INDEX

Name of work & Location **Provision of civil work for Tubewell for Newly Constructed veer Nari Awas at CRPF, Group Centre, Bijnour, Lucknow. (SH:- New Tubewell).**

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NIT amounting to ₹ 7,55,973/- (Rupees Seven Lakh Fifty Five Thousand Nine Hundred Seventy Three Only) is approved.

Certified that this N.I.T. contains 1 to 92 (One to Ninety Two) pages only.

Executive Engineer(L)-I
CPWD, Lucknow.

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PART-A

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

(Applicable for inviting open bids)

The **Executive Engineer(Lucknow)-I, C.P.W.D., Lucknow** on behalf of President of India invites **online Percentage rate bids** from approved and eligible contractors of CPWD for the following work(s):

S. No.	NIT NO.	Name of work and location	Estimated cost put to bid	Earnest Money	Period of Completion	Last date & time of submission of bid, original EMD, copy of receipt or deposition of original EMD and other Document as specified in the bid document	Time & date of opening of tender
1	2	3	4	5	6	7	8
1	55/EE/Lucknow-I/2026-27 (Recall-1)	Provision of civil work for Tubewell for Newly Constructed veer Nari Awas at CRPF, Group Centre, Bijnour, Lucknow. (SH:- New Tubewell)	Civil Work:- ₹ 7,55,973/- Total :- ₹ 7,55,973/-	₹ 15,119/-	01 Month	Upto 15:00 Hrs. on 29.10.2026	At 15:30 Hrs. on 29.10.2026

1. The intending bidder must read the terms and conditions of CPWD-6 carefully. He should only submit his bid if he consider himself eligible and he is in possession of all the documents required.
2. Information and Instructions for bidders posted on website shall form part of bid document.
3. The bid document consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents can be seen and downloaded from website https://etender.cpwd.gov.in or www.cpwd.gov.in
4. The bid can only be submitted after **depositing 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***

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such as Demand Draft or Pay order or Banker`s Cheque or Deposit at call Receipt or Fixed Deposit Receipts and Bank Guarantee of any Scheduled Bank towards EMD in favour of Executive Engineer **as mentioned in NIT, receipt for deposition of original EMD to division office of any Executive Engineer** *(including NIT issuing EE/AE)*, **CPWD** and other documents as specified.

5. Those contractors 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.
6. The intending bidder must have valid class-III digital signature to submit the bid.
7. On opening date, the contractor can login and see the bid opening process. After opening of bids he will receive the competitor bid sheets.
8. Contractor can upload documents in the form of **JPG** format and **PDF** format.
9. Contractor must ensure to quote rate in the column (5) 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.

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

I. Copy of receipt for deposition of original EMD issued from division office of any Executive Engineer (including NIT issuing EE/AE), CPWD.

II. Bankers Cheque / Account Payee Demand Draft / FDR / Insurance Surety Bonds of any commercial Bank against EMD.

III. Enlistment Order of the Contractor along with all modifications therein.

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

'or'

(B) Undertaking: If the bidder has not obtained GST registration as applicable, then he shall scan and upload following undertaking along with bid documents.

"If the work is awarded to me, I/We shall obtain GST registration Certificate, as applicable, within one month from 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 a/c of the work executed and / or for any action taken by CPWD or GST department in this regard.

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Annexure-I.

RECEIPT OF DEPOSITION OF ORIGINAL EMD

(Receipt No. …….…… / date …….……)

Name of Work : Provision of civil work for Tubewell for Newly Constructed veer Nari Awas at CRPF, Group Centre, Bijnour, Lucknow. (SH:- New Tubewell)

1. NIT No. : **55/EE/Lucknow-I/2026-27 (Recall-1)**
2. Estimated Cost : **₹ 7,55,973/-**
3. Amount of Earnest Money Deposit: **₹ 15,119/-**
   (In Favour of Executive Engineer, Lucknow Central Division-I, CPWD, Lucknow)
4. Last date & Time of submission of Bid : 15:00 Hrs. on **29.10.2026**

Name of Contractor : …….....

1. Form of EMD …….....
2. Amount of Earnest Money Deposit …….....
3. Date of submission of EMD ……..……

……..…….

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

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CPWD-6 FOR e-Tendering

1. Item rate/percentage rate bids are invited on behalf of President of India from approved and eligible contractors of CPWD for the **Work of Provision of civil work for Tubewell for Newly Constructed veer Nari Awas at CRPF, Group Centre, Bijnour, Lucknow. (SH:- New Tubewell)**
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 **₹ 7,55,973/-.** This estimate, however, is given merely as a rough guide.

1.1.1 The authority competent to approve NIT for the combined cost and belonging to the major discipline will consolidate NITs for calling the bids. He will also nominate Division which will deal with all matters relating to the invitation of bids. For composite bid, besides indicating the combined estimated cost put to bid, should clearly indicate the estimated cost of each component separately. The eligibility of bidders will correspond to the combined estimated cost of different components put to bid.

2. Agreement shall be drawn with the successful bidders on prescribed Form No. CPWD 7/8 (or other Standard Form as mentioned) 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 **01 Month** from the date of start as defined in schedule 'F' or from the first date of handing over of the site, whichever is later, in accordance with the phasing, if any, indicated in the bid documents.

4. The site for the work is available.

5. The architectural and structural drawings shall be made available in phased manner, as per requirement of the same as per approved program of completion submitted by the contractor after award of work. 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 https://etender.cpwd.gov.in or www.cpwd.gov.in free of cost.

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

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

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

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9. Earnest Money in the form of Insurance Surety Bonds, Account Payee Demand Draft, Fixed Deposit Receipt, Banker's Cheque or Bank Guarantee (for balance amount as prescribed) from any of the Commercial Banks **(drawn in favour of Executive Engineer, Lucknow Central Division-I, CPWD, Lucknow)** shall be scanned and uploaded on the e-Tendering website within the period of bid submission. The original EMD should be deposited either in the office of Executive Engineer inviting bids or division office of any Executive Engineer, CPWD within the period of bid submission. The EMD receiving Executive Engineer (including NIT issuing EE/AE) shall issue a receipt of deposition of earnest money deposit to the bidder in a prescribed format (enclosed) uploaded by tender inviting EE in the NIT.

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

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

Copy of Enlistment Order and certificate of work experience and other documents as specified in the notice inviting e- tender shall be scanned and uploaded on the e-Tendering website within the period of bid submission. However, certified copy of all the scanned and uploaded documents as specified in e- tender notice shall have to be submitted by the lowest bidder within a week physically in the office of tender opening authority. Online bid documents submitted by intending bidders shall be opened only of those bidders, 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 PM on 29.10.2026**

10. The bid submitted shall become invalid and e-Tender processing fee shall not be refunded if:

(i) The bidder is found ineligible.

(ii) The bidder does not upload scanned copies of all the documents stipulated in the bid document.

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

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

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10. The contractor whose bid is accepted will be required to furnish performance guarantee in favour of **Executive Engineer, Lucknow Central Division-I, CPWD, Lucknow** at specified percentage of the tendered amount as mentioned in schedule E and within the period specified in Schedule F. This guarantee shall be in the form of Insurance Surety Bonds, Account Payee Demand Draft, Fixed Deposit Receipt or Bank Guarantee from any of the Commercial Banks in accordance with the prescribed form.. In case the contractor fails to deposit the said performance guarantee within the period as indicated in Schedule 'F', including the extended period if any, the Earnest Money deposited by the contractor shall be forfeited automatically without any notice to the contractor. The earnest money deposited along with bid shall be returned after receiving the aforesaid performance guarantee. The contractor whose bid is accepted will also be required to furnish either copy of applicable licenses/ registrations or proof of applying for obtaining labour licenses, registration with EPFO, ESIC and BOCW Welfare Board including Provident Fund Code No. If applicable and also ensure the compliance of aforesaid provisions by the subcontractors, if any engaged by the contractor for the said work within the period specified in Schedule F.

Where the tendered amount is less than eighty percent (80%) of the estimated cost put to tender (ECPT), the performance guarantee, in addition to the requirement under (a) above, shall be increased by an amount equal to the difference between eighty percent (80%) of the ECPT and the tendered amount.

12. **The description of the work is as follows: Provision of civil work for Tubewell for Newly Constructed veer Nari Awas at CRPF, Group Centre, Bijnour, Lucknow. (SH:- New Tubewell)**

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

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

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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 bidders 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 Housing and Urban Affairs. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of this Department.

17. No Engineer of Gazetted Rank or other Gazetted Officer employed in Engineering or Administrative duties in an Engineering Department of the Government of India is allowed to work as a contractor for a period of one year after his retirement from Government service, without the prior permission of the Government of India in writing. This contract is liable to be cancelled if either the contractor orany 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 bids for the work shall remain open for acceptance for a period of 30 (thirty) days from the date of opening of bids in case of single bid system and 75 (seventy five) days from the date of opening of technical bids in case bids are invited in 2 or 3 bid system.

Further

(i) If any tenderer withdraws his tender or makes any modification in the terms & conditions of the tender which is not acceptable to the department within 7 days after last date of submission of bids, then the Government shall without prejudice to any other right or remedy, be at liberty to **forfeit 50%** of the earnest money absolutely irrespective of letter of acceptance for the work is issued or not.

(ii) If any tenderer withdraws his tender or makes any modification in the terms & conditions of the tender which is not acceptable to the department after expiry of 7 days after last date of submission of bids, then the Government shall without prejudice to any other right or remedy, be at liberty to **forfeit 100% of the earnest money** absolutely irrespective of letter of acceptance for the work is issued or not.

(iii) In case of forfeiture of earnest money as prescribed in para (i) and (ii) above, the bidders shall not be allowed to participate in the rebidding process of the same work.

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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 7/8 or other Standard C.P.W.D. Form as applicable.

20. **For Composite Bids**

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

20.1.2 The bid document will include following three components:

Part A:- CPWD-6, CPWD-7/8 including schedule A to F for the major component of the work, Standard General Conditions of Contract for CPWD 2014 as amended/ modified up to 2020.

Part B:- General / specific conditions, specifications and schedule of quantities applicable to major component of the work.

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

20.1.3 The bidders must associate himself, with agencies as per NIT conditions.

20.1.4 The eligible bidders shall quote rates for all items of major component as well as for all items of minor components of work.

20.1.5 After acceptance of the bid by competent authority, the EE in charge of major component of the work shall issue letter of award on behalf of the President of India. After the work is awarded, the main contractor will have to enter into one agreement with EE incharge of major component and has also to sign two or more copies of agreement depending upon number of EE's/DDH incharge of minor components. One such signed set of agreement shall be handed over to EE/DDH incharge of minor component(s).

EE of major component will operate Part A and Part B of the agreement.

EE/DDH incharge of minor component(s) shall operate Part- C alongwith Part A of the agreement.

20.1.6 Entire work under the scope of composite bid including major and all minor components shall be executed under one agreement.

20.1.7 Security Deposit will be worked out separately for each component corresponding to the estimated cost of the respective component of works.

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20.1.8 The main contractor has to associate agencies for specialized component(s) conforming to eligibility criteria as defined in the bid document and has to submit detail of such agency(s) to Engineer-in-Charge of relevant component(s) within prescribed time. Name of the agency(s) to be associated shall be approved by Engineer-in-Charge of relevant component(s).

20.1.9 In case the main contractor intends to change any of the above agency/agencies during the operation of the contract, he shall obtain prior approval of Engineer-in- Charge of relevant specialized component(s).
The new agency/agencies shall also have to satisfy the laid down eligibility criteria. In case Engineer-in-Charge is not satisfied with the performance of any agency, he can direct the contractor to change the agency executing such items of work and this shall be binding on the contractor.

20.1.10 The main contractor has to enter into MoU with agency(s) associated by him. Copy of such MoU shall be submitted to EE/ DDH in charge of each relevant component as well as to EE-in-charge of major component. In case of change of associate contractor, the main agency(s) has to enter into MoU/agreement with the new contractor associated by him.

20.1.11 Running payment for the major component shall be made by EE of major discipline to the main contractor. Running payment for minor components shall be made by the Engineer- in-Charge of the discipline of minor component directly to the main contractor. The CMB shall be maintained independently by Engineer-in-Charge of major and minor components.

20.1.12A. The composite work shall be treated as complete when all the components of the work are complete. The completion certificate of the composite work shall be recorded by Engineer-in-Charge of major component after record of completion certificate of all other components.

20.1.12B. Final bill of whole work shall be finalized and paid by the EE of major component. Engineer(s) in charge of minor component(s) will prepare and pass the final bill for their component of work and pass on the same to the EE of major component for including in the final bill for composite contract.

20.1.13 **In case of non-availability of budget or any other unforeseen situation the scope of work may be reduced. In case of reduction in scope of work no claim on account of reduction in value of work, loss of expected profit, consequential overheads etc. shall be payable to the contractor**.

21. Integrity Pact: The contractor shall download the Integrity Pact, which is a part of tender documents, affix his signature in the presence of a witness, and upload the same while submitting online bids for all works of estimated cost put to tender equal or more than the threshold value given in Schedule-F. In the event of his failure to sign and upload the Integrity Pact along with other bid documents, his bid shall be rejected.

22. The intending bidders are required to update their profile in CPWD e- tender portal and to upload their bids well in advance of last date of submission of tender. Any issue related to updating profile/uploading tender can be resolved through the concerned Executive Engineer/Assistant Engineer (Phone no:0522-2329438, e-mail : eelcd1.cpwdlu-up@nic.in) or ERP helpline no. 18001803286 or e-mail Id cpwd.support@techmahindra.com The e- tendering bidders are also advised not to wait to raise any issues till the last date of submission of bid in their own interest.

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INTEGRITY PACT

To,

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Sub: NIT No. 55/EE/Lucknow-I/2026-27 (Recall-1) for the work of "Provision of civil work for Tubewell for Newly Constructed veer Nari Awas at CRPF, Group Centre, Bijnour, Lucknow. (SH:- New Tubewell)"

Dear Sir,

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

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

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

Yours faithfully

Executive Engineer(L)-I,
CPWD, Lucknow.

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To,

The Executive Engineer,
(Lucknow)-I,
CPWD, Lucknow.

Sub: Submission of Tender for the work of "Provision of civil work for Tubewell for Newly Constructed veer Nari Awas at CRPF, Group Centre, Bijnour, Lucknow. (SH:- New Tubewell)"

Dear Sir,

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

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

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

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

Yours faithfully

(Duly authorized signatory of the Bidder)

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To be signed by the bidder and same signatory competent / authorised to sign the relevant contract on behalf of CPWD.

INTEGRITY AGREEMENT

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

BETWEEN

President of India represented through **Executive Engineer(Lucknow)-I, CPWD, Lucknow** (Hereinafter referred as the '**Principal/Owner**', which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

AND

..... (Name and Address of the Individual/firm/Company) through ..... (Hereinafter referred to as the (Details of duly authorized signatory)

"**Bidder/Contractor**" and which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

Preamble

WHEREAS the Principal/Owner has floated the Tender (**NIT No. 55/EE/Lucknow-I/2026-27 (Recall-1)** (hereinafter referred to as "Tender/Bid") and intends to award, under laid down organizational procedure, contract for "**Provision of civil work for Tubewell for Newly Constructed veer Nari Awas at CRPF, Group Centre, Bijnour, Lucknow. (SH:- New Tubewell)"**

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

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

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

Article 1: Commitment of the Principal / Owner

1) The Principal/Owner commits itself to take all measures necessary to prevent corruption and to observe the following principles:
   (a) No employee of the Principal/Owner, personally or through any of his/her family members, will in connection with the Tender, or the execution of the Contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.

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

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

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

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

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

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

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

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

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

d) The Bidder(s)/ Contractor(s) of foreign origin shall disclose the names and addresses of agents / representatives in India, if any. Similarly Bidder(s)/Contractor(s) of Indian Nationality shall disclose names and addresses of foreign agents/representatives, if any. Either the Indian

agent on behalf of the foreign principal or the foreign principal directly could bid in a tender but not both. Further, in cases where an agent participate in a tender on behalf of one manufacturer, he shall not be allowed to quote on behalf of another manufacturer along with the first manufacturer in a subsequent/parallel tender for the same item.

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

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

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

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

Article 3: Consequences of Breach

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

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

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

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

Article 4: Previous Transgression

1) The Bidder declares that no previous transgressions occurred in the last 5 years with any other Company in any country confirming to the anticorruption approach or with Central Government or State Government or any other Central/State Public Sector Enterprises in India that could justify his exclusion from the Tender process.
2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the Tender process or action can be taken for banning of business dealings/ holding listing of the Bidder/Contractor as deemed fit by the Principal/ Owner.
3) If the Bidder/Contractor can prove that he has resorted / recouped the damage caused by him and has installed a suitable corruption prevention system, the Principal/Owner may, at its own discretion, revoke the exclusion prematurely.

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

1) The Bidder(s) / Contractor(s) undertake(s) to demand from all subcontractors a commitment in conformity with this Integrity Pact. The Bidder / Contractor shall be responsible for any violation(s) of the principles laid down in this agreement/Pact by any of its Sub-contractors/sub-vendors.
2) The Principal / Owner will enter into Pacts on identical terms as this one with all Bidders and Contractors.
3) The Principal / Owner will disqualify Bidders, who do not submit, the duly signed Pact between the Principal/Owner and the bidder, along with the Tender or violate its provisions at any stage of the Tender process, from the Tender process.

Article 6- Duration of the Pact

This Pact begins when both the parties have legally signed it. It expires for the Contractor / Vendor 45 Days after the completion of work under the contract or till the continuation of defect liability period, whichever is more and for all other bidders, till the Contract has been awarded.

If any claim is made/lodged during the time, the same shall be binding and continue to be valid despite the lapse of this Pacts as specified above, unless it is discharged/determined by the Competent Authority, CPWD.

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Article 7- Other Provisions

1) This Pact is subject to Indian Law, place of performance and jurisdiction is the **Head quarters of the Division** of the Principal / Owner, who has floated the Tender.
2) Changes and supplements need to be made in writing. Side agreements have not been made.
3) If the Contractor is a partnership or a consortium, this Pact must be signed by all the partners or by one or more partner holding power of attorney signed by all partners and consortium members. In case of a Company, the Pact must be signed by a representative duly authorized by board resolution.
4) Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
5) It is agreed term and condition that any dispute or difference arising between the parties with regard to the terms of this Integrity Agreement / Pact, any action taken by the Owner/Principal in accordance with this **Integrity Agreement/ Pact or interpretation** there of shall not be subject to arbitration.

Article 8- LEGAL AND PRIOR RIGHTS

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

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

(For and on behalf of Principal/Owner)

(For and on behalf of Bidder/Contractor)

WITNESSES:

1. . ..... (Signature, name and address)
2. . ..... (Signature, name and address)

Place: **-**
Dated:

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CPWD-7

GOVERNMENT OF INDIA
CENTRAL PUBLIC WORKS DEPARTMENT

PERCENTAGE RATE TENDER & CONTRACT FOR WORKS

(A) Tender for the work of: **Provision of civil work for Tubewell for Newly Constructed veer Nari Awas at CRPF, Group Centre, Bijnour, Lucknow. (SH:- New Tubewell)**

(i) To be uploaded by **15:00 Hrs.** on **29.10.2026** at **https://etender.cpwd.gov.in**

(ii) To be opened in presence of tenderers who may be present at **15:30 Hrs.** on **29.10.2026** in the office of **Executive Engineer(Lucknow)-I, CPWD, Lucknow.**

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 **Thirty (30) Days** from the due date of its opening and not to make any modification in its terms and conditions.

