

GOVERNMENT OF INDIA
CENTRAL PUBLIC WORKS DEPARTMENT

PART-A

O/o ASSISTANT ENGINEER
CENTRAL PUBLIC WORKS DEPARTMENT
RAJKOT

CENTRAL PUBLIC WORKS DEPARTMENT
NOTICE INVITING e-TENDERS

The Assistant Engineer-Rajkot, CPWD, Rajkot, (Ph.No. ***No. 0281-2440931*** ***Email id: eercd.cpwd@gov.in****) for & on behalf of President of India invites online percentage rate bids from approved and eligible contractors of CPWD registered in Composite / B & R category for the following work.*

NIT NO: ***21 / AE / RAJKOT / 2026-27***

Name of Work*:* **Clearing of jungle and grass, cleaning of roads and disposal of rubbish at SB office complex, Rajkot**

Estimated Cost : Rs. 5,70,315/-

Earnest money: **Rs 11,406/-**

Time of completion:- 01 (One) Months

Last time & date of submission of Bid: *15:00 hrs on 06-11-2026*

The tender forms and other details can be obtained from the website https://etender.cpwd.gov.in and https://eauction.cpwd.gov.in

Not to published below the box

Assistant Engineer-Rajkot,
CPWD, Rajkot.

Note:- Applicants are advised to keep visiting the above mentioned web-sites from time to time (till the deadline for bid submission) for any updates in respect of the tender documents, if any. Failure to do so shall not absolve the applicant of his liabilities to submit the applications complete in all respect including updated thereof, if any. An incomplete application may be liable for rejection.

Check List for Contractors for Submission of Tenders Online:

1. Tender shall be witnessed at specified page of tendered documents at the time of drawing agreement with the successful bidder.
2. The tender/tenders containing conditions contrary to those specified in this document shall be summarily rejected.
3. In schedules of quantities appended to the tender documents, the rates in terms of overall percentage above or below the total estimated amount put to tender must be filled both in figures and in words on specified page of tender document.
4. It may be noted that in the present contract, 10CC & 10CA are not applicable.
5. The contractor/ agency shall quote the rate keeping in view that they have to give an undertaking before award of work that "they will install/ arrange field testing instruments and essential T&P, technical representatives specified in the tender document/specification.
6. It will be mandatory to first refer any dispute related to execution of this work to the conciliator. Contractor or department can only seek arbitration if not satisfied with the decision of the conciliator. This should be read along with provisions of clause 25 of GCC 2023 for construction works duly amended & modified with corrections up to date of submission of tender.

INFORMATION & INSTRUCTIONS FOR CONTRACTORS FOR e-TENDERING FORMING PART OF NIT AND TO BE POSTED ON WEBSITE: -

The Assistant Engineer, ***C.P.W.D., Rajkot*** - (Gujarat) invites on behalf of President of India ***Online Percentage Rate*** *bids* from approved and eligible CPWD contractors in the "Composite / B&R Category" for the following work :-

Sr. No.	NIT No.	Name & Location	Estimated Cost Put to bid	Earnest Money	Period of Completion	Last date & time of submission of bid, Original EMD, copy of receipt for deposition of original EMD and other Document as specified in the press notice	Time & date of Opening of Bid
1	2	3	4	5	6	7	8
1	21 / AE / RAJKOT / 2026-27	**Clearing of jungle and grass, cleaning of roads and disposal of rubbish at SB office complex, Rajkot**	Rs. 5,70,315/-	Rs. 11,406/-	01 (One) Months	Up to 15:00 Hrs on 06-11-2026	Up to 15:30 Hrs on 06-11-2026

1. The intending bidder must read the terms and conditions of CPWD-6 carefully. He should only submit hisbid if he considers himself eligible and he is in possession of all the required documents.
2. This information and instructions for bidders posted on website shall form part of bid document.
3. The bid document consisting of Plans, Specifications, 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 free of cost.
4. The bid can only be submitted after deposition of original EMD either in the office of Executive Engineer inviting bids or division office of any Executive Engineer, CPWD within the period of bid submission and uploading the mandatory scanned documents such as Insurance Surety Bonds, Account Payee Demand draft or Bankers Cheque or Fixed Deposit Receipts or/ and Bank Guarantee/e- Bank Guarantee (for balance amount asprescribed) from any of the Commercial 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 NITissuing EE), CPWD and other documents as specified.
5. Those contractors who are not registered or have not updated their profile on the website mentioned above, are required to get registered/update their profile beforehand. The necessary training materials including the videos with step to step process are available on download section of https://etender.cpwd.gov.in
6. The intending bidder must have valid class-III digital signature certificate with encryption key (combo type) to perform any operations/ transactions on the e-tendering portal / website and the bidder should download and install the eM-signer on their system as per instruction available on download section of https://etender.cpwd.gov.in
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 of each item. The column meant for quoting rate in figures appears in **yellow** color 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 sameshall 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, thetender shall be treated as invalid and will not be considered as lowest tenderer.

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

11. After submission of the bid the Bidder can re-submit revised bid any number of times but before last time and date of submission of bid as notified. The bidder can submit revised bid only online on tendering website. The intending bidders are not allowed to modify /revise bid by physical document or physical communication whatsoever.

12. The bid submitted shall be come invalid and e-bidding 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.

13. It this work requires engaging more than 20 nos. of labours / workers and therefore all necessary licenses such as Labour license, EPFO and ESI, BOCW welfare registration etc., shall be taken by contractor within the time limits as prescribed under Clause 1 of Schedule-'F'.

14. The documents to be physically submitted shall be page numbered and each page shall be signed by authorized signatory.

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

16. The safety and security of the completed buildings is the responsibility of the contractor till they are handed over to the client department. After completion of the work, the taking over process may take time. The responsibility of safety and security of the buildings including all fixtures and fittings shall rest with the contractor and nothing extra shall be payable on this account.

17. The Contractor shall adhere to the restrictions, rules, regulations and timings imposed by the department on the working and on movement of labour, materials etc. The Contractor will be permitted to construct site office, site store yard and workers rest rooms (including toilets) near the place of construction, at a place procured by the agency as per the decision of local administration/CPWD. These structures shall be removed and cleared by the contractor upon

completion of the work.

18. 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 entertained.

19. GST or any other tax applicable in respect of inputs procured by the contractor for this contract shall be payable by the contractor and CPWD will not entertain any claim whatsoever in respect of the same.

20. The bidder should have sufficient number of Technical and Administrative employees for the proper execution of the contract. The bidder shall have to submit a list of these employees stating clearly how these would be involved in this work within 15 days of award of work.

21. If any information furnished by the applicant is found to be incorrect at a later stage, he shall be liable to be debarred from tendering/taking up of works in CPWD. The department reserves the right to verify the particulars furnished by the applicant independently.

22. The bidder should not have been barred/black listed by the central/State Government, or any entity controlled by it, from participating in any tender, and the bar subsists as on the Bid Due Date, such bidder would not be eligible to submit the BID.

23. The tenderer (s) shall associate with himself, specialized agencies of the appropriate eligibility for components of specialized nature of items / work of major component listed below individually. Such works shall be got executed only through associated agencies specialized in these fields. If the tenderer (s) himself fulfils the eligibility criteria laid down for associated specialized agencies, and he wants to execute work himself then he will have to satisfy Engineer-in-Charge that he himself had carried out such specialized similar work of required magnitude during last 7 years directly without subletting and take written approval before commencing with the work. The tenderer(s) whose tender is accepted shall indicate the name(s) of his associated specialized agencies those fulfilling the eligibility criteria laid down below as early as possible and within 60 days of award of work for the approval of the Engineer-in-charge whose decision shall be final and binding.

S. No.	Specialized work(s) /Item of work (s)	Eligibility Criteria of Associated Agencies
A	**Major Work (CIVIL)**	The tenderer shall associate specialized agencies, who have satisfactorily completed three specialized works of similar nature of each costing not less than amount equal to 40% of tendered amount of corresponding specialized item, or two specialized works of similar nature each costing not less than amount equal to 60% of tendered amount of corresponding specialized item or one similar work costing not less than amount equal to 80% of tendered amount of corresponding specialized item during the last seven years ending on the last day of the month previous to the one in which the tenders are invited. The value of executed similar works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum calculated from the date of completion to the last day of the month previous to the one in which the tenders are invited.
1	Water proofing treatment	
2	Aluminium works	

List of Documents to be scanned and uploaded by intending Bidders within the period of Bid submission: (in JPG or PDF format)

1	Scanned copy of Insurance Surety Bonds, Account Payee Demand draft or Bankers Cheque or Fixed Deposit Receipts or/ and Bank Guarantee/e- Bank Guarantee (for balance amount as prescribed) from any of the Commercial Bank against EMD as prescribed.
2	Copy of Receipt for deposition of original EMD issued from division office of any Executive Engineer, CPWD (Including NIT issuing EE.)
3	Copy of Enlistment Order in appropriate Class and Category issued by CPWD.
4	GST Registration Certificate of the State in which the work is to be taken up, if already obtained by the Bidder. If the Bidder has not obtained GST registration of the State in which the work is to be taken up, or as required by the GST authorities, then in Such a case, he shall scan and upload following undertaking along with bid documents. "If work is awarded to me, I/We shall obtain GST registration certificate of the State, in which said work is to be taken up within one month from the date of receipt of award letter or before release of any payment by CPWD, whichever is earlier, failing which I/We shall be responsible for any delay in payments which will be due towards me/us on a/c of the work executed and/or for any action taken by CPWD or GST Department in this regard".
5	Any other document as specified in the NIT.
6	Scanned copy of ERP Training Certificate as per DG OM No. DG / Enlist.Rules-2023 / 07, Dtd. 12-01-2024

Assistant Engineer,
CPWD, Rajkot

Form F

EMD FORMAT

Receipt of deposition of original EMD

(Receipt No ……..Date……)

1. Name of work : **Clearing of jungle and grass, cleaning of roads and disposal of rubbish at SB office complex, Rajkot**

2. NIT No: **21 / AE / RAJKOT / 2026-27**

3. Estimated cost :- **Rs. 5,70,315/-**

4. Amount of Earnest Money Deposit: **Rs. 11,406/-**

5. Last date of submission of bid: **06-11-2026 Up to 15:00 hrs**

1. Name of contractor:

2. Form of EMD:

3. Amount of Earnest Money Deposit:

4. Date of submission of EMD:

Signature, Name and Designation of EMD Receiving officer

(EE / AE(P)/ AE / AAO) Along with office stamp

#(To be filled by EMD receiving EE or NIT issuing EE/AE as the case may be)

Note:-

i. The EE/Engineer in Charge/DDH of any divisions/projects of CPWD or any other office designated by CPWD Directorate from time to time, are authorized to receive the EMDs. These authorities should receive the original EMD for their tenders or tenders of any other division/projects.

ii. The NIT approving authority/ Tender inviting authority at the time of issue of NIT also fills and upload the prescribed format of receipt of deposition of original EMD along with NIT

iii. The Authority receiving EMD in original form examines the EMD deposited by the bidder and issues receipt of deposition of earnest money to the agency in a given format uploaded by tender inviting authority. The receipt can also be issued by any subordinate gazette authority as authorized by the EE/Engineer in Charge/DDH.

iv. The authority receiving original EMD also intimates tender inviting authority about deposition of EMD by the agency by email/fax/telephonically.

v. The original EMD receiving authority releases the EMD to unsuccessful bidders after the expiry of stipulated bid validity period or immediately after acceptance of the successful bidder, whichever is earlier, after verification form the e-tendering portal website **(https://etender.cpwd.gov.in and https://eauction.cpwd.gov.in)** that the particular on tractor is not L-1 tenderer and work is awarded.

vi. The tender inviting authority calls for original EMD of the L1 tenderer from EMD receiving authority immediately.

Form G

UNDERTAKING REGARDING GST REGISTRATION

To

Assistant Engineer

CPWD, Rajkot

Subject: **Clearing of jungle and grass, cleaning of roads and disposal of rubbish at SB office complex, Rajkot**

Sir,

Having examined the details given in press notice and bid document for the above work, I/we hereby submit the following:

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

Seal of bidder:

Date of submission:

Signature(s) of Bidder(s)

CPWD-6 FOR e-Tendering

The Assistant Engineer, CPWD, Rajkot (Gujarat) on behalf of the President of India invites online percentage rate bids from approved and eligible contractors of CPWD enlisted in appropriate class for the following work-

1. **Clearing of jungle and grass, cleaning of roads and disposal of rubbish at SB office complex, Rajkot** 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 bid.

1.1 The work is estimated to cost **Rs. 5,70,315.00** This estimate, however, is given merely as a rough guide.

2. Agreement shall be drawn with the successful bidders on prescribed Form No. CPWD 7, which is available as a Govt. of India Publication and also available on website www.cpwd.gov.in. Bidder shall quote his rates as per various terms and conditions of the said form, which will form part of the agreement.

3. The time allowed for carrying out the work will be **01 (One) Months** from the date of start as defined in schedule 'F' or from the first date of handing over of the site, whichever is later, in accordance with the phasing, if any, indicated in the bid documents.

4. The site for the work is available.

   The Structural and Architectural drawings for work are available.

5. The bid document consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents except Standard General Conditions of Contract Form can be seen on website https://etender.cpwd.gov.inor 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 tender as notified.

8. Earnest Money in the form of Insurance Surety Bonds, Account Payee Demand Draft, Fixed Deposit Receipt, Banker's Cheque or Bank Guarantee including e- Bank Guarantee (for balance amount as prescribed) from any of the Commercial Banks (drawn in favour of Executive Engineer, RCD, CPWD Rajkot.) 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 including e- 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 03:30 PM on 06-11-2026.

9. The bid submitted shall become invalid and e-Tender processing fee (if applicable) shall not be refunded if:

I. The bidder is found ineligible.

II. The bidder does not 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. Bidder does not upload ERP Training Certificate

~~*V.* Bidder does not upload Form H - i.e. Affidavit for Non Black listing~~

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

10. The contractor whose bid is finally accepted will be required to furnish performance guarantee at specified percentage of tendered amount as mentioned in schedule E and within the period specified in Schedule F. in the form Insurance Surety Bond or Account Payee Demand Draft or Fixed Deposit Receipt or Banker‘s Cheque or Bank Guarantee including e-Bank Guarantee (for balanced amount as prescribed) from any of the commercial bank in accordance with the prescribed form given in NIT. 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 be 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 sub-contractors, if any engaged by the contractor for the said work within the period specified in Schedule-F.

11. The description of the work is as follows

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

In addition to above the bidder shall fully acquaint himself about the conditions with regard to site , nature of soil , availability of material , suitable location for construction of go down, stores and labour huts, the extend of leads and lifts involved in the work (over the entire duration of the contract) including local conditions, terrain, atmospheric temperature, rainfall, humidity availability of labour, working window in the different season, working culture , traffic restrictions and other conditions ,as required for satisfactory execution of the works. The proposed rates shall take into consideration all such factors and contingencies. No claim whatsoever shall be entertained by the department on this account. No hindrance shall be allowed for normal monsoon seasons from July to Sept every year.

12. 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 himself 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.

13. 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.

14. The competent authority on behalf of President of India reserves to himself the right of accepting the whole or any part of the bid and the bidder shall be bound to perform the same at the rate quoted.

15. The contractor shall not be permitted to bid for works in the CPWD Circle (Division in case of contractors of Horticulture/Nursery category) responsible for award and execution of contracts, in which his near relative is posted a Divisional Accountant or as an officer in any capacity between the grades of Superintending Engineer and Junior Engineer (both inclusive). He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to any gazetted officer in the Central Public Works Department or in the Ministry of Urban Development. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of this Department.

16. No Engineer of Gazetted Rank or other Gazetted Officer employed in Engineering or Administrative duties in an Engineering Department of the Government of India is allowed to work as a contractor for a period of one year after his retirement from Government service, without the prior permission of the Government of India in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found any time to be such a person

who had not obtained the permission of the Government of India as aforesaid before submission of the tender or engagement in the contractor's service.

17. The bid for the works shall remain open for acceptance for a period of Thirty (30) days from the date of opening of bids. Further,

- If any bidder withdraws his bid or makes any modification in the terms and conditions of the bid 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.
- If any bidder withdraws his bid or makes any modification in the terms and conditions of the bid 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 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.
- 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.

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

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

(b) Standard C.P.W.D. Form 7 GCC-2023 for Maintenance work modified up to date of submission of bid

19. GST and all other taxes as applicable, Education Cess, Gujarat State Construction worker's welfare cess etc. shall be payable by the contractor and Government will not entertain any claim whatsoever in respect of the same.

20. For Composite bids

- 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.
- The bid document will include following three components:

  Part A: - CPWD-6, CPWD-7 including schedule A to F for the major component of the work, Standard General Conditions of Contract for CPWD 2023 as amended/modified up to previous day of the last date of submission of tender.

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

  Part C: - Schedule A to F for minor component of the work, General/specific conditions, specifications applicable to minor component(s) of the work.

  Part D: - Schedule of quantities applicable to major & minor component (s) of the work.

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

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

23. 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 in charge of major component and has also to sign two or more copies of agreement depending upon number of EE's/DDH in charge of minor components. One such signed set of agreement shall be handed over to EE/DDH in

charge of minor component(s). EE of major component will operate Part A, Part B and Part D of the agreement. EE in charge of minor component(s) shall operate Part C & D along with Part A of the agreement.

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

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

26. The main contractor has to associate agency(s) for minor 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 minor component(s) within prescribed time. Name of the agency(s) to be associated shall be approved by Engineer-in-charge of minor component(s).

27. 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 minor component. 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.

28. The main contractor has to enter into MoU / agreement with contractor(s) associated by him. Copy of such MoU / agreement 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 has to enter into agreement with the new contractor associated by him.

29. 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.

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

B. 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.

31. 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 0281-2440931 e- mail Id eercd.cpwd@gov.in) or ERP helpline no. 18001803286 or e-mail ld cpwd.support@techmahindra.com The e- tendering bidders 18001803286 are also advised not to wait to raise any issues till the last date of submission of bid in their own interest.

Assistant Engineer,
CPWD, Rajkot
(For and on behalf of President of India)

GOVERNMENT OF INDIA
CENTRAL PUBLIC WORKS DEPARTMENT

CPWD – 7	CPWD

PERCENTAGE RATE TENDER & CONTRACT FOR WORK: -

Tender for the work of for **Clearing of jungle and grass, cleaning of roads and disposal of rubbish at SB office complex, Rajkot**

To be submitted/uploaded by 15.00 Hrs on 06-11-2026 to Assistant Engineer, Central P.W.D., Rajkot. by uploading at https://etender.cpwd.gov.in

(i) To be opened in presence of tenderers who may be present at 15.30 Hrs on 06-11-2026 in the office of Assistant Engineer, Central P.W.D., Rajkot.

T E N D E R

I/We have read and examined the notice inviting Bid, 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 condition of contract and all other contents in the bid 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 with the specifications, designs, drawings and instructions in writing referred to in Rule-1 of General Rules and Directions and in Clause 11 of the General Conditions of contract applicable and with such materials as are provided for, by, and in respects in accordance with, such condition so far as applicable.

