KIRLOSKAR, SIR, RATAN INDUSTRIAL CORPORATION, HVI, NVR.
82	STAINLESS STEEL PIPES & FITTINGS	JSW, OM STEEL GROUP, V STEEL, VIEGA, RAMPART INDIA PVT. LTD.,
83	DUCTILE IRON PIPES & FITTINGS	ELECTRO STEEL, CHANDRANCHAL INFRA, ELECTROTHERAM
84	C.I./ D.I. MANHOLE COVERS & FRAMES	SWASTIKA ENTERPRISES, BENGAL IRON CORPORATION, NECO, BINAY UDYOG, CHANDER ANCHAL, HEPSCO, SKF, NECO, RIF
85	WATER REPELLANT SILANE CHEMICAL	PIDILITE, FERROUS CRETE, ARDEX ENDURA
86	ALUMINIUM SECTIONS	HINDALCO, INDIAN ALUMINIUM CO., NALCO, VEDANTA ALUMINIUM, JINDAL INDIA ALUMINIUM CO,
87	ALL TYPES OF GLASS (Basic/ toughened etc.)	SAINT GOBAIN, ASAHI, MODI, PILINGTON. AIS/GLAVERBEL,
88	Approved Processors For PERFORMANCE GLASS/ TOUGHENED GLASS/ HERMETICALLY SEALED/ LACQUERED GLASS/DGU etc.	ART & GLASS, MIRAGE TOUGHENED GLASSES (P) LTD., AAR PAR GLASS, VERMA GLASS., TUFF AND authorized tougheners of Glass manufacturers (Modi Guard, Saint Gobain, ASAHI, AIS/Glaverbel, Pilkington)
89	STRUCTURAL GLAZING	ALCOB, ALUPRO, ALUPLAX, SP FABRICATORS, SAINT GOBAIN, GLAVERBEL.
90	FAÇADE GLASS OPENABLE FITTINGS	ALUALPHA, SAVIO, HOPPE, ALUTECH, OZONE, DORSET, EBCO
91	GLASS FAÇADE/ GLASS CANOPY WITH SS SPIDER FITTINGS	ALCOB, ALUPRO, ALUPLAX, SP FABRICATORS, SAINT GOBAIN, GLAVERBEL.
92	FRAMELESS GLAZING WITH SS PATCH FITTINGS and SS SPIDER FITTINGS	DORMA, ASSA ABLOY, GEZE, D-LINE, OZONE, DORSET
93	HIGH PRESSURE LAMINATE	VIRGO, MERINO, GREENLAM
94	FACTORY MADE MODULAR KITCHEN	GODREJ INTERIO, HAECKER, HAFELE, JOHNSON, HERMAN MILLER
95	MODULAR KITCHEN FITTINGS	GODREJ, HETTICH, OZONE, KICH, KAFF, JOHNSON

NOTE:-

- 1) A List of Preferred Brand Names of Various Materials / Products are shown above for usage in execution of Work. Only preferred brands shall be used in work.
- 2) For materials for which preferred brand is not mentioned then it must be ensured, in general, that materials to be used in the works shall be good quality of reputed make and bear BIS Certification mark.

- 3) 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 condition that it should conform to CPWD Specifications, meeting minimum GRIHA 3 star rating 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.
- 4) The list given above does not absolve the Executing Agency from their responsibility for using these products. It is only after, they are satisfied about the quality and performance, the products shall be used. To achieve this, proper check on the quality of the product, actually to be used, should be exercised.
- 5) However, in exceptional circumstances alternate approved equivalent material of any other Specialized Companies / Firms may also be used, like in case it is established that the Brands Specified in the list are not available in the current market or in other unavoidable circumstances and subject to approval of the alternate brand by the Superintending Engineer and the decision of SE (Jalandhar) shall be binding and final in this regard. Also in such situation, cost adjustment (if required) shall also be made if felt necessary.

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/
and Additional 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 / Additional 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 hereby undertake to pay the amount due and payable under this guarantee without any demur, merely on a demand from the Government stating that the amount claimed is required to meet the recoveries due or likely to be due from the said Contractor. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this Guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. (Rupees. only).
4. We, (indicate the name of the Bank), further undertake to pay the Government any money so demanded notwithstanding any dispute or disputes raised by the contractor in any suit or proceeding pending before any Court or Tribunal, our liability under this Bank Guarantee being absolute and unequivocal. The payment 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.