A sum of **₹ 15,119/-** is hereby forwarded in Cash/Receipt Treasury Challan/Deposit at call Receipt of a Scheduled Bank/Fixed deposit receipt of scheduled bank/demand draft of a scheduled bank/bank guarantee issued by scheduled bank as earnest money. If I/we, fail to furnish the prescribed performance guarantee or fail to commence the work 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 of commence work as specified, I/we agree that President of India or his successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said earnest money and the performance guarantee absolutely, otherwise the said earnest money shall be retained by him towards security deposit to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to therein and to carry out such deviations as may be ordered, up to maximum of the percentage mentioned in Schedule 'F' and those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.3 of the tender form.

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Further, I/We agree that in case of my self / our self becoming label for action as per my/our EMD declaration or forfeiture of 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 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 _____**_____ Signature of contractor
Postal Address **

Witness: **
Address: **
Occupation: **

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ACCEPTANCE

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

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

(a) _____

(b) _____

(c) _____

For & on behalf of President of India

Signature

……..

Dated: Designation

……

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PROFORMA OF SCHEDULES

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

SCHEDULE 'A'

Schedule of quantities **(Attached Page No. 89 to 92)**

SCHEDULE 'D'

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

SCHEDULE 'E'

Reference to General Conditions of contract – Applicable GCC is GCC for Construction works 2023, as modified and corrected up to previous day of last date of submission of bids.

Name of Work: Provision of civil work for Tubewell for Newly Constructed veer Nari Awas at CRPF, Group Centre, Bijnour, Lucknow. (SH:- New Tubewell)	
Estimated cost of the work:	
Civil Items of Work	**Rs. 7,55,973/-**
~~**Electrical Items of Work**~~	
Total	**Rs. 7,55,973/-**
Earnest money	**Rs. 15,119/- (to be returned after receiving Performance Guarantee)**
Performance Guarantee	a) 5% of the tendered value or Estimated Cost Put to Tender (ECPT) (whichever is higher) b) Where the tendered amount is less than eighty percent (80%) of the Estimated Cost Put to Tender (ECPT), the Performance Guarantee, in addition to the requirement under (a) above, shall be increased by an amount equal to the difference between eighty percent (80%) of the ECPT and the tender amount.
Security Deposit	2.5% of the tendered value

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SCHEDULE 'F'

GENERAL RULES & DIRECTIONS:

Officer inviting tender	**Executive Engineer, Lucknow-I, C.P.W.D., Lucknow**

Definitions:

2(vii)	**Engineer-in-Charge**	
	For Civil items of work	**Executive Engineer, Lucknow-I, C.P.W.D., Lucknow**
	~~For Electrical items of work~~	~~**Executive Engineer (Elect.), Lucknow, C.P.W.D., Lucknow**~~
2(viii)	Accepting Authority	**Executive Engineer, Lucknow-I, C.P.W.D., Lucknow**
2(ix)	Percentage on cost of materials and labour to cover all overheads and profits	15%
2(x)	**Standard Schedule of Rates:**	
(a)	Civil Items of Work:	Delhi Schedule of Rates 2023 & Market rates.
(b)	~~Electrical Items of Work:~~	~~As mentioned in electrical part~~
2(xi)	Department:	Central Public Works Department
9(ii)	Standard CPWD contract Form:	GCC 2023 for Construction Works, CPWD Form-7/8 as amended/modified up to previous day of last date of submission of the bids.

Clause 1	i) Time allowed for submission of Performance Guarantee, Programme Chart (Time and Progress) and applicable labour licenses, registration with EPFO, ESIC and BOCW Welfare Board or proof of applying thereof from the date of issue of letter of acceptance.	07 Days
	ii) Maximum allowable extension **with late fee @ 0.1% per day of Performance Guarantee amount beyond the period as provided in (i) above**	03 Days

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Clause 2	Authority for fixing Compensation under Clause 2	**Chief Engineer (Lucknow), CPWD, Lucknow.**

Clause 5	**Applicable**	
	(i) Number of days from the date of issue of letter of acceptance for reckoning date of start	**07 Days or date of handing over of site which ever is later.**
	(ii) Time allowed for execution of work	**01 Month**
	(iii) Mile stones	**See on Page No. 88**

Clause 5.1 (iv) : Monthly time and progress chart containing upto date progress of work shall be for work done during previous month submitted by the agency on or before 5th day of every month failing which, a non refundable recovery @ Rs. 5000/- per week basis shall be made from running account bill without any notice in this regard.

Clause 5.4

(i)	**Authority to convey the decision of shifting of mile stone and extension of time- Executive Engineer, Lucknow-I, C.P.W.D., Lucknow.**
(ii)	**Authority to decide rescheduling of mile stone and extension of time- Chief Engineer (Lucknow), CPWD, Lucknow or successor thereof or Higher authority.**
(iii)	**Shifting of date of start in case of delay in handing over of site- Chief Engineer (Lucknow), CPWD, Lucknow or successor thereof or Higher authority.**

PROFORMA OF SCHEDULE clause 5 Schedule of handing over the 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	10 (Ten) days
Part-B	Portion with encumbrances	NA	NA
Part-C	Portion dependent on work of other agencies	NA	NA

Clause 6 : Computerized Measurement Book/ Electronic Mode of Measurement : EMB through CPWD ERP Portal.

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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. 7.50 lakh**
Clause 7A	Whether Clause 7A shall be applicable	**Yes** (No Running Account Bill shall be paid for the work till the applicable labour licences, registration with EPFO, ESIC and BOCW Welfare Board, whatever applicable are submitted by the contractor to the Engineer-in-charge).
Clause 8	Competent Authorities to inspect and issue Part/ Final Completion Certificate	**Executive Engineer (Lucknow-I), CPWD, Lucknow or successor thereof or Higher authority**
Clause 8A	Authority to decide compensation on account if contractor fails to submit completion plans.	**Chief Engineer (Lucknow), CPWD, Lucknow**
~~**Clause 10A**~~	~~List of testing equipment to be provided by the contractor at site lab.~~	~~See as on Page~~
Clause 10 B (ii)	Whether clause 10-B (ii) shall be applicable.	**Not Applicable**

Clause 10C **Not Applicable**

~~Component of Labour expressed as percent of total value of work~~	~~25%~~

Clause 10CC : Not Applicable

Clause 11	**Specification to be followed for execution of work:**
For Civil items of work	CPWD Specifications 2019 Vol. 1 and Vol. 2 with correction slips issued up to day previous to last date of submission of tender (Hereinafter called CPWD specifications also)
~~For Electrical items of work~~	~~As per electrical component~~

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Clause 12		
Type of work	**Construction Work**	
12.2	**Deviation limit beyond which Clause 12.2 shall apply**	**100%**

Clause 16	**Competent Authority for Deciding reduced rates:**	
	For Civil items of work	**Chief Engineer (Lucknow), CPWD, Lucknow or successor thereof or Higher authority.**
	~~For Electrical items of work~~	~~**Chief Engineer (Lucknow), CPWD, Lucknow or successor thereof or Higher authority.**~~
Clause 18	List of machinery, tools & plants to be deployed by the contractor at site as & when required	**N.A**
Clause 19C	**Authority to decide penalty for each default**	**Chief Engineer (Lucknow), C.P.W.D., Lucknow or successor thereof.**
Clause 19D	**Authority to decide penalty for each default**	
Clause 19G	**Authority to decide penalty for each default**	
Clause 19K	**Employment of skilled / semi skilled workers.**	**Not Applicable**

Clause 25 Conciliator /Arbitrator

(i) Conciliator	**:**	**ADG(Lucknow), CPWD, Lucknow**
(ii) Arbitrator Appointing Authority	**:**	**Chief Engineer (Lucknow)**
(iii) Place of Arbitration	**:**	**Lucknow**

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

~~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~~	~~1 of Major Component~~	~~Project Manager cum Planning/Quality/Site/billing Engineer~~	~~2 Or 5 respectively~~	~~1~~	~~Rs. 15,000/- per month per person~~	~~Rs. Fifteen Thousand per month per person~~

Assistant Engineers retired from Government services that are holding Diploma will be treated at par with Graduate Engineers**. Diploma holder with minimum 10 years 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 2023** printed by CPWD	**D.S.R. 2023 with** correction slips up to day previous to the last date of submission of bids
ii)		**Variations permissible on theoretical quantities**	
	a)	Cement for works with estimated cost put to tender not more than Rs. 25 lakhs.	**3% plus/minus**
		For works with estimated cost put to Tender is more than Rs. 25 lakhs	**2% plus/minus**
	b)	Bitumen all works	**2.5% plus & nil on minus side.**
	c)	Steel reinforcement and structural steel Sections for diameter, section and category.	**2% plus/minus.**
	d)	All other materials	**Nil**

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SALIENT/MANDATORY REQUIREMENTS FOR THE TENDER

Name of Work: **Provision of civil work for Tubewell for Newly Constructed veer Nari Awas at CRPF, Group Centre, Bijnour, Lucknow. (SH:- New Tubewell)**

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

2 The contractor shall quote the percentage rates in figures and words accurately so that there is no discrepancy in rates written in figures and words.

3 Time allowed for the execution of work is **01 Month.**

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

5 Contractor has to arrange and install **field laboratory** during the currency of work and nothing extra will be paid on this account.

6 Quality of the project is of utmost importance. This shall be adhered to in accordance with the provisions of **CPWD specifications 2019 Vol. I & II with upto date correction slips** and guidelines given in the relevant paras.

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

8 **Cement shall be arranged by the contractor himself.**

9 **Steel Reinforcement shall be arranged by the contractor himself.**

10 Contractor has to use specialized agencies for specialized items of works such as water proofing, aluminium works, structural glazing, PVDF, ACP and other specialized items as mentioned in the tender documents. Only those specialized agencies/firms who have satisfactorily executed works as per following criteria during last seven years are eligible for the specialized works-

~~**(i) FOR water proofing works -**~~
~~(a) Three works each costing not less than Rs. _____/-~~

~~Or~~

~~(b) Two works each costing not less than Rs. _____/-~~

~~Or~~

~~(c) One work costing not less than Rs._____/-~~

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~~**(ii) FOR Aluminium works –**~~

2(a) ~~Three works each costing not less than 40% of Rs.~~
= Rs.

Or

(b) ~~Two works each costing not less than 50% of Rs.~~
= Rs.

Or

(c) ~~One work costing not less than 80% of Rs.~~
= Rs.

Approval of the specialized agencies for each specialized work shall be obtained from the Engineer-in-Charge within one month of award of work. Even if, such specialized items of work shall be executed by the specialized agencies, the work shall be deemed to be executed by the tenderer for all purposes and the responsibility of the quality of items of works executed etc. shall continue to be that of the tenderer only.

11 Contractor has to deploy required Plant and machinery on the project. In case the contractor fails to deploy the plant and machinery whenever required and as per the direction of the Engineer-in-charge, he (Engineer-in-charge) shall be at a liberty to get the same deployed at the risk and cost of the contractor.

12 Contractor has to provide reinforcement cover blocks made of approved proprietary pre packed free flowing mortars (Conbextra as manufactured by M/s Fosroc Chemical India Ltd. or approved equivalent) of high early strength.

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

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PART-B

SPECIAL CONDITIONS OF THE WORK

1 GENERAL

1.1 Wherever any reference to any Indian Standard Specifications of BIS/BS/ASTM occurs in the documents relating to this contract, the same shall be inclusive of all amendments issued there-to or revisions thereof, if any, up to the day previous to the date of receipt of tenders.

2. Unless otherwise specified, the agreement rates for all items of work of the schedule of quantities are for all heights, depths, leads and lifts involved in the execution of work.
3. The contractor shall make his own arrangements for obtaining electric connection for carrying out any maintenance activity and make necessary payment directly to the department concerned.
4. Other agencies working at site will also simultaneously execute the work entrusted to them and the contractor shall offer necessary co-operation wherever required to other agencies.
5. ~~In the event of failure on the part of contractor to remove the splashes and the paint mark, compensation at the following rates shall be levied.~~

~~**Description**~~	~~**For Splashes of Internal finishing**~~	~~**For Splashes of paint/ paint marks**~~	~~**For splashes of External finishing**~~
~~**ICAR-ISRI**~~	~~₹ 1500/- for each Qtr.~~	~~₹ 1500/- for each Qtr.~~	~~₹ 1500/- for each Qtr~~

6. On account of security and consideration of the convenience of the residents / guests consideration, there could be some restrictions on the working hours, movement of vehicles for transportation of materials. The contractor shall be bound of follow all such restrictions and adjust the program for execution accordingly.
7. The work shall be carried out in a manner complying in all respects with the requirements of relevant bye laws of the local bodies, labour laws, minimum wages act, workmen compensation act and other statutory laws enacted by Central Govt. as well as State Govt.
8. ~~All malba/rubbish/silt/waste/garbage etc. generated due to any operation from houses and other open spaces whatsoever shall be disposed off on daily basis by the contractor to the specified common disposal point and nothing extra shall be paid on this account. After the collection of full truck load of the said malba (aprox 4.5 cubic metres) or every alternate day whichever is earlier, the same shall be disposed of by the contractor to the authorized municipal dhalao/dumping ground. In case of non-removal/disposal in the specified period, the Engineer-in-charge may get it removed at risk and cost of the contractor. In addition to this, a sum of **Rs. One Thousand per day shall be recovered from the contractor. Decision of Engineer-in-charge as regard to delay shall be final and binding.**~~
9. 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 staff in the campus.
10. ~~The engineers who are employed by the contractor under Clause-32 of the agreement shall be present at the site from 9:00 AM to 5:00 PM on all working days and shall~~

~~carry mobile telephone(s) to enable the Engineer in Charge to have easy and quick communication. Message / instructions communicate to the engineers employed by the contractor at site on any social networking platform shall be deemed to have been conveyed to the contractor. Nothing extra shall be paid to the contractor on this account and his quoted rates will be deemed to be inclusive of all the cost involved in this obligation.~~

11. The Contractor shall employ their regular staff in the works and credentials of employees shall have to be given by the Contractor. No claim of Contractors employees/staff employed for subject work in any form shall be entertained by the department. Police verification of every staff deployed by the Contractor shall be got done by the Contractor compulsorily and a copy of police verification shall be provided to Engineer-in-Charge after which an identity card duly countersigned by Engineer-in-Charge or his representative shall be issued to each employee of the Contractor for proper identification. In case, the contractor removes an employee from the site, it will be the responsibility of the contractor to get back the identity card of such employee. The contractor shall be responsible for any misuse of the identity card by any of his employees.

12. The Contractor shall provide uniform to each employee/worker along with Name Badge and CPWD Logo and appropriate Shoes within 15 days of start of work. In the event of non compliance, a recovery of Rs. 50/- per day per Employee/worker shall be made. The employee/worker engaged by the Contractor under this contract shall wear neat and clean uniforms along with name badges (duly countersigned by CPWD) and CPWD Logo as approved by Engineer-in-Charge. The Contractor shall also provide the basic PPEs (Personal Protection Equipments)/ Safety equipment like Helmet, Safety belt/harness, Safety Shoes, Gloves etc. to each worker and supervisor, whosoever is directly connected with the work. The contractor shall also comply with guidelines / instructions or directions issued by central or state government for safety measures against COVID-19 as applicable to work site. The cost of compliance with these measures shall be demed to be included in the rates tendered by the contractor and nothing extra shall be paid.

13. All materials, T & P consumable and contingent articles required for the work shall be arranged by the contractor. Materials used shall be in following order of preferences:-
    i. Under the Nomenclature of the item.
    ii. As per list of preferred makes of materials attached (Annexure-VII).
    iii. CPWD specifications
    iv. ISI marked.
    v. Approved by NIT issuing authority CPWD.
    vi. As per direction of the Engineer-in-Charge.

    Material of specifications richer than the specified materials and compatible to the work may be permitted by Engineer-in-charge without any extra cost at the request of the contractor. However, if market rate of such replaced material is less than market rate of specified material, cost adjustment shall be effected from the contractor's bill. Decision of Engineer-in-charge as to market rates shall be final and binding.

14. Staff employed by the contractor shall be well behaved, Polite & courteous. Any complaint against staff on behavior shall be taken very seriously and such staff shall

be replaced by the contractor on demand from Engineer-in-Charge. The decision of Engineer-in-Charge shall be final and binding in this case.

15. The contractor shall make all safety arrangements required for the labour engaged by him at his own cost. All consequences due to negligence or due to lapse of security/safety or otherwise shall remain with the contractor. The department shall not be responsible for any mishap, injury, accident or death of the contractor's staff. No claim in this regard shall be entertained /accepted by the department.
16. Contractor shall be fully responsible for any damages caused to Govt. property or allotee property by him or his labour in carrying out the work and the same shall be rectified by the contractor at his own cost.
17. GST/VAT/WCT/Income Tax/other statutory taxes/ levies as applicable shall be recovered from the contractor's bill. The stamp duty if any shall be borne by the contractor.
18. Chases, holes & drilling works etc. shall be done using only power operated tools.
19. In the case of discrepancy between the Schedule of Quantities, the specifications and/or the Drawings, the following order of preferences shall be observed:-
    i. Description of Schedule of Quantities
    ii. Additional specifications and special conditions, if any.
    iii. Contract clauses of GCC 2020 for construction work as amended/modified up to day previous to the last date of submission of bids / General conditions of contract for Central P.W.D. works 2020 Form.
    iv. CPWD specifications.
    v. Architectural drawings.
    vi. Indian standards specification/BIS.
    vii. Sound engineering practice or manufacturers' specifications.
    Any references made to any Indian standards specifications shall imply to the latest version of that standard, including such revisions/amendments as issued by the Bureau of Indian standards up to last date of receipt of tenders. The contractor shall keep at his own cost all such publications of relevant Indian standards applicable to the work at site.
20. The contractor shall have to carry out the work other than day to day maintenance according to program given by the Engineer-in-Charge or his representative. The contractor shall not carry out any work in any building without permission of Engineer-in-Charge. The contractor shall adhere to this programme failing which he shall be wholly responsible. No claim for idle labour on any account shall be entertained. The contractor shall depute his representative daily to the site of work. His name and signature shall be attested by the contractor for record in the department.
    (i) The premises and portions of premises where the work is to be executed on any day shall be got approved from the representative of Engineer-in-Charge at the site of work in writing. No work shall be carried out in any premises without the approval of the representative of the Engineer-in-Charge.
    (ii) Any work carried out without the approval of the representative of the Engineer-in-Charge at the site of work shall be liable to be rejected and will not be measured and paid for.
    (iii) The material such as paints, varnish, distempers, water proofing cement paint and primers etc. as required shall be of approved brand and manufacturers, and

of required shade and conforming in all respects to the relevant I.S. specifications.

(iv) The manufacturing date and batch No. inscribed or printed on packs/containers by manufacturers are only acceptable for all the above said materials. Fresh material shall be brought at site as far as possible .The material shall be used within it's shelf-life as prescribed by the manufacturer. Any material which has out lived it's life shall not be permitted to be used in the work and removed immediately from the site. The decision of the Engineer-in-Charge shall be final & binding.

(v) The contractor shall get the shades of all types of paints, distemper, water proofing cement paint etc. approved from the Engineer-in-Charge before procurement of materials.