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

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

A copy of earnest money deposit receipt of prescribed amount deposited in the form of Insurance Surety Bonds, Account Payee Demand Draft, Fixed Deposit Receipt, Banker's Cheque or Bank Guarantee (as prescribed) issued by a Commercial Bank, is scanned and uploaded (strike out as the case may be). If I/We, fail to furnish the prescribed performance guarantee within prescribed period, I/We agree that the said President of India or his successors, in office shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely. Further, if I/We fail to commence work as specified, I/ We agree that President of India or the successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said performance guarantee absolutely. The said Performance Guarantee shall be a guarantee to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.3 of the tender form.

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

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

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: **_____ Telephone No._____*_____

Fax _____*_____

E-Mail_____*_____

(*) To be filled in by the Contractor

(**) To be filled in by the Witness

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 `…….....

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

(a)

(b)

(c)

For & on behalf of the President of India

Signatures

Designation

Dated

PROFORMA OF SCHEDULE	CPWD

PROFORMA OF SCHEDULES (CIVIL WORKS)

(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 (as per PWD-3) : **Separate sheet uploaded**

SCHEDULE 'D'
Extra schedule for specific requirements / document for the work, if any : **NIL**

SCHEDULE 'E'
Reference to General Conditions of contract : GCC Maintenance work 2023 as modified & corrected up to previous day of the last date of submission of tender.

NAME OF WORK :- Clearing of jungle and grass, cleaning of roads and disposal of rubbish at SB office complex, Rajkot

Estimated cost of work : **Rs. 5,70,315/-**

(i) Earnest money : **Rs. 11,406/-**

(ii) Performance Guarantee : 5% of ECPT or Contract Amount whichever is higher and Additional Performance Guarantee equivalent to different between 80% amount of ECPT and quoted amount if quoted bid amount is lesser then 80% of ECPT

(iii) Security Deposit : 2.5% of tendered value

PROFORMA OF SCHEDULE	CPWD

SCHEDULE 'F'

GENERAL RULES& DIRECTIONS

Officer inviting tender		:	**Assistant Engineer, C.P.W.D., Rajkot**

Definitions:

2 (v)	Engineer-in-Charge	:	**Assistant Engineer, C.P.W.D., Rajkot**
2 (viii)	Accepting Authority	:	**Assistant Engineer, C.P.W.D., Rajkot**
2 (x)	Percentage on cost of materials and labour to cover all overheads and profits.	:	15%
2 (xi)	Standard Schedule of Rates	:	**Delhi schedule of Rates 2023** with correction slips issued up to previous day of the last date of submission of bid.
2 (xii)	Department	:	Central Public Works Department
9 (ii)	Standard CPWD contract Form	:	GCC 2023, CPWD form 7 as modified & corrected up to previous day of the last date of submission of tender

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 provided in (i) above	:	**03 days**

Clause 2

Authority for fixing compensation under Clause 2	:	Executive Engineer or Chief Engineer, CPWD, Gandhinagar or any other authority notified by CPWD Directorate from time to time during the currency of the Agreement.

Clause 2 A

Applicable Clause 2 / Clause 2A	:	2A Applicable (Maintenance Work)

Clause 5
Number of days from the date of issue of letter of acceptance for reckoning date of start : **10 Days**

Mile Stones are as per Table given below:-

Sr. No.	Description of Milestone (Financial)	Time allowed in days (from date of start)	Amount to be with held In case of non achievement of mile stone
1	1/8th (of the whole work)	1/4th (of the whole time)	In the event of not achieving the necessary progress as assessed from the running payment, 1.25% of the tender value of work will be withheld for failure of each mile stone.
2	3/8th (of the whole work)	1/2nd (of the whole time)	
3	3/4th (of the whole time)	3/4th (of the whole time)	
4	Full work	Full time	

Schedule of Handing Over of Site			
Part	**Portion of site**	**Description**	**Time Period for handing over reckoned from date of issue of letter of intent**
Part A	Portion without any hindrance	---	At the time of date of start
Part B	Portions with encumbrances	---	Not Applicable
Part C	Portions dependent on work of other agencies	---	Not Applicable

Time allowed for execution of work : **01 (One) Months**

Authority to decide

(i) Authority to convey the decision of shifting of milestone and Extension of time : Assistant Engineer, CPWD, Rajkot

(ii) Authority to decide rescheduling of milestone and extension of time : Assistant Engineer, CPWD, Rajkot

(iii) Shifting of date of start in case of delay in handing over of site : Assistant Engineer, CPWD, Rajkot

Clause 5
Clause applicable – (5 or 5A) : **Clause 5 Applicable (Maintenance work)**

Clause 6

Mode of Measurement : **Computerized Measurement Book (CMB) / Electronic Measurement Book (EMB**

Clause 7
Gross work to be done together with net payment / adjustment of advances for material collected, if any, since the last such payment for being eligible to interim payment. : **Rs. 4,00,000/-**

Clause - 7 A

Whether clause 7 A Shall be applicable : Yes, No Running Account Bill shall be paid for the work till the applicable labour licenses, registration with GST, EPFO, ESIC and BOCW Welfare Board, whatever applicable as submitted by the Bidder to the Engineer-in- Charge

Clause 10 A

List of testing equipment to be provided by the contractor at site lab : ~~Sieve Set, Slump cone set,~~ weighing balance, ~~Cube set, Compressive testing machine, oven, Measuring Jar, Moisture Meter~~, Screw Gauge and Vernier Caliper, Hammer, Screw driver, ~~Bitumen Extractor~~, Any other work specific apparatus

Or

The agency at his own discretion may request to waive off the major apparatus required to be used for test conducted at the site lab if he is willing to get all the test done in the lab approved by the department/government lab at his own cost. The decision of engineer in-charge shall be final and binding.

Clause 10 B

Whether clause 10 – B (i) shall be applicable : **Not Applicable**

Clause 10 C

Component of labour expressed as percent of value of work = 25 % : **25% Applicable**

(Payment under this clause for this component is admissible when contractor submits proof of having paid wages due to every worker through bank or ECS or online transfer to his bank account.)

Clause 10 CA : **Not Applicable**

~~Sr. No.~~	~~Material covered under this clause~~	~~Nearest Materials (other than cement*, reinforcement bars and the structural steel) for which All India Wholesale Price Index to be followed~~	~~Base price and its corresponding period of all materials covered under clause 10 CA**~~
~~1.~~	~~Cement~~		~~PPC- ₹ 5,800/- MT~~ ~~OPC- ₹ 5,500/- MT~~
~~2.~~	~~Steel reinforcement (TMT bars Fe-500D) from primary producers.~~		~~₹ 70,000/- MT~~

~~* includes Cement component used in BMC.~~

** ~~Base price and its corresponding period of all the materials covered under clause 10 CA is to be mentioned at the time of approval of NIT. In case of recall of tenders, the base price may be modified by adopting latest base price and its corresponding period.~~

Clause 10 CC

Clause 10 CC to be applicable in contracts with stipulated period of completion exceeding the period shown in next column	:	12 (Twelve) Months
Schedule of component of other Materials, Labour, POL etc. for price escalation.		
Component of Civil (except materials covered Under Clause 10CA) / Electrical construction Materials expressed as percentage of total value of work :-	:	X m (Not applicable)…….% (Not Applicable)
Component of Labour - expressed as percentage of total value of work	:	Y (Not applicable) .....%
Component of P.O.L. expressed as percentage of total value of work	:	Z (Not applicable) .....%

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

PROFORMA OF SCHEDULE	CPWD

Clause 11

Specifications to be followed for execution of work	:	CPWD Specification-2019 Vol. I & II with correction slips up to the last date of submission of bid.(Hereinafter called CPWD Specification also) and Manufacture's specification wherever applicable

Clause 12

Type of Work	:	**(Repair & Maintenance Work). The completion cost shall, in no case, exceed 1.25 times the contract amount.**

12.2 (c):

Deviation Limit beyond which Clauses - 12.2 (C) shall apply for building work.	:	**No Limit**

12.4

Deviation Limit beyond which Clauses – 12.2 (C) & shall apply for building work. (Except Earth Foundation Work)	:	**No Limit**
Deviation Limit for items in earth work subhead of DSR or related items.	:	**No Limit**

Clause 16

Competent Authority for deciding reduced rates		Executive Engineer / Chief Engineer, CPWD, Gandhinagar or any authority notified by CPWD Directorate from time to time during the currency of the agreement.

Clause 18

List of mandatory machinery, tools & plants to be deployed by the contractor at site		As required for the Execution of Work as per CPWD Specification and directions of Engineer-in-charge.

Clause 19C

Authority to decide penalty for each default		Assistant Engineer, CPWD, Rajkot

Clause 19D

Authority to decide penalty for each default		Assistant Engineer, CPWD, Rajkot

Clause 19G

Authority to decide penalty for each default		Assistant Engineer, CPWD, Rajkot

Clause 19K

Authority to decide penalty for each default		Assistant Engineer, CPWD, Rajkot

Clause 25 : Settlement of disputes by Conciliation and Arbitration		**As per OM issued by DG, CPWD, New Delhi No. DG/CON/317, dated 28-06-2021**
Conciliator for settlement of disputes		SDG, CPWD, Mumbai or Any other officer appointed by the Director General.
Competent authority for appointing Arbitrator		Chief Engineer CPWD, Gandhinagar or Any other officer appointed by the Director General.
Place of Arbitration		Rajkot

Clause 32 (i)

Requirement of Technical Representative(s) and recovery Rate:

~~SL. No.~~	~~Minimum Qualification of Technical Representative~~	~~Discipline~~	~~Designation (Principal /Technical Representative)~~	~~Minimum Experience~~	~~NUMBER~~	~~Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of clause 36 (i)~~	
						~~Figures~~	~~Words~~
~~1~~	~~Graduate Engineer or Diploma Engineer~~	~~Civil~~	~~Principal / Technical Representative (Project / Planning / Site / Billing Engineer)~~	~~2 years or 5 years~~	~~0~~	~~Rs. 25,000/- Per month~~	~~(Rupees Twenty Five Thousand Only) Per month~~

NOTE:-

1. 'Cost of work,' in table above, means the agreement amount of the work.
2. Nothing extra need to be added while preparing market rate justified amount of the work if stipulation is made as per above recommended scale of requirement of technical staff.
3. Requirement of technical staff and their experience can be varied depending upon nature of work by NIT approving authority with recorded reasons.
4. The NIT approving authority shall mention the appropriate stage of employment of technical staff for minor component / specified work, if any at the time of approval of NIT.
5. Engineer(s) and / or overseer(s) deployed as per stipulation in the contact shall look afteronly the work under contract and no other work and shall be available fully during execution of work.
6. Even if contractor (or partner in case of firm / company) is himself an engineer / overseer, it is necessary on part of the work(s) as per stipulation.
7. Assistant Engineers retired from Government services that are holding Diploma will be treated at par with Graduate Engineers. Diploma holder with minimum 10 year relevant experience with a reputed construction co. can be treated at par with Graduate Engineers for the purpose of such deployment subject to the condition that such diploma holders should not exceed 50% of requirement of degree engineers
8. The contractor shall submit a certificate of employment of the technical representative (s) (in the form of copy of Form -16 or CPF deduction issued to the Engineers employed by him) along with every account bill/final bill and shall produce evidence if at any times so required by the Engineer-in-charge.

Clause 38

(i) (a) Schedule/statement for determining theoretical quantity of cement & bitumen on the basis of **Delhi Schedule of Rates- 2023** printed by C.P.W.D.

(ii) Variations permissible on theoretical quantities : -

(a) Cement

For works with estimated cost put to tender not more than Rs.5 lakhs : 3% Plus / Minus

For works with estimated cost put to tender more than Rs.5 lakhs : 2% Plus / Minus

(b) Bitumen All works : 2.5 % Plus only & Nil on minus side.

(c) Steel Reinforcement and structural steel
Sections for each diameter, section and Category : 2 % Plus / Minus

(d) All other materials : NIL

RECOVERY RATES FOR QUANTITIES BEYOND PERMISSIBLE VARIATION:

~~SR. NO.~~	~~DESCRIPTION OF ITEM~~	~~RATES IN FIGURES AND WORDS AT WHICH RECOVERY SHALL BE MADE FROM THE CONTRACTOR~~	
		~~EXCESS BEYOND PERMISSIBLE VARIATION~~	~~LESS USE BEYOND PERMISSIBLE VARIATION~~
~~1.~~	~~CEMENT (PPC)~~		~~*₹6,050/- (Rupees Six Thousand Fifty Only)~~
~~2.~~	~~STEEL REINFORCEMENT~~		~~*₹77,000/- (Rupees Seventy Seven Thousand Only)~~

***Subject to acceptance of quality of work by the Competent Authority.**

GOVERNMENT OF INDIA
CENTRAL PUBLIC WORKS DEPARTMENT

PART-B

O/o ASSISTANT ENGINEER
CENTRAL PUBLIC WORKS DEPARTMENT
RAJKOT

General Rules and Directions

1. All work proposed for execution by contract will be notified in a form of invitation to tender published digitally and can be seen and downloaded from website https://etender.cpwdw.gov.in free of cost. This form will state the work to be carried out, as well as the dated of submitting and opening tenders and the time allowed for carrying out the work, also the amount of earnest money to be deposited with the tender, and the amount of the security deposit and Performance guarantee to be deposited by the successful tenderer and the percentage, if any, to be deducted from bills. Copies of the specifications, designs and drawings and any other documents required in connection with the work signed for the purpose of identification by the officer inviting tender shall also be open for inspection by the contractor at the office of officer inviting tender during office hours.

2. In the event of tender being submitted by a firm, it must be signed separately by each partner thereof or in the event of the absence of any partner, it must be signed on his behalf by a person holding a power of attorney authorizing him to do so, such power of attorney to be produced with the tender, and it must disclose that the firm is duly registered under the Indian Partnership Act 1952.

3. Receipts for payment made on account of work, when executed by a firm, must also be signed by all the partners, except where contractors are described in their tender as a firm, in which case the receipts must be signed in the name of the firm by one of the partners, or by some other person having due authority to give effectual receipts for the firm.

4. Applicable for Item Rate Tender only (CPWD-8).

   The rate(s) must be quoted in decimal coinage. Amounts must be quoted in full rupees by ignoring fifty paisa and considering more than fifty paisa as rupee one.

   In case the lowest tendered amount (worked out on the basis of quoted rate of Individual items) of two or more contractors is same, then such lowest contractors may be asked to submit sealed revised offer quoting rate of each item of the schedule of quantity for all sub sections/sub heads as the case may be, but the revised quoted rate of each item of schedule of quantity for all subsections / subheads should not be higher than their respective original rate quoted already at the time of submission of tender. The lowest tender shall be decided on the basis of revised offer.

   If the revised tendered amount (worked out on the basis of quoted rate of individual items) of two or more contractors received in revised offer is again found to be equal, then the lowest tender, among such contractors, shall be decided by draw of lots in the presence of SE of the circle, or CE of the zone EE (s) in-charge of major & minor component (s) (also DDH in case Horticulture work is also included in the tender), and the lowest contractors those have quoted equal amount of their tenders.

   In case of any such lowest contractor in his revised offer quotes rate of any item more than their respective original rate quoted already at the time of submission of tender, then such revised offer shall be treated in valid. Such case of revised offer of the lowest contractor or case of refusal to submit revised offer by the lowest contractor shall be treated as withdrawal of his tender before acceptance and 50% of his earnest money shall be forfeited.

   In case all the lowest contractors those have same tendered amount (as a result of their quoted rate of individual items), refuse to submit revised offers, then tenders are to be recalled after forfeiting 50 % of EMD of each lowest contractor.

   Contractor, whose earnest money is forfeited because of non - submission of revised offer, or quoting higher revised rate (s) of any item (s) than their respective original rate quoted already at the time of submission of his bid shall not be allowed to participate in the retendering process of the work.

5. Applicable for Percentage Rate Tender only (CPWD-7)

   In case of Percentage Rate Tenders, contractor shall fill up the usual printed form, stating at what percentage below / above (in figures as well as in words) the total estimated cost given in Schedule of Quantities at Schedule-A, he will be willing to execute the work. The tender submitted shall be treated as in valid if: -

I. The contractor does not quote percentage above/below on the total amount of tender or any section/subhead of the tender.

II. The percentage above / below is not quoted in figures & words both on the total amount of tender or any section / sub head of the tender.

III. The percentage quoted above / below is different in figures & words on the total amount of tender or any section/sub head of the tender.

Tenders, which propose any alteration in the work specified in the said form of invitation to tender, or in the time all owed for carrying out the work, or which contain any other conditions of any sort including conditional rebates, will be summarily rejected.

ln case the lowest tendered amount (estimated cost ± amount worked on the basis of percentage above/below) of two or more contractors is same, such lowest contractors will be asked to submit revised price bid online quoting percentage above/below on estimated cost of tender including all sub sections/sub heads as the case may be on the revised template which has been sent to them by the Tender inviting Authority (TIA), but the revised percentage quoted above/below on tendered cost or on each sub section/ sub head should not be higher than the percentage quoted at the time of submission of tender. The lowest tender shall be decided on the basis of revised offers.

In case any of such contract or refuses to submit revised offer, then it shall be treated as withdrawal of his tender before acceptance and 50 % of earnest money shall be forfeited.

If the revised tendered amount of two or more contractors received in revised offer is again found to be equal, the lowest tender, among such contractors, shall be decided by draw of lots in the presence of SE of the circle, or CE of the zone EE (s) in-charge of major & minor component (s) (also DDH in case Horticulture work is also included in the tender), & the lowest contractors those have quoted equal amount of their tenders.

In case all the lowest contractors those have quoted same tendered amount, refuse to submit revised offers, then tenders are to be recalled after forfeiting 50% of EMD of each contractor. Contractor(s), whose earnest money is forfeited because of non-submission of revised offer, shall not be allowed to participate in there-tendering process of the work.

6. The officer inviting tender or his duly authorized assistant, will open tenders in the presence of any intending contractors who may be present at the time.

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

8. The receipt to fan accountant or clerk for any money paid by the contractor will not be considered as any acknowledge mentor payment to the officer inviting tender and the contractor shall be responsible for seeing that he procures a receipt signed by the officer inviting tender or a duly authorized Cashier.

9. In the case of Item Rate Tenders, only rates quoted shall be considered. Any tender containing percentage below/above the rates quoted is liable to be rejected. Rates quoted by the contractor in item rate tender in figures and words shall be accurately filled in so that there is no discrepancy in the rates written in figures and words. However, if a discrepancy is found, the rates which correspond with the amount worked out by the contractor shall unless otherwise proved be taken as correct. If the amount of an item is not worked out by the contractor or it does not correspond with the rates written either in figures or in words, then the rates quoted by the contractor in words shall be taken as correct. Where the rates quoted by the contract or in figures and in words tally, but the amount is not worked out correctly, the rates quoted by the contract or will unless otherwise proved be taken as correct and not the amount. In event no rate has been quoted for any item (s), leaving space both in figure(s), word (s), and amount blank, it will be presumed that the contractor has included the cost of this / these item (s) in other items and rate for such item (s) will be considered as zero and work will be required to be executed accordingly. However, if a tenderer quotes nil rates against each item in item rate tender, the tender shall be treated as invalid and will not be considered as lowest tenderer and earnest money deposited shall be forfeited.