Bank seal

2. Signature

Name and address

* 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 and additional performance guarantee / security deposit / mobilization advance, as the case may be.

Annexure –V

**GUARANTEE BOND TO BE EXECUTED BY THE CONTRACTOR FOR WATER
PROOFING TREATMENT FOR BASEMENT / TERRACE / TOILETS.**

The Agreement made this day of two thousand and between son of of (hereinafter called the Guarantor of the one part) and the PRESIDENT OF INDIA (hereinafter called Government of the other part).

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

AND WHEREAS GUARANTOR agreed to give a guarantee to the effect that the said structures will remain water and leak-proof for **ten years, to be reckoned from the date of completion of entire work under the agreement.**

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 of completion of entire work under the agreement.**

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

- (a) Misuse of roof shall mean any operation which will damage proofing treatment, like chopping off firewood and things of the same nature which might cause damage to the roof;
- (b) Alteration shall mean construction of an additional storey or a part of the roof or construction adjoining to existing roof whereby proofing treatment is removed in parts;
- (c) The decision of the Engineer-in-Charge with regard to cause of leakage shall be final.

During this period of guarantee the guarantor shall make good all defects and in case of any defect being found, render the building water-proof to the satisfaction of the Engineer-in-Charge at his cost, 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 the Department by some other contractor at the GUARANTOR'S cost and risk. The decision of the Engineer- in-Charge as to the cost, payable by the Guarantor shall be final and binding.

That if GUARANTOR fails to execute the water proofing or commits breach thereunder 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 reason of any default on the part of the GUARANTOR in performance and observance of this supplementary agreement. As to the amount of loss and/or damage and/or cost incurred by the Government the decision of the Engineer-in-Charge will be final and binding on the parties.

IN WITNESS WHEREOF these presents have been executed by the Obligor 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.

Annexure –VI

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

The Agreement made this day of two thousand and between son of of (hereinafter called the Guarantor of the one part) and the PRESIDENT OF INDIA (hereinafter called Government of the other part).

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

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

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

The decision of the Engineer in charge with regard to nature and cause of defects shall be final.

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

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

IN WITNES WHEREOF those presents have been executed by the obligator _____ and _____ by for and on behalf of the PRESIDENT OF INDIA on the day , month and year first above written.

Signed sealed and delivered by OBLIGATOR in presence of :.

1. _____
2. _____

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

1. _____
2. _____

Annexure –VII

The contractor gives an authority letter addressed to the Engineer-in-charge on a non-judicial stamp paper of Rs. 100 in the format given below :-

Authority Letter for Payment to Third Party

To,

**The Executive Engineer
C.P.W.D., Amritsar**

Sub:-**Authority for payment to third party.**

I/We authorize the **Executive Engineer, CPWD, Amritsar** to pay directly on my / our behalf to (name of third party) an amount of Rs. (Rupees in words) for the work done or supplies made by (name of third party).

I/We shall be responsible for the quality and quantity of the same under the provisions of agreement No.

Signature of Contractor

Note :-

1. The total payment to third party (or parties) shall not exceed 10% of the agreement cost of the work.
2. Full reasons for proposing such third party payment shall be recorded and prior written approval of the next higher authority shall be obtained before making such payment.

PROFORMA FOR TESTS CARRIED OUT

NAME OF THE WORK:

DIVISION:

AGREEMENT NO. & DATE:

SUB-DIVISION:

Sl. No.	Item	Quantities as per agreement	Frequency as per specification	No. of tests required	R.A. bill No.	Uptodate quantity	No. of tests required	No. of tests actually done	Remarks
1	2	3	4	5	6	7	8	9	10

Signature of Contractor

केन्द्रीय लोक निर्माण विभाग
कार्यालय ज्ञापन

No. DG/Manual-2024/20

ISSUED BY THE AUTHORITY OF DIRECTOR GENERAL, CPWD

Vidyut Bhawan, New Delhi

Dated: 27.02.2026

Sub: **Modification in Para 5.2 for CPWD Works Manual 2024.**

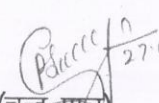
Following modification is made in Para no. 5.2 for CPWD Works Manual 2024:

Existing Provision	Modified Provision
5.2 Performance Guarantee	5.2 Performance Guarantee
Sl. No. 1	No Change
2. PG shall be 5% of the contract amount or as prescribed from time to time to be submitted in the form as prescribed in GCC. Performance Guarantee shall remain valid for a minimum period of sixty days beyond the date of completion of all contractual obligations as per GCC. In case of contracts where supplementary agreement is drawn, the fresh PG shall be obtained from the contractor @ 5% of the amount of the supplementary agreement or as prescribed from time to time. The PG received against the original work shall be released as per contract conditions.	2. PG shall be 5% of the Estimated cost put to tender (ECPT) or contract amount whichever is higher , or as prescribed from time to time, to be submitted in the form as prescribed in GCC. Performance Guarantee shall remain valid for a minimum period of six months beyond the date of completion of all contractual obligations as per GCC. In case of contracts where supplementary agreement is drawn, the fresh PG shall be obtained from the contractor @ 5% of the amount of the supplementary agreement or as prescribed from time to time. The PG received against the original work shall be released as per contract conditions.
Sl. No. 3	No Change
4. No provision	4. A bid will be treated as abnormally low if the quoted bid amount is lesser than 80% of the estimated cost put to tender.
5. No provision	5. Requirement of Additional Performance Guarantee (APG) : In case of abnormally low bids as defined above, the bidder shall be required to submit Additional Performance Guarantee (APG) in addition to the Standard Performance Guarantee (PG). The amount of Additional Performance Guarantee (APG) shall be equivalent to the difference between the 80% amount of ECPT and quoted amount. (e.g. if ECPT is A and quoted amount is 0.7A then the amount of APG shall be

12/2/26 Jindal
EE (Contract)

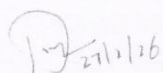
	0.8A – 0.7A). The Additional Performance Guarantee (APG) shall be in the prescribed format of Performance Guarantee and has to be submitted within the time frame prescribed for submission of Performance Guarantee. The other terms and conditions of release etc. of APG shall be same as that of PG.
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This is issues with the approval of DG CPWD.


 27.02.2026
 ((चन्द्र पाल))
 अधीक्षण अभियंता (सी.एच.एम.) (सी.एच.एम.)
 Chandar Pal, SE (C&M)

Issued from file No. CSQ/CM/16(1)/2026 e-file 9212995 (DFA/ 9365789)

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


 21.1.16

D.P. Jindal
EE (Contract)

Part-B

Price Bid

SCHEDULE OF QUANTITIES

Name of Work : A/R & M/O to Residential & Technical Buildings at No. 1FBSU, Airforce Rajasansi, Amritsar dg. 2026-27. SH: Operation of Sewerage Treatment Plant.

Item No	DSR Item	Description of Item	Unit	Quantity	Rate	Amount
1	N.S.	Operation & Maintenance of Sewerage Treatment Plant i/c Up-keeping the STP area enclosed within fencing, cleaning of pipes as and when required and disposal of dried sludge outside the area as per instructions of Engineer-in-charge. (One job shall be consisting of three shifts of 8 hours for one calender month)	Per Month	12.00	121644.00	1459728.00
					Total : (A)	1459728.00

<u>केंद्रीय लोक निर्माण विभाग</u> <u>Central</u> <u>Public Works Department</u>			
NIT No. <u>35/EE-AMRITSAR/2026-27</u>			
कार्य का नाम:- A/R & M/O TO RESIDENTIAL & TECHNICAL BUILDINGS AT NO. 1FBSU, AIRFORCE RAJASANSI, AMRITSAR DG. 2026-27. SH: OPERATION OF SEWERAGE TREATMENT PLANT....			
PRICE BID			
ठेकेदार का नाम Name of the Contractor			
Sl. No.	Name of work	Estimate Cost	# Rate in Percentage
1	A/R & M/O TO RESIDENTIAL & TECHNICAL BUILDINGS AT NO. 1FBSU, AIRFORCE RAJASANSI, AMRITSAR DG. 2026-27. SH: OPERATION OF SEWERAGE TREATMENT PLANT...	Rs. 14,59,728/-	
	GRAND TOTAL		

Note : Contractor participating in the bid should have experience of completion of STP work having capacity of minimum 50 KLD or he should have experience of maintaining STP of capacity of minimum 50 KLD.