(vi) The paints/other material shall be issued by the Junior Engineer/Assistant Engineer to the contractors after breaking the seal of the containers/packing and quantity to be issued shall be as per the daily requirement at the site. After day's use balance quantity of paints etc., if any left, will be returned by the contractor to the Engineer-in-Charge or his representative. After use the empty container shall have to be returned to the Engineer-in-Charge or his representative and will not de disposed off till the completion of the work.

(vii) The site for the collection and stacking of the material shall be got approved from the Engineer-in-Charge. The contractor will stack at any place other than the approved site.

(viii) Nothing extra shall be paid to the contractor for excess consumption of material.

(ix) The contractors shall quote their rates inclusive of all taxes, cartage, royalties etc, complete.

(x) The contractor shall prepare one sample of item which shall be got approved from the Engineer-in-Charge. Only on acceptance of sample work, contractor will be allowed to commence the work and sample is to be preserved with the JE-in-Charge of work till the whole work is completed. The quality of entire work should conform to the approved samples.

(xi) Contractor shall take daily instructions. A register will be maintained at the Enquiry premises for this purpose. The JE will note down the work in office to be attended to and the dates on which the work in these office is to be started. An authorized representative of the contractor will, therefore, have to visit the Enquire Office daily and note down the instructions in the register.

(xii) The contractor and/or his authorized agent should see the site order book every day and get the compliance noted by the Junior Engineer/Assistant Engineer/Engineer-in-Charge.

(xiii) All the items of work in a quarter/flat shall have to be taken up-sequentially i.e. after the patch repairs are carried out, white/colour washing will be taken in the same quarter and thereafter painting shall have to be got completed.

~~21. The scope of work includes renovation, ordinary / special repair and comprehensive maintenance with different periods of completion as **01 Month**. As contract term is for one years, for each item is to be executed as per tentative schedule of yearly breakup and the contractor has to be restricted within that quantity in that particular year in proportion. The work of Ordinary /Special Repair shall be started only after~~

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~~obtaining written instructions from Engineer-in-charge under his signature with particular details of quantities within the scope of agreement. In case there is any increase in quantities for particular item/ head, the Engineer-in-charge shall obtain the approval of NIT issuing authority before allowing excess and after ensuring availability of funds.~~

22. Any damage to the building structure, fitting or any other articles etc. done by the contractor or his workman during the execution of the work shall be made good by the contractor at his own cost.
23. The contractor shall clear the site properly before the completion of the work.
24. For each premises, the measurements as recorded in S.M.B./M.B. will be paid. Any portion of the premises such as store rooms, inside almirahs/cupboards, etc. in which white/colour wash, could not be done for any reasons, suitable deduction will be made.
25. The theoretical consumption of materials like, distemper, paint, water proof cement paint etc. shall be computed, as per the consumption co-efficient. In case of variation between the actual and the theoretical calculations action shall be taken as below:-

    In case the materials used are less than theoretical requirements the cost for the materials used less shall be recovered form the contractor at the basic rate as given in D.S.R. 2023 plus carriage plus 1% W.C. plus 15% contractor profit and over heads plus contractor's enhancement/abatement as per the clause 12 of the Agreement. For all excess use of material over the theoretical consumption no extra payment shall be made to the contractor.
26. Old doors, windows, floors, furniture, Electrical and other fitting shall be cleaned from all splashes, dust, dirt and mortars etc. The rate for the white washing/colour washing/distempering/painting etc. include the cost of removal of splashes and paint marks.

27. The cost of all the bills/running cost of Computer and its connection(s) shall be borne by the contractor. The Computer and service connections available at the Service Centre can be used by the Contractor, if he so desires.
28. The Contractor shall take immediate action to attend any complaint received on CPWD Sewa Website or assigned to him through Site Order Book/verbal instructions from Engineer-in-charge or on Telephone/ CPWD SEWA from occupants. Contractor shall endeavor to attend the complaints within the stipulated Time Frame as mentioned in CPWD Sewa Portal.
29. ~~In the CPWD E-Sewa Portal, the Complaints attended in the stipulated time frame are shown as Green & Complaints attended with moderate delay are shown in Yellow. The percentage of complaints attended in GREEN benchmark time every calendar month shall not be less than 90% in case of civil complaints as well as electrical complaints. In case of percentage of complaints attended in Green benchmark time for any calendar month falls below 90% but not less than or equal to 80 % then a lump sum amount of Rs. 20,000/- shall be recovered from Contractors bill for every such month of default from respective civil and electrical bills separately. If this percentage falls below 80% but not less than or equal to 70% in case of civil complaints as well as electrical complaints, a lump sum amount of Rs. 50,000 shall be recovered from Contractors bill for every such month of default from respective civil and electrical bills separately (The above condition shall be~~

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~~applicable for the enquiry/ station registered in CPWD e-sewa where the complaints are attended by contractor's labour only).~~

~~30. If the percentage of complaints attended in green bench mark time for any calendar month falls below 70 %, for civil complaints as well as electrical complaints, no payment shall be made to the contractor for day to day component of that work for that particular month (The above condition shall be applicable for the enquiry/ station registered in CPWD e-sewa where the complaints are attended by contractor's labour only).~~

~~31. Main agency shall ensure that the day to day complaints are attended timely and there is satisfaction among the allottees. In case there is default of not complying to the bench mark standard in respect of timely attending the complaints and satisfaction level then the Engineer-in-charge reserves the right to ask the main agency to replace the sub agency duly fulfilling the eligibility criteria.~~

~~32. The reports generated by CPWD Sewa every month shall form the basis of above recoveries and shall be binding on the Contractor. No dispute on this matter shall be entertained.~~

TARGET TIME FRAME FOR ATTENDING COMPLAINTS

~~S.No.~~	~~Complaint Type~~	~~Time~~
~~1.~~	~~Emergency Complaints (blocked drains, no water, no electricity, leakage current etc.)~~	~~3 Hours~~
~~2.~~	~~Minor Complaints (cleaning of drains, water overflow, rewinding of fans & motors etc.)~~	~~2 Days~~
~~3.~~	~~Major Complaints (repairs to doors, windows, plumbing, replacement of MCCBs, repairing of APFC Panel & Fire Panel etc.)~~	~~7 Days~~
~~4.~~	~~Periodical Complaints (White washing, painting, cleaning water tanks, preventive maintenance of electrical installation etc.)~~	~~10 Days~~

(The above condition shall be for the enquiry/ station where the complaints are attended by contractor's labour only)

~~33. If the individual emergent civil/electrical complaint is not attended within Benchmark time (GREEN) as prescribed in CPWD E-Sewa then recovery of Rs 500/- (Rupees Five Hundred Only) per complaint per day of delay shall be made from the contractor's bill (The above condition shall be for the enquiry/ station where the complaints are attended by contractor's labour only).~~

~~34. Quick Response System (QRS) shall be provided for 24x7 for maintenance work equipped with all essential spare parts for regular / emergent maintenance and all required T&P for plumbing, carpentry, sewerman tools, electrician tools i/c ladder, cables fault locator, pressure pump (to clear blockage of sewer lines or water supply lines), drilling machine (all types) and all other necessary for attending the emergent complaints etc. complete. Failure in maintaining 24x7 QRS shall attract Rs.5000.00 per day for such absences (The above condition shall be for the enquiry/ station where the complaints are attended by contractor's labour only).~~

35. All required Registers will be arranged by agency itself duly marked in chronological order. Nothing extra shall be paid on this account.

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36. The Contractor will have to arrange all the required Computer, furniture etc. at his own cost pertaining to his job and he will take all these things back only after the expiry of the agreement for which nothing extra shall be paid.

37. The Engineers, Supervisors and staff including skilled and unskilled workers of the agency shall carry mobile telephone(s) to enable the Engineer-in-charge 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 deemed to be inclusive of the expenditure towards such Mobile connections and use thereof.

38. Staff employed by the Contractor should be well behaved, polite & courteous. The worker will clean the place/site thoroughly before leaving the site while attending the complaints. Any complaint against staff on behavior will be taken seriously and such staff should be removed by the Contractor immediately from the site and arrange replacement for the same failing which the Engineer-in-Charge has to recover as per corresponding conditions in this NIT.

39. Safety of the staff employed will be the responsibility of the Contractor. It shall be the prime duty of the Contractor to provide requisite safety equipments to all the workers and supervisors for their protection. CPWD will not be responsible for any mishap, injury/accident or death of the staff. No claim in this regard shall be entertained/ accepted by the department.

40. Contractor shall be fully responsible for any damages caused to govt. property or allottee‘s property by his labour in carrying out the work and the damage shall be rectified/made good by the Contractor at his own cost.

41. The Contractor shall maintain/stock sufficient quantity of materials and spares at site to meet the requirement of attending the complaints as per direction of the Engineer-in-charge. Stores/ bins if available shall be handed over to the Contractor for storing the material. The material management shall be operated with online/LAN system narrated above. No manual system shall be accepted.

42. Operations in which assistance shall be provided by the agency to the CPWD where the work is to be done by contractor’s labour only:-
    a. Assistance for occupation and vacation for the bungalows and visit of allottees.
    b. Informing to the CPWD engineers regarding the failure in any service being provided by other departments, in so far as they affect the assets being maintained under this contract, so that they can be taken up with the concerned local body/ department for rectification.
    c. Assisting the department in detection of unauthorized encroachments in the area being maintained.
    d. In case any vacant quarter or part of quarter or unit or part of unit or residential complex etc. is found to be occupied unauthorized **a recovery @ Rs. 5000/- (Rupees Five Thousand Only) per day per quarter / unit or part thereof**, shall be levied and the contractor will also be liable for action for loss caused due to theft or any other causes, and such shall be made good by the contractor at this own cost. The repetition of such instance may attract criminal action also.

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e. Contractor shall ensure the cleanness of vacant quarter(s) till the allotment& shall be fully responsible for its watch & ward till handing over to occupant(s).
f. Contractor or his authorized representative shall be responsible for inventory like furniture, electrical items and ensure after the vacation of bungalow all the inventory items shall be in place.
g. Contractor or his authorized representative shall ensure wet cleaning inside the bungalow area and dry cleaning outside the bungalow immediately after the vacation of bungalow by the allottee.
h. Contractor or his authorized representative shall be responsible for Security and Safety vacant bungalow.
i. Contractor or his authorized representative shall ensure connectivity / availability on mobile phone round the clock.
j. Contractor shall provide alternate mobile/telephone no. for ease of communication, if so required.
k. Contractor shall ensure to attend/respond to the individual complaints within the time prescribed in CPWD e-Sewa.
l. Contractor shall follow the Department‘s Citizen Charter and Model Code of Conduct for workers behavior as decided by Engineer-in-Charge.
m. The Contractor or his Engineer at the Service Centre shall also maintain Complaint register for recording the complaints.
n. Contractor shall facilitate Visitors while they visit to Service Centre for lodging complaint in person.
o. Complaints received telephonically, personally or through a mode other than “CPWD Sewa‘ shall be entered into CPWD Sewa and attended in the same manner as prescribed for the complaints received through CPWD Sewa.

43. The contractor shall provide Cell Phone to each skilled worker for receiving and furnishing the compliance of complaints. The Cell Phone should be made compatible with e-Sewa.

44. The Contractor shall have to carry out the work other than Day to Day Maintenance according to program given by the Executive Engineer/ Assistant Engineer / Junior Engineer-in-Charge. The Contractor shall have to adhere to this program failing which he shall be wholly responsible for any inconvenience caused to the occupants. No claim for idle labour on any account shall be entertained. The Contractor shall depute his representative daily to the site of work. His name and Signature shall be attested by the Contractor for record in the department.

45. The contractor shall also assist inspection and collection of samples by Engineer-in Charge for testing. The samples of materials/ items of work required for testing by Engineer-in Charge or his representative shall be provided free of charge by the contractor. The cost incurred in collection of samples and its packing and transportation to the approved lab/field laboratory shall be borne by the contractor. The test outside field laboratory shall be got done from the laboratory approved by Engineer-in-Charge. The cost of test shall be borne by the contractor for failed samples.

~~46. The maintenance work is to be carried out in **CRPF Bijnour**, Lucknow, which include’s maintenance under all branches like Civil & Electrical.~~

~~i) The details of assets which are to be maintained and services to be provided are indicated in the nomenclature of item and “Scope of work”~~

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~~ii) Layout plan of the area is enclosed, the roads, which have to be maintained by the agency have been shown in the layout plan. Service Center will operate in full from 24x7 on all working days i/c Sundays and Gazetted Holidays. Contractor shall depute minimum required staff in night shifts as per direction of Engineer-in-charge. During the holidays, the staff deputed in the non-residential areas will be shifted to the residential areas as per direction of Engineer-in-charge. The contractor made suitable arrangement for weekly offs of workers by providing additional workers on his own cost nothing extra shall be paid by the Deptt. on account of this.~~

47. Necessary registers/complaint- attendance books duly machine numbered and authenticated by Engineer-in-Charge shall be maintained by the contractor in respect of complaints received and shall be got signed by the allottees, after attendance. All complaints must be registered in E-Sewa and compliance shall also be recorded.

48. In case of failure to meet these deadlines a compensation of **Rs. 500/- (Rs. Five Hundred only) per complaint per day will be levied from his due bills/ Security Deposit for each default to attend the complaints assigned to him. The decision of Engineer-in-Charge regarding correctness of complaint shall be final and binding** (The above condition shall be for the enquiry/ station where the complaints are attended by contractor's labour only).

49. In case of receipt of feedback from allottee regarding his complaint through CPWD as **"unsatisfactory"** and the same being confirmed upon inspection by CPWD officials, compensation **@ Rs. 500/- (Rs. Five hundred only)** per such feedback will be levied (The above condition shall be for the enquiry/ station where the complaints are attended by contractor's labour only).

50. This levy will be made after due verification of such feed back by Engineer-in-Charge and his decision in this regard shall be final.

~~51. The following facilities shall be made available to/ by the agency at the Service Center (s) :-~~

~~a) Counter (free of charge) for the receptionist to sit and receive complaints.~~

~~b) One room (free of charge) for the use of the workers and other staff deployed by the agency ……..*……..~~

~~c) All furniture etc required for contractor's staff shall be arranged by the contractor at his own cost.~~

~~d) Electric connection for general purpose at the service center already exists. Bills for the electricity consumed shall be paid by the agency and reimbursed to him. In case additional load is required for some purpose this shall be arranged by the agency.~~

~~e) The agency shall restore back the premises and other articles provided by the department to the contractor at the time of closure of the contract in good condition.~~

52. Operations in which assistance shall be provided by the agency to Engineer-in-Charge.

a) Assistance for occupation and vacation of the quarters.
b) Assisting the department in detection of unauthorized encroachments in the area being maintained.
c) Informing the Engineer-in-Charge regarding the failure of any service being provided by other agencies, in so far as they affect the assets being maintained under this

contract, so that they can be taken up with the concerned local body/departments for rectification.

~~d) The contractor shall engage computer literate staff that should be able to use computerized complaints receiving and monitoring system. The contractor will have to arrange and maintain telephone, computers along with peripherals and broadband internet connections (including standby connection from other service provider) to operate IVRS/ CPWD Sewa system. The contractor shall also pay all the bills / running cost of the computer and its peripherals, consumable, landline telephone and broadband connections etc. Land Line Telephone Nos. …….. enquiry telephone connections available at the service center can be used by the contractor if he so desires however bill will have to be paid by the contractor.~~

~~53. In case any computer operator/reception attendant/clerk/staff is absent on any day, a substitute shall invariably be provided by the contractor. Otherwise compensation shall be levied from the contractor from the payment due to him or his Security Deposit as per details below:~~

~~a) Enquiry Clerk/Supervisor/Computer Operator @ Rs. 700/- per day.~~
~~b) Skilled labour @ Rs. 650/- per day.~~
~~c) Unskilled labour @ Rs. 500/- per day.~~

54. The contractor shall be provided with an inventory list of items in campus to be maintained. The contractor shall be responsible for watch and ward of such items. The loss, if any shall be made good by the contractor at his cost. The decision of Engineer-in-Charge in this respect shall be final and binding on the contractor.

~~55. Stores and bins as available shall be handed over to the contractor for storing the materials. The following stores are available at the service centre at * .~~

56. The contractor shall provide his mobile number or the mobile number of his representative to the Engineer-in-Charge for ease of communication with the controlling staff.

57. If any dismantled material has been received after attending complaint in lieu of new material provided shall be the property of the contractor and a recovery for the same will be made from the bill of the contractor at his quoted rates.

58. Police verification of every staff deployed by the contractor shall be got done by the contractor compulsorily and a copy of police verification shall be provided to Engineer-in-Charge after which an identity card duly countersigned by Engineer-in-Charge or his representative shall be issued to each employee of the contractor for proper identification. The contractor shall provide uniform along with Badge and shoes within 15 days of start of work. In the event of non compliance a recovery of Rs. 50/- per day per employee shall be made. The employees and labours engaged by the contractor under this contract shall wear neat and clean uniforms along with name badges as approved by Engineer-in-Charge.

59. The labour deployed for attending complaints should carry necessary tool kit, container (Tasla), required for mixing any cement sand or other material and should carry with them water bottle and waste bag for collection of minor rubbish material if received during attending the complaints, so that the site of work shall remain neat and clean.

60. The contractor shall have registration with Employee's Provident Fund Commissioner and Employee's State Insurance Corporation for safeguarding interest of his workmen. He shall obtain all other necessary approvals form statutory bodies as per law in force.

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61. The contractor will arrange & store all the materials at Enquiry office, required for attending day to day maintenance complaints for at least 3 months or as decided by Engineer-in-Charge, throughout agreement period. A material at site (MAS a/c.) register shall be maintained by the contractor for materials brought at site & used in day-to day maintenance work. The MAS a/c. shall be kept at service Centre so that officers of CPWD can review the quantity and quality of material present in store. This MAS a/c. shall be the property of Engineer-in-Charge after the completion of work.
62. For the purpose of categorization of staff as skilled and unskilled, the sweepers/beldars shall be taken as unskilled; the mason/plumber/sewer man/carpenter shall be taken as skilled.
63. The contractor will maintain attendance records of the staff which can be checked by the Junior Engineer/Assistant Engineer and higher officers as & when required.
64. Cost of scaffoldings (as per specifications, wherever required to executive the work) shall be deemed to be included in rates quoted by agency. Nothing shall be paid on this account.
65. The contractor shall have to be provided services of labour on all days for door to door garbage collection. Falling which recover shall be made @ Rs. 800/- per day per person from the contractor bill. Decision of Engineer-in-Charge will be paid and binding on this account.
66. Necessary arrangement (tools & plant etc.) for door to door garbage collection, if any, to carried out the work shall be made by the contractor. Nothing shall be paid on this account.

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PARTICULAR SPECIFICATIONS & SPECIAL CONDITIONS

1. GENERAL

1.1. Wherever any reference to any Indian Standard Specifications of BIS or other International standards of ASTM / BS / EN occurs in the documents relating to this contract, the same shall be inclusive of all amendments issued there-to or revisions thereof, if any, up to the day previous to the date of receipt of tenders.