10. In case of percentage Rate Tenders only percentage quoted shall be considered. Any tender containing item rates is liable to be rejected. Percentage quoted by the contractor in percentage rate tender shall be accurately filled in figures and words, so that there is no discrepancy.

11. In Percentage Rate Tender, the tenderer shall quote percentage below / above (in figures as well as in words) at which he will be willing to execute the work. He shall also work out the total amount of his offer and the same should be written in figures as well as in words in such a way that no interpolation is possible. In case of figures, the word '₹' Should be written before the figure of rupees and word 'P' after the decimal figures, e.g. '₹ 2.15P and in case of words, the word 'Rupees' should precede, and the word 'Paisa' should be written at the end.

12. The Contractor whose tender is accepted, will be required to furnish Performance Guarantee of 5% (Five Percent) of ECPT or Contract Amount whichever is higher and Additional Performance Guarantee equivalent to different between 80% amount of ECPT and quoted amount if quoted bid amount is lesser then 80% of ECPT within the period specified in Schedule F. This guarantee shall be in the form of cash (in case guarantee amount is less than ₹ 10,000/-) or Deposit at call receipt of any scheduled bank / Banker's cheque of any scheduled bank / Demand Draft of any scheduled bank / Pay order of any scheduled bank (in case guarantee amount is less than ₹1,00,000/-) or Government Securities or Fixed Deposit Receipts or Guarantee Bonds of any Scheduled Bank

13. The contractor whose tender is accepted will also be required to furnish by way of Security Deposit for the fulfilment of his contract, an amount equal to 2.5% of the tendered value of the work. The Security deposit will be collected by deductions from the running bills as well as final bill of the contractor at the rates mentioned above. The Security amount will also be accepted in cash or in the shape of Government Securities. Fixed Deposit Receipt of a Scheduled Bank or will also be accepted for this purpose provided confirmatory advice is enclosed.

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

15. GST or any other tax applicable in respect of inputs procured by the contractor for this contract shall be payable by the Contractor and Government will not entertain any claim whatsoever in respect of the same. However, component of GST at time of supply of service (as provided in CGST Act 2017) provided by the contract shall be varied if different from that applicable on the last date of receipt of tender including extension if any.

16. The contractor shall give a list of both gazetted and non-gazetted C.P.W.D. employees related to him.

17. The tender for composite work includes, in addition to building work, all other works such as sanitary and water supply installations drainage installation, electrical work, horticulture work, roads and paths etc.

1. ADDITIONAL CONDITIONS FOR CIVIL WORK

General

1.1.1 **In case of any difference or discrepancy between the description of items as given in the schedule of quantities, particular specifications for individual items of work (including special conditions if any) and I.S. Codes etc., the following order of preference shall be observed :**

(i) Description of items as given in Schedule of quantities
(ii) Particular specifications
(iii) Additional Conditions
(iv) Tender drawings attached
(v) CPWD Specifications
(vi) General Conditions of Contract for CPWD works
(vii) I.S. Codes
(viii) ASTM, BS, or other foreign origin code mentioned in tender document
(ix) Decision of Engineer-in-Charge
(x) Sound Engineering practices or well established local construction practices

Note : Unless otherwise specified, CPWD Specifications 2009 volume I & II with corrections slips till the last date of tender submission shall be followed in general. Any additional item of work, if taken up subsequently, shall also conform to the relevant CPWD specifications mentioned above.

1.1.2 **The work shall be carried out in accordance with the Architectural drawings and structural drawings, to be issued from time to time, by the Engineer-in-Charge. Before commencement of any item of work, the contractor shall correlate all the relevant architectural and structural drawings issued for the work and satisfy himself that the information available from there is complete and unambiguous. The discrepancy, if any, shall be brought to the notice of the Engineer-In-Charge before execution of the work. The contractor alone shall be responsible for any loss or damage occurring by the commencement of work on the basis of any erroneous and or incomplete information.**

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

1.1.4 For works below ground level the contractor shall keep that area free from water. If dewatering or bailing out of water is required the contractor shall do it at his cost and nothing extra shall be paid except otherwise provided in the items of schedule of quantities.

1.1.5 Results of sub-surface investigations conducted at site are indicated in extracts of the soil investigation report attached. This information about the soil and sub-soil water conditions is being made available to the tenderer, in good faith, for guidance only and the tenderer is advised to obtain details directly as may be considered necessary by him before quoting rates in the tender. No claim whatsoever on account of any discrepancy between the sub-surface strata conditions that may be actually encountered at the time of execution of the work and those given in these tender documents, in-accuracy or interpretation thereof shall be entertained from the Contractor under any circumstances. The ground water table is a variable condition and the information given in the report is only indicative and it may vary from time to time.

1.1.6 The Contractor shall make all necessary arrangements for protecting from rains, fog or likewise extreme weather conditions, the work already executed and for carrying out the further work, during monsoon including providing and fixing temporary shelters, protections etc. Nothing extra shall be payable on this account. Also, no claims for hindrance shall be entertained on this account.

1.1.7 In case of flooding of site on account of rain or any other cause and any consequent damage, whatsoever, no claim financially or otherwise shall be entertained not withstanding any other provisions elsewhere in the contract agreement. Also, the Contractor shall make good, at his own cost, the damages caused, if any. Further, no claims for hindrance shall be entertained on this account.

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

1.2 **TOOLS AND PLANTS**

1.2.1 The bidder should own/take on lease constructions equipment as per required for the proper and timely execution of the work. Nothing extra shall be paid on this account.

1.2.2 No tools and plants including any special T&P etc. shall be supplied by the Department and the Contractor shall have to make his own arrangements at his own cost. No claim of hindrance (or any other claim) shall be entertained on this account.

1.2.3 The Contractor shall do proper sequencing of the various activities by suitably staggering the activities within various pockets in the plot so as to achieve early completion. The agency may deploy adequate equipment, machinery and labour as required for the completion of the entire work within the stipulated period specified. Also ancillary facilities shall be provided by contractor commensurate with requirement to complete the entire work within the stipulated period. Nothing extra shall be payable on this account. Adequate number/sets of equipment in working condition, along with adequate stand-by arrangements, shall be deployed during entire construction period. It shall be ensured by the Contractor that all the equipment, Tools & Plants, machineries etc. provided by him are maintained in proper working conditions at all times during the progress of the work and till the completion of the work. Further, all the constructional tools, plants, equipment and machineries provided by the Contractor, on site of work or his work shop for this work, shall be exclusively intended for use in the construction of this work and they shall not be shifted / removed from site without the permission of the Engineer-in-Charge.

1.3 **ROYALTY**

1.3.1 Royalty at the prevalent rates shall be paid by the Contractor or the RMC supplier as per the terms of supply between them, on all materials such as boulders, metals, all sizes stone aggregates, brick aggregates, coarse and fine sand, moorum, river sand, gravels and bajri etc. collected by him for the execution of the work, directly to the revenue authority of the state government concerned. Further, contractor needs to submit proof of submission of full royalty to the state government or local authority. Nothing extra shall be payable on this account.

1.4 **PRESERVATION AND CONSERVATION MEASURES**

1.4.1 Existing drains, pipes, cables, over-head wires, sewer lines, water lines and similar services encountered in the course of the execution of work shall be protected against the damage by the contractor, at his own expense, for which nothing is payable. The contractor shall not store materials or otherwise occupy any part of the site in a manner likely to hinder the operation of such services.

1.4.2 All fossils, coins, articles of value of antiquity, structures and other remains or things of geological or archaeological interest discovered on project location during excavation/construction shall be the property of the Government, and shall be dealt with as per provisions of the relevant legislation. The contractor will take reasonable precaution to prevent his workmen or any other persons from removing and damaging any such article or thing. He will, immediately upon discovery thereof and before removal acquaint the Engineer-in-charge of such discovery and carry out the official instructions of Engineer-in-charge for dealing with the same, till then all work shall be carried out in a way so as not to disturb/ damage such article or thing.

1.5 **RESPONSIBILITY**

1.5.1 The Contractor shall keep himself fully informed of all relevant acts and laws of the Central & State Governments, orders, decrees of statutory bodies, tribunals having any jurisdiction or authority, which in any manner may affect those engaged or employed and anything related to carrying out the work. All the rules & regulations and bye-laws laid down for IS by District Collector / Bhuj Municipal Corporation / Urban Development Authority and any other statutory bodies shall be adhered to, by the contractor, during the execution of work. The Contractor shall also adhere to all traffic restrictions notified by the local authorities. The water charges (for municipal water connection as well as tanker water) shall be borne by the contractor. Also, if the contractor obtains water connection for the drinking purposes from the municipal authorities or any other statutory body, the consequent sewerage charges shall be borne by the contractor. All statutory taxes, levies, charges (including water and sewerage charges, charges for temporary service connections and / or any other charges) payable to such authorities for carrying out the work, shall be borne by the Contractor. The Contractor shall arrange to give all notices as required by any statutory / regulatory authority and shall pay to such authority all the fees that is required to be paid for the execution of work. He shall protect and indemnify the Department / client and its officials & employees against any claim and /or liability arising out of violations of any such laws, ordinances, orders, decrees, by himself or by his employees or his authorized representatives. Nothing extra shall be payable on these accounts.

1.5.2 The fee payable to statutory authorities for obtaining the various permanent service connections & Bldg Use Certificate for the building shall be borne by the Department / client.

1.5.3 The Contractor shall assume all liability, financial or otherwise in connection with this contract and shall protect and indemnify the Department from any and all damages and claims that may arise on any account. The Contractor shall indemnify the Department against all claims in respect of patent rights, royalties, design, trademarks of name or other protected rights, damages to adjacent buildings, roads or members of public, in course of execution of work or any other reasons whatsoever, and shall himself defend all actions arising from such claims and shall indemnify the Department in all respect from such actions, costs and expenses. Nothing extra shall be payable on this account.

1.5.4 The contractor shall keep himself fully informed of all acts and laws of the Central Government and Government of Gujarat, all local bye laws, ordinances, rules and regulations and all orders and decree of bodies or, tribunals having any jurisdiction or authority which in any manner affect those engaged or employed on the work or which in any way affect the conduct of the works. Contractor shall at all times, observe and comply with all such laws, ordinances, rules, regulations, orders and decrees, and shall give all notices and pay out of his own money any fees or charges to which he may be liable. He shall protect and indemnify the Department / client and its officers and employees against any claim or liability arising out of violations of any such law, ordinances, legislations, order or decree, whether by himself or by his employees & authorized representatives.

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

1.6.1 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, to have minimum construction time and minimum inconvenience to road users and to the occupants of the buildings on the adjacent plot and public in general, etc. He shall make good at his own cost and to the entire satisfaction of the Engineer in Charge any damage to roads, paths, cross drainage works or public or private property whatsoever caused, due to the execution of the work or by traffic brought thereon, by the Contractor. Further, the Contractor shall take all precautions to abide by the environmental related restrictions imposed by Gujarat state Pollution control board, Govt. of Gujarat as well as prevent any pollution of streams, ravines, river bed and waterways. All waste or superfluous materials shall be transported by the Contractor, entirely to the satisfaction of the Engineer-in-Charge. 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.

1.6.2 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 Department / client 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.

1.6.3 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.

1.6.4 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.

1.6.5 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.

1.6.6 **Specialized Agencies**

1.6.6.1 The composite tender comprises of two components: viz. Civil work and Electrical works. The eligible Contractors shall be issued tender on production of valid electrical license from competent authority in the name of the contractor. However, the contractors shall be allowed to participate in tender with an undertaking that they will either obtain valid electrical license at the time of execution of electrical work or associate contractors having valid electrical license of eligible class.

1.6.6.2 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. No claim of hindrance in the work shall be entertained from the Contractor on this account. No extension of time shall be granted and no claim what so ever, of any kind, shall be entertained from the Contractor on account of delay attributable to the selection/rejection of the Specialized Agencies.

1.6.6.3 The main contractor cannot work as a specialized agency unless his name is already included in the list of approved specialized agencies or is approved by the Engineer in Charge.

1.6.6.4 The specialized agencies for the followings work shall be got approved by Engineer In Charge before start of Item

(i) Water proofing work. **(ii)** Any other work mentioned in the contract.

1.7 **RATES**

1.7.1 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.

1.7.2 The rates quoted by the tenderer, shall be firm and inclusive of all taxes and levies.

1.7.3 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.

1.7.4 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 and other storage, steel fabrication yard, site laboratory, water tank, etc.

1.7.5 For completing the work in time, the Contractor might be required to work in two or more shifts (including night shifts). No claim whatsoever shall be entertained on this account, not with-standing the fact that the Contractor may have to pay extra amounts for any reason, to the labourers and other staff engaged directly or indirectly on the work according to the provisions of the labour and other statutory bodies regulations and the agreement entered upon by the Contractor with them.

1.7.6 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.

1.8 **SAFETY PRACTICES**

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

1.8.2 **SIGN BOARDS**: The Contractor shall provide and erect a display board of size and shape as required and paint over it, in a legible and workman like manner, the details about the salient features of the project, as required by the Engineer-in-Charge. The Contractor shall fabricate and put up a sign board in an approved location and to an approved design indicating name of the project, client / owner, architects, structural consultants, Department etc. besides providing space for names of other Contractors, Sub-Contractors and specialized agencies. Nothing extra shall be payable on this account.

1.8.3 Necessary protective and safety equipments shall be provided to the Site Engineer, Supervisory staff, labour and technical staff of the contractor by the Contractor at his own cost and to be used at site.

1.8.4 No inflammable materials including P.O.L shall be allowed to be stored in huge quantity at site. Only limited quantity of P.O.L may be allowed to be stored at site subject to the compliance of all rules / instructions issued by the relevant authorities and as per the direction of Engineer -in- Charge in this regard. Also all precautions and safety measures shall be taken by the Contractor for safe handling of the P.O.L products stored at site. All consequences on account of unsafe handling of P.O.L shall be borne by the Contractor.

1.9 **QUALITY ASSURANCE**

1.9.1 The proposed building is a prestigious project and quality of work is of paramount importance. Contractor shall have to engage well-experienced skilled labour and deploy modern T&P and other equipment to execute the work. Many items like masonry with SOLID CEMENT CONCRETE Block of Grade D, exposed finish form work, RCC in vertical / horizontal ties , specialized flooring work, factory made door- window shutters, proper slope maintaining in toilet units, sanitary- water supply installation, textured finishing, grit plastering with aluminium channel insertions, water proofing treatment with APP, Extruded Polystyrene insulation boards and treatment in toilet drops will specially require engagement of skilled workers having experience particularly in execution of such items.

1.9.2 The contractor shall ensure quality construction in a planned and time bound manner. Any sub-standard material / work beyond set out tolerance limit shall be summarily rejected by the Engineer-in-charge & contractor shall be bound to replace / remove such sub-standard / defective work immediately. If any material, even though approved by Engineer-In-Charge is found defective or not conforming to specifications shall be replaced / removed by the contractor at his own risk & cost.

1.9.3 During the supervision of work by CPWD engineers, deficiencies, shortcomings, inferior workmanship pointed out by them shall also be made good by necessary improvement, rectification, replacement upon receipt of instructions from Engineer in Charge up to his complete satisfaction. Special attention shall be inevitable towards line and level of internal and external plastering, exposed smooth surface of RCC members by providing fresh shuttering plates rubberized linings to all the shuttering joints, accurate joinery work in wooden doors and windows, thinnest joints in stone/ tiling / cladding work, non-hollowness in floor and dado tiles work, protection of scratches over flooring by impounding layer of plaster of Paris, water tight pipe linings, absence of hollow vertical joints in brick masonry, proper compaction of filled up earth etc to achieve an Institution of International standards and up keeping of quality assurance shall be of paramount importance.

1.9.4 The Contractor shall submit, within **10 days** after the date of award of work, a detailed and complete method statement for the execution, testing and Quality Assurance, of such items of works, as directed by the Engineer-in-Charge. All the materials to be used in the work, to give the finished work complete in all respects, shall comply with the requirements of the specifications and shall pass all the tests required as per specifications as applicable or such specifications / standards as directed by the Engineer-in-Charge. However, keeping the Quality Assurance in mind, the Contractor shall submit, on request from the Engineer-in-Charge, his own Quality Assurance procedures for basic materials and such items, to be followed during the execution of the work, for approval of the Engineer-in-Charge.

1.9.5 All materials and fittings brought by the contractor to the site for use shall conform to the samples approved by the Engineer-in-charge which shall be preserved till the completion of the work. If a particular brand of material is specified in the item of work in Schedule of Quantity, the same shall be used after getting the same approved from Engineer-In-Charge. Wherever brand / quality of material is not specified in the item of work, the contractor shall submit the samples as per suggested list of brand names given in the tender document / particular specifications for approval of Engineer-In-Charge. For all other items, materials and fittings of ISI Marked shall be used with the approval of Engineer-In-Charge. Wherever ISI Marked material / fittings are not available, the contractor shall submit samples of materials / fittings manufactured by firms of repute conforming to relevant specifications or IS codes and use the same only after getting the approval of Engineer-In-Charge.

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

1.9.7 All materials whether obtained from Govt. stores or otherwise shall be got checked by the Engineer-in-Charge or his authorized supervisory staff on receipt of the same at site before use.

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

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

1.9.10 The Contractor or his authorized representative shall associate in collection, preparation, forwarding and testing of such samples. In case he or his authorized representative is not present or does not associate him, the result of such tests and consequences thereon shall be binding on the Contractor .The Contractor or his authorized representative shall remain in contact with the Engineer-in–Charge or his authorized representative associated for all such operations. No claim of payment or claim of any other kind, whatsoever, shall be entertained from the Contractor.

1.9.11 All the testing charges shall be borne by the contractor in the manner indicated below:

(i) By the contractor, if the results show that the material does not conform to relevant specifications and BIS codes.

(ii) By the department, if the results show that the material conforms to relevant specifications and BIS codes.

1.9.12 All the hidden items such as water supply lines, drainage pipes, conduits, sewers etc. are to be properly tested as per the design conditions before covering and their measurements in computerized measurement book duly test checked shall be deposited with Engineer in charge or his authorized representative, prior to hiding these items.

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

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

1.9.15 The contractor shall have to execute guarantee bonds in respect of water proofing works as per Proforma enclosed.

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

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

1.9.18 The Contractor shall arrange electricity at his own cost for testing of the various electrical installations as directed by Engineer-in-Charge and for the consumption by the contractor for executing the work. Also all the water required for testing various electrical installations, fire pumps, wet riser / fire fighting equipment, fire sprinklers etc. and also testing water supply, sanitary and drainage lines, water proofing of underground sump, overhead tanks, water proofing treatment etc. shall be arranged by the contractor at his own cost. Nothing extra shall be payable on this account.