1.2. The contractor shall work according to the program of work as approved by the Engineer-in-charge, for which purpose, the contractor shall submit a program of the work within 15 days from the stipulated date of start of the work based on computer software such as MS Project/ Primavera etc. and shall update the same every fortnight. The contractor shall submit monthly progress report of the work in a computerized form. The progress report shall contain the following, apart from whatever else may be required as specified:-

a. Project information, giving the broad features of the contract of the work under the contract, and the broad structural or other details.
b. Introduction, giving a brief scope of the work under the contract, and the broad structural or other details.
c. Construction schedule of the various components of the work through a bar chart for the next three quarters (or as may be specified), showing the milestones, targeted tasks and upto date progress.
d. Progress chart of the various components of the work that are planned and achieved, for the month as well as cumulative upto the month, with reasons for deviations, if any, in a tabular format.
e. Plant and machinery statement, indicating those deployed in the work, and their working status.
f. Man-power statement, indicating individually the names of all the staff deployed in the work, along with their designations.
g. Financial statement, indicating the broad details of all the running account payments received upto date, such as gross value of work done, advances taken, recoveries effected, amounts withheld, net payments, details of cheque payments received, etc.
h. A statement showing the extra and substituted items submitted by the contractor, and the payments received against them, items pending for sanction/decision by the Department, broad details of the Bank Guarantees, indicating clearly their validity periods, broad details of the insurance policies taken by the contractor, if any, the advances received and adjusted.
i. Progress photographs, in colour, of the various items/components of the work done upto date, to indicate visually the actual progress of the work.
j. Quality assurance and quality control tests conducted during the month, with the results thereof.
k. Videography at various stages of construction right from the day of start of work to date of completion/occupation, covering all major events, inspections, visits by dignitaries etc.

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1.3. The contractor shall take instructions from the Engineer-in-charge for stacking of materials at site. No excavated earth or building materials shall be stacked on areas where the buildings, roads, services or compound walls are to be constructed.

1.4. If as per Municipal or prevailing rules of the secured campuses, the huts for labour are not to be erected at the site of work by the contractors, the contractors shall provide such accommodation at such locations as are acceptable to local bodies with all provisions concerning labour safety & sanitation as contained in the relevant clause of the contract, for which nothing shall be payable.

1.5. Unless otherwise provided in the Schedule of quantities, the rates tendered by the contractor shall be all inclusive and shall apply to all heights, lifts, leads and depths of the building and nothing shall be payable to him on this account.

1.6. The working drawings appearing at para 4(ii) of conditions of contract in the form CPWD-6, shall mean to include both architectural and structural drawings respectively. The structural and architectural drawings shall be properly correlated before executing the work. In case of any difference noticed between architectural and structural drawings, final decision, in writing of the Engineer-in-charge shall be obtained by the contractor before proceeding further.

1.7. On account of security and consideration of the convenience of the residents / guests consideration, there could be some restrictions on the working hours, movement of vehicles for transportation of materials. The contractor shall be bound of follow all such restrictions including issue of identity cards to all persons authorized by him to do work/ visit the work and adjust the program for execution accordingly. Nothing shall be payable to contractor on this account.

1.8. The contractor shall make his own arrangements for obtaining electric connections, if required, and make necessary payments directly to the department concerned.

1.9. The contractor shall conduct his work, so as not to interfere with or hinder the progress or completion of the work being performed by other contractor (s) or by the Engineer-in-Charge and shall as far as possible arrange his work and shall place and dispose off the materials being used or removed, so as not to interfere with the operations of other contractors, 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 Engineer-in-Charge. The contractor shall be responsible for any damage due to hindrance caused by him.

1.10. Cast iron pipes and fittings without ear shall be used. However, pipes and fittings with ears may be accepted without any extra payment. In such cases, clamps are not required and no extra payment shall be made for fixing the pipes in a different manner.

1.11. Any cement slurry added over base surface for bond or for continuation of concreting, for protecting reinforcement bars, its cost shall be deemed to have been included in the respective items, unless specified otherwise and nothing extra shall be payable nor extra cement shall be considered in the cement consumption on this account.

1.12. Stacking of materials and excavated earth including its disposal shall be done as per the directions of the Engineer-in-Charge. Double handling of materials or excavated earth if required at any stage shall have to be done by the contractor at his own cost.

1.13. No claim for idle establishment & labour, machinery &equipments, tools & plants and the like, for any reason whatsoever, shall be admissible during the execution of work as well as after its completion.

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1.14. Only Stainless Steel screws shall be used unless otherwise specified.
1.15. Work shall be carried out in professional manner with finished product serving the intended purpose with specified strength, durability and aesthetics.
1.16. Work activities shall be executed in well thought out sequences such that consequent activities not adversely affecting previously done work. Nothing extra shall be payable to protect the works already done.
1.17. The contractor shall prepare all the needed shop drawings well in advance and get them approved before placing the order and execution of the item.
1.18. The contractor shall not store /dump construction material or debris on metalled road and footpath.
1.19. 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.
1.20. 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.
1.21. The contractor shall ensure that all the trucks or vehicles of any kind which are used for construction purposes / or are carrying construction material like cement, sand and other allied material are fully covered. The contractor shall take every necessary precautions that the vehicles are properly cleaned and dust free to ensure that enroute their destination, the dust, sand or any other particles are not released in air / contaminate air.
1.22. The contractor shall provide mask and gloves to every worker working on the construction site and involved in loading, unloading and carriage of construction material and construction debris to prevent inhalation of dust particles.
1.23. The contractor shall provide all medical help, investigation and treatment to the workers involved in the construction of building and carry of construction material and debris relatable to dust emission.
1.24. The contractor shall ensure that C&D waste is transported to the C & D waste site only and due record shall be maintained by the contractor.
1.25. The contractor shall compulsory use of wet jet in grinding and stone cutting.
1.26. The contractor shall comply all the preventive and protective environmental steps as stated in the MoEF guidelines, 2010.
1.27. The contractor shall carry out on-Road-Inspection for black smoke generating machinery. The contractor shall use cleaner fuel.

2.0. FLOORING, SKIRTING, VENEERING, DADO, TREADS & RISERS OF STEPS, JAMBS, SILLS & SOFFITS

2.1. Nothing extra shall be payable for using combination of marble, granite and kota in the required pattern at various locations unless otherwise specified. Nothing extra shall be paid for cutting masonary /RCC/CC so as to achieve required projection of skirting from the finishes wall surface.

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2.2. Flooring in toilets, verandah, kitchen, courtyard and at other places if required shall be laid to the required slope/gradient as per the directions of the Engineer-in-Charge and nothing extra shall be paid on account of the same.

2.3. The pattern, spacing and locations of joints shall be as per drawings and direction of the Engineer-in-Charge and nothing extra shall be paid on account of the same.

3.0. SPECIALISED ITEMS

3.1. LIST OF SPECIALISED ITEMS:

1.1. Water proofing treatment work

3.2. Procedure for Execution of the Specialized Items:

Such items should be got executed only through associated agencies specialized in these fields. The contractor shall indicate the name(s) of his associated specialized agencies those fulfilling the conditions described in NIT, asper direction and approval of Engineer-in-Charge.

3.3 Specialized Agencies

3.3.1 List of Specialized Agencies for certain items in case of Civil works have been approved by the competent authority and given in the tender documents unless specified otherwise. The contractors shall quote the rates after careful study of contract conditions, specifications, drawings & schedule of quantities.

3.3.2 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.

3.3.3 For specialized items, the main contractor cannot work as a specialized agency unless his name is already included in the list of approved specialized agencies for these items. The contractor shall get these items executed through the specialized agencies as approved by competent authority.

3.4 RATES

3.4.1 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, barriers, 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, working at all depths, height, lead, lift, levels and location etc. and any other

unforeseen but essential incidental works required to complete this work. Nothing extra shall be payable on this account and no extension of time for completion of work shall be granted on these accounts.

3.4.2 The rates quoted by the tenderer, shall be firm and inclusive of all taxes and levies (including works contract tax but excluding service tax).

3.4.3 No foreign exchange shall be made available by the Department for importing (purchase) of equipment, plants, machinery, materials of any kind or any other items required to be carried out during execution of the work. No delay and no claim of any kind shall be entertained from the Contractor, on account of variation in the foreign exchange rate.

3.4.4 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 or any other activity which is necessary (for execution of work and as directed by Engineer-in-Charge), shall be deemed to be included in rates quoted by the Contractor, for various items in the schedule of quantities. Nothing extra shall be payable on these accounts. 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 & other storage, fabrication yard, site laboratory, water tank etc.

3.4.5 On account of security and consideration of the convenience of the residents / guests consideration, there could be some restrictions on the working hours, movement of vehicles for transportation of materials. The contractor shall be bound of follow all such restrictions including issue of identity cards to all persons authorized by him to do work/ to visit the work and adjust the program for execution accordingly. 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.

3.4.6 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.

3.5 CLEANLINESS OF SITE

The Contractor shall not stack building material / malba / muck/ rubbish on the land or road of the local development authority or on the land owned by the others, as the

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

3.6 INSPECTION OF WORK

In addition to the provisions of relevant clauses of the contract, the work shall also be open to inspection by the Chief Engineer/Superintending Engineer and other 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 Site Engineer duly accredited in writing, to be present for that purpose Senior Officers of CPWD Authorities shall be inspecting the on-going work at site at any time with or without prior intimation.

3.7 GUARANTEE FOR WATER PROOFING TREATMENT:

The contractor shall give Ten years performance guarantee in the prescribed proforma for the water proofing treatment. In addition 10% (Ten percent) of the cost of water proofing items shall be retained as security, to watch the performance of the work executed. However, half of this amount (withheld) shall be released after five years, after the completion of the work, if no defect comes to notice. If any defect is noticed during the guarantee period, it shall be rectified by the contractor within Seven days after serving the notice by Department and, if not attended to, the same shall be got done through other agency at the risk and cost of the contractor. In any case the guaranteeing firms during the guarantee period shall inspect and examine the treatment once every year and make good any defect observed and Certificate to that effect shall be submitted to Department every year. However, the 10 % security deposit referred above can be replaced with bank guarantee of equivalent amount for relevant period.

4.0 Stainless Steel Railing/Handrails:

4.1 GENERAL

The contractor shall apply all materials, labour, tools, ladders, scaffolding and other equipments necessary for the completion and protection of all stainless steel work.

4.2 MATERIAL

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All stainless steel pipes and plates shall conform to AISI 304 in 18/8 composition. 18 will be chromium and 8 will be Nickel and carbon content will be 0.03 maximum and the relevant clauses associated with this grade of steel to be followed.

4.3 SURFACE FINISH

Surface finish of all the stainless steel materials will be in 240 grit satin finish / matt finish.

4.4 ACCESSORIES

Fixing will be done by stainless steel expansion bolts of approved size and make as per Engineer-in-charge and welding to be done by using organ welding rods and the surface being duly finished and cleaned by K2 passivation, which is nitric acid plus floric acid solution treatment by which the chances of corrosion will be eliminated and any burn out makes on the metal will also be eliminated.

4.5 COATING MASS

All stainless steel material will have to be coated by a solution of Inox to avoid finger in prints and avoidance of settlement of environment / atmospheric dust.

4.6 MEASUREMENT

All the stainless steel finished parts shall be weighed correct to a gram and paid on weight basis.

4.7 RATE

The rate shall include the cost of all the materials, machinery and labour involved in all the operations described above including cartage, lifts and all the taxes including GST, Entry tax, Octroi etc. as applicable.

Any incidental additional requirements for execution of this item to the satisfaction of Engineer-in-Charge shall also be treated as included in the item and shown in attached drawing and nothing extra will be paid for such extra work.

4.9.5 CO-OPERATION WITH OTHER CONTRACTORS/SPECIALIZED AGENCIES / SUB-CONTRACTORS

4.9.5.1 The Contractor shall take all necessary precautions to prevent any nuisance or inconvenience to the owners, tenants or occupants of the adjacent properties and to the public in general .The Contractor shall take all care, as not to damage any other adjacent property or other services running adjacent to the plot. If any damage is done, 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 equipments for execution of the work, so as to cause minimum environmental pollution of any kind during construction. Further, the Contractor shall take all precautions to abide by the environmental related restrictions imposed by Uttar Pradesh Pollution control board, Govt. of Uttar Pradesh.

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Utmost care shall be taken to keep the noise level to the barest minimum so that no disturbance as far as possible is caused to the occupants / users of adjoining buildings. No claim what so ever on account of site constraints mentioned above or any other site constraints, inadequate availability of skilled, semi-skilled or unskilled workers in the near vicinity, non-availability of construction machinery spare parts and any other constraints not specifically stated here, shall be entertained from the Contractor. Therefore, the Tenderers are advised to visit site and get first-hand information of site constraints. Accordingly, they should quote their tenders. Nothing extra shall be payable on this account.

4.9.5.2 The Contractor shall cooperate with and provide the facilities to the sub-Contractors and other agencies working at site for smooth execution of the work. The contractor shall indemnify the CPWD.

4.9.5.3 Against any claim(s) arising out of such disputes. The Contractor shall:

i. Allow use of scaffolding, toilets, sheds etc.
ii. Properly co-ordinate their work with the work of other Contractors.
iii. Provide control lines and benchmarks to his Sub-Contractors and the other Contractors.
iv. Provide electricity and water at mutually agreed rates.
v. Provide hoist and crane facilities for lifting material at mutually agreed rates.
vi. Co-ordinate with other Contractors for leaving inserts, making chases, alignment of services etc. at site.
vii. Adjust work schedule and site activities in consultation with the Engineer-in-Charge and other Contractors to suit the overall schedule completion.
viii. Resolve the disputes with other Contractors/ sub-contractors amicably and the Engineer-in-Charge shall not be made intermediary or arbitrator.

4.9.5.4 The work should be planned in a systematic manner so as to ensure proper co-ordination of various disciplines viz. sanitary & water supply, drainage, rain water harvesting, electrical, fire fighting, information technology, communication & electronics and any other services.

4.9.5.5 Other agencies will also simultaneously execute and install the works of sub-station / generating sets, air-conditioning, lifts, etc. for the work and the contractor shall afford necessary facilities for the same. The contractor shall leave such recesses, holes, openings trenches etc. as may be required for such related works (for which inserts, sleeves, brackets, conduits, base plates, clamps etc. shall be supplied free of cost by the department unless otherwise specifically mentioned) and the contractor shall fix the same at time of casting of concrete, stone work and brick work, if required, and nothing extra shall be payable on this account.

4.9.5.6 The contractor shall conduct his work, so as not to interfere with or hinder the progress or completion of the work being performed by other contractor(s) or by the Engineer-In-Charge and shall as far as possible arrange his work and shall place and dispose off the materials being used or removed so as not to interfere with the operations of other contractor or he shall arrange his work with that of the others in

an acceptable and in a proper co -ordination manner and shall perform it in proper sequence to the complete satisfaction of others.

5.0 CONSUMPTION OF PIG LEAD AND IT'S VARIATION FOR SCI SANITARY PIPES AND FITTINGS AS PER IS:3989

In order to ensure that adequate lead is poured properly into the joints and to control waste in use of lead for caulking of joints of SCI pipes and fittings, at the beginning of the work three or four sample joints shall be made and the quantum of lead per joint approved by the Engineer in charge. The actual consumption of lead should be within variation of 5% of the approved sample job. This variation includes allowances of wastage also. If the actual consumption of pig lead is less than the required consumption worked out on the above basis, the recovery on account of less use of lead shall be made from the contractor at market rate to be determined by the Engineer-in-charge, whose decision in the matter shall be final & binding.

6.0 FIXING OF SCI/CI PIPE

The SCI/CI pipes and G.I. pipes, wherever necessary, shall be fixed to RCC columns, beams etc. with rawl plugs, or appropriate fasteners as approved by Engineer-in-Charge, and nothing extra shall be payable on this account. GI pipes shall be wherever made to pass through wall / concrete then it shall be done using protective sleeves alround the pipes to protect it from damage, nothing extra shall be payable on this account.

7.0 CONDITION FOR CEMENT:-

7.1 The Contractor shall procure 43 grade Ordinary Portland cement (conforming to IS : 8112) or Portland slag cement (conforming to IS : 455) or Portland Pozzolana Cement (PPC) (Fly ash based) – conforming to IS : 1489 (Part-I) as required in the work, from reputed manufactures of cement such as ACC, Ultratech, Ambuja & J.K. Cement or from any other reputed cement Manufacturer having a production capacity not less than one million tonnes per annum as approved by ADG for that sub region.

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 issue in accordance with provisions of relevant BIS codes. In case test results indicate that the cement arranged by the Contractor does not conform to the relevant BIS codes, the same shall stand rejected and shall be removed from the site by the Contractor at his own cost within a week's time of written order from the Engineer-in-charge to do so.

If Portland Pozzolana cement or Portland slag cement is used, suitable modification in de-shuttering time etc. shall be done if need be as per specifications and standards and as directed by Engineer – in – charge and nothing extra shall be payable on this account.

No extra payment / deduction shall be made from the payment to the contractor for using any of the above type of cement.

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

7.3 For each grade / type, cement bags shall be stored in two separate godowns, one for tested cement and the other for fresh cement (under testing) constructed by the contractor at site of work as per sketch shown in General conditions of contract for CPWD works 2020 with weather proof roofs and walls, for which no extra payment shall be made. The size of the cement godown is indicated in the sketch for guidance only. The actual size of godown shall be as per site requirements and as per the direction of the Engineer in charge and nothing extra shall be paid for the same. The decision of the Engineer-in-charge regarding the capacity required/needed will be final. However, the capacity of each godown shall not be less than 100 tonnes. Each godown shall be provided with a single door with two locks. The keys of one lock shall remain with CPWD Engineer-in-charge or his authorized representative and that of other lock with the contractor at the site of work so that the cement is issued from godown according to the daily requirement with the knowledge of both the parties. The account of daily receipt and issue of cement shall be maintained in a register in the prescribed Proforma and signed daily by the contractor or his authorized agent in token of its correctness.

7.4 The cement shall be got tested by 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. The cost of tests shall be borne by the contractor / Department in the manner indicated below :-

(a) By the contractor, if the results show that the cement does not conform to relevant BIS codes.

(b) By the Department, if the results show that the cement conforms to relevant BIS codes.

7.4.1 All other charges of sampling, packing and transportation of sample shall also be borne by the Contractor.

7.5 The actual issue and consumption of cement on work shall be regulated and proper accounts maintained separately for each type of cement, as provided in clause 10 of the contract. The theoretical consumption of cement shall be worked out as per procedure prescribed in Clause 38 of the contract and shall be governed by conditions laid therein. However, for consumption lesser beyond permissible theoretical variation recovery shall be made in accordance with conditions of contract at Schedule A to F (CPWD-7), without prejudice to action for acceptance of work/item at reduced rate or rejection as the case may be. In case of excess consumption no adjustment shall be made.

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

8.0 <u>CONDITIONS FOR REINFORCEMENT STEEL :-</u>

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8.1 The contractor shall procure TMT bars of Fe 500D grade from primary producers such as SAIL, Tata Steel Ltd., RINL, Jindal Steel & Power Ltd. and JSW Steel Ltd. or any other producer as approved by CPWD who are using iron ore as the basic raw material / input and having crude steel capacity of 2.0 Million tonne per annum and above.

In case of non-availability of steel from primary producers, use of TMT reinforcement bars procured from steel producers having integrated steel plants (ISPs) or secondary producers using iron ore as the basic raw material for production of crude steel which is further rolled into finish shapes in-house having crude steel capacity of 0.5 million tonne per annum or more will be allowed subject to fulfillment of following conditions:

a. The grade of the steel such as Fe 500D or other grade to be procured is to be specified as per BIS : 1786 - 2008.
b. The secondary producers must have valid BIS license to produce HSD bars conforming to IS 1786 : 2008. In addition to BIS license, the secondary producer must have valid license from either of the firms Tempcore, Thermex, Evcon Turbo & Turbo Quench to produce TMT Bars.
c. The TMT bars procured from primary producers and ISPs shall conform to manufacturer's specifications.
d. The TMT bars procured from secondary producers shall conform to the specifications as laid down by Tempcore, Thermex, Evcon, Turbo and Turboquench as the case may be.
e. TMT bars procured either from primary producers, ISPs or secondary producers, the specifications shall meet the provisions of IS 1786 : 2008 pertaining to Fe 500D or other grade of steel as specified in the tender.

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

In case contractor is permitted to use TMT reinforcement bars procured from secondary producers then:

I. The base price of TMT reinforcement bars as stipulated under schedule 'F' shall be reduced by Rs. 6700/- MT. However, for operation of provisions of clause 10CA in such case, the indices for TMT reinforcement bars of secondary producers will be considered same as for primary producers.
II. The rate of providing & laying TMT reinforcement bars as quoted by the contractor in the tender shall also be reduced by Rs. 8.00 per kg.

8.3 The steel reinforcement bars shall be brought at site in bulk supply as decided by the Engineer in charge.

8.4 The steel reinforcement bars shall be stored by the contractor at site of work in such a way as to prevent distortion and corrosion and nothing extra shall be paid on this

account. Bars of different sizes and lengths shall be stored separately to facilitate easy counting and checking.

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

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

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

8.7 All other charges of sampling, packing and transportation of sample shall also be borne by the Contractor.

8.8 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 38 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.

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

8.10 (i) Reinforcement including authorized spacer bars and lappages 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 centimeter. Wastage and unauthorized overlaps shall not be measured.

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

(iii) Record of actual sectional weights shall also be kept dia wise 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.

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(a) If the derived weight as in sub-para (iii) above is less than the standard weight as in sub-para (ii) above, then the Derived Actual Weight shall be taken for payment.

(b) If the derived actual weight is found more than the standard weight, than standard weight as worked out in sub para (ii) above shall be taken for payment. Nothing shall be paid extra for the difference in Derived/ Actual Weight and standard weight.

8.11 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.

8.12 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.

9.0 REINFORCED CEMENT CONCRETE WORK

9.1 DESIGN MIX CONCRETE

9.1.1 The RCC work shall be done with Design Mix Concrete unless otherwise specified. In the nomenclature of items wherever letter M has been indicated, the same shall imply for the Design Mix Concrete. For the nominal mix in RCC, CPWD Specifications shall be followed. The Design Mix Concrete will be designed based on the principles given in IS: 456-2000. The contractor shall design mixes for each grade of concrete indicating that the concrete ingredients and proportions will result in concrete mix meeting requirements specified. In case of use of admixture and or white cement, the mix shall be designed with these ingredients as well.

9.1.2 The concrete mix design with and without admixture will be carried out by the Contractor, at his own cost, through one of the following laboratories/Test houses to be approved by Engineer-in-charge: -

I. IIT- Kanpur, BHU, Roorkee
II. IET- Lucknow
III. HBTI- Kanpur
IV. MNNIT- Allahabad
V. NCCBM- Ballabhgarh
VI. Approved Lab/Govt. Engineering Institutions as directed by the Engineer-in-charge.
VII. MMM Engineering College, Gorakhpur (UP)

9.1.3 In the event of all the above laboratories being unable to carry out the requisite design / testing the contractor shall have to get the same done from any other laboratory with prior approval of the Engineer-in-Charge.

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9.1.4 The contractor shall submit the mix design report from any of above approved laboratories for approval of Engineer-in-Charge within 45 days from the date of issue of letter of acceptance of the tender.

9.1.5 In case of white Portland cement and the likely use of admixtures where CC/RCC is done with concrete pumps in concrete with ordinary Portland/white Portland cement, the contractor shall design and test the concrete mix by using trial mixes with white cement and /or admixtures also, for which nothing extra shall be payable.

9.1.6 Each time when there is change of source or characteristic properties of the ingredients used in the concrete mix during the work, a revised mix design shall be done and approval obtained from the approved Laboratory or as per the direction of the Engineer-in-Charge. Preferably only single source of cement shall be kept for the work. In case contractor decides to use more than one source of approved cement brand then for each brand separate design mix shall be done and got approved by Engineer-in-charge.

9.1.7 The Mix shall be designed to produce the grade of concrete having required workability and characteristic strength not less than as specified.

9.1.8 The mix design for a specified grade of concrete shall be done for a target mean compressive strength T ck = F ck + 1.65 S
Where,
F ck = Characteristic compressive strength at 28 days.
S= Standard deviation
The standard deviation for each grade of concrete shall be calculated separately.
The degree of quality control for this work is "Good" for which the standard deviation (s) obtained for different grades of concrete shall be as follows:-

Grade of Concrete	For "Good" quality of control
M 20	4.0
M 25	4.0
M 30	5.0
M 35	5.0

9.1.9 Out of the six specimen of each set, three shall be tested at seven days and remaining three at 28 days. The preliminary tests at seven days are intended only to indicate the strength likely to be attained at 28 days. All cost of mix designing and testing connected therewith including charges payable to laboratory shall be borne by the Contractor.

9.1.10 The samples of cement, aggregate (fine & coarse) to be sent to the laboratories shall be sealed in the presence of the Engineer- in -Charge and shall have his signature and cost of packaging, sealing, transportation, loading, unloading, cost of samples and the testing charges for Mix design in all cases shall be borne by the contractor.

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9.1.11 Not with standing the approval granted by Engineer-in-Charge in aforesaid manner, the contractor shall be fully responsible for quality of concrete including input control, transportation and placement etc.

9.1.12 The Engineer-in-Charge reserves the right to exercise control over the ingredients, water and admixtures, purchased, stored and to be used in the concrete including conducting of tests for checking quality of materials fit or unfit for use in production of mix.

9.1.13 The Contractor shall submit the test data of the material used for concrete mix-design in the laboratories, so the material being used at site can be compared with those data / size etc.

9.1.14 In case of change of parameters of ingredients (sand, cement, coarse aggregate) fresh concrete mix-design to be done as mentioned in paras 9.1.1, 9.1.2 & 9.1.6 to 9.1.10 above and got approved from the Engineer-in-Charge before execution.

9.1.15 The contractor shall make arrangement to install a mini laboratory at site for accelerated testing of design mix concrete as per IS : 9013. The department reserves right to take samples of design mix concrete from the mass production of the concrete for testing and compare with the laboratory's results.

9.1.16 Nothing shall be paid extra for installation and cost of batching plant and other arrangement for making necessary test of design mix concrete.

9.1.17 The item of design mix cement concrete shall be inclusive of all the ingredients including admixtures if required, labour, machinery T & P etc. (except shuttering which will be measured & paid for separately) required for a design mix concrete of required strength and workability. The rate quoted by the agency shall be net & nothing extra shall be payable on account of change in quantities of concrete ingredients like aggregates and admixtures as per the approved mix design.

9.1.18 Concrete shall be handled from the place of mixing to the place of final deposit / placement by methods, which prevent segregation, or loss of any ingredients and contamination.

9.1.19 Where concrete is conveyed by chutes, the chute shall be made of metal or fitted with metal lining. The approval of the Engineer-in-charge shall be obtained for the use of chutes in excess of 3 metres length and in such cases the concrete shall be remixed if so required by the Engineer-in-Charge or closed bottom buckets shall be used. If concrete is placed by pumping, the conduit shall be primed properly. Once pumping is started, it shall not be interrupted as far as possible. Concrete shall not be dropped into place from a height more than 1.5m.

9.1.20 Concreting of any portion of the work shall be done in presence of the representative of the Engineer-in-Charge and shall be done only after approval of the Engineer-in-Charge.

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9.1.21 Concreting shall be carried out continuously between constructions joints shown on the drawings or as agreed by the Engineer-in-Charge. The contractor shall closely follow the sequence of concreting where it is specified in the drawings. If concreting is interrupted before reaching the predetermined joint an approved construction joint shall be provided. Construction joints shall be minimized as far as possible. These shall be set at right angles to the general direction of the member. The surface film of the first placed concrete should preferably be removed while the concrete is still green to expose the aggregate and leave a sound irregular surface. However care shall be taken not to disturb the concrete already laid.

9.1.22 Admixtures : Wherever required, admixtures of approved quality only shall be mixed with concrete as specified. The admixtures shall conform to IS: 9103. The chloride content in the admixture shall satisfy the requirements of BS: 5075. The total amount of chlorides in the admixture mixed concrete shall also satisfy the requirements of IS 456-2000.

9.1.23 Use of ready mixed concrete (RMC) may also be permitted, with prior approval of Engineer –in – Charge, without any extra payment. Separate account of design mix concrete and RMC shall however be kept. The ready mixed concrete shall conform to the requirement of durability, workability and strength as laid down for design mix concrete.

9.2 Use of Fly Ash and Fly Ash Blended Cements in RCC Structures :-

9.2.1 General

9.2.1.1 IS : 456-2000 Code of Practice for plain and Reinforced Concrete (as amended up to date) shall be followed in regard to Concrete mix Proportion and its production as under :-

9.2.1.1.1 The concrete mix design shall be done as “Design Mix Concrete” as prescribed in clause – 9 of IS 456 mentioned above.

9.2.1.1.2 Concrete shall be manufactured in accordance with clause 10 of above mentioned IS : 456 covering quality assurance measures both technical and organizational, which shall also necessarily require a qualified Concrete Technologist to be available during manufacture of concrete for certification of quality of concrete.

9.2.1.2 Minimum M25 grade of concrete shall be used in all structural elements made with RCC both in load bearing and framed structure.

9.2.1.3 The mechanical properties such as modulus of elasticity, tensile strength, creep and shrinkage of flyash mixed concrete or concrete using flyash blended cements (PPCs) should not likely to be significantly different and their values are to be taken same as those used for concrete made with OPC. Fly ash when used in the production of concrete shall be strictly in conformity with IS : 3812 (Para 1 & 10).

9.2.1.4 To control higher rate of carbonation in early ages of concrete both in flyash admixed as well as PPC based concrete, water / binder ratio shall be kept as low as possible, which shall be closely monitored during concrete manufacture. If necessitated due to low water / binder ratio, required workability shall be achieved by use of chloride free chemical admixtures conforming to IS : 9103. The compatibility of chemical admixtures and supper plasticizers with each set OPC, fly ash and / or PPC received from different sources shall be ensured by trials.

9.2.1.5 In environment subjected to aggressive chloride or sulphate attack in particular, use of flyash admixed or PPC based concrete is recommended. In cases, where structural concrete is exposed to excessive magnesium sulphate, flyash substitution / content shall be limited to 18% by weight. Special type of cement with low C3A content may also be alternatively used. Durability criteria like minimum binder content and maximum water / binder ratio also need to be given due consideration in such environment.

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

9.2.2 Use of Flyash Admixed Cement Concrete (FACC) in RCC Structures :- There shall be no bar on use of FACC in RCC structures subject to following additional conditions :-

9.2.2.1 Flyash shall have its chemical characteristics and physical requirements etc. conforming to IS : 3812 (Part-10) and shall be duly certified.

9.2.2.2 To ensure uniform blending of flyash with cement in conformity with IS : 456, a specific facility needs to be created at site with complete computerized automated process control to achieve design quality or with similar facility from Ready Mix concrete (RMC) plants.

9.2.2.3 As per IS : 1489 (Part-I), Maximum 35% of OPC by mass is permitted to be substituted with flyash conforming to IS : 3812 (Part-I)and same is reiterated.

9.2.2.4 Separate storage for dry flyash shall be provided. Storage bins or silos shall be weather proof and permit a free flow and efficient discharge of flysh. The filter or dust control system provided in the bins or silos shall be of sufficient size to allow delivery of flyash maintained at specified pressure to prevent undue emission of flyash dust, which may interfere weighing accuracy.

9.2.3 Use of Fly Ash Blended Cements in Cement Concrete (PPCC) in RCC structures

9.2.3.1 Subject to General Guidelines detailed out as above, PPC manufactured conforming to IS : 1489 (Part-I) shall be treated at par with OPC for manufacture of Design Mix Concrete for structural use in RCC.

9.2.3.2 Till the time, BIS makes it mandatory to print the %age of flyash on each bag of cement, the certificate from the PPC manufacturer indicating the same shall be insisted upon before allowing use of such cements in works.

9.2.3.3 While using PPC for structural concrete work, no further admixing of fly ash shall be permitted.

10.0 PARTICULAR SPECIFICATIONS FOR AAC BLOCK MASONRY:

10.1 The AAC Blocks shall be procured from approved manufacturers.

10.2 The blocks shall be stored at site in stacks on a level dry surface.

10.3 The mortar used for joining the blocks shall be mixed in the proportion 1:4 (1 Cement : 4 coarse sand) by volume.

10.4 The thickness of joints in the masonry shall not exceed 10 mm and shall be of uniform thickness.

10.5 Maximum height of wall built on any day shall not be more than 1.2 metres (i.e. 6 layers).

10.6 The joints in the masonry shall be recessed and no flush pointing shall be done.

10.7 A slip membrane with PVC sheet shall be introduced as per the recommendation of blocks manufacturer before laying the first course on the plinth beam.

10.8 The blocks shall not be soaked in water and instead they shall be dipped in water and taken out immediately to have only moist surface.

10.9 The vertical joints of the masonry shall be broken to have a minimum overlap of 100 mm.

10.10 Bed joint 2 Nos 6mm dia reinforcement bars may be placed in the joints after every 3rd course in two successive layers as per the recommendation of the manufacturers to have good lateral stability.

10.11 It shall be ensured that the lintels are rest at either end of window opening only on full block and not on half or part blocks reinforcement shall be placed in the sill course of window openings in two successive horizontal joints and extend the same at least to 600 mm on either side of the jamb surface.

10.12 At a RCC column interface an MS anchor ("L" shape) may be placed and fixed with screws at every 4th course so as to anchor the wall with RCC column for better lateral stability. The anchor shall be got approved from Engineer-in-Charge.

10.13 Curing of the masonry shall be done only by spraying water and no flooding shall be done by water jets / buckets.

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10.14 The chases in the wall surface for electrical conduits shall be done only by electrically operated chase cutting mashine and the portion between the cuts shall be chiseled carefully. The depth of vertical chases should be limited to 1/3 rd of wall thickness and horizontal chases should not be more than 1/6th of wall thickness. The chases have to be properly packed with cement mortar 1:4 (1 cement : 4 sand) between pipes and chases. This will applied to brick massonary also.

10.15 The blocks shall be cut using a carpenter saw to have half blocks or any other suitable size block to close the masonry course or to break the vertical joint from the bottom course. Hammer or a masons trowel shall not be used to cut the blocks.

10.16 GI wire mesh shall be fixed on all column wall and beams- wall junctions before taking up the plaster work.

10.17 The rates of the item include all the elements described above.

11.0 EQUIPMENTS AND PLANTS (Refer Clause 18 of Schedule 'F')

11.1 The contractor has to deploy necessary tools & plants in required numbers as per requirement and direction of Engineer-in-charge to ensure smooth & timely execution of work, at his own cost & risk as per the requirement of work at different stages. The decision of Engineer-in-Charge shall be final regarding use of particular T&P(s) at a particular time(s) & the contractor has to adhere to the same strictly. The following description & quantum of T&P is given for general guidance which is not mandatory. However, the successful contractor shall give a list of tools and plants which he proposes to deploy to ensure smooth and timely execution as per different milestone fixed and timely completion of work while submitting the program and progress chart.

i.	Steel centering and shuttering, scaffolding.	As per requirement
ii.	Builders Hoist.	-do-
iii.	Concrete mixer with hopper.	-do-
iv.	Plate Vibrator.	-do-
v.	Needle Vibrator.	-do-
vi.	Floor grinding machine	-do-
vii.	Generator	-do-
viii.	Welding machine	-do-
ix.	Grinder, Drilling machine etc.	-do-
x.	Water Pump	-do-
xii.	Chase cutter	-do-
xiii.	Ladder	-do-

11.2 To achieve the program of work as per program the contractor must bring at site the required shuttering materials required for cement concrete and RCC work etc. within 30 days from the date of start of work. All other equipments shall be brought, installed and commissioned at site of work at least one week before their actual planned use at site. Work shop facilities for fabrication/addition and alterations, and other allied works shall be arranged by the contractor at his own cost.

11.3 The list of equipment/T&P/machinery as per para 11.1 is for general guidance. In addition to these, machinery / equipment as required shall be arranged by the

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contractor in case the requirement at any stage exceeds as per the programme finalized at his own cost and nothing extra whatsoever on this account shall be paid. This include equipment for arrangement of concrete from RMC producing plants also.

11.4 All the equipment, T&P and machinery shall be kept in good condition.

12.0 SAFETY MEASURES AT CONSTRUCTION SITE

In order to ensure safe construction, following shall be adhered in addition to any other measures mentioned else where in the documents for strict compliance at the site:-

(i) The work site shall be properly barricaded.
(ii) Adequate signages indicating 'Work in Progress – Inconvenience caused is Regretted' or Diversion Signs shall be put on the sites conspicuously visible to the public even during night hours. These are extremely essential where works are carried out at public places in use by the public.
(iii) The construction malba at site shall be regularly removed on daily basis.
(iv) All field officials and the workers must be provided with safety helmets, safety shoes and safety belts.
(v) Proper MS pipe scaffoldings with work – platforms and easy-access ladders shall be provided at site to avoid accidents.

Necessary First-Aid kit shall be available at the site.

The above provisions shall be followed in addition to the provisions of General Condition of Contract.

13.0 LIST OF EQUIPMENT FOR SITE LABORATORY TO BE MADE AVAILABLE BY THE CONTRACTOR AT HIS OWN COST (Refer Clause 10 A of Schedule 'F')

(A) Laboratory testing instruments.

(1) Balances
   i. 7 Kg. to 10 Kg. capacity, semi-self indicating type – accuracy 10 gm.-1 No.
   ii. 500 gm. Capacity, semi-self indicating type – accuracy 1 gm.- 1 No.
   iii. Pan balance – 5 Kg. capacity – accuracy 10 gms.-1 No.
(2) Ovens–electrically operated, thermostatically controlled upto 1100 C–sensitivity 10 C. – 1 No.
(3) Sieves : as per IS 460 – 1962.
   I. I.S. sieves – 450 mm internal dia, of sizes 100mm, 80 mm, 63 mm, 50mm, 40 mm, 25mm, 20 mm, 12.5 mm, 10 mm, 6.3mm, 4.75 mm, 2.36mm complete with lid and pan. – 1 Set
   II. I.S. sieves - 200 mm internal dia (brass frame) consisting of 2.36 mm, 1.18 mm, 600 microns, 425 microns, 300 microns, 212 microns, 150 microns, 90 microns, 75 microns with lid and pan. – 1 Set
(4) Sieve shaker capable of 200 mm and 300 mm dia sieves, manually operated with timing switch assembly - 1 No.