1.9.19 The Contractor should own constructions equipment as per list required for the proper and timely execution of the work. Nothing extra shall be paid on this account.

1.10 SUBMISSION AND DOCUMENTATION

1.10.1 The Contractor shall display all permissions, licenses, registration certificates, bar charts, other statements etc under various labour laws and other regulations applicable to the works, at his site office.

1.10.2 The Contractor shall make available four sets of completed Building Drawings, “As Built Drawings” along with literatures, manuals, warranty certificates etc. of various installed fittings, fixtures and equipment for the completed projects. This shall be the prerequisite for payment of final bill.

1.10.3 The Contractor shall make available three sets of all drawings of internal and external services i.e. Water Supply, Sanitary line and Drainage lines. This shall be the prerequisite for payment of final bill. These drawings shall have the following information:

(i) Run off for all piping and their diameters including soil, waste pipes and vertical stacks.

(ii) Ground and invert level of all drainage pipes together with locations of all manholes and connections, up to outfall.

(iii) Run off for all water supply lines with diameters location of control valves, access panels etc.

1.10.4 The contractor shall make available four sets of computerized standard measurement books having measurement of all the permanent standing in a building.

1.10.5 The security deposit shall not be released to the contractor until the aforesaid drawings are submitted to the Engineer-in-Charge

1.10.6 The contractor will submit computerized measurement sheet for the work carried out by him for making payment as per Clause – 6A of the CPWD General Conditions of Contract 2014(with correction slips up to the last date of submission of tender). For casting of RCC members and other hidden items the corrected and duly test checked measurement sheets of reinforcement or that of other hidden items shall be deposited with Engineer in charge or his authorized representative, before casting of RCC or other hidden items. The delay in submission of corrected and duly checked measurement sheet may, therefore, delay casting of RCC or execution of hidden item for which no hindrance shall be recorded.

1.10.7 To avoid delay, contractor should submit all samples well in advance so as to give timely orders for procurement.

1.10.8 **Program Chart:**

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

(i) Descriptive note explaining sequence of various activities.

(ii) Network (PERT/CPM/BAR CHART which will indicate resources in financial terms, manpower and specialized equipment for every important stage.

(iii) Program for procurement of materials by the contractor.

(iv) Program for arranging and deployment of manpower both skilled and unskilled so as to achieve targeted progress.

(v) Program of procurement of machinery / equipment having adequate capacity, commensurate with the quantum of work to be done within the stipulated period, by the contractor.

1.10.9 If at any time, it appears to the Engineer-In-Charge that the actual progress of work does not conform to the approved program referred above, the contractor shall produce a revised program showing the modifications to the approved program by additional inputs to ensure completion of the work within the stipulated time.

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

1.10.11 Apart from the above integrated program chart, the contractor shall be required to submit fortnightly progress report of the work in a computerized form on 1st and 16th of every month. The progress report shall contain the following, apart from whatever else may be required as specified:

(i) Construction schedule of the various components of the work through a bar chart for the next two fortnights (or as may be specified), showing the micro-milestone/milestones, targeted tasks (including material and labour requirement) and up to date progress.
(ii) Progress chart of the various components of the work that are planned and achieved, for the fortnight as well as cumulative up to the fortnight under reckoning, with reason for deviations, if any in a tabular format.
(iii) Plant and machinery statement, indicating those deployed in the work.
(iv) Man-power statement indicating:
  a) Individually the names of all the staff deployed on the work, along with their designations.
  b) No. of skilled workers (trade wise) and total no. of unskilled workers deployed on the work and their location of deployment i.e. blocks.

(v) Financial statement, indicating the broad details of all the running account payment received up to date, such as gross value of work done, advances taken, recoveries effected, amount withheld, net payments details of cheque payment received, extra/substituted/deviation items if any, etc.

1.11 TEMPORARY WATER/ ELECTRICITY/ TELEPHONE CONNECTION

1.11.1 Arrangement of temporary telephone connection, water and electricity required by Contractor, shall be made by him at his own cost and also necessary permissions shall be obtained by him directly from concerned authorities, under intimation to the Department. Also, all initial cost and running charges, and security deposit, if any, in this regard shall be borne by him. The Contractor shall abide by all the rules/ bye laws applicable in this regard and he shall be solely responsible for any penalty on account of violation of any of the rules / byelaws in this regard. Nothing extra shall be payable on this account.

1.11.2 The Contractor shall be responsible for maintenance and watch and ward of the complete installation and water / electricity meter and shall also be responsible for any pilferage, theft, damage, penalty etc. in this regard till the handing over of the site to the Client Department. The Contractor shall indemnify the Department against any claim arising out of pilferage, theft, damage, penalty etc. whatsoever on this account. Security deposit for the work shall be released only after No Dues Certificates are obtained from the local Authorities from whom temporary electric/ water / telephone connection have been obtained by the Contractor. Nothing extra shall be payable on this account.

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

1.12 **TRAFFIC ARRANGEMENTS**

1.12.1 Haphazard plying of vehicles shall be avoided. Care shall be taken to avoid damages to Existing trees, recently planted trees including tree guards and irrigation water supply piping system can be located nearby work site, hence, while taking up excavation activities, trees as well as their root zones be protected and the stacking of excavated earth shall be made in such a way that neither plants are buried nor damaged. The initial survey, demarcation of roads should be made in the campus and pickets etc should be fixed at locations which shall not be disturbed or damaged by vehicular movement or manual tampering, else the same shall be made good by the contractor at his own. In case of failure to comply with the above requirements the damage caused shall be made good at cost of contractor and the cost so incurred and assessed by Engineer in charge shall be recovered from running account bill of contractor.

1.12.2 In event of any restriction being imposed by the Department, traffic or any other statutory authority having control over the project, on the working or movement of Labour, materials, etc., the Contractor shall strictly follow all such restrictions or instructions issued regarding the same and nothing extra shall be payable to the Contractor on account of such restrictions or instructions. No delay or claims of any kind shall be entertained from the Contractor on this account. The loss of time on this account, if any, shall have to be made up by the contractor by generating and deploying additional resources etc. Nothing extra shall be payable on this account.

1.13 **CLEANLINESS OF SITE**

1.13.1 The Contractor shall not stack building material / malba / muck on the land or road of the local development authority or on the land owned by the others, as the case may be. So the muck, rubbish filth 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.

1.13.2 The contractor shall take instructions from the Engineer-In-Charge regarding collection and stacking of materials at any place. No excavated earth or building rubbish shall be stacked on areas where other buildings, roads, services and compound walls are to be constructed.

1.13.3 The site of work shall be always kept clean due to constraints of space and to avoid any nuisance to the users of buildings in the adjacent plots. The Contractor shall take all care to prevent any water- logging at site. The waste water, slush etc. shall not be allowed to be

collected at site. It may be directly pumped into the creek with prior approval of the concerned authorities. For discharge into public drainage system, necessary permission shall be obtained from relevant authorities after paying the necessary charges, if any, directly to the authorities. The work shall be carried out in such a way that the area is kept clean and tidy. All the fees/charges in this regard shall be borne by the Contractor. Nothing extra shall be payable on this account.

1.14 **INSPECTION OF WORK**

In addition to the provisions of relevant clauses of the contract, the work shall also be open to inspection by the CE Gandhinagar circle 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.

1.14.1 Senior Officers of CPWD, Dignitaries from Central Ministry / Department, State Government and Client Authorities shall be inspecting the on-going work at site at any time with or without prior intimation. The contractor shall, therefore, keep updated the following requirements and detailing.

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

(ii) Entrance and area surrounding to be kept cleaned.

(iii) Display layout plan key plan, Building drawings including plans, elevations and sections.

(iv) Up to date displays of Bar chart, CPM and PERT etc.

(v) Keep details of quantities executed, balance quantities, deviations, possible Extra item, substituted Item etc.

(vi) Keep plastic / cloth mounted one sets of building drawings.

(vii) Set of Helmets and safety shoes for safety.

1.15 **SETTING OUT**

1.15.1 The Contractor shall carry out survey of the work area, at his own cost, setting out the layout of building in consultation with the Engineer-in-Charge & proceed further. Any discrepancy between the architectural drawings and actual layout at site shall be brought to the notice of the Engineer-in-charge. It shall be responsibility of the Contractor to ensure correct setting out of alignment. Total station survey instruments only shall be used for layout, fixing boundaries, and centre lines, etc., along with theodolites. Nothing extra shall be payable on this account.

The Contractor shall establish, maintain and assume responsibility for grades, lines, levels and benchmarks. He shall report any errors or inconsistencies regarding grades, lines, levels, dimensions etc. to the Engineer-in-Charge before commencing work. Commencement of work shall be regarded as the Contractor’s acceptance of such grades, lines, levels, and dimensions and no claim shall be entertained at a later date for any errors found.

1.15.2 If at any time, any error appears due to grades, lines, levels and benchmarks during the progress of the work, the Contractor shall, at his own expense rectify such error, if so required, to the satisfaction of the Engineer-in-Charge. Nothing extra shall be payable on this account.

1.15.3 Though the site levels are indicated in the drawings the Contractor shall ascertain and confirm the site levels with respect to benchmark from the concerned authorities. The Contractor shall protect and maintain temporary/permanent benchmarks at the site of work throughout the execution of work. These benchmarks shall be got checked by the Engineer-in-Charge or his authorized representatives. The work at different stages shall be checked with reference to bench marks maintained for the said purpose. Nothing extra shall be payable on this account.

1.15.4 The approval by the Engineer-in-Charge, of the setting out by the Contractor, shall not relieve the Contractor of any of his responsibilities and obligation to rectify the errors/ defects, if any, which may be found at any stage during the progress of the work or after the completion of the work.

1.15.5 The Contractor shall be entirely and exclusively responsible for the horizontal, vertical and other alignments, the level and correctness of every part of the work and shall rectify effectively any errors or imperfections therein. Such rectifications shall be carried out by the Contractor at his own cost to the entire satisfaction of the E-in-Ch.

1.15.6 The rates quoted by the Contractor are deemed to be inclusive of site clearance, setting out work (including marking of reference points, center lines of buildings), construction and maintenance of reference bench mark(s), taking spot levels, construction of all safety and protection devices, barriers, barricading, signage, labour safety, labour welfare and labour training measures, preparatory works, working during monsoon, working at all depths, height and location etc. and any other incidental works required to complete this work. Nothing extra shall be payable on this account.

- **VARIATION IN CONSUMPTION OF MATERIALS**
- The variation in consumption of material shall be governed as per CPWD specification and clauses of the contract to the extent applicable. The following specifications shall govern the variation in consumption of pig lead.
- **VARIATION IN CONSUMPTION OF PIG LEAD**
- The pig lead for caulking at joints of SCI pipes shall be issued as per theoretical consumption for SCI pipes of size 100mm, 75mm, 50mm at 0.980 Kg., 0.88 Kg. 0.770 Kg. per joint respectively. Over and above the theoretical quantities of leas as worked out, a variation of 5% shall be allowed for wastage etc. Any difference between the actual consumption of pig lead and theoretical consumption worked out on the above basis including the authorized variation shall be recovered at the rate mentioned under schedule “F”. Where the pig lead is arranged by the contractor, variation of 5% will be allowed. In case variation is on the higher side 5% will be allowed. In case the variation is on the lower side, the quantity of the pig lead less used shall be recovered from the contractor at market rate to be determined by the Engineer-in-charge whose decision in the matter will be made and binding.

- **MATERIALS BROUGHT BY THE CONTRACTOR**
- The contractor shall have to deposit the approved paints of required colour and shade as per actual requirements of the work to be done, with the Engineer-in-charge at his departmental stores at the site of work.

- The paint will be issued to the contractor from time to time according to his requirements for the work in the same manner as the issue of materials stipulated to be issued departmentally.
- Similar procedure shall be followed for water proofing compound.
- The day-to-day receipt and issue quantity account of water proofing compound, paints etc. shall be maintained by the Junior Engineer and signed daily by the contractor or his authorized agent.
- Empty containers should not be removed without the written permission of the Engineer-in-charge.
- The steel windows and ventilators shall be factory made and ISI marked.

- **TESTING OF MATERIALS**
- The contractor shall procure all the materials in advance so that there is sufficient time for testing and approving of the material and clearance of the same before use in work.
- (a) The contractor's rates for the items involving the use of materials shall be deemed to cover the cost of sample. The cost of packaging, sealing, transportation, loading, unloading etc. shall be borne by the contractor. Testing charges shall be borne by the department only when the samples satisfy the provisions specified and conform to the requirements of the relevant specifications. If the result shows that the samples do not satisfy the relevant specifications, the testing shall be borne by the contractor.
- (b) (1) Kota stone shall be of full width of platform / shelves and shall be of single piece of length, but not more than 1.5 metres. In case the platform / shelves being more than 1.5 meters in length, two pieces shall be allowed as per direction of Engineer-in-charge.
- The edges of the platform shall be neatly rounded and all exposed surfaces shall be machine polished. Surface should be of even colour and shade without rub marks of scratches.
- **Necessary charges shall be born by the *contractor***

2. PARTICULAR SPECIFICATIONS

2.1 General

2.1.1 Unless otherwise specified in the schedule of quantities, particular specifications or CPWD specifications (subject to the order or preference) the rates tendered by the tenderer shall be all inclusive and shall apply to all lifts, all heights and all floor including terrace, leads and depths and nothing extra over and above the schedule of quantity shall be payable on this account.

2.1.2 The work shall be carried out in accordance with the Architectural drawings, structural drawings and approved shop drawings. The structural shop and architectural drawings shall have to be properly correlated before executing the work. In case of any difference noticed between architectural and structural drawings, the contractor shall obtain final decision, in writing, of the Engineer-in-charge. In case of any discrepancy in the item given in the schedule of quantities appended with the tender and architectural drawings related to the relevant items, the former shall prevail unless and otherwise given in writing by the Engineer in charge. Nothing extra shall be payable on this account.

2.1.3 Wherever any reference to any Indian Standards occurs in the documents relating to this contract, the same shall be inclusive of all amendments issued thereto or revisions thereof, if any, up to the date of receipt of tenders.

2.1.4 Unless otherwise specified in the schedule of quantities, the rates for all items of work shall be considered, as inclusive of pumping out or bailing out water, if required throughout the construction period for which no extra payment shall be made. This shall also include water encountered from any source such as rains, floods, sub soil water table being high and/or due to any other cause whatsoever.

2.1.5 The work shall be executed and measured as per metric dimensions given in the Schedule of quantities, drawings etc. (F.P.S. units wherever indicated are for guidance only).

2.1.6 The following additional specifications shall apply:

2.1.6.1.1 All stone aggregate and stone ballast shall be of hard stone variety to be obtained from approved quarries at **AJI DAM**

2.1.6.2 Coarse sand should be obtained from **PADDHARI** The same shall be clean and sharp angular grit type. The coarse sand shall be screened before using, if required. If the sand brought to site is dirty, it must be washed in clean water to bring the sand to the required specifications. Nothing extra shall be payable on this account.

2.1.6.3 Fine sand should be obtained from **SURENDRANAGAR** or any other source to be got approved by the Engineer-in-charge and screened as required. The same shall be clean and sharp angular grit type. If the sand brought to site is dirty it must be washed in clean water.

2.1.6.4 Bricks (F.P.S) shall be of crushing strength not less than as specified in the nomenclature of the item the average water absorption of bricks when immersed in water for 24 hours shall not be more than 20% of the dry weight.

2.1.7 The rates for all items of work, shall unless clearly specified otherwise, include cost of all operations and all inputs of labour, material, T & P, scaffolding, wastages, watch and ward, other inputs, all incidental charges, all taxes, cess, VAT, duties, levies etc. required for execution of the work.

2.1.8 The masonry work for the portions of the external wall of W.C., through which pipes are taken, shall be done after the pipes are fixed as far as practicable.

2.1.9 All crossings, embedment etc. in walls and floors for water supply, drainage and sanitary pipes, fittings etc. shall be provided as per the detailed working drawings for individual walls and floors so as to avoid cuttings of masonry work and floors. All such areas shall be made good during finishing and nothing extra shall be payable on these accounts.

2.2 PRODUCT DELIVERY, STORAGE AND HANDLING OF CHEMICALS

2.2.1 The contractor shall construct storage space for Chemicals materials to ensure that the storage conditions are as recommended by the manufactures.

2.2.2 All the materials shall be procured and delivered in sealed containers with labels legible and intact.

2.2.3 All the chemicals {polymers, epoxy, water proofing compound, plasticizer, Polysulphide, SBR based elastomeric, APP (Atactic Polypropylene Polymer), all exterior and interior paints, polish etc.) shall be procured in convenient packs say 20 litres/Kgs.} capacity packing only or as approved by the Engineer-in-Charge, and not in bigger capacity containers, say 200 litre (Kgs.) drums unless otherwise specifically permitted by the Engineer-in-Charge. One sample from each lot of the chemical procured by the contractor shall be tested in a laboratory as approved by the Engineer-in-Charge.

2.2.4 All material required for the execution of the work shall be got approved, procured and deposited with the Departmental supervisory staff. The materials shall be kept in joint custody of the contractor and the Department. The watch and ward of such material shall, however, remain to be the responsibility of the contractor and no claim, whatsoever, on this account shall be entertained. Different containers of each chemical shall be serially numbered on packing and also consumed in that order. Day-to-Day account of receipt, issue and balance shall be regulated by the Department and proper account shall be maintained at site of work in the prescribed form as per the standard practice.

2.2.5 All the chemicals shall be procured by the contractor directly from the manufacturer. In exceptional circumstances, the contractor may be allowed to procure the materials from the authorized dealers of the manufacturers, if specifically permitted by the Engineer-in-Charge.

2.2.6 The original copies of challan / cash memos towards the quantity of various chemicals procured shall be made available by the contractor at the request from the Engineer-in-Charge and a copy of the same shall be kept in record.

2.2.7 The Name of manufacturers, manufacturer’s product identification, manufacturer’s mixing instructions, warning for handling and toxicity and date of manufacturing and shelf life shall be clearly and legibly mentioned on the labels of the each container.

2.2.8 The contractor shall submit for the chemicals procured, manufacturer’s and / or authorized dealer’s certificate regarding supplying and verifying conformance to the material specifications, as specified.

2.2.9 All filled containers shall be handled in safe manner and in a way to avoid breaking container seals.

2.2.10 Empty containers of the chemicals should not be removed from site till the completion of work and shall be removed only with the written approval of the Engineer-in-Charge.

2.2.11 All arrangements for measuring, dosing and mixing of material / chemicals at site have to be made by the contractor.

2.2.12 Contractor shall suitably advise his site Engineer and all the workers as regards safe handling of chemicals. Necessary protective and safety equipments in form of hand gloves, goggles etc. shall be provided by the contractor and be also used at site.

2.2.13 All incidental charges of any kind including cartage, storage and wastage and safe custody of material etc. shall be borne by the contractor and no claim, whatsoever, shall be entertained on this account.

2.2.14 The chemicals shall be tested in an independent laboratory as approved by the Project Manager at the frequency as specified. If required, more samples may have to be tested as per the directions of the Engineer-in-Charge. Nothing extra shall be payable on this account. However testing charges shall be borne by the department for the samples satisfying the requirements specified in the tender.

2.3 EARTHWORK

2.3.1 Earthwork in excavation, in general, shall be carried out as per the CPWD Specifications.

2.3.2 The earthwork in excavation, wherever required, shall be carried out in slushy position. Rates for earthwork shall include cost of the element for working in or under water / liquid mud including pumping of water / liquid mud. Nothing extra shall be payable on this account. Therefore, the Contractor shall quote his rates after studying the site conditions.

2.3.3 The rates for earthwork in excavation, wherever required, shall be inclusive of carrying out the work for all lifts, depths, heights and leads within the plot.

2.3.4 Wherever required, the Contractor shall carry out close / open timbering, including strutting, shoring and packing etc., at his own cost. Rates for the earthwork items shall include the cost of the elements of close / open timbering, including strutting, shoring and packing etc., and nothing extra shall be payable on this account.

2.3.5 De-watering shall be done conforming to BIS Code IS: 9759 (guide lines for de-watering during construction) and / or as per the specifications approved by the Engineer-in-Charge. Design of an appropriate and suitable dewatering system shall be the Contractor's responsibility. Such scheme shall be modified / augmented as the work proceeds based on fresh information discovered during the progress of work, at no extra cost. At all times during the construction work, efficient drainage of the site shall be carried out by the Contractor and especially during the ANTI TERMITE & WATER PROOFING treatment, casting of RCC raft foundation, lift pit, laying of plain cement concrete, taking levels, installing rock anchors etc. The Contractor shall also ensure that there is no danger to the nearby properties and installations on account of such lowering of water table. If needed, suitable precautionary measures shall be taken by the Contractor. Also the scheme of dewatering adopted shall have adequate built in arrangement to serve as stand-bye to attend to repair of pumps etc. and disruption of power / fuel supply. Nothing extra shall be payable on this account.

2.3.6 De-watering shall be carried out by suitable means with adequate stand-by arrangements of pumps etc. and it shall be ensured that its disposal is carried out as per the regulations of the local bodies. The water / slush / muck etc. shall not be disposed off into the public drainage system of sewer manhole or storm water drain, but shall be pumped off into the creek close to the plot or disposed by any other manner, subject to the approval of the local bodies in this regard. The agencies are, therefore, advised to inspect and acquaint themselves of the site and location of disposal point(s) of water / slush and satisfy themselves as regards method of pumping and disposal required to be adopted. Any default or failure on the part of the Contractor to acquaint himself with the aforesaid aspect of work shall not absolve him from his responsibility for the execution / performance of this contract. Also, all permissions in this regard, to be taken from local authorities, shall be obtained by the Contractor. Nothing extra shall be payable on these accounts.

2.3.7 In trenches where surface water is likely to get into cut / trench during monsoons, a ring bund of puddle clay or by any other means shall be formed outside, to the required height, and maintained by the Contractor. Also, suitable steps shall be taken by the Contractor to

prevent back flow of pumped water into the trench. Nothing extra shall be payable on this account.

2.3.8 The cost of de watering or working under water and / or liquid mud for execution of all the items for the work is deemed to be included in quoted rates of the respective items and shall not be measured separately for payment. Nothing extra shall be payable for de watering in this work, irrespective of whether specified or not, in the item descriptions or in the specifications / conditions in this contract agreement.

2.4 R.C.C Work : Design Mix Concrete

The work in general shall be carried out as per CPWD specification.

2.4.1 WATER CEMENT RATIO AND WORKABILITY

The quantity of water added to cement, sand and aggregates during mixing, including moisture contents of the aggregates, shall not exceed 0.45 water cement ratio. Reference may be made to CPWD Specifications for guidance with respect to workability. The concrete mix shall be suitably designed for the required slump, if required, by using appropriate admixture to limit the maximum water cement ratio.

2.4.2 **CONCRETE TESTING:**

Samples from fresh concrete shall be taken as per IS: 1199. One sample consisting of six cubes 15 cm. X 15 cm. X 15 cm. shall be taken as specified in the CPWD Specifications and tested at 28 days in accordance with IS: 516. Random sampling procedure shall be adopted to ensure that each concrete batch shall have a reasonable chance of being tested. At least one sample shall be taken from each shift of work. Samples of concrete for each batch shall have to be taken by the **BMC Plant** supplier also and tested after 28 days and results submitted to the department for record. Procedure of testing, its acceptance criteria etc. shall be regulated in accordance with the CPWD Specifications. Concrete can be laid using born pumps, buckets, cranes, trolleys etc. as required as per the site conditions. However, nothing extra shall be payable on accounts of using any particular method of laying concrete.

2.4.3 TRANSPORTING:

2.4.3.1 The period between mixing of concrete and placing it in final position shall be kept to a minimum and the delivery of concrete shall be coordinated with the rate of placement, to avoid delays in delivery and placement.

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

2.4.3.3 Where concrete is conveyed by chutes, the chutes 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 long and in such cases the concrete shall be remixed if so required by the Engineer-in-Charge or closed bottom buckets shall be used. Concrete shall not be dropped in to place from a height more than 1.5m.

2.4.4 **PLACING:**

2.4.4.1 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.

2.4.4.2 Concreting shall be carried out continuously between construction 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.

2.4.4.3 Concrete shall be deposited as nearby as practicable in its position to avoid re-handling and shall not be dumped in a large quantity at any point.

2.4.4.4 All care shall be taken to prevent honey combed concrete or bleeding or segregation of concrete.

2.4.5 **CHEMICAL ADMIXTURES AND ADDITIVES**

2.4.5.1 Chemical admixtures shall not be used unless permitted by the Engineer-in-charge. However, admixtures procured from the manufacturers and of brand as approved by the Engineer-in-charge may be allowed on specific request of the Contractor for imparting special characteristics to the concrete. Only those admixtures which conform to IS: 6925 and IS: 9103 shall be allowed to be used, for restricting water cement ratio to 0.45 and at the same time obtaining specified slump value as per CPWD Specifications. The admixtures shall not in any way adversely affect the durability of the concrete and the reinforcement. Admixtures generating hydrogen and nitrogen etc. shall not be allowed to be used. Slump required shall be as the CPWD specification and as per the method of placement adopted by the contractor. However the water cement ratio for all concrete shall not be more than 0.45. Nothing extra shall be payable an account of any admixture required for achieving certain slump or for the method of placement like within born pump, bucket with crane etc. However the concrete and admixtures shall satisfy the other parameters as specialized in the tender.

2.4.5.2 Nothing extra shall be payable on account of use of admixtures and Additives in concrete.

2.4.6 CONSTRUCTION JOINTS

2.4.6.1.1 Construction joints in PCC, RCC and Light Weight Concrete works etc., shall be provided only at places as per approved structural drawings. It shall not in any manner structurally or functionally affect the structure. If, any additional construction joint is required to be provided, it shall be done with approval of the Engineer-in-Charge.

2.4.6.1.2 The centring, shuttering, strutting etc., required for the construction joint in PCC, RCC and Light Weight Concrete works shall be provided as per the CPWD Specifications. Nothing extra shall be payable on this account.

2.4.6.2 It is clarified that, since the building in the basement portion is more than 45 metres long, shrinkage strips may be required to be left for the short – term shrinkage and creep in the RCC slabs and beams to take place, as directed by the Engineer-in-charge and as per structural drawings. These shall be cast afterwards as directed by the Engineers-in-charge. The reinforcement bars (dowels) shall be left in position as per structural drawings and suitable supported and protected till the slab / beam is cast. All the wastage and incidental charges shall be borne by the contractor. Nothing extra shall be paid as this account.

2.4.7 **TREATMENT TO THE CONSTRUCTION JOINTS AND RECTIFICATION OF DEFECTS.**

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

2.4.7.2 All care shall be taken to avoid any honey combed concrete or any cavity. Still, if any honey combed concrete or cavity in RCC wall is encountered the same shall be rectified by removing all loose concrete by chiselling. The chipped concrete surface shall be cleaned and made dust free by blowing compressed air and then washed clean with water (but without excess water). Then a bond coat of polymer modified cement slurry @ 2.2 kg of cement per sq. m. of concrete surface, in two coats, shall be applied as specified. The second coat shall be applied immediately within 15-20 minutes of application of the first coat. A coat of polymer modified cement plaster of mix 1:3 (1 cement: 3 fine sand) of the required thickness shall be applied as specified to fill the cavity if the required thickness is less than 20 mm. If the required thickness is more than 20 mm. the cavity shall be filled by concrete of relevant grade after providing the required centring and shuttering. The surface shall then be moist cured for minimum 7 days. Nothing extra shall be payable on this account.

2.4.8 MISCELANEOUS

2.4.8.1 Mixer having arrangement of weighing water for controlling W.C. ratio should only be used in all PCC and RCC works where there is no provision for Ready Mix Concrete.

2.4.8.2 Only factory made round type concrete cover blocks of same mix shall be used. No other type of cover blocks shall be permitted.

2.4.8.3 Any cement slurry if added over base surface (or for continuation of concreting) for bond, its cost shall be deemed to have been included in the respective items, unless otherwise, explicitly stated and nothing extra shall be payable nor extra cement considered in the cement consumption on this account

2.4.8.4 Centring and shuttering for all concrete and reinforced concrete wherever required shall be in steel and / or plywood to produce a smooth and uniform finish on all exposed surfaces. However, all props, bracings, scaffolding etc., shall be in steel. The entire responsibility of planning, design, erection and safety of formwork shall lie with the Contractor.

2.5.1 **APPROVAL OF DESIGN MIX**

2.5.1.1 The mix design for a specified grade of concrete shall be done for a target mean compressive strength Tck = Fck + 1.65s

Where Fck = Characteristic Compressive Strength at 28 days
s = Standard deviation which depends on degree of quality control.

2.5.1.2 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 – 25	5.0
M – 30	6.0
M – 35	6.0

2.5.1.3 Out of the six specimen of each set, three shall be tested at seven days and remaining three at 28 days. The preliminary tests at seven days are intended only to indicate the strength to be attained at 28 days.

2.5.2 **CHARGES FOR DESIGN MIX**

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

2.5.3 **PREPARATION OF MIXES AS PER APPROVED DESIGN MIX AND CONDUCTING CONFIRMATORY TEST AT FIELD LAB.**

2.5.3.1.1 The contractor shall make the cubes of trial mixes as per approved Mix design at site laboratory for all grades, in presence of Engineer in charge using sample of approved materials proposed to be used in the work prior to commencement of concreting and get them tested in his presence to his entire satisfaction for 7 days and 28 days . Test cubes shall be taken from trial mixes as follows.

2.5.3.2 For each mix, a set of six cubes shall be made from each of the three consecutive batches. Three cubes from each set of six shall be tested at age of 7 days and remaining three cubes at age of 28 days. The cubes shall be made, cured, transported and tested strictly in accordance with specifications. The average strength of nine cubes at age of 28 days shall exceed the specified target mean strength for which design mix has been approved , the evaluation of test results will be done as per IS : 456-2000.

2.5.4 **WORK STRENGTH TEST**

2.5.4.1 TEST SPECIMEN

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

2.5.4.2 TEST RESULTS OF SAMPLE

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

2.5.4.3 STANDARD FOR ACCEPTANCE

2.5.4.3.1 Standard of acceptance shall be same as specified in clause 16 of IS 456-2000.

2.5.4.3.2 In order to keep the floor finish as per architectural drawings and to provide required thickness of the flooring as per specification, the level of top surface of RCC shall be accordingly adjusted at the time of its centering, shuttering and casting for which nothing extra shall be paid to the contractor.

2.5.5 **Ultrasonic Pulse Velocity Method of Test for RCC**

2.5.5.1 The underlying principle of assessing the quality of concrete is that comparatively higher velocities are obtained when the quality of concrete in terms of density, homogeneity and uniformly is good. The consistency of the concrete as regards its general quality gets established. In case of poorer quality lower velocities are obtained. If there are cracks, voids or flaws inside the concrete which come in the way of transmission of pulse, lower velocities are obtained.

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

Velocity criterion for Concrete Quality Grading

Sl. No.	Pulse velocity by Cross Probing (km/sec)	Concrete Quality Grading
1	Above 4.5	Excellent
2	4.5 to 3.5	Good
3	3.5 to 3.0	Medium
4	Below 3.0	Doubtful

Note : In Case of “doubtful” quality it may be necessary to carry further tests.

2.5.5.2.1 Pulse velocity method of test of concrete is to be conducted for CPWD works as a routine test. The acceptance criteria as per the above table will be applicable which is as per IS 13311 (part-1): 1992. From the above “Good” and “Excellent” grading are acceptable and below these grading the concrete will not be acceptable. For new works the provision of test will be suitably incorporated in tender conditions/NIT. For ongoing works, the test must also be carried out to ensure quality of concrete along with there exists no provision of such tests in the tender documents. However cost of testing may be borne by the department in case of ongoing works.

2.5.5.2.2 5% of the total number of RCC members in each category i.e. beam, column, slab and footing may be tested by UPV test method for establishing quality of concrete. It is suggested that test be conducted on RCC beam near joint with column, on RCC column near joint with beam, on RCC footings and rafts. On RCC rafts a suitable grid can be worked out for determining number of tests. In addition doubtful areas such as honeycombed locations, locations, where continuous seepage is observed, construction joints and visible loose pockets will also be tested.

2.5.5.2.3 The test results are to be examined in view of the above acceptance criteria “Good” and “Excellent” and wherever concrete is found with less than required quality as per acceptance criteria, repairs to concrete will be made. Honeycombed areas and loose pockets will be repaired by grouting using Portland Cement Mortar/Polymer Modifies Cement Mortar /Epoxy Mortar ,etc. after chipping loose concrete in appropriate manner. In areas where concrete is found below acceptance criteria and defects are not apparently visible on surface ,injecting approved grout in appropriate proportion using epoxy grout /acrylic Polymer modified cements slurry made with shrinkage compensating cement / plain cement slurry etc will be resorted to for repairs.(refer relevant chapters from CPWD Hand Book on Repairs and Rehabilitation of RCC Buildings).Repair to concrete will be done till satisfactory results are obtained as per the acceptance criteria by retesting of the repaired area. If satisfactory results are not obtained dismantling and relaying of concrete will be done.

MEASUREMENT

2.5.5.3 As per CPWD specifications.

2.5.6 **TOLERANCES**

2.5.6.1 As per CPWD specifications

2.5.7 **RATE** :-

2.5.7.1 The rate includes the cost of materials and labour involved in all the operations described above except for the cost of centering, shuttering and reinforcement, which will be paid separately.

2.5.7.2 In case of actual average compressive , strength being less than specified strength which shall be governed by para ‘ Standard of Acceptance” as above the rate payable shall be worked out accordingly on prorata basis.

2.5.7.3 In case of rejection of concrete on account of unacceptable compressive strength, governed by para ‘Standard of Acceptance’ as above, the work for which samples have failed shall be redone at the cost of contractors. However, the Engineer in charge may order for additional tests (like cutting cores, ultrasonic pulse velocity test, load test on structure or part of structure etc) to be carried out at the cost of contractor to ascertain if the portion of structure wherein concrete represented by the sample has been used, can be retained on the basis of results of individual or combination of these tests.

The contractor shall take remedial measures necessary to retain the structure as approved by the Engineer in charge without any extra cost. However, for payment, the basis of rate payable to contractor shall be governed by the 28 days cube test results and reduced rates shall be regulated in accordance with para 5.4.13 of Revised CPWD specification 2009, Vol.-I.

2.5.7.4 As per general engineering practice, level of floors in toilet / bath, balconies, shall be kept 12 to 20mm or as required, lower than general floors shuttering should be adjusted accordingly. The landing level of mumty/ Staircase cabin shall be Kept one riser level higher than adjoining slab level so as to accommodate water proofing treatment over terrace slab. In case of kitchen slab the portion of floor trap below kitchen platform be kept at lower level as per drawings. Nothing extra is payable on this account.

2.5.7.5 For the execution of centring and shuttering, the contractor shall use propriety “Reebole” chemical mould release agent of FOSROC or equivalent as shuttering oil as approved by Engineer-in-charge and nothing extra shall be paid on this account.

2.5.8 **REINFORCEMENT**

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

2.6 FLOORING

2.6.1 All work in general shall be carried out as per CPWD Specifications.

2.6.2 Whenever flooring is to be done in patterns of tiles and stones, the contractor shall get samples of each pattern laid and approved by the Engineer-in-charge before final laying of such flooring. The sample produced shall be fully supported by the details of location/quarry and the same shall not be removed except with the written permission of Engineer-in-Charge. Nothing extra shall be payable on this account.

2.6.3 Different stones / tiles used in pattern flooring shall be measured separately as defined in the nomenclature of the item. The rate of item of marble/ Kota/ tiles or any combinational stone flooring is inclusive of providing required patters with combination of all. Nothing extra will be paid on this account .No additional wastage, if any, shall be accounted for any extra payment.

2.6.4 Samples of flooring stones (Kota/ Marble/ Granite/ Tiles of all kinds etc.) shall be deposited well in advance with the Engineer-in-Charge for approval. Approved samples should be kept at site with the Engineer-in-Charge and the same shall not be removed except with the written permission of Engineer-in-Charge. No payment whatsoever shall be made for these samples.

2.6.5 The Marble/ Kota/ Granite/ Tiles of all kinds mentioned in different items of flooring subhead shall be fully supported by the details establishing the quarry and its location or source.

2.6.6 Full width stone over kitchen platform, window sills, jambs and soffit shall be provided except to adjust for closing pieces The marble/any stone flooring in treads and risers of stair case is to be laid in single piece. Nothing extra shall be paid on these accounts.

2.6.7 Chasing of required width and thickness shall be made in brick work at skirting location so as to flush the external surface of skirting with internal plastering. No extra payment towards making chases in brick work at skirting shall be made and the same is presumed to be inclusive of rate quoted for the item of providing and fixing skirting.

2.6.8 Proper gradient shall be given to flooring for toilets, verandah, kitchen, courtyard etc. so that the wash water flows towards the direction of floor trap. Any reverse slop if found, shall be made good by the contractor by ripping open the floor/grading concrete and nothing shall be paid for such rectifications.

2.6.9 The granite stonework shall, in general, be carried out as per the CPWD Specifications. The specifications for dressing, laying, curing, finishing, measurements, rate etc. for the granite stone flooring shall be same as that of works for the Marble flooring, skirting and risers of steps under Flooring Sub Head of the CPWD Specifications. The wall lining / veneer work with granite stone shall be as per the CPWD Specifications for Marble work Sub Head.

2.6.10 The granite stone slabs to be procured for the work shall match the samples shown to the Contractors before submission of the tenders. Before starting the work, the Contractor shall procure and submit the samples of granite stone slab (matching to the samples shown to the Contractors before submission of the tenders) for the approval of the Engineer-in-Charge.