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(5) Equipment for slump test–slump cone, steel plate, tamping rod, steel scale, scoop- 2sets
(6) Dial gauges, 25 mm travel – 0.01 mm / division least count – 2 Nos.
(7) 100 tones compression testing machine, electrical cum manually operated. – 1 No.
(8) Graduated measuring cylinders 200 ml capacity – 6 Nos.
(9) Enamel trays (for efflorescence test for bricks).
   i. 300 mm X 250 mm X 40 mm – 2 Nos. 10 Set
   ii. Circular plates of 2850 mm dia – 4 Nos.

B. Field testing instruments.(Following instruments in sufficient quantity as directed by the Engineer- in- Charge shall be made available by the contractor. It shall be ensured that the instruments always remain in serviceable condition else the same will be replaced.

1. Steel tapes – 3 m.
2. Vernier Calipers.
3. Micrometer screw 25 mm gauge.
4. A good quality plumb bob.
5. Spirit level, minimum 30 cms long with 3 bubbles for horizontal vertical.
6. Wire gauge (circular type) disc.
7. Foot rule.
8. Long nylon thread.
9. Magnifying glass
10. Screw driver 30 cms long
11. Plastic bags for taking samples
12. Earth resistance tests (for Electrical Divisions)
13. Meggar (for Electrical Divisions)

14.0 SPECIFICATIONS FOR FLY ASH BRICKS - All fly ash bricks as brought to the site shall conform to the strength & durability parameters as prescribed in the tender and CPWD specifications.

15.0 The contractor shall submit 'Method Statement' for the approval soon after the award of work. 'Method Statement' is a statement by which the construction procedures for important activities of construction are stated, checked and approved. Method Statement shall have description of the item with elaborate procedures in steps to implement the same. The specification of the materials involved their testing and acceptance criteria, equipments to be used, precautions to be taken, mode of measurements etc.

16.0 TESTING OF MATERIALS.

16.1 The contractor shall arrange carrying out of all tests required under the agreement through the laboratory as approved by the Engineer-in-Charge and shall bear all charges in connection therewith including fee for testing unless specified otherwise. In all cases cost of samples and to &fro carriage shall be borne by the contractor. Contractor shall establish a laboratory at site of work at his own cost. The laboratory shall be equipped with all necessary equipment as per requirement of specification or as per direction of Engineer-in-Charge. A list of laboratory equipments to be maintained by the contractor is enclosed at para 13 page 61. Establishing the laboratory at site shall not absolve the contractor from fulfilling the criteria of getting

the test done in independent approved laboratories as per DG/MAN/308. The decision of the Engineer-in-Charge of allowing any test in the site laboratory shall be final.

16.2 Even ISI marked materials may 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. Whenever ISI marked materials are brought to the site of work the contractor shall, if required by the Engineer-in-charge, furnish manufacturer test certificate or test certificate from approved testing laboratory to establish that the material procured by the contractor for incorporation in the work satisfy the provisions if IS codes relevant to the material and/or the work done.

16.3 Sub-standard Material/Work : In case any material/work is found substandard the same shall be rejected by the Engineer-in-Charge and the same shall be removed from the site of work within 48 hour, failing which the same shall be got removed by the Engineer-in-Charge at the risk and cost of the contractor without giving any further notice and time.

17.0 CONDITIONS OF CONTRACT SPECIFIC TO GREEN BUILDING PRACTICES

The contractor shall strictly adhere to the following conditions as part of his contractual obligations:

17.1 SITE

17.1.1 The contractor shall ensure that adequate measures are taken for the prevention of erosion of the top soil during the construction .The contractor shall prepare and implement the Erosion and Sedimentation Control Plan (ESCP) provided to him after approval by the Engineer- in- Charge as part of the larger Construction Management Plan(CMP). The contractor shall obtain the Erosion and Sedimentation Control Plan (ESCP) Guidelines if required from the Engineer in Charge and then prepare "working plan" for the following month's activities as a CAD drawing showing the construction management, staging & ESCP. At no time soil should be allowed to erode away from the site and sediments should be trapped where necessary.

The contractor shall ensure that all the top soil excavated during construction works is neatly stacked and is not mixed with other excavated earth. The contractor shall take the clearance of the Engineer in Charge before any excavation. Top soil should be stripped to a depth of 20 cm (centimeters) from the areas to be disturbed, for example proposed area for buildings, roads, paved areas, external services and area required for construction activities etc. It shall be stockpiled to a maximum height of 40 cm in designated areas, covered or stabilized with temporary seeding for erosion prevention and shall be reapplied to site during plantation of the proposed vegetation or as directed by the engineer in charge. Top soil shall be separated from subsoil, debris and stones larger than 50 mm (milimetre) diameter. The stored top soil may be used as finished grade for planting areas.

17.1.2 The Contractor should follow the construction plan as proposed by the Architect / Engineer in Charge to minimize the site disturbance such as soil pollution due to spilling. If required use of staging and spill prevention and control plan to restrict

the Spilling of the contaminating material on site needs to be resorted. Protection of top soil from erosion by collection storage and reapplication of top soil, constructing sediment basin, contour trenching, mulching etc., may also be directed by the engineer in charge.

17.1.3 No excavated earth shall be removed from the campus unless suggested otherwise by Engineer-in-Charge. All subsoil shall be reused in backfilling/landscape, etc as per the instructions of the Engineer in Charge. The surplus excavated earth shall be disposed of by the contractor as per the direction of the engineer in charge at his own cost for reuse. A certificate of reuse as required by the Engineer-in-Charge shall be submitted by the contractor.

17.1.4 The contractor shall not change the natural gradient of the ground unless specifically instructed by the Engineer in Charge. This shall cover all natural features like water bodies, drainage gullies, slopes, mounds, depressions, etc. Existing drainage patterns through or into any preservation area shall not be modified unless specifically directed by the Engineer-in-Charge.

17.1.5 The contractor shall not carry out any work which results in the blockage of natural drainage.

17.1.6 The contractor shall ensure that existing grades of soil shall be maintained around existing vegetation and lowering or raising the levels around the vegetation is not allowed unless specifically directed by the Engineer-in-Charge.

17.1.7 Contractor shall reduce pollution and land development impacts from automobiles use during construction.

17.1.8 Overloading of trucks is unlawful and creates the erosion and sedimentation problems, especially when loose materials like stone dust, excavated earth, sand etc. are moved. Proper covering shall be used by the contractor. Also, no overloading shall be permitted.

17.2 CONSTRUCTION PHASE AND WORKER FACILITIES

17.2.1 The contractor shall specify and limit construction activity in pre-planned/designated areas and shall start construction work after securing the approval for the same from the Engineer in Charge. This shall include areas of construction, storage of materials, and material and personnel movement.

17.2.2 Preserve and Protect Landscape during Construction

a. The contractor shall ensure that no trees, existing or otherwise, shall be harmed and damage to roots. These shall be prevented during trenching, placing backfill, driving or parking heavy equipment, dumping of trash and protected from oil, paint, and other materials detrimental to plant health. These activities shall be restricted to the areas outside of the canopy of the tree, or, from a safe distance from the tree/plant by means of barricading. Trees will not be used for support; their trunks shall not be damaged by cutting and carving or by nailing posters, advertisements or other

material. Lighting of fires or carrying out heat or gas emitting construction activity within the ground, covered by canopy of the tree is not at all permitted.

b. The contractor shall take steps to protect trees or saplings if any identified for preservation within the construction site using tree guards of approved specification.
c. Contractor should limit all construction activity within the specified area as per the Construction Management Plan (CMP) approved by Engineer in Charge.
d. The contractor shall avoid cut and fill in the root zones, through delineating and fencing the drip line (the spread limit of a canopy projected on the ground) of all the trees or group of trees. The zones of movement of heavy equipment, parking, or excessive foot traffic shall be separated from the fenced plant protection zones.
e. The contractor shall ensure that maintenance activities during construction period shall be performed as needed to ensure that the vegetation remains healthy.

17.2.3 Contractor shall be required to develop and implement a waste management plan, quantifying material diversion goals. He shall establish goals for diversion from disposal in landfills and incinerators, if required, and adopt a construction waste management plan to achieve these goals. A project wide policy of "Nothing leaves the Site" shall be followed. The Contractor's ingenuity is especially called towards meeting this prerequisite/ credit (as per IGBC LEED India, New Construction v1.0 & GRIHA , MNRE) and may consider recycling cardboard, metal, brick, acoustical tile, concrete, plastic, clean wood, glass, gypsum wallboard, carpet and insulation, designating a specific area(s) on the construction site for segregated or commingled collection of recyclable material, and track recycling efforts throughout the construction process, identifying construction haulers and recyclers to handle the designated materials at his cost. The diversion may include donation of materials to charitable organizations and salvage of materials on-site.

17.2.4 Contractor shall collect all construction waste generated on site. He may consider at segregating wastes based on their utility and examine means of sending such waste to manufacturing units which use them as raw material or other site which require it for specific purpose. Typical construction debris could be broken bricks, steel bars, broken tiles, spilled concrete and mortar etc.

17.2.5 The contractor shall provide potable water and other amenities for all workers as per the contract.

17.2.6 The contractor shall provide the minimum level of sanitation and safety facilities for the workers at site as described in CPWD General Conditions of contract. The contractor shall ensure cleanliness of workplace with regard to the disposal of waste and effluent; provide clean drinking water and latrines and urinals as per applicable provisions. Adequate toilet facilities shall be provided for the workmen within easy access of their place of work. The total no. to be provided shall not be less than 1per 30 employees in any one shift. Toilet facilities shall be provided from the start of building operations, connection to a sewer shall be made as soon as practicable. Every toilet shall be so constructed that the occupant is sheltered from view and protected from the weather and falling objects. Toilet facilities shall be maintained in a sanitary condition. A sufficient quantity of disinfectant shall be provided and natural or artificial illumination shall also be provided.

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17.2.7 The contractor shall ensure that air pollution due to dust/generators is kept to a minimum, preventing any adverse effects on the workers and other people in and around the site. The contractor shall ensure proper screening, covering stockpiles, covering brick and loads of dusty materials, wheel-washing facility, gravel pit, and water spraying. Contractor shall also ensure the following activities to prevent air pollution during construction:

- Clear vegetation only from areas where work will start right away
- Vegetate / mulch areas where vehicles do not ply.
- Apply gravel / landscaping rock to the areas where mulching / paving is impractical
- Identify roads on-site if applicable that would be used for vehicular traffic. Upgrade vehicular roads (if these are unpaved) by increasing the surface strength by improving particle size, shape and mineral types that make up the surface & base and add surface gravel to reduce source of dust emission to limit amount of fine particles (smaller than 0.075mm) to 10 – 20%
- Water spray, through a simple hose for small projects, to keep dust under control. Fine mists should be used to control fine particulate. However, this should be done with care so as not to waste water. Heavy watering can also create mud, which when tracked onto paved public roadways, must be promptly removed. Also, there must be an adequate supply of clean water nearby to ensure that spray nozzles don't get plugged.
- Water spraying shall be done on:

17.2.7.1 Any dusty materials before transferring, loading and unloading
17.2.7.2 Area where demolition work is being carried out
17.2.7.3 Any un-paved main haul road
17.2.7.4 Areas where excavation or earth moving activities are to be carried out :-

- The contractor shall ensure that the speed of vehicles within the site is limited to 10 km/hr.
- All material storages should be adequately covered and contained so that they are not exposed to situations where winds on site could lead to dust / particulate emissions.
- Spills of dirt or dusty materials will be cleaned up promptly so the spilled material does not become a source of fugitive dust and also to prevent of seepage of pollutant laden water into the ground aquifers. When cleaning up the spill, ensure that the clean-up process does not generate additional dust. Similarly, spilled concrete slurries or liquid wastes should be contained / cleaned up immediately before they can infiltrate into the soil / ground or runoff in nearby areas
- Provide hoardings of not less than 3m high along the site boundary, next to a road or other public area at his cost.
- Provide dust screens, sheeting or netting to scaffold along the perimeter of the building at his cost
- Cover stockpiles of dusty material with impervious sheeting at his cost.
- Cover dusty load on vehicles by impervious sheeting before they leave the site at his cost.

17.2.8 Contractor shall be required to provide an easily accessible area that serves the entire building and is dedicated to the separation, collection and storage of materials for recycling including (at a minimum) paper, corrugated cardboard, glass, plastics, and

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metals. He shall coordinate the size and functionality of the recycling areas with the anticipated collections services for glass, plastic, office paper, newspaper, cardboard, and organic wastes to maximize the effectiveness of the dedicated areas. Consider employing cardboard balers, aluminium can crushers, recycling chutes, and collection bins at individual workstations to further enhance the recycling program.

17.2.9 The contractor shall ensure that no construction leachate (e.g. cement slurry etc.), is allowed to percolate into the ground. Adequate precautions will 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 sewer line).

17.2.10 Staging (dividing a construction area into two or more areas to minimize the area of soil that will be exposed at any given time) should be done to separate undisturbed land from land disturbed by construction activity and material storage.

17.2.11 The contractor shall comply with the safety procedures, norms and guidelines (as applicable) as outlined in the document Part 7 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 causalities. 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.

17.2.12 The contractor shall ensure the following activities for construction workers safety, among other measures at his cost.

- 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.

17.2.13 The storage of material shall be as per standard good practices as specified in Part 7, Section 2 - Storage, Stacking and Handling practices, NBC 2005 and shall be to the satisfaction of the Engineer in Charge to ensure minimum wastage and to prevent any misuse, damage, inconvenience or accident. Watch and ward of the Contractor's

materials shall be his own responsibility. There should be a proper planning of the layout for stacking and storage of different materials, components and equipments with proper access and proper maneuverability of the vehicles carrying the materials. While planning the layout, the requirements of various materials, components and equipments at different stages of construction shall be considered.

17.2.14 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 plastic, glass, metal, biological and paper waste and labeled in both Hindi and English with suitable symbols.

17.2.15 The contractor shall prepare and submit 'Spill prevention and control plans' before the start of construction, clearly stating measures to stop the source of the spill, to contain the spill, to dispose the contaminated material and hazardous wastes, and stating designation of personnel trained to prevent and control spills. Hazardous wastes include pesticides, paints, cleaners, and petroleum products.

17.2.15.1 Contractor shall collect & submit the relevant material certificates for materials if directed by the Engineer in charge with high recycled (both post-industrial and post-consumer) content, including materials like RMC mix with fly-ash, glass with recycled content, calcium silicate boards etc.

17.2.16 Contractor shall collect the relevant material certificates for rapidly renewable materials such as bamboo, wool, cotton insulation, agri fiber, linoleum, wheat board, strawboard and cork etc.

17.2.17 Where possible, the contractor shall select materials / vendors, harvested and manufactured regionally, within a 800-km radius of the project site.

17.2.18 Contractor shall adopt an IAQ (Indoor Air Quality) management plan to protect the HVAC system during construction, control pollutant sources, and interrupt pathways for contamination. He shall sequence installation of materials to avoid contamination of absorptive materials such as insulation, carpeting, ceiling tile, and gypsum wallboard. He shall also protect stored on-site or installed absorptive materials from moisture damage.

17.2.19 The contractor shall ensure that a flush out of all internal spaces is conducted prior to handover his shall comprise an opening of all doors and windows for 14 days to vent out any toxic fumes due to paints, varnishes, polishes, etc.

17.2.20 Contractor shall make efforts to reduce the quantity of indoor air contaminants that are odorous or potentially irritating harmful to the comfort and well-being of installer and building occupants. Contractor shall ensure that the VOC (Volatile Organic Compounds) content of paints, coatings and primers used must not exceed the VOC content limits mentioned below in case items of such paints are/is available in schedule of quantities.

Paints

Non-flat - 150 g/L Flat (Mat) - 50, g/L Anti corrosive/ anti rust - 250 g/L

Coatings / Clear wood finishes

Varnish - 350 g/L Lacquer - 550 g/L Floor coatings - 100 g/L Stains - 250 g/L

Sealers

Waterproofing sealer - 250 g/L Sanding sealer - 275 g/L Other sealers - 200 g/L

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17.2.21 The VOC (Volatile Organic Compounds) content of adhesives and sealants used if prescribed in the schedule of quantities must be less than VOC content limits mentioned: Architectural Applications VOC Limit (g/l less water) Indoor Carpet adhesives - 50 g/L, Carpet Pad Adhesives - 50 g/L, Wood Flooring Adhesive - 100 g/L, Rubber Floor Adhesives - 60 g/L, Sub Floor Adhesives – 50 g/L, Ceramic Tile Adhesives - 65 g/L, VCT and Asphalt Tile adhesives - 50 g/L, Dry Wall and Panel Adhesives - 50 g/L, Structural Glazing Adhesives - 100 g/L, Multipurpose Construction Adhesives – 70 g/L, Substrate Specific Application VOC Limit (g/l less water), Metal to Metal - 30 g/L, Plastic Foams - 50 g/L, Porous material (except wood) - 50 g/L, Wood - 30 g/L, Fiber Glass – 80 g/L

17.2.22 Wherever required, Contractor shall meet and carry out documentation of all activities on site, supplementation of information, and submittals in accordance with IGBC LEED India New Construction v1.0 or GRIHA program standards and guidelines. Towards meeting the aforementioned building environmental rating standard(s) expert assistance shall be provided to him up on request.

17.2.23 Water Use during Construction 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.

17.2.24 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. The malba obtained during construction shall be collected in well formed heaps at properly selected places, keeping in a view safe condition for workmen in the area. Materials which are likely to cause dust nuisance or undue environmental pollution in any other way, shall be removed from the site at the earliest and till then they shall be suitable covered. Glass & steel should be dumped or buried separately to prevent injury. The work of removal of debris should be carried out during day. In case of poor visibility artificial light may be provided.

17.2.25The contractor shall provide O & M Manuals wherever applicable.

17.2.26 The contractor shall make himself conversant with the Site Waste Management Program Manual and actively contribute to its compilation by estimating the nature and volume of waste generated by the process/installation in question.

17.2.27 MATERIALS & FIXTURES FOR THE PROJECT

a. Contractor will produce wherever feasible certificate regarding distance of the source of the relevant material.
b. Unless otherwise stated cement used at site for reinforced concrete, precast members, mortar, plaster, building blocks, etc shall be PPC (Portland Puzzolana Cement). The PPC must meet the requirements of IS 1489 (Part I) as regards to fly ash content in cement The contractor shall obtain from the PPC manufacturer the certificate regarding fly ash content in the PPC in each batch of consignment.
c. The contractor has to comply as per MoEF issued notification 8.0.763(E) dated 14th Sept.1999 containing directive for greater fly ash utilization. Every construction

agency engaged in the construction of buildings within a radius of 50 km radius of a Thermal Power Plant, have to use of 100% fly ash based bricks/blocks in their construction.

d. The contractor shall ensure that all paints, polishes, adhesives and sealants used both internally and externally, on any surface, shall be Low VOC products. The contractor shall get prior approval from the Engineer in Charge before the application of any such material.
e. All plumbing and sanitary fixtures installed shall be as per the prescription of the Engineer in Charge and shall adhere to the minimum LPM (litres per minute) and LPF (liters per flush) mentioned. The contractor shall employ 100% zero ODP (ozone depletion potential) insulation; HCFC (hydro-chlorofluorocarbon)/ and CFC (chlorofluorocarbon) free HVAC and refrigeration equipments and / halon-free fire suppression and fire extinguishing systems.
f. The contractor shall ensure that all composite wood products/agro-fibre products used for cabinet work, etc do not contain any added urea formaldehyde resin.

17.2.28 RESOURCES CONSUMED DURING CONSTRUCTION

(a) The contractor shall ensure that the water and electricity is not wasted during construction. The Engineer in Charge can bring to the attention any such wastage and the contractor will have to ensure that such bad practices are corrected.
(b) The contractor shall install necessary meters and measuring devices to record the consumption of water, electricity and diesel on a monthly basis for the entire tenure of the project.
(c) The contractor shall ensure that all run-off water from the site, during construction is collected and reused to the maximum.
(d) The contractor shall use treated recycled water of appropriate quality standards for construction, if available.
(e) No lights shall be turned on during the period between 6:00 AM to 6:00 PM, without the permission of the Engineer in Charge.

17.2.29 CONSTRUCTION WASTE

Contractor shall ensure that wastage of construction material is within 3%.

(a) All construction debris generated during construction shall be carefully segregated and stored in a demarcated waste yard. Clear, identifiable areas shall be provided for each waste type and measures employed to segregate the waste on site into inert, chemical, or hazardous wastes.
(b) All construction debris shall be used for road preparation, back filling, etc, used if described in the schedule of quantities and as per the instructions of the Engineer in Charge, with necessary activities of sorting, crushing, etc.
(c) No construction debris shall be taken away from the site, without the prior approval of the Engineer in Charge.
(d) The contractor shall recycle the unused chemical/hazardous wastes such as oil, paint, batteries, and asbestos.
(e) If and when construction debris is taken out of the site, after prior permissions from the Engineer in Charge, then the contractor shall ensure the safe disposal of all wastes and will only dispose of any such construction waste in approved dumping sites.

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17.2.30 DOCUMENTATION

(a) The contractor shall, during the entire tenure of the construction phase, submit the following records to the Engineer in Charge on a monthly basis:
   i) Water consumption in litres
   ii) Electricity consumption in 'kwh' units
   iii) Diesel consumption in litres
   iv) Quantum of waste (volumetric/weight basis) generated at site and the segregated waste types divided into inert, chemical and hazardous wastes.
   v) Digital photo documentation to demonstrate compliance of safety guidelines as specified here and in the Appendix on Safety Conditions.

(b) The contractor shall, during the entire tenure of the construction phase, submit the following records to the Engineer in Charge on a fortnightly basis:
   i) Quantities of material brought into the site, including the material issued to the contractor by the Engineer in charge.
   ii) Quantities of construction debris (if at all) taken out of the site
   iii) Digital photographs of the works at site, the workers facilities, the waste and other material storage yards, pre-fabrication and block making works, etc as guided by the Engineer in Charge.

(c) The contractor shall submit a document after construction of the buildings, a brief description along with photographic records to show that other areas have not been disturbed during construction. The document should also include brief explanation and photographic records to show erosion and sedimentation control measures adopted. (Document CAD drawing showing site plan details of existing vegetation, existing buildings, existing slopes and site drainage pattern, staging and spill prevention measures, erosion and sedimentation control measures and measures adopted for top soil preservation during construction.

(d) The contractor shall submit to the Engineer in Charge after construction of the buildings, a detailed as built quantification of the following:
   i. Total materials used,
   ii. Total top soil stacked and total reused
   iii. Total earth excavated
   iv. Total waste generated,
   v. Total waste reused,
   vi. Total water used,
   vii. Total electricity, and
   viii. Total diesel consumed.

(e) The contractor shall submit to the Engineer in Charge, before the start of construction, a site plan along with a narrative to demarcate areas on site from which top soil has to be gathered, designate area where it will be stored, measures adopted for top soil preservation and indicate areas where it will be reapplied after construction is complete.

(f) The contractor shall submit to the Engineer in Charge, a detailed narrative (not more than 250 words) on provision for safe drinking water and sanitation facility for construction workers and site personnel.

(g) Provide supporting document from the manufacturer of the cement specifying the fly-ash content in PPC used in reinforced concrete.

(h) Provide supporting document from the manufacturer of the pre-cast building blocks specifying the fly ash content of the blocks used in an infill wall system.

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(i) The contractor shall, at the end of construction of the buildings, submit to the Engineer in Charge, submit following information, for all material brought to site for construction purposes, including manufacturer's certifications, verifying information, and test data, where Specifications sections require data relating to environmental issues including but not limited to:

i) Source of products: Supplier details and location of the supplier.

ii) Project Recyclability: Submit information to assist Owner and Contractor in recycling materials involved in shipping, handling, and delivery, and for temporary materials necessary for installation of products.

iii) Recycled Content: Submit information regarding product post industrial recycled and post consumer recycled content. Use the "Recycled Content Certification Form", to be provided by the Commissioning Authority appointed for the Project.

iv) Product Recyclability: Submit information regarding product and product's component's recyclability including potential sources accepting recyclable materials where ever applicable.

(j) Provide final certification of well-managed forest of origin to provide final documentation of certified sustainably harvested status: Acceptable wood "certified sustainably harvested" certifications shall include:

(a) Wood suppliers' certificate issued by one of the Forest Stewardship Council-accredited certifying agencies;

(b) liers' invoice detailing the quantities of certified wood products for project;

(c) Letter from one of a certifying agency corroborating that the products on the wood supplier's invoice originate from certified well-managed forests.

i) Clean tech: Provide pollution clearance certificates from all manufacturers of materials

ii) Indoor Air quality and Environmental Issues: Submit emission test data, sourced from the manufacturers, produced by acceptable testing laboratory listed in Quality Assurance Article for materials as required in each specific Specification section.

(d) Certifications from manufacturers of Low VOC paints, adhesives, sealant and polishes used at this particular project site.

e) Certification from manufacturers of composite wood products/agrofibre products on the absence of added urea formaldehyde resin in the products supplied to them to this particular site.

f) Submit environmental and pollution clearance certificates for all diesel generators installed as part of this project.

g) Provide total support to Engineer in Charge and Green Building Consultants appointed by the Engineer- in- Charge in completing all Green Building Rating related formalities, including signing of forms, providing signed letters in the contractor's letterhead whenever required.

17.2.31 EQUIPMENT

(a) To ensure energy efficiency during and post construction all pumps, motors and engines used during construction or installed, shall be subject to approval and as per the specifications of the Engineer in Charge.

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(b) All lighting installed by the contractor around the site and at the labour quarters during construction shall be CFL bulbs of the appropriate illumination levels. This condition is a must, unless specifically prescribed.

The contractor is expected to go through all other conditions of the LEED & GRIHA rating stipulations.

Failure to adhere to any of the above mentioned items, without approval of the Engineer in Charge, shallb be deemed as a violation of contract and the contractor shall be held liable for penalty as per terms of the agreement.

18.1 Formwork for exposed concrete surfaces:-

18.1.1 Where it is specifically shown on the drawings to have original fair face finish of concrete surface without any rendering of plastering, formwork shall be carried put by using plywood on steel plates of approved quality.

18.1.2 The forms shall be constructed so as to produce a uniform and consistent texture and pattern on the face of the concrete. The formwork shall be placed so that all horizontals are constructed of lumber and are not paneled and the formwork joints shall be staggered.

18.1.3 To achieve a finish which shall be free of board marks, the formwork shall be faced with plywood or equivalent material in large sheets. The sheets shall be arranged in an approved pattern. Whenever possible, joints between sheets shall be arranged to coincide with architectural feature, sills, window heads or change in direction of surface. All joints between panels shall be vertical or horizontal unless otherwise directed. Suitable joints shall be approved between sheets. The joints shall be arranged and fitted so that no blemish or mark is imparted to the finished surfaces.

18.1.4 Forms for exposed concrete surfaces shall be constructed with grade strips (the underside of which indicate top of pour) at horizontal constructions joints, unless the use of groove strips is specified on the drawings. The reset forms shall be tightened against the concrete so that the forms will not be spread and permit abrupt irregularities or loss of mortar. Supplementary form ties shall be used as necessary to hold the reset forms tight against the concrete.

18.1.5 For fair faced concrete, the position of through bolts will be restricted and generally as indicated on the drawings.

18.1.6 Plywood and steel plates used in the formwork for obtaining exposed surfaces shall be got approved from Engineer-in-Charge on each use. However no forms will be allowed for reuse if it is doubtful to produce desired texture of exposed concrete.

18.1.7 Cement of only approved shade shall be used preferably of single lot to achieve integrity of texture.

18.2 Class of Surface Finish:-

18.2.1 For Beams &Slabs :

The finish shall be uniform, dense and smooth. no grout, no grain pattern, no crazing and no major blemishes shall be permitted. Abrupt irregularities not

exceeding 3mm and gradual irregularities less than 5mm in 2m length only shall be permitted.

18.2.2 For Columns/Wall/Fins :
The finish shall be uniform and smooth leveling the surface of the compacted concrete shall be done with a screed board with power floating the surface and over that steel trowelling the surface under firm pressure characteristics of finish shall be brush marks < 3mm gradual irregularities less than 10mm in 2m.

18.3 Tolerance in Finished Concrete:-
The formwork shall be so made as to produce a finished concrete true to shape, lines, level, plumb and dimensions as shown in the drawings subject to the following tolerance unless otherwise specified in this specification or drawings.

18.4 WALL/COLUMN/FINS:

18.4.1	Variation from the plumb	± 6mm	Upto 3m height
18.4.2	Variation from the plumb of conspicuous liner	± 6mm	Upto 6m height
18.4.3	Variation in the size of wall openings	(+)15mm (-) 6mm	
18.4.4	Variation in parapet wall thickness		
	(a) Upto 30cm thickness	± 6mm	

18.5 SLAB, BEAM & GIRDER FORMS:

18.5.1 Variation from the level or from the specified grid for beam soffit before removal of shores,

(a)	In any 3m	± 6mm
(b)	In any 6m	± 10mm

All the tolerances mentioned above shall apply to concrete dimensions only, and not to positioning of vertical steel or dowels. The tolerances given above are specified for local aberration in the finished concrete surface and should not be taken as tolerance for the entire structure taken as whole for the setting and alignment of formwork. Any error, within the above tolerance limits, or any other if noticed in any of the structure after part or portion stripping of forms, shall be corrected in the subsequent work to bring back the structure to its true line, level and alignment.

Annexure-IV

GUARANTEE TO BE EXECUTED BY CONTRACTORS FOR REMOVAL OF DEFECT AFTER COMPLETION IN RESPECT OF WATER PROOFING WORKS

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 from the date of giving of water proofing treatment.

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 after the maintenance period prescribed in the contract.

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

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

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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 there under then the **GUARANTOR** will indemnify the Principal and his successors against all loss, damage, cost, expense or otherwise which may be incurred by him by 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 above written.

Signed, sealed and delivered by OBLIGOR in the presence of –

…….

…….

Signed for and on behalf of THE PRESIDENT OF INDIA by ……..in the presence of –

…….

…….

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AFFIDAVIT

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

(Name of work)

Agreement No. _____

Dated _____from _____

(Name of the Bank with full address)

to the Executive Engineer _____with a view (Name of the Division)

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

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

(Deponent)

Signature of Contractor

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

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Annexure-V

TO BE EXECUTED BY THE CONTRACTOR FOR REMOVAL OF DEFECTS AFTER COMPLETION IN RESPECT OF ALUMINIUM DOORS, WINDOWS VENTILATORS, STRUCTURAL GLAZING & ALUMINIUM COMPOSITE PANEL WORKS

The agreement made this _____ day of _____ Two Thousand and _____ between _____ son of _____ (hereinafter called the GURANTOR of the one part) and the PRESIDENT OF INDIA (hereinafter called the Government of the other part.)

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

AND WHEREAS THE GURANTOR agreed to give a guarantee to the affect that the said work will remain structurally stable, leak proof and guaranteed against faulty material and workmanship, defective anodizing, colouring, sealing and finishing for 2 (Two) years to be reckoned from the date after the expiry of maintenance period prescribed in the contract.

NOW THE GUARANTOR hereby guarantee that work executed by him will remain structurally stable, leak proof and guaranteed against faulty material and workmanship, defective anodizing, colouring, sealing and finishing for two years to be reckoned from the date after the expiry of maintenance period prescribed in the contract.

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

During this period of guarantee, the guarantor shall make good all defects 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 risk and cost. 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 or 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 both the parties.

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

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

1. _____
2. _____

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

1. _____
2. _____

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Annexure-VI

GUARANTEE BOND TO BE EXECUTED BY THE CONTRACTOR FOR EMOVAL OF DEFECTS AFTER COMPLETIONIN RESPECT OF SANITARY INSTALLATIONS / WATER SUPPLY / DRAINAGE WORK.

The agreement made this..... day of ..... (Two Thousand …… only)..... between .....S/o .....(hereinafter called the GUARANTOR of the one part) and the PRESIDENT OF INDIA (hereinafter called the Government of the other part)

WHEREAS THIS agreement is supplementary to a contract (Hereinafter called the Contract) dated ..... and made between the GUARANTOR OF THE ONE PART

AND the Government of the other part, whereby the contractor inter alia, undertook to render the work in the said contract recited structurally stable, leak proof and sound material, workmanship, anodizing, colouring, sealing.

AND WHEREAS THE GUARANTOR agreed to give a guarantee to the affect that the said work will remain structurally stable, leak proof and guaranteed against faulty material and workmanship, and finishing for five years from the date of completion of work.

NOW THE GUARANTOR hereby guarantee that work executed by him will be free from any leakage, seepage, cracks in pipes, fittings, floor traps and guaranteed against faulty material and workmanship, defective galvanizing for five years to be reckoned from the date after the expiry of maintenance period prescribed in the contract.

The decision of the Engineer-In-Charge with regard to nature and cause of defect shall be final.

During this period of guarantee, the guarantor shall make good all defects and in case of any defect to satisfaction of 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.

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That if the guarantor fails to make good all defects or 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 both the parties.

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

Signed, sealed and delivered by OBLIGOR in the presence of –

…….

…….

Signed for and on behalf of THE PRESIDENT OF INDIA by ……..in the presence of –

…….

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LIST OF PREFERRED MAKES (CIVIL WORKS)

Approved makes of materials to be used in the work are as under. In case of non-availability of these makes, the Engineer-in-charge may allow use of alternative BIS makes of materials in the work. Non BIS marked materials may be permitted by the Engineer-in-charge.

Sl. No.	Material description	Proposed make list
1	Acoustic Wall Paneling	
	i) Wooden Slats Panels	Armstrong, Gyptech, Anutone, BSR Calsi Ceilings, Bollard, Tranquil
	ii) Puffed Fabric Finish Panel	Armstrong, Gyptech, Anutone, Bollard, Tranquil
2	Aluminium section	Hindalco, Jindal, Indian Aluminium Co.
3	Aluminium shuttering	Knest, S-form, Durand forms (India) Pvt. Ltd, Mivan, Pabors
4	Aluminium Composite Panel 4 mm thick 'B1' Fire rated (external grade)	Viva, Alstone, Eurobond, Wonder Alu Board, Alutuff, Alex, Aldeko
5	Anodized aluminium hardware	Alualpha, Global, Classic, Ebco
6	AAC Block	MAX Blocks, Biltech ACE, Don Construction Chemicals, UltraTech, Garvit, HIL
7	Adhesive -AAC block Adhesive	UltraTech, Ferrous Crete, Aneeb, JK Cement (JK Tylo), Saint Gobain Weber, Ardex Endura, VURA, Berger, Astral
8	Adhesive -Tile Adhesive Grouts	STP Ltd, Kajaria, BASF, Don Building Chemicals (India) Pvt. Ltd., Ardex Endura, Aneeb, Garware, JK White (JK Tylo), Don Construction Chemicals India Pvt. Ltd., JK Cement, Vura, Berger, Astral, Trimurti
9	CPVC Pipe & fitting	Astral, Superme, Raksha, Ashirwad, Prayag Polymers, Birla HIL, AKG, Kothari, Sparsh Pearl, Vigor
10	Cement (PPC/OPC)	ACC, Ultratech, Shree Cement, JK Cement, Century Cement, Prism Cement, Ambuja
11	Cement (White)	Birla White, JK White or equivalent
12	Centrifugally Cast (Spun) Iron Pipes & Fittings /Hubless pipes & fittings	NECO, Kapilansh, RPMF, SKF, RIF
13	a) CP brass bath fittings (Standard)	Jaquar (Essco), CERA, Johnson, Parryware, Euronics, Polyplast, Asian Paints (EssEss), Kerovit (Kajaria), Essel, RAK, Hindware Limited (Italian), Somany, Prayag, Astral, Sparsh Pearl
	b) CP brass bath fittings (Premium)	Jaquar, Grohe, Kholer, Essel, Roka. Hindware Limited (Queo), Asian Paints (Bathsense), Sparsh Pearl
14	DGU Glass	Gold Plus, Olumpus Toughened, Shankar Fenestration Glasses
15	Distemper- 1st quality acrylic distemper (washable/ ready mix / Low VOC)	Asian Paints (Tractor Aqua Lock Paint), Garware, Berger: Bison lite ICI-Dulux, JK MaxX (Jumbo)], Birla Opus Prime (D-20)
16	Dash fasteners / Clamps/ Anchors	Hilti, Bosch, AFT, Fischer, Wuerth
17	DI Pipes & fittings	Jindal, Electro steel, Tata Ductura, Kapilansh
18	Elastomeric Liquid W.P. membrane with acrylic polymer	Tikidan (Tiki Aquoseal ARR), Don Construction Chemicals, Pidilite, MYK Arment, Berger, Astral, Technonicol
19	Extruded polystyrene insulation board	Dowcorning, Supreme, Analco, Tikidan (DANOPREN Range), Technonicol

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20	**False Ceiling System**	
	i) GI Sections for frame work of Gypsum/ Calcium Silicate board	Saint Gobain, Hi-Steel, USG Boral, Western, Anutone, BSR Calsi Ceilings
	ii) T-grid of GI powder coated for Mineral / perforated Gypsum / Calcium Silicate / Metal/ Glass tiles /GRG ceiling	Saint Gobain, Hi-Steel, USG Boral, Armstrong, Anutone, Bollard, Royal Kraft, BSR Calsi Ceilings
21	**False Ceiling Tiles**	
	i) Perforated GRG tiles	Saint Gobain, USG Boral, Armstrong, Gyptech, Anutone, BSR Calsi Ceilings
	ii) Mineral Fiber tiles	Saint Gobain, Hi-Steel, USG Boral, Armstrong, Anutone
	iii) Glass Fiber Reinforced Gypsum tiles	Saint Gobain, Anutone, BSR Calsi Ceilings
	iv) Metal tiles	Saint Gobain, Hi-Steel, USG Boral, Armstrong, Gyptech, Bollard, Royal Kraft, Anutone, BSR Calsi Ceilings, Tranquil
	v) Calcium silicate tiles	Aerolite, Ramco Hilux or equivalent
22	Fire rated doors	Signum fire protection, Shakti Metdoor, Navair, Promat, Bhawani Fire, Asahi, Supreme Metwood
23	Fire rated stainless steel fittings	Geze, Dorma, Ozone, Dorset, KICH & KICH PR
24	Fire rated glass	AIS, Hero Fire S, Schott, Sanit Gobain, Asahi
25	Floor hardener	Ironite, Perma, STP Ltd., MYK Arment, Berger, Astral
26	Floor spring & door closer	Godrej, Dorset, Ozone, Hardwyn, Dormakaba, Geze, KICH & KICH PR
27	Flooring (Epoxy, PU Flooring, Anti-Static, Terrazzo, Car Park Deck, Self-levelling compound)	Beger, Don Construction Chemicals or equivalent.
28	Flush door shutters	Century, Durian, Green Ply, Jayna (Jain wood Industries), Airolam, Archidply, Black Cobra
29	FRP doors shutters & frame	Jayna, Fiberways, Jain doors Pvt. Ltd.
30	FRP Drain cover & frame	Dudhi, NECO, Fibreways or equivalent
31	FRP Chajja	Fibreways / Dudhi / NECO
32	FRP Manhole Covers	Fibreways / Dudhi / NECO
33	GI Sections for Dry Wall Cladding / Partition	Western / Saint Gobain / Everest / Trimurti
34	Gypsum plaster	Ferrous Crete, Dudhi, Gyproc Saint Gobain, Ultra Tech, JK Cement 'Gypso MaxX', Western, Aneeb, Trimurti
35	Glass (Clear/ Float/ Frosted/ Refractive Glass/ Tinted/ Lacquered)	Saint Gobain, AIS, Modiguard, Gold Plus, Shankar Fenestration Glasses,
36	Glass -Mirror glass	Atul, Modi Guard, Golden Fish, Gold Plus
37	Glass Wool	Dow Corning, UP Twiga, Isover
38	Hand dryer	Euronics / Dolphy / Jaquar
39	HDPE Pipes	Reliance, Jain Pipes, Raksha, Supreme, Kothari, Prayag, Astral
40	HDPE /PVC Membranes for water Proofing	Asian Paints, Berger, Pidilite, MYK Arment, Technonicol
41	HDHMR Board	Black Cobra / Action Tesa / Century Ply / Green Ply
42	Hessain Based Bituminous Felt	MAK Felt 46 Kg, STP Ltd. or equivalent
43	Laminates	Action TESA, Greenlam, Century Ply, Airolam, Archidply, Durian, Black Cobra