2.6.11 The decision of the Engineer-in-Charge as regards the approval of the samples for the various types of the granite stones shall be final and binding on the Contractor. No claim of any kind whatsoever shall be entertained from the Contractor on this account. The Contractor shall then procure and get the mock up prepared at site of work for approval of quality of workmanship and the granite stone as specified. The mock up shall be prepared in lift lobby, toilet etc. on one of the floors. The size of the stones shall be as per the architectural drawings. If the quality of the workmanship and the material is as per the required standards, the mock up shall be allowed as part of the work and measured for payment and shall not be dismantled. Otherwise, it shall be dismantled by the contractor as directed by the Engineer-in-Charge and taken away from the site of the work at his own cost. Nothing extra shall be payable on this account.

2.6.12 For the steps (risers and treads) in the linear profile, the granite stone shall be provided in single pieces up to 2.0 m as per the architectural drawings, unless otherwise specifically permitted by the Engineer-in-Charge. Wherever grooves are required to be provided the same is to be done as per architectural drawings and as directed by the Engineer-in-charge. Wherever required, the joints shall be provided as per the architectural drawings. Nothing extra shall be payable on these accounts.

2.6.13 The granite slabs used for providing and fixing in the sills, soffits and jambs of doors, windows, ventilators and similar locations shall be in single piece unless otherwise directed by the Engineer-in-Charge. Wherever stone slab other than in single piece is allowed to be fixed, the joints shall be provided as per the architectural drawings and as per the directions of the Engineer-in-Charge. Depending on the number of joints, as far as possible, the stone slabs shall be procured and fixed in slabs of equal lengths as per the architectural drawings and as directed by Engineer-in-Charge.

2.6.14 The granite work, Vitrified ceramic flooring, Ceramic flooring shall be adequately protected by a layer of Plaster of Paris, which shall be maintained throughout the construction and removed just before handing over of the works for which nothing extra shall be payable.

2.7 FINISHING

2.7.1 General

2.7.2 The work shall be done in accordance with CPWD Specifications -2009 Vol. I to Vol. II with up to date correction slip sand the manufacturer's specifications where CPWD specifications are not available.

2.7.3 The quantity of paint required as per the theoretical consumption including wastages, if any, shall be procured from the approved manufacturer or his authorized dealers and deposited with the representative of the Engineer-in-Charge at site.

2.7.4 The paint shall be obtained in smaller packing (around 20 litre) .

2.7.5 The paint shall be kept in the joint custody of the Department and the Contractor and day-to-day account of receipt and issue shall be maintained. However, the safe custody and watch and ward shall remain to be the responsibility of the Contractor. Nothing extra shall be payable on this account.

2.7.6 The name of the manufacturer, manufacturer's product identification, manufacturer's mixing instructions, warnings and instructions for handling and application, toxicity and date of manufacturing and shelf life shall be clearly and legibly mentioned on the labels of each container. These details shall be kept in record. The material shall be consumed in the order of material brought to site, first come first consume basis. The Contractor shall obtain and submit to the Department the manufacturer's certificate for compliance of the various characteristics of the materials as per the manufacturer's specifications and also copy of the manufacturer's test report for the record.

2.7.7 Empty containers of the paints shall not be removed from site till the completion of the work unless otherwise permitted and shall be removed only with the permission of the Engineer-in-Charge or his authorized representative at site of work.

2.7.8 All arrangements for measuring, dosing etc. at site shall be made by the Contractor. Nothing extra shall be payable on this account.

2.7.9 The Contractor shall apply samples of each kind of paint for the approval of shade and colour as per the directions of the Engineer-in-Charge before procuring the paint in mass.

2.7.10 All incidental charges of cartage, storage, wastage, safe custody, scaffolding, cost of samples and mock ups etc. shall be borne by the Contractor and no claim, whatsoever, shall be entertained on this account.

2.7.11 For the item of Epoxy paint, it is clarified that the surface for painting shall be prepared by shot blasting. The metal surface shall be cleaned off any rust using sand/ emery paper and also by mechanical brush / power tool cleaning using grinder as required as per the manufacturer's specifications etc. The sand blasting as such is not required to be carried out on the surface. However the epoxy primer shall be applied immediately after the surface preparation.

2.7.12 For the item of melamine polish, the item includes all the sand papering required to be carried out and wiped properly for cleaning all the loose dust particles. Necessary masking tapes are to be provided where different finishing work is to be carried out, so that the melamine polish does not spread to the other surfaces. Care should be taken while removing the masking tape, so that the surface is not damaged. Cost of melamine polish includes the cost of providing and removing the masking tapes wherever required. The surface shall be sand papered using emery paper no. 180, 320 and 400 as required. Any staining required shall be carried out by applying Apcolite Wood Stain or equivalent, to achieve the required colour and shade as directed by the Engineer-in-Charge. The item of melamine polish is deemed to include cost of such staining. Where French spirit polish is to be carried out the rate is inclusive of cost of staining and wood filler (Apcolite wood filler of Asian Paints or Asian NC Clear Wood filler or equivalent of other brands ICI and Pidilite Industries) if required. Nothing extra shall be payable on this account.

2.7.13 **TEXTURED PAINT**

2.7.13.1 Application

Texture wall finish is a two coat system over an initial coat of low VOC cement primer. First Coat should be applied onto the surface with a stainless steel trowel and the second coat by special spray plaster gun. A plastic (hard) roller should be run on the surface while it is semi-dry. The material is rainproof after 8 hours, at a temperature of 20'C.

Spray machine used may be (a) high pressure (small air aperture) type or (b) a low pressure (large air gap) type, depending on the nature and location of work to be carried out. Skilled and experienced workmen shall be employed for this class of work. Paints used shall be brought to the requisite consistency by adding a suitable thinner.

Spraying should be done only when dry conditions prevails. During spraying the spray gun shall be held perpendicular to the surface to be coated and shall be passed over the surface in a uniform sweeping motion. Different air pressures and fan adjustment shall be tried so as to obtain the best application with the minimum wastage of paint. The air pressure shall not be kept too high as otherwise the paint will clog up and will be wasted.

Spots that are inaccessible to the spray pattern shall be touched up by brush after spraying.

At the end of the job, the spray-gun shall be cleaned thoroughly so as to be free from dirt. Incorrect adjustments shall be set right, as otherwise they will result in variable spray patterns, runs, sags and uneven coats.

Each coat shall be allowed to dry completely and lightly rubbed with very fine grade of sand paper and loose particles brushed off before next coat is applied. Each coat shall vary slightly in shade and shall be got approved `from the Engineer-in-charge before next coat is started.

Each coat except the last coat, shall be lightly rubbed down with sand paper or fine pumice stone and cleaned off dust before the next coat is applied.

No hair marks from the brush or clogging of paint puddles in the corner panels, angles of moulding, etc. shall be left on the works. In painting doors and windows, the putty round the glass panes shall also be painted but care shall be taken to see that no paint stains etc. are left on the glass. Tops of shutters and surfaces in similar hidden locations shall not be left out in painting.

2.7.13.2 Measurement

Texture Painting on plastered or concrete surface shall be measured in sq.m correct to a cm. Deductions on account of openings of doors, windows, ventilators and additions on account of sill, jambs, soffits etc shall be calculated as per criteria mentioned in finishing (Painting item) subhead of CPWD specification 2009, vol. II.

2.8 STAINLESS STEEL HAND RAIL

2.8.1.1 Providing, fabricating and fixing in position welded built –up section using stainless pipes and connecting plates, of Grade S.S 304 and of required diameter & thickness as per the directions of the Engineer-in -Charge, at the junctions of doors, on walls, other locations as directed etc. including cutting, welding, grinding, bending to required profile and shape, hoisting, buffing and polishing, cutting chase / embedding in RCC / Masonry, fixing using stainless steel screws, nuts, bolts and washers or stainless steel fasteners as required to make it rigidly fixed & stable and making good the plaster/ flooring etc. all complete, at all floors and all levels as directed by the Engineer-in – Charge.

2.8.1.2 Rate includes cost of all inputs of materials, labour, T&P, etc. involved in the work and all incidental charges to execute this item. However, for the purpose of payment only the actual weight of the stainless pipes and stainless steel plates provided and fixed shall be measured in kg.

3 PARTICULAR SPECIFICATIONS – ALUMINIUM WORK FOR DOORS, WINDOWS AND PARTITIONS

The material for the work shall be procured from the approved manufacturer as per the list attached with the tender documents. The Contractor shall procure and submit samples of various materials to be used in the work for the approval of Engineer-in-Charge and no work shall commence before such samples are approved. Samples of un-anodized as well as anodized aluminium sections, neoprene gaskets, glass, stainless steel screws, anchor fasteners, hardware and any other material or components requiring approval of samples, in opinion of Engineer-in-Charge, shall be submitted for the approval as mentioned above .The above samples shall be retained as standards of materials and workmanship. The cost of the above samples shall be borne by the Contractor.

3.1 The Contractor shall prepare the shop drawings for the aluminium windows giving details of the various aluminium sections, neoprene gaskets, cleats, anchor fasteners, hardware, sealants, glass etc. and submit the same for the approval of Engineer-in-Charge. Nothing extra shall be payable on this account.

3.2 Only after the approval of the samples and the shop drawings by the Engineer-in-Charge, the Contractor shall procure the material for the work. All materials brought to the site by the Contractor, for use in the work, as well as fabricated components shall be subject to inspection and approval by Engineer-in-Charge. The Contractor shall, if required by the Engineer-in-Charge, produce manufacturer's test certificates for any material or particular batch of materials supplied by him.

3.3 The Contractor shall prepare a finished sample of the aluminium window along with glazing panel and fittings etc. for approval of workmanship and material. Nothing extra shall be payable on this account

3.4 The Contractor shall get the necessary tests carried out in an approved laboratory, as specified. The tests carried out shall be as per relevant specifications / Standard Codes. One test for each lot of anodized aluminium section of each type shall be carried out. However, this is subject to at least one test for every 1,000 Kg or part thereof, for each type of section.

3.5 Aluminium sections to be used for doors, windows, ventilators and fixed glazing, partitions, false ceiling etc. shall be appropriate to meet technical, structural, functional and aesthetic considerations. The anodizing shall be carried out in an approved factory / workshop as specified in the tender documents.

3.6 The aluminium extruded sections shall conform to I.S. Designations HEIWP / HVIWP alloy, with chemical composition and technical properties as per I.S. 733 and I.S. 1285.

4. FABRICATION

a. All joints shall be accurately fabricated and be hairline in appearance. The finished surface shall be free from visible defects.

b. Taking into consideration varying profiles of aluminium sections being extruded by approved manufacturers, the Contractor shall prepare detailed shop drawings of his proposal using suitable sections based on architectural design / drawings, adequate to meet the requirements / specifications laid down and as proposed by the manufacturer and these detailed shop drawings shall be subject to approval of the Engineer – in – Charge.

c. All hardware used shall conform to the relevant specifications and as per samples approved by the Engineer-in-Charge. Design, quality, type, number and fixing of hardware shall be generally in accordance with architectural drawings and as approved by the Engineer-in-Charge before use.

d. All doors, windows, ventilators and glazing etc. shall be made water tight with neoprene gaskets and weather silicone sealants to the satisfaction of the Engineer-in-Charge, for which nothing extra shall be payable.

e. The frames shall be strictly as per Architectural drawings, the corners of the frame being fabricated to the true right angles. Both the fixed frames and open able shutter frames shall be fabricated out of sections cut to required length, mitered and mechanically jointed for satisfactory performance. All members shall be accurately machine milled and fitted to form hairline joints. The jointing accessories such as aluminium cleats, stainless steel screws etc. shall not to cause any bi-metallic reaction by providing separators, wherever required. Nothing extra shall be payable for jointing accessories.

f. Mitered joints of the doors, windows, ventilators shutters and frames shall be either corner crimped or fixed with self tapping stainless steel screws of approved make and quality to heavy duty extruded aluminium cleats and sealed with weather silicone sealant, for which nothing extra shall be payable.

g. Vertical members of the aluminium frame work shall be embedded in the floors, wherever required, by cutting and making good of the floor. Nothing extra shall be payable on this account.

5. FIXING OF ALUMINIUM FRAME WORK

1.1 The screws used for fixing fixed aluminium frames of the aluminium windows to masonry walls / RCC members and aluminium members to other aluminium members shall be of stainless steel of approved make and quality and of stainless steel grade 304. Threads of machine screws used shall conform to requirement of I.S. 4218.

1.2 The aluminium frames of the gypsum board partition and the wooden rafter ceiling shall be fixed to masonry walls / RCC members using stainless steel anchor fasteners of grade 316, of Kundan or Arrow make and aluminium members to other aluminium members shall be fixed using stainless steel screws of approved make and quality and of stainless steel grade 304.

1.3 For the aluminium windows, the gap between the aluminium frames and the R.C.C / Masonry and also any gaps in the various sections shall be filled with weather silicone sealant DC 795 of Dow Corning or equivalent in the required bite size, to ensure water tightness including providing and fixing backer rod , wherever required. The weather silicone sealant shall be of such approved colour and composition that it would not stain or streak the masonry / R.C.C. work. It should not sag or flow and shall not set hard or dry out under any conditions of weather and shall be tooled properly. The weather silicone sealant shall be used as per the manufacturer's specifications and shall be of approved colour and shade. Any excess sealant shall be removed / cleared. Nothing extra shall be payable for the above.

1.4 Fixing of glass panes shall be designed in such a way that replacing damaged / broken glass panes is easily possible without having to remove or damage any members or interior finishing materials.

6. ANODIZING

6.1 Aluminium sections shall be anodized as per I.S. 7088 – 1973. Anodizing to be as per grade AC 20 and not less than 20 microns thick when measured as per I.S. 6012, in colour and shade as approved by the Engineer-in-charge.

6.2 and / or I.S. 6057. Sealing quality shall be tested in accordance with the relevant standards. Nothing extra shall be payable on this account.

6.3 The Contractor shall satisfy himself by checking in the factory that the thickness of the anodic coating is found to be minimum 20 microns and sealing quality is appropriate everywhere. The testing shall be done in an approved laboratory by EDDY CURRENT METHOD as per I.S. 6012 for thickness. For testing the thickness of anodic coating of the anodized aluminium sections, the calibration shall be done on bare (un-anodized) aluminium sections of same type. If any material is found sub-standard, it shall be rejected.

6.4 All anodized aluminium works shall conform to relevant I.S. Codes relating to materials, workmanship, fabrications, finishing, erection, installations etc. In this connection I.S. Codes including I.S. 1868 – 1982, I.S. 733 – 1983, I.S. 1948-1961, I.S. 7088-1973, I.S. 6012-1970, I.S. 1285 – 1975, I.S. 740-1975 are considered relevant and applicable.

6.5 The exposed surface of the aluminium sections shall be protected against surface damage, dents, scratches etc. It shall, therefore, be provided with protective tape. After fixing and assuring of proper functioning of doors, windows, frame work for partitions / false ceiling etc. such protective tape shall be cleaned out / removed as per the directions of Engineer-in-Charge. Nothing extra shall be payable for above.

7 GLAZING

7.1 All glass panes shall be retained within aluminium framing by use of exterior grade neoprene gaskets. Use of glazing or caulking compounds around the perimeter of glass will not be permitted. There shall be no whistling or rattling. Before installation of glass, Contractor shall ensure the following:

a) All glazing rebates shall be square, to plumb, true to plane, dry and free from dust.
b) Glass edge shall be clean and cut to exact size and grounded

7.2 Annealed float glass in doors, windows, ventilators and fixed glazing etc. shall be of approved make and standard quality conforming to C.P.W.D. Specifications.

7.2.1 4.0 mm thick glass panes shall be provided for openings not exceeding 0.5 sqm. For openings exceeding 0.5 sqm in area, 5.0 mm thick glass panes shall be provided unless specified otherwise.

8 PROTECTIONS AND CLEANING:

8.1.1 After erection and removal of protective layer, all aluminium works including glass panes shall be moist cleaned with a de-ionized water to clean all marks, stains and blemishes.

9 MEASUREMENT AND RATES:

9.1.1 For aluminium frame work, the length of each member of the frame shall be measured correct to half a centimeter. The weight shall then be calculated on the basis of unit weight specified in the manufacturer's catalogue.

9.1.2 The actual weight per metre of the respective aluminium sections shall be measured for three random samples collected for each type of aluminium section used in the work, cut to required lengths and weighed and average weight calculated and recorded. The average weight for each type of aluminium section shall be taken as the actual weight per metre for that aluminium section. The decision of the Engineer-in-Charge as regards the random samples and average weight shall be final and binding on the Contractor and no claim of any kind shall be entertained from the Contractor in this regard.

9.1.3 The quantity of the aluminium, to be paid for, shall be the least of the two weights calculated on the basis of above two paras 9.25.1 and 9.25.2

9.1.4 For glazing, the actual area of the glass panels excluding the portion in the beading shall be measured in sqm up to two decimal places, for payment.

9.1.5 Stainless steel adjustable friction hinges and the aluminium handles for the open able side-hung windows shall be of "Earl Bihari", make or equivalent as approved by the Engineer-in-Charge. 2 nos. friction hinges shall be provided per shutter.

9.1.6 The cost of designing and preparation of shop drawings, all the samples, mock up of window etc. is deemed to be included in the cost of the relevant items. Nothing extra shall be payable on this account.

9.1.7 The item for aluminium for fixed portions for aluminium windows, frame work for partitions and wooden rafter ceiling shall include cost of all inputs of labour, material (anodized aluminium sections, including cleats, other fixtures, weather silicone sealants, stainless steel screws, nuts, bolts, rawl plugs, backer rods, polyethylene tapes etc. which shall be required for fabrication and erection of aluminium work) T & P, all incidental charges, wastages etc. involved in the work. However, for the purpose of payment, the weight of aluminium sections for the fixed window frame, frame work for partitions and wooden rafter ceiling, shall be measured in Kg. The aluminium cleats, stainless steel screws, nuts, bolts, separators etc. shall not be measured separately for payment and their cost is deemed to be included in the cost of this item. The item for aluminium for frame work for fixed partitions and wooden rafter ceiling shall also include cost of providing and fixing stainless steel anchor fasteners as required.

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

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

9.1.10 The item for the aluminium frame work includes cost of making provision for fixing fittings, wherever required, as per the item description (The cost for providing fitting (handle and buffer) shall be paid for separately under relevant item).

ADDITIONAL CONDITIONS WHEN STEEL AND CEMENT IS TO BE ARRANGED BY THE CONTRACTOR CONDITION FOR STEEL

1. The contractor shall procure TMT bars of Fe 500D grade (the grade to be procured is to be specified) 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 tonnes per annum and above. The TMT bars procured from primary producers shall conform to manufacture's specifications/ BIS specifications.

2. The specifications of TMT bars procured from primary producers and ISPs shall meet the provisions of IS 1786 pertaining Fe 500D grade of steel as specified in the tender.

3. Structural steel shall be procured from approved manufacturer having valid BIS license.

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

5. Samples shall also be taken and got tested by the Engineer-in-Charge as per the provisions in this regard in relevant BIS codes. In case the test results indicate that the steel arranged by the contractor does not conform to the specifications as defined under para3.3 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 or written orders from the Engineer-in-Charge to do so. Else the department shall remove it and recover double the cost of removal from the contractor.

   The steel reinforcement bars shall be brought to the site in bulk supply of 30 tonnes or more, or as decided by the Engineer-in-charge.

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

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

Size of Bar	For Consignment below 100 tonnes	For consignments above100 tonnes
Under 10 mm dia bars	One sample for each 25 tonnes or part thereof	One sample for each 40 tonnes or part thereof
10 mm to 16 mm dia bars	One sample for each 35 tonnes or part thereof	One sample for each 45 tonnes or part thereof
Over 16 mm dia bars	One sample for each 45 tonnes or part thereof	One sample for each 50 tonnes or part thereof

8. 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/Department in the manner indicated below:

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

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

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

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

11. For the purpose of payment, the actual weight of steel reinforcement / structural steel sections/ plates / bolts and nuts shall be measured as below: *Unit weight for rolled steel sections and MS plates*: The actual weight per metre of the steel section shall be measured of minimum one sample per lot for each type of steel sections brought to site for use in the work. For this, each sample of steel section shall be cut to required length as decided by the Engineer-in-charge and weighed and recorded. The weight calculated as above shall be taken as the actual weight per unit length. For MS plates the weight per square metre shall be calculated from minimum one random sample. The weight shall then be calculated for each lot of the material received at site of work and unused in the work and unit weight shall be modified accordingly.

12.2 *Unit weight for reinforcement bars*: The actual weight per metre of the reinforcement of various diameters shall be measured for three random samples collected (for each diameter of steel reinforcement) from each lot of particular diameter of steel reinforcement brought to the site for use in the work. For this, each sample (one sample consisting of three specimens) for each diameter of steel reinforcement shall be cut to require lengths and weighed and average weight calculated and recorded. The average weight for each type of steel section and steel reinforcement of each diameter shall be taken as the actual weight per metre for that steel section and that diameter of steel reinforcement.

*12.*3 In case actual unit weight is less than standard unit weights mentioned in CPWD specifications 2009 Volume 1, but within variation, in such cases payment shall be made on the basis of actual unit weight. However, if actual unit weight is more than standard unit weights mentioned in CPWD specifications 2009 Volume 1, then payment shall be made on the basis of standard unit weight in such cases.

SPECIAL CONDITIONS

1. The contractor shall, at his own expense procure and provide all materials including cement and steel required for the work.

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

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

4. The contractor shall also employ necessary watch and ward establishment for the safe custody of materials at his own cost.

5. Contractor has to produce manufacturers test certificate for each lot of cement & steel procured at site.

6. **SPECIAL CONDITIONS FOR CEMENT**

i) The contractor shall procure Portland Pozzolona Cement (PPC) conforming to IS: 1489 (Part-1) from reputed manufacturers of cement, such as given in preferred manufacture or from any other reputed cement Manufacturer having a production capacity not less than one million tonnes per annum as approved by Chief Engineer Gandhinagar, CPWD, Gandhinagar. The tenderers may also submit a list of names of cement manufacturers which they propose to use in the work. The tender accepting authority reserves right to accept or reject name(s) of cement manufacturer(s) which they propose to use in the work. No change in the tender rate is accepted if the tender accepting authority does not accept the list of cement manufacturers, given by the tenderer, fully or partially. The supply of cement shall be made in 50 kg bags bearing manufacturer's name and ISI marking Samples of cement arranged by the contractor shall be taken by the Engineer-in-Charge and got tested in accordance with provisions of the relevant BIS codes. In case the test results indicate that the cement arranged by the contractor does not confirm to the relevant BIS code the same shall stand rejected and shall be removed from the site by the contractor at his own cost with in 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 charge and nothing extra shall be in-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. Portland Pozzolana Cement is to be used for RCC works only subject to fulfillment of conditions of circular No. CDO/SE(RR)/Flyash[MAN] 02 dated 09.04.09. However, if the contractor uses higher grade of cement or uses OPC only nothing extra shall be paid.

a) IS:456-2000 Code of Practice for Plain and Reinforced Concrete (as amended up to date) shall be followed in regard to Concrete Mix Portion and its production as under:

(i) The concrete mix design shall be done as "Design Mix Concrete" as prescribed in clause-9 of IS 456 mentioned above.

(ii) 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.

b) The specified grade of concrete shall be used in all structural elements made with RCC cast-in-situ / precast members respectively as mentioned in structural drawings.

c) The mechanical properties such as modulus of elasticity, tensile strength, creep and shrinkage of fly ash mixed concrete or concrete using fly ash blended cements (PPCs) are not likely to be significantly different and their valus are to be taken same as those used for concrete made with OPC.

d) To control higher rate of carbonation in early ages of concrete both in fly ash admixed as well as PPC based concrete, water/binder ratio shall be kept as low as possible, which shall be closely monitored during concrete production. 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 super plasticizers with each set OPC, fly ash and /or PPC received from different sources shall be ensured by trails.

e) In environment subjected to aggressive chloride or sulphate attack in particular, use of fly ash admixed or PPC based concrete is recommended. In case, where structural concrete is exposed to excessive magnesium sulphate, fly ash 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 is such environment.

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

g) 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.

h) Till the time, BIS makes it mandatory to print the percentage age of fly ash 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.

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

ii) The cement shall be brought at site in bulk supply of approximately 50 tonnes or as decided by the Engineer-in-charge.

iii) The cement godown of the capacity to store a minimum of 2000 bags of cement shall be constructed by the contractor at the site of work for which no extra payment shall be made. Double lock provision shall be made to the door of the cement go down. The keys of one lock shall remain with the Engineer-in-charge or his authorized representative and the keys of the other lock shall remain with the contractor.

iv) The contractor shall be responsible for the watch and ward and safety of the cement godown. The contractor shall facilitate the inspection of the cement godown by the Engineer-in-charge at any time.

v) The cement shall be got tested at a frequency of one test for 50 MT or part thereof, by Engineer-in-charge and shall be used on after satisfactory test results have been received. The contractor shall supply free of charge the cement required for testing including its transportation cost to the test laboratory. The cost of tests shall be borne by the contractor.

vi) The actual issue and consumption of cement on work shall be regulated and proper accounts maintained as provided in respective clause of the contract. The theoretical consumption of cement shall be worked out as per procedure prescribed in respective clause of the contract and shall be governed by conditions therein.

vii) 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.

viii) Damaged cement shall be removed from site immediately by the contractor on receipt of notice in writing from the Engineer-in-charge. If he does not do so within three days of receipt of such notice, the Engineer-in-charge shall get it removed at the cost of the contractor.

ix) Cement should be kept in godowns under double locks and keys and its consumption account invariably maintained, whether the cement is supplied departmentally or arranged by the contractor. A register should be maintained at the site for this purpose. This register should contain the columns as shown in Appendix-28. (CPWD Works Manual 2019). The pages of the register should be machine numbered. The cement godown and the register are required to be checked by the AE/AEE in- charge.

SPECIAL CONDITIONS FOR STEEL REINFORCEMENT

The Contractor shall procure IS marked low alloy TMT bars of various grades from primary manufacturers such as SAIL, TATA STEEL LTD., RINL, JINDAL STEEL & POWER LTD AND JSW Steel Ltd. or their authorized dealers having valid BIS license for IS:1786:2008 (Amendment -1 November 2012)

2. The steel manufacturers or their authorized dealers (as per following selection criteria) having valid BIS license for IS: 1786:2008 (Amendment -1 November 2012)

The procured steel should have following qualities: -

i. Excellent ductility, bend ability and elongation of finished product due to possible refining technology.

ii. Consumption of steel should be accurate as per design.

iii. Steel should have no brittleness problem in finished product.

iv. Steel should carry the quality of corrosion and earthquake resistance.

v. Quality steel with achievement of proper level of Sulphur and phosphorus as per IS: 1786:2008.

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

4. 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 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.

5. The steel reinforcement bars shall be brought to the site in bulk supply of ten tons or more as decided by the Engineer-in-charge.

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

7. 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:

Size of bar	For consignment below 100 tons	For consignment above 100 tons
Under 10mm dia bars	One sample for each 40 tons or part thereof.	One sample for each 60 tons or part thereof.
10mm to 16mm dia bars	One sample for each 50 tons or part thereof.	One sample for each 70 tons or part thereof.
Over 16mm dia bars	One sample for each 60 tons or part thereof.	One sample for each 80 tons or part thereof.

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

9. The actual issue and consumption of steel on work shall be regulated and proper accounts maintained as provided in relevant clause of the contract. The theoretical consumption of steel shall be worked out as procedure prescribed in relevant clause of the contract and shall be governed by conditions laid therein. In case the consumption is less than theoretical consumption including permissible variations leading to under designing of the structural. The work shall be summarily rejected, otherwise recovery at the rate so prescribed shall be made after ensuring structural soundness and stability. In case of excess consumption, no adjustment need to be made.

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

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

12. Reinforcement including authorized spacer bars and laps shall be measured in length of 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.

13. The standard sectional weights referred to as in Table 5.4 in para 5.3.4 in CPWD Specifications will be considered for conversion of length of various sizes of M.S. Bars, Steel Bars and T.M.T. bars into Standard Weight.

14. Records 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.

15. (a) If the Derived Weight as in sub-para above is less than the Standard Weight as in Sub-para above then the Derived Actual Weight shall be taken for payment provided, if it is within the following tolerances specified in IS1786-2008, otherwise whole lot will be rejected.

Tolerances on Nominal Mass

Nominal Size in mm	Batch	Tolerance on Nominal mass Per cent	
		Individual Sample*	Individual sample for coil**
Up to and including 10	+7	-8	+8
Over 10 up to and Including 16	+5	-6	+6
Over 16	+3	-4	+4

* For individual sample plus tolerance is not specified.

** For coils batch tolerance is not specified.

Tolerance shall be determined in accordance with method given in IS 1786.

b) If the Derived Actual Weight is found more than the Standard Weight, the Standard Weight as per in sub-para above shall be taken for payment. In such case nothing extra shall be paid for the difference between the Derived Actual Weight and the Standard Weight.

16. The following procedure should be followed in case of removal of rejected/sub-standard materials from the site of work.

i) Whenever any material brought by the contractor to the site of work is rejected, entry thereof should invariably be made in the site order book under the signature of the AE/AEE giving approximate quantity of such materials.

ADDITIONAL CONDITIONS OF CONTRACT SPECIFIC TO GREEN BUILDING PRACTICES CONDITIONS ON GREEN BUILDINGS.

4. GENERAL NOTE ON GREEN BUILDING PRACTICES

All materials and systems used in the project are intended to maximize energy efficiency for operation of Project throughout service life (substantial completion to ultimate disposition - reuse, recycling, or demolition) with an emphasis on top quality. Materials and systems are to maximize environmentally- benign construction techniques, including construction waste recycling, reusable delivery packaging, and reusability of selected materials. All vendors / contractors must adhere to best practices related to Green Buildings.

Green Building Practices:

- Ensure healthy indoor air quality in final Project.
- Maximize use of products with low embodied energy (harvesting, mining, manufacturing, Transport, installation, use, operations, recycling and disposal). Exceptions might include materials that result in net energy conservation during their useful life in building and buildings life cycle.

1. Where possible, select materials harvested and manufactured regionally, within a 500-km radius of the project site.
2. Maximize use of durable products.
3. Maximize use of products easy to maintain, repair, and that can be cleaned using non-toxic substances.
4. Maximize recycled content in materials, products, and systems.
5. Maximize use of reusable and recyclable packaging.
6. Where possible and feasible, provide for non-destructive removal and re-use of materials after their service life in this building.
7. Re-use existing building materials to extent feasible within design concept expressed in Contract Documents. Provide materials that utilize recycled content to maximum degree possible without being detrimental to product performance or indoor air quality.
    - Use construction practices such as material reduction and dimensional planning that maximize efficient use of resources and materials.
    - Provide or contribute to O&M Manuals wherever applicable.
    - Be conversant with the Site Waste Management Program Manual and actively contribute to its compilation. Assist the author of the Manual by estimating the nature and volume of waste generated by the process/installation in question.
    - Minimize pollution: Select materials that generate least amount of pollution during mining, manufacturing, transport, installation, use, and disposal.

1. Avoid materials that emit greenhouse gases.
2. Avoid materials that require energy intensive extraction, manufacturing, processing, transport, installation, maintenance, or removal.
3. Avoid materials that contain ozone-depleting chemicals (e.g. CFCs or HCFCs).

4. Avoid materials that emit potentially harmful volatile organic chemicals (VOCs).

5. Employ construction practices that minimize dust production and combustion by-products.

6. Avoid materials that can leach harmful chemicals into ground water; do not allow potentially harmful chemicals to enter sewers or storm drains.

7. Protect soil against erosion and topsoil depletion.

8. Minimize noise generation during construction; screen mechanical equipment to block noise.

9. Select materials that can be reused or recycled and materials with significant percentage of recycled content; conform with or exceed specified Project recycled content percentages for individual materials; avoid materials difficult to recycle.

10. Protect natural habitats; restore natural habitats where feasible within scope of Project.

CONDITIONS OF CONTRACT SPECIFIC TO GREEN BUILDING PRACTICES
The contractor shall strictly adhere to the following conditions as part of his contractual obligations:

A. SITE

1. 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 contractors shall take the clearance of the architects before any excavation. Top soil should be stripped to a depth of 20 cm (centimeters) from the areas proposed for buildings, roads, paved areas, and external services. It shall be stockpiled to a height of 40 cm in designated areas and shall be reapplied to site during plantation of the proposed vegetation. Top soil shall be separated from subsoil debris and stones larger than 50 mm (millimeter) diameter. The stored top soil may be used as finished grade for planting areas.

2. The Contractor should follow the construction plan as proposed by the architect to minimize the site disturbance such as soil pollution due to spilling. Use staging and spill prevention and control plan to restrict the spilling of the contaminated material on site.

   Protect top soil from erosion by collection storage and reapplication of top soil, constructing sediment basin, contour trenching, mulching etc.

3. No excavated earth shall be removed from the campus. All soil shall be reused in backfilling/landscape, etc as per the instructions of the architects.

4. The contractor shall not change the natural gradient of the ground unless specifically instructed by the architects. This shall cover all natural features like water bodies, drainage gullies, slopes, mounds, depressions, rocky outcrops, etc.

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

6. The contractor shall ensure that adequate measures are taken for the prevention of erosion of the top soil during the construction phase.

7. 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 landscape architect/architect/engineer-in-charge

B. CONSTRUCTION PHASE AND WORKER FACILITIES

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 Project Manager. This shall include areas of construction, storage of materials, and material and personnel movement.

2. The contractor shall ensure that no existing trees shall be cut down, or, harmed during construction.

3. The contractor shall ensure that no trees, existing or otherwise, shall be harmed, and damage to roots should be prevented during trenching, placing backfill, driving or parking heavy equipment, dumping of trash, oil, paint, and other materials detrimental to plant health. These activities should be restricted to the areas outside of the canopy of the tree, or, from a safe distance from the tree/plant.

C. PRESERVE & PROTECT LANDSCAPE DURING CONSTRUCTION

1. Contractor should limit all construction activity within the specified area as per the construction plan proposed by the architect. All the existing trees should be preserved, if not possible than compensate the loss by re-planting trees in the proportion of 1:3.

2. Contractor shall collect all construction waste generated on site. Segregate these waste 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 etc.

3. The contractor shall provide the minimum level of sanitation and safety facilities for the workers at site. The contractor shall ensure cleanliness of workplace with regard to the disposal of waste and effluent; provide clean drinking water and latrines and urinals as per applicable standard. Adequate toilet facilities shall be provided for the workman within easy access of their place of work. The total no. to be provided shall not be less than 1 per 25 employs 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. Natural or artificial illumination shall be provided.

4. 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, and water spraying. Contractor shall ensure the following activities to prevent air pollution during construction:
   - Clear vegetation only from the area where work will start right away.
   - Vegetate/mulch area where vehicles don't play. Apply gravel where mulching is impractical.
   - Apply surface gravel to all vehicular roads.
   - Spray water on any dusty material, areas where demolition work is being carried out, unpaved roads and other dusty areas and excavated areas.
   - Provide dust screens sheeting or netting to scaffolding along perimeter of a building.
   - Also cover stock pile dusty material & transferring loses material like bulk cement fly ash etc.

5. The contractor shall ensure that the speed of vehicles within the site is limited to 10 km/hr.

6. Lighting of fires or carrying out heat or gas emitting construction activity within the ground covered by canopy of the tree shall not be permitted.

7. The contractor shall ensure that no construction leach ate (Ex: cement slurry), is allowed to percolate into the ground. Adequate precautions are to be taken to safeguard against this including, reduction of wasteful curing processes, collection, basic filtering and reuse. 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).

8. 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.

9. 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 utilisation 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.

10. 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.

11. 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.

12. Adopt additional best practices, prescribed norms as in Doc No. CED 46(6086), July 2003: Draft National Building Code of India: Part 7 Constructional practices and safety, issued by Bureau of Indian Standards.

13. The contractor shall ensure that a flush out of all internal spaces is conducted prior to handover. This shall comprise an opening of all doors and windows for 10 days to vent out any toxic fumes due to paints, varnishes, polishes, etc.

    1. 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 Project Manager 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 manoeuvrability 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. The Owner shall not take any responsibility on any account.

D. WATER USE DURING CONSTRUCTION –

Contractor should spray curing water on concrete structure and shall not allow free flow of water. After curing on first day, all the concrete structures should be painted with 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.

E.

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.

F. MATERIALS & FIXTURES FOR THE PROJECT

1. All materials sourced specifically for construction at this project, shall be strictly sourced from a distance of 500 km radius from the project site except Kota stone, marble and granite.

2. Any material that is to be sourced from outside the prescribed radius shall be done after securing the necessary approval from the architects and the Project Manager.

3. All cement used at site for reinforced concrete, precast members, mortar, plaster, building blocks, etc shall be PPC (Portland Pozzolana Cement). The PPC must meet the requirements of IS 1489: 1991.

4. As a measure to reduce wastage and water consumption during construction, the contractor shall source or set up the infrastructure for a small scale ready mix concrete. All concreting works at site shall utilise only ready mix concrete and not a site mix.

5. 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, where it stipulates that 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.

6. The contractor shall ensure that quarry dust is used in place of sand in an all concreting works unless specifically instructed otherwise by the architects.

7. All timber used in the manufacture of door and window frames and shutters shall constitute of reclaimed timber. The source of such reclaimed timber shall be approved by the Architects and the Project Manager.

8. 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 Architects and the Project Manager before the application of any such material.

9. 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.

10. The contractor shall ensure that all composite wood products/agri fibre products used for cabinet work, etc do not contain any added urea formaldehyde resin.

G. RESOURCES CONSUMED DURING CONSTRUCTION

1. The contractor shall ensure that the least amount of water and electricity is wasted during construction. The Project Manager can bring to the attention any such wastage and the contractor will have to ensure that such bad practices are corrected.

2. 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.

3. The contractor shall ensure that all run-off water from the site, during construction is collected and reused to the maximum.

4. The contractor shall use treated recycled water of appropriate quality standards for construction, if available.

5. No lights shall be turned on during the period between 6:00 AM to 6:00 PM, without the permission of the Project Manager.

6. The contractor is encouraged to use bio-diesel in place of petroleum diesel for the running of generators during construction.

H. CONSTRUCTION WASTE

1. Contractor shall ensure that wastage of construction material is kept to a maximum of 3%.

2. 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. Employ measures to segregate the waste on site into inert, chemical, or hazardous wastes.

3. All construction debris shall be used for road preparation, back filling, etc, as per the instructions of the Architects and the Project Manager, with necessary activities of sorting, crushing, etc.

4. No construction debris shall be taken away from the site, without the prior approval of the Project Manager.

5. The contractor shall recycle the unused chemical/hazardous wastes such as oil, paint, batteries, and asbestos.

6. If and when construction debris is taken out of the site, after prior permissions from the Project Manager, then the contractor shall ensure the safe disposal of all wastes and will only dispose of any such construction waste in approved dumping sites.

7. Inert waste to be disposed off by municipal corporation/local bodies at landfill sites.

I. DOCUMENTATION

1. The contractor shall, during the entire tenure of the construction phase, submit the following records to the Project Manager on a monthly basis:
   i. Water consumption in litres
   ii. Electricity consumption in „kwh" units
   iii. Diesel consumption in litres
   iv. Quantum of waste 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.

2. The contractor shall, during the entire tenure of the construction phase, submit the following records to the Project Manager on a weekly basis:
   i. Quantities of material brought into the site, including the material issued to the contractor by the client.
   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 Project Manager.

3. The contractor shall submit one document after construction of the buildings, a brief description along with photographic records to show that other areas have not been disrupted 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.

4. The contractor shall submit to the Project Manager 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.

5. The contractor shall submit to the Project Manager, 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.

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

7. Provide supporting document from the manufacturer of the cement specifying the fly ash content in PPC used in reinforced concrete.

8. The contractor shall, at the end of construction of the buildings, submit to the Project Manager, 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 products components recyclability including potential sources accepting recyclable materials.
   v. Provide certification for all wood products provided by a Forest Stewardship Council (FSC - or equivalent organization) accredited certifier.

vi. 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) Suppliers" 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.

vii. Clean tech: Provide pollution clearance certificates from all manufacturers of materials

viii. 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.

a) Certifications from manufacturers of Low VOC paints, adhesives, sealant and polishes used at this particular project site.
b) Certification from manufacturers of composite wood products/agri-fibre products on the absence of added urea formaldehyde resin in the products supplied to them to this particular site.
c) Submit environmental and pollution clearance certificates for all diesel generators installed as part of this project.

9. Provide total support to the Architects / Project Manager / Green Building Consultants appointed by the owner in completing all Green Building Rating related formalities, including signing of forms, providing signed letters in the contractor’s letterhead.

J. EQUIPMENT

1. 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 architects.

2. 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 TERI-GRIHA rating stipulations, which can be provided to him by the architects. Failure to adhere to any of the above mentioned items, without necessary clearances from the architects and the Project Manager, shall be deemed as a violation of contract and the contractor shall be held liable for penalty as determined by the Engineer-in-Charge.

K.

The contractor has to execute the work complying to the additional conditions specified above and nothing extra shall be paid to him for the same.

PARTICULAR SPECIFICATIONS AND SPECIAL CONDITIONS FOR FACTORY MADE DOOR WINDOW SHUTTERS:

A FACTORY MADE DOOR / WINDOW SHUTTERS:

1.1 Factory made doors and windows shall be procured from one of the approved manufacturers as specified. The Contractor shall, within a period of ***one month after the issue of letter for commencement of work,*** intimate the name of manufacturer from which the factory made shutters for doors and windows are to be procured.

1.2 The work shall be carried out in accordance with the architectural drawings issued by the department. The architectural drawings shall at all times be properly correlated and architectural requirements have to be fully satisfied.

1.3 The exact size of different door and window shutters and their numbers shall be obtained from the Engineer-in-Charge before placing the order for manufacturing of door shutters.

2.0 **SPECIFICATION FOR SHUTTERS:**

2.1 The factory made flush door shutters shall be ISI marked. For the flush door shutters with laminate and veneer, flush door shutters shall conform to ISI parameters except for laminate and veneer. The material used for manufacture of shutter shall be as follows: -

2.1.1 **TIMBER:** As specified in the items and conforming to I.S: 2202 (Part-I). The Contractor shall obtain the species of timber to be actually used by the manufacturer of the shutters and submit the same for the approval of the Engineer-in-Charge.

2.1.2 The face panel shall be of BWP grade ply conforming to IS-2191 (Part-I).

2.1.3 The shutters shall have external lipping of second class teak wood of minimum 10mm thickness. The veneer / laminate shall mask the external lipping as per the details given in the architectural drawings. For the shutters fixed on floor springs, the thickness of the external lipping shall be 20mm including moulding and making necessary grooves as per the architectural drawings. The lipping shall be fixed using adhesive as specified and shall be factory pressed. Nothing extra shall be payable on this account.

2.2 **SEASONING AND PRESERVATIVE TREATMENT:**

2.2.1 Timber shall be kiln seasoned by a suitable process conforming to IS: 1141 before being planed to the required sizes.

2.2.2 The maximum permissible moisture content in timber shall be 10 percent except for frames where it can be up to 12%.

2.2.3 The preservation of timber shall be done with Complex boron treatment as per IS-401 with minimum absorption of preservative as 6.5 Kg/cum of treated timber.

2.3 **DIMENSIONS AND TOLERANCES:**

The shutters shall be supplied as per the specified size with allowable tolerance of 3mm over the specified dimension for which no extra payment shall be made. No tolerance on the lower side will be allowed on the overall dimensions of shutters. The manufacturing tolerance of individual members of shutters will be +/- 1mm in thickness and +/- 2 mm in width.

3.0 **INSPECTION:**

The Contractor shall get fabricated six shutters of each type of door / window and give a written intimation to the Engineer-in-Charge who shall arrange for the visual inspection of the samples at the factory premises. The samples inspected by the Engineer-in-Charge or his representative shall be signed by him as a mark of identification. These inspected samples of each type will be delivered by the Contractor at site. Contractor should give notice 10 days in advance before every consignment is ready at factory site for inspection and testing at factory site before dispatch. The final approval of the door and window shutters is subject to testing as per Para 4.

4.0 **TESTING:**

4.1 In any consignment all the shutters of the same type and size and manufactured under similar conditions of production shall be grouped together to constitute a lot. Samples shall be selected and inspected separately for each lot for determining its conformity or otherwise, to the requirement of the specifications.

4.2 **NUMBER OF TESTS AND CRITERIA FOR CONFORMITY:**

4.2.1 The numbers of shutters to be selected for inspection / testing from a lot shall be as in the table given below:

LOT SIZE	FOR CHECKING DIMENSIONS, TOLERANCE CONSTRUCTION, WORKMANSHIP AND FINISH		SAMPLE SIZE FOR TESTING OF MATERIALS.
	Sample size	Permissible no. of Defective shutters	
26 to 50	5	0	1
51 to 100	8	0	1
101 to 150	13	1	1
151 to 300	20	2	2
301 to 500	32	3	4
501 to 10000	50	5	8
1000 to above	80	7	10

4.2.2 The sample size indicated in column 2 of table shall be inspected for dimension and tolerance construction and workmanship and finish. A lot shall be considered as having satisfied the requirements of the specifications in these respects, if the number of defective shutters in the sample does not exceed the corresponding permissible number of defective shutters given in column 3 of the table above. If the number of defective shutters exceeds the permissible number of defective shutters, the lot as a whole shall be rejected and the Contractor shall have no claim whatsoever on this account.

4.2.3 The sample size as per column 4 of table shall be tested in an approved test house. The timber shall be tested for the moisture content (IS- 1708) and preservative treatment (IS-401 and other relevant IS standards). A lot shall be considered as having satisfied the requirements of the specifications in these respects only if all the tests are satisfactory. If any sample fails to meet the requirements of the specifications in respect of any test, the whole lot shall be rejected and the Contractor shall have no claim whatsoever on this account.

4.2.4 The cost of sample, packaging, sealing and transportation of samples to the laboratory, shall be borne by the Contractor. Testing charges shall be borne by the department provided that the shutters fulfill the requirement of relevant specification. If the shutters fail to fulfill the requirements, testing charges shall be borne by the Contractor.
Flush doors shall be tested as per IS-4020

Annexure I

GUARANTEE FOR ALUMINIUM WORK

The work of Aluminium doors/ windows etc. shall be guaranteed for a period of **5 (Five) years** as per enclosed guarantee bond against structural stability, water leakage, faulty materials, workmanship and defective anodized finish, on notification by the Engineer-in-charge of any compliance to be performed under this guidance by the contractor, the contractor shall immediately apply labour/ materials and rectify all the defects notified by the Engineer-in-charge to perform this guarantee at no additional cost and to ensure that the defects are fully rectified. 1 (one) % of the amount of the aluminium work shall be withheld on this account, which shall be refunded under the expiry of the guarantee period if no defects are observed in the said period or if the defects have been rectified in pursuant in the agreement to the entire satisfaction of the Engineer-in-charge.

LIST OF PREFERRED MAKES FOR CIVIL WORKS

(Approved make shall fulfill the public procurement policy of Make in India)

1 The contractor shall obtain prior approval from the Engineer-in-Charge before placing order for any specific material or engaging any of the specialized agencies. The contractor shall make a detailed submittal with catalogues and highlighted proposed specifications, as well as full details of the works executed by the specialized agency, as specified.

2 Wherever applicable, the Engineer-in-Charge may approve any material equivalentto that specified in the tender subject to proof being offered by the contractor for equivalence to his satisfaction.

3 Unless otherwise specified, the brand / make of the material as specified in the item nomenclature, in the particular specifications and in the list of preferred materials attached in the tender, shall be used in the work.

4. In case the make of any material is not mentioned in this list , the decision of Engineer-in - charge shall be final and binding.

5 Sample of all the materials will be used only after approval of the **Engineer- in-charge**

S. No.	Description of Material	Brands Name
1	PLANT FOR READY MIX CONCRETE	A.C.C., RMC INDIA READYMIX (PRISM JOHNSON), ULTRATECH CEMENT LTD., LAFARGE (Nuvoco Vistas Corporation Limited), J.K.Laxmi
2	P.P.C. /O.P.C (Cement)	A.C.C., ULTRATECH CEMENT LTD., AMBUJA CEMENT, JAY PEE CEMENT, CENTURY CEMENT, J.K. LAKSHMI CEMENT, SANGHI CEMENT, BIRLA CEMENT.
3	White Cement	J.K. WHITE, BIRLA WHITE.
4	Water proofing Compound (Liquid)	PIDILITE, STRUCO EXCEL, CICO, FOSROC, SIKA, BASF.
5	Reinforcement Steel	TISCO, SAIL, JSPL, RINL, JSW Steel,
6	Structural Steel, Steel Section like Angles, Channels, Round / Square Bars.	TISCO, SAIL, JSPL, RINL, ANY OTHER BRAND AS PER C.P.W.D. CIRCULAR.
7	Vitrified / Ceramic Tiles	H & R JOHNSON, KAJARIA, SOMANY, ASIAN, NITCO,
8	HARDENERS (Liquid)	IRONITE, FERROCK, HARDONATE.
9	FLUSH DOORS	KANARA WOOD AND PLYWOOD INDUSTRIES LTD. KENWOOD, ORIENT, KUTTY.

10	PLYWOOD	KITPLY, GREENPLY, CENTURY PLY, DURO,ANCHOR,DURIAN
11	ROLLING SHUTTERS WITH GRILLS	STANDARD, SWASTIK, SHUBDHWAR, SONA.
12	STAINLESS STEEL SCREWS	KUNDAN, ARROW, JINDAL , CONNECT ARCHITECTURAL PRODUCT PVT LTD.
13	DASH FASTNERS	HILTI, FISHER, CANON.WRUTH
14	GLASS (Float / Plain)	ST. GOBAIN, MODIGUARD, AIS (ASAHI)
15	GYPSUM BOARD	SAINT GOBAIN, BORAL.
16	FALSE CEILING SYSTEM ALONG WITH SUPPORTING GRID	ARMSTRONG, SAINT GOBAIN, DEXUNE.
17	CALCIUM SILICATE FALSE CEILING SYSTEM	AEROLITE, RAMCO –HILUX, PROMAT
18	MINERAL FIBRE FALSE CEILING&SOUNDSCAPES ACOUSTICAL CLOUDS	ARMSTRONG OR EQUIVALENT
19	CEMENT CONCRETE PAVER TILES / BLOCKS	SUPER TILES AND MARBLES PVT. LTD., VYARA, SONA, NITCO TILES LIMITED, VINAYAK or any ISI Mark products
20	SANITARY WARE	CERA , JAQUAR, JOHNSON , HINDWARE, PARRYWARE
21	G I PIPE	SURYA, TATA, JINDAL
22	RIGID PVC PIPES AND FITTING	SUPREME , ASTRAL, PRINCE, FINOLEX
23	MIRROR GLASS	ATUL, MODIGUARD.
24	GULLY TRAPS (S.W.)	PERFECT, PARRY, CHERRY.
25	RCC PIPES	LAKSHMI, SOOD & SOOD, PRAGATI
26	UPVC PIPES/ CPVC PIPES & FITTING	SUPREME, PRINCE, FINOLEX , ASTRAL
27	STAINLESS STEEL SINKS	STAR, JAYNA, NIRALI
28	CP BRASS Fillings	JAQUAR, KOHLER, JOHNSON, CERA, HINDWARE, ROCA
29	CP BRASS, FLUSH VALVE	JAQUAR, ZOLOTO , JOHNSON ,LEADER

30	PVC FLUSHING TANK	COMMANDER, PARRYWARE, JOHNSON HINDWARE, CERA.
31	CENTRIFUGALLY CAST SOIL PIPES (ISI MARKED)	NECO, BIC, SKF, KAPILANSH.
32	UPVC RAIN WATER PIPES	FINOLEX, SUPREME , PRINCE
33	PTMT FITTINGS	PRAYAG OR OTHER ISI BRAND
34	DOOR& WINDOWS HARDWARE	DORMA, HAFELE, GEZE, GODREJ, KICH, HARRISON,DEFINE,OZONE
35	PVC TANK	STAR, SINTEX.
36	PREMIXED FORMULATED LIGHT WEIGHT GYPSUM PLASTER	FERROUS CRETE, GYPROCK, SAINT GOBAIN, ULTRATECH
37	EPOXY Grout Flooring Tiles	MYK LATICRETE, ARDEX ENDURA, FOSROC.
38	AAC BLOCK	JK LAXMI CEMENT LTD./ MAGICRETE BUILDING SOLUTION /BILT / ECO GREEN.
39	POLYMER MODIFIED CEMENTITIOUS GROUT	BAL ENDURA/ WEBBER/ MYKLATICRETE/ECO GREEN
40	CHLORPYRIPHOS/LINDANE (For Antitermite Treatment)	ESSAR-CHLORO,DURSBAN, GIBRALTOR, BAYER
41	INTERNAL & EXTERNAL PAINTS	JONSON & NICHOLSON, BERGER PAINTS, ASIAN PAINT, NEROLAC, ICI
42	HERMITICALLY SEALED PERFORMANCE GLASS TOUGHENED GLASS, DGU	AUTHORIZED FABRICATORS (MODI GUARD, SAINT GOBAIN, TATA ASAHI, HNG, AIS-GLEVERBEL, PILKINGTON
43	FIRE PROOF STEEL DOORS & GENERAL PURPOSE STEEL DOORS	METAFLEX, SHAKTI HORMANN, NAVAIR
44	ALUMINIUM COMPOSITE PANEL (ACP)	ALSTRONG, ALUCOBOND, ALUDECOR
45	GLASS MOSAIC TILES	BISAZZA, ITALIA, PALLADIO

S. No.	Description of Material	Brands Name
46	FIRE RATED DOOR	NAVAIR, PROMAT, SHAKTI-MET, PACIFIC, SUKRI, SAINT GOBAIN, GODREJ
47	FIRE RATED GLASS / FIRE RATED VISION PANELS	SAINT GOBAIN,AASHI, PYROGUARD, PILKINGTON, SCHOTT, GLABERVEL, FIRELITE
48	SUPERPLASTICIZERS / ADMIXTURE	MC BAUCHEMIE, SIKA, FOSROC, BASF, ASIAN LABORATORIES
49	FLOOR SPRINGS / DEAD LOCK / DOOR CLOSERS / PANIC BAR	DORMA, GEZE, HAFELE
50	G.I. FITTINGS	UNIK, R-BRAND, ZOLOTO, DRP
51	MELAMINE POLISH	TOUCH WOOD OF ASIAN PAINTS, WUDFIN OF PEDILITE INDUSTRIES, TIMBER TONE MELAMINE OF ICI DULUX
52	SPIDER FITTINGS	DORMA, HEFELE
53	EPDM	AMEE RUBBER INDUSTRIES PVT. LTD., BOHRA RUBBER
54	ALL TYPE OF SILICONE	DOW CORNING, GE
55	WPC FRAMES, SHUTTERS& WPC JALI	HARDYSMITH, ECOSTE, ALSTONE,FLEXIBOND, GIZA, RAJESHRI, KAKA
56	UPVC WINDOWS	FENESTA, ALUPLAST , LINGEL
57	WOODEN FLOORING	KRONOSWISS / PERGO / EGGER/ ARMSTRONG/ HARO / PARADOR / BALTERIO
58	VINYL FLOORING	EBACO, GERFLOOR, MONDO, ARMSTRONG
59	POLY CARBONATE SHEET	"MACRO LUX SUPER LIFE", GE PLASTICS (SABIC LEXAN)
60	TEXTURE PLASTER	BAKELITE HYLAM LIMITED, LUXTURE, HERITAGE, ASIAN, BERGER, ICI, SPECTRUM, ASIAN, BERGER, NEROLAC
61	VINYL WALLPAPER	GLOOB DÉCOR, MARSHALL, ELEMENTOO, D'DECOR
62	POLYSTER FILM ON GLASS	GARWARE, LUMAR, LG
63	ROLLER BLIND CURTAIN	VISTA LEVOLOR, MAC ,'AUROLUS
64	CENTRIFUGALLY CAST SPUN IRON PIPES	NECO, KAPILANCE, BENGAL IRON CORPORATION
65	GATE VALVES (ISI MARKED)	ZOLOTO, LEADER, SANT

66	C.I. PIPES (ISI MARKED ONLY)(IS:1536)	TRUFORM ENGINEERS, NECO
67	D.I. PIPES	ELECTRO STEEL CASTINGSLIMITED,SRIKALAHASTHI/TATA
68	ALUMINIUM EXTRUSIONS	JINDAL, HINDALCO, INDALCO
69	NATURAL Wood VEENERS / PLYWOOD / MDF / PARTICAL WOOD / LAMINATE	ANCHOR, ACTION TESSA, DURIAN