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44	Laminated Glass	Gold Plus, Olumpus Toughened, Shankar Fenestration Glasses
45	Matting's (Trapper, carpet, Aluminium Dust – Buster)	Euronics / Dolphy / Euro tech
46	MS Tubular windows	Navair, Sukriti, Jangid Engineering Works
47	Melamine polish	Asian Paints melamine gold, Garware, Wudfin of Pidilite, Timbertone of ICI Dulux. Birla Opus Allwood
48	Manhole covers – (CI Manhole covers, frames and Gratings)	NECO, SKF, RPMF, Kapilansh, Astral, Fibreways
49	Manhole covers – (SFRC Manhole covers, frames and Gratings)	KK, JAIN, Pargati
50	Modular Kitchen	Godrej, Evok by Hindware, Glanz
51	Modular Expansion Joint	Herculus, MNR, Sanfield India Ltd, DECG (FRANO), Vexcolt, Pinnacle Solutions, V.R. Engineer
52	Pressed Steel door frames	Navair, Sukriti, Jangid Engineering Works
53	Plywood / Veneer	Greenply, Durian, Century, Airolam, Archidply, Black Cobra
54	Multicell Polycarbonate Sheet	GE Plastic, LEXAN, MG Polyplast, Danpal, Fibreways
55	Profile steel sheet	Ezydeck of TATA, Lloyd Superdeck, JSW, Jindal, Fibreways
56	Particle board	Action TESA, Merino, Archidply, Greenlam
57	Paver block & Kerb stone	Pavcon, Mayur, KK, Power, Navya
58	Paint -Acrylic emulsion	Asian Paints: (Premium Interior Emulsion Paint), Garware, Nerolac: Beauty Gold, Berger: Rangoli Total Care, ICI Dulux: Super Cover, JK MaxX (Trendz), Birla Opus Prime (I-50/Calista Everclear),
59	Paint-Premium acrylic	Asian Paints: (Royale Luxury Emulsion), Nerolac: Impression, Berger: Silk, ICI Dulux: Velvet Touch, JK MaxX (Majesta), Birla Opus Prime (One Pure Elegance),
60	Paint-Plastic emulsion	Asian Paints (Apcolite), Garware, Nerolac: Impression, Berger (easy clean), ICI Dulux 3in 1, Birla Opus Prime (I-50/Calista Everclear),
61	Paint -Textured Exterior Paint	Luxture, Asian Paints, Nerolac, Garware, Berger Paints, JK MaxX Paints, Birla Opus Prime, UTTPL,
62	Paint -Acrylic smooth exterior paint	Asian Paints: (Apex), Nerolac: Excel Super, Berger: Weather Coat, ICI Dulux: Weather Shield, JK Armour, Birla Opus Prime (E-30/E-50/ Calista Neo Star),
63	Paint -Premium acrylic smooth exterior paint with silicon additive	Asian Paints: Apex Ultima, Nerolac: Excel Total Super, Garware, Berger: Long life7, ICI Dulux : Weather Shield Max, JK MaxX (Maximo), Birla Opus Prime (E-70/One True Look),
64	Paint -Synthetic Enamel Paint	Asian Paints: Apcolite Premium Gloss Enamel, Nerolac: Synthetic Hi gloss, Berger: Luxol Hi gloss, ICI Dulux: Gloss Synthtic enamel, JK MaxX (JK Enamlo), Birla Opus Prime (N-52/N-53/ Sparkle Gloss/ Style Cover Max),
65	Primer-Cement Primer	Nerolac, Berger (BP white), Garware, Asian (Decoprime WT), ICI (White primer), JK MaxX (JK Primera), Birla Opus Prime (I-10/Calista Pro Hide),
66	Primer -Steel primer (Red Oxide Zinc Chromate Primer)	Asian Paints, Nerolac, Garware, Berger, ICI, JK MaxX, Birla Opus – (Red Oxide Primer / CMP RO Primer/ SGE RO Primer),
67	Primer -Wood primer	Asian Paints, Nerolac, Garware, Berger, ICI, JK MaxX, Birla Opus,

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68	Paint- Epoxy paint	Asian Paints, Nerolac, Berger, ICI, JK MaxX, Birla Opus
69	Paint- Fire retardant paint	Asian Paints, Akzo Nobel, Wuerth Promat, JK MaxX, Birla Opus
70	PVC Water Tank	Syntex, JS Polyplast, Prayag, Astral, Vectus
71	PVC/WPC Jali	Black Cobra / Alstone / Rajshree / Jamex
72	PVC Flushing Cistern	Sparsh Pearl / Prima / Cera / Hindware
73	PVC Seat Cover	Sparsh Pearl / Jaquar / Hindware / Kohler
74	PTMT fittings	Shakti, Polyplast, Prima, Raksha, Prayag Polymer, Vectus, Sparsh Pearl
75	Pipe-GI/MS Pipe	Tata, Jindal (Hisar), Prakash Surya
76	Pipe Fittings -GI	Unik, AVR, Zoloto
77	PVC door shutter and frame	Rajshri, Sintex, Jain Door Pvt. Ltd., Black Cobra
78	Polyurea coating for Water Proofing	Asian Paints, Berger, Pidilite, MYK Arment, Technonicol
79	Polyurethane over deck insulation foam	Berger, Technonicol or equivalent
80	Puf Sandwich Panel	Fibreways / TATA / EPACK / Alphapeb
81	Ready Mix Concrete (RMC Plant)	RMC India, Ultratech Concrete, ACC Ready Mix, AVRM India Pvt. Ltd., J.P. Group, Shree Cement Ltd. (Bangur Concrete), JK Cement (JK Super RMC)
82	Reinforcement- (Steel TMT bars)	SAIL, Tata Steel, Rashtriya Ispat Nigam Ltd. (RINL), JSW Steel Ltd, Jindal Steel & Power Ltd
83	Stainless steel railing, Accessories etc.	Jindal, Dormakaba, Ozone, Godrej, KICH & KICH PR
84	SS fittings for doors & window	Jindal, Dormakaba, Global, Dorset, Hardwyn, Godrej, Ozone, Geze, Prayag, KICH & KICH PR
85	Sealant – (Silicon based water repellant / weather sealant)	Dow Corning, Waker, BASF, Pidilite (Dr. Fixit / Roff). STP Ltd., Makphalt, Don Construction Chemicals, Tikidan (Tiki Siliseal / Tikiseal PU Range), MYK Arment, Berger
86	Sealant (Poly-Sulphide)	Fosroc, Pidilite (Dr. Fixit/Roff), CAC, BASF, Sika, Don Construction Chemicals, Makphalt, Tikidan (Tiki Polyseal Range), MYK Arment, Berger
87	SW Pipes (BIS approved)	Anand, Parry, Perfect
88	a) Sanitary ware, fittings & accessories (Standard)	Jaquar (Essco), CERA, Johnson. Parryware, Euronics, Asian Paints (EssEss), Kerovit (Kajaria), Essel, RAK, Hindware Limited (Italian), Somany
	b) Sanitary ware, fittings & accessories (Premium)	Jaquar, Grohe, Kholer, Essel, Roka. Hindware Limited (Queo), Asian Paints (Bathsense),
89	Soap & Paper dispenser	Euronics, Jaquar, Essel, Kholer, KICH & KICH PR, Sparsh Pearl
90	Stainless steel Grab Bars & Rails	Euronics, Jaquar, Essel, Dormakaba, KICH & KICH PR
91	Stainless Steel grating	Neer, Asian Paint, Essel, Euronics, Sparsh Pearl
92	Stainless steel sink	Neelkanth, Niralli, Essel, Jayna, Plato, Prima, Prayag
93	SCI S&S Pipes & fittings	NECO / RIF / Kapilansh / RPMF / SKA
94	Tiles- Mosaic tiles/ Chequered Tiles	Ultra Tiles, Nitco, Pavcon
95	Tiles- Glazed Ceramic	Kajaria, Johnson, Somany, RAK, Nitco, Aparna Vitero, Italica, AGL, Orient Bell
96	Tiles- Vitrified Tiles (Antiskid / Matt / Glazed)	Kajaria, Johnson, Somany, RAK, Nitco, Aparna Vitero, Italica, AGL, Orient Bell
97	Tile Grouts	Aneeb, Don Construction Chemicals, MYK Arment
98	Toilet Cubicles	Merino (Titan Series), Greenlam (Sturdo Classic) or equivalent

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99	Toughened Glass	Gold Plus, Olumpus Toughened, Shankar Fenestration Glasses
100	uPVC door/ window / ventilator	Fenesta, Veka, Duroplast, Aluplast, Prominance, Koemmerling, AdvikaFenster, Okotech [IS:17953:2023], Eumax [IS 17953: 2023], Yashpoly (IS 17953:2023], Pabros, Rajshri, Simta Astrix
101	uPVC doors and window hardware	Roto, Dorset, GEZE
102	uPVC pipe and fittings	Astral, Supreme, Raksha, Ashirwad, Prayag Polymers, Birla HIL, AKG, Kothari, Sparsh Pearl, Vigor
103	Water proofing compounds, (admixtures, plasticizer, super plasticizer, curing compounds)	Fosroc, ROFF/Dr. Aneeb, Fixit (Pidilite Industries), CAC, Perma, Sika, BASF, STP Ltd., Garware, Tikidan (Danomix Range), Birla Opus Prime, Penetron, Don Construction Chemicals, MYK Arment, Berger, Technonicol
104	Water proofing compound (Integral) (with cement for plaster & mortar)	Fosroc: Conplast 421, CAC, Aneeb, Perma, Dr. Fixit : LW+, Sika: Sikacim, STP Ltd., Garware, Tikidan (Danomix LW Range), Birla Opus Prime, Penetron, Don Construction Chemicals, MYK Arment, Berger, Technonicol
105	Water proofing compound (for bathroom/ toilet /balcony & other wet areas)	Fosroc: Bush Bond, Aneeb, Dr. Fixit : Pidifine 2K, Asian Paints: Damp Block 2K, Garware, Perma, CICO: Tapecrete, STP Ltd., Tikidan (Danocrte Range), Birla Opus Prime (C2K, C2K+), Don Construction Chemicals, MYK Arment, Berger, Technonicol
106	Water proofing compound (Crystalline)	Fosroc: Bushbond TGP, CAC, Dr. Fixit : Dr. Fixit Krystalline, Sika: Sika 101h, Aneeb, Perma, Garware, STP Ltd., Tikidan (Tikicryst-BC Range), Penetron, Don Construction Chemicals, MYK Arment, Berger, Technonicol
107	Water Proofing Coatings (Polyurethane, Polyurea, Acrylic Cementitious, SRI Coating, Food grade epoxy coating, Coal tar epoxy, Silicone water repellent coating)	Aneeb, Berger, Technonicol or equivalent
108	WTP -MBBR Reactor, Multigrade Filter and Activated carbon Filter	Degremont, OSDPL, Thermax & Ion Exchange
109	WTP- MBBR Media	Cooldeck, MM Aqua, Eco Aqua & Ion Exchange
110	WPC door shutter and frame	Alstone, Jamex, Rajshri, Plasto Green, Black Cobra
111	Wall putty (cement based)	Asian Paints, Birla Wall Care, Trimurti, Garware, JK White, Dudhi, Wonder, JK Cement (JK wall MaxX),
112	WPC Board	Jamex, Alstone, Rajshri, Black Cobra

Note : Contractor shall provide applicable warranty of the products/materials being used in the work to the Engineer-in-Charge at time of approved of the product/material & contractor shall finally submit warranty taken from the manufacturer to Engineer-in-Charge for record.

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MILE STONE OF THE CONTRACT

SL. NO	DESCRIPTION OF MILE STONE	PERIOD FOR COMPLETION FROM DATE OF START IN MONTHS	WITHHELD AMOUNT FOR NON ACHIEVEMENT OF MILESTONE.
1.	Completion of 50 % of work	15 Days	2.50 % of the accepted tendered value.
2.	Completion of 100 % of work	01 Month	2.50 % of the accepted tendered value.

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SCHEDULE OF QUANTITY					
Name of Work :- Provision of civil work for Tubewell for Newly Constructed veer Nari Awas at CRPF, Group Centre, Bijnour, Lucknow. (SH:- New Tubewell)					
Item No.	**Description Of Item**	**Qty**	**Unit**	**Rate i.c Cost Index @ 5%**	**Amount**
1	**EARTH WORK**				
1.1	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m :				
1.1.1	All kinds of soil				
1.1.1.1	Pipes, cables etc, not exceeding 80 mm dia.	80.00	Meter	226.38	18110.00
2	**CEMENT CONCRETE (CAST IN SITU)**				
2.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :				
2.1.1	1:1.5:3 (1 Cement: 1.5 coarse sand (zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources)	0.40	Cum	8757.89	3503.00
2.1.2	1:5:10 (1 cement : 5 coarse sand (zone-III) derived from natural sources : 10 graded stone aggregate 40 mm nominal size derived from natural sources)	0.40	Cum	6844.53	2738.00
3	**MASONRY WORK**				
3.1	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth in:				
3.1.1	Cement mortar 1:6 (1 cement : 6 coarse sand)	1.00	Cum	7488.86	7489.00
3.2	Half brick masonry with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundations and plinth in :				
3.2.1	cement mortar 1:4 (1 cement : 4 coarse sand)	4.00	Sqm	950.30	3801.00
4	**FINISHING**				
4.1	12 mm cement plaster of mix :				
4.1.1	1:6 (1 cement: 6 coarse sand)	6.00	Sqm	360.83	2165.00
4.2	15 mm cement plaster on rough side of single or half brick wall of mix:				
4.2.1	1:6 (1 cement: 6 coarse sand)	4.00	Sqm	415.12	1660.00
5	**WATER SUPPLY**				

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5.1	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain &brass threaded fittings This includes jointing of pipes & fittings with one step CPVC solvent cement, trenching, refilling & testing of joints complete as per direction of Engineer in Charge. External work				
5.1.1	20 mm nominal dia Pipes	2.00	metre	288.02	576.00
5.1.2	25 mm nominal dia Pipes	20.00	metre	373.17	7463.00
5.1.3	65 mm nominal dia Pipes	50.00	metre	1758.12	87906.00
5.2	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :				
5.2.1	20 mm nominal bore	2.00	each	566.95	1134.00
5.2.2	65 mm nominal bore	1.00	each	1829.26	1829.00
6	**RAIN WATER HARVESTING & TUBEWELLS**				
6.1	Boring/drilling bore well of required dia for casing/ strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/ bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer -in-charge, upto 90 metre depth below ground level.				
6.1.1	All types of soil				
6.1.1.1	400 mm dia	90.00	metre	1040.34	93631.00
6.2	Boring/drilling bore well of required dia for casing/ strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/ bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer -in-charge, beyond 90 metre & upto 150 metre depth below ground level.				
6.2.1	All types of soil				
6.2.1.1	400 mm dia	80.00	metre	1300.43	104034.00
6.3	Gravel packing in tubewell construction in accordance with IS: 4097, including providing gravel fine/ medium/ coarse, in required grading & sizes as per actual requirement, all complete as per direction of Engineer in-charge.	24.00	Cum	2125.73	51018.00

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6.4	Supplying, assembling, lowering and fixing in vertical position in bore well, ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/ plain ended casing pipes of required dia, conforming to IS: 4270, of reputed & approved make, including painted with outside surface with two coats of anticorrosive paint of approved brand and manufacture, including required hire & labour charges, fittings & accessories, all complete, for all depths, as per direction of Engineer-in-charge.				
6.4.1	150 mm nominal size dia having minimum wall thickness 5.00 mm	90.00	Metre	2070.86	186377.00
6.5	Supplying, assembling, lowering and fixing in vertical position in bore well, ERW (Electric Resistance Welded) FE 410 plain slotted (having slot of size 1.6/3.2 mm) mild steel threaded and socketed / plain bevel ended pipe (type A) of required dia, conforming to IS: 8110, of reputed and approved make, having wall thickness not less than 5.40 mm, including painted with outside surface with two coats of anticorrosive bitumastic paint of approved brand and manufacture, including hire & labour charges, fittings & accessories, all complete, for all depths, as per direction of Engineer -in-charge.				
6.5.1	150 mm nominal size dia having minimum wall thickness 5.00 mm	60.00	Metre	2207.36	132442.00
6.6	Development of tube well in accordance with IS : 2800 (part I) and IS: 11189, to establish maximum rate of useable water yield without sandcontent (beyond permissible limit), with required capacity air compressor, running the compressor for required time till well is fully developed, measuring yield of well by "V" notch method or any other approved method, measuring static level & draw down etc. by step draw down method, collecting water samples & getting tested in approved laboratory, including disinfection of tubewell, all complete, including hire & labour charges of air compressor, tools & accessories etc., all as per requirement and direction of Engineer-in-charge.	60.00	hrs	1139.30	68358.00
6.7	Providing and fixing suitable size threaded mild steel cap or spot welded plate to the top of bore well housing/ casing pipe, removable as per requirement, all complete for bore well of:				
6.7.1	150 mm dia	1.00	Each	258.77	259.00
6.8	Providing and fixing M.S. clamp of required dia to the top of casing/ housing pipe of tubewell as per IS: 2800 (part I), including necessary bolts & nuts of required size complete.				
6.8.1	150 mm clamp	1.00	Each	2120.00	2120.00

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6.9	Providing and fixing Bail plug/ Bottom plug of required dia to the bottom of pipe assembly of tubewell as per IS:2800 (part I).				
6.9.1	150 mm dia	1.00	Each	338.10	338.00
	TOTAL				**776951.00**
	Correction Factor @ 0.973 as per O.M. eFile No. 9158977 Dated 08-08-2024				**755973.00**
	TOTAL				**755973.00**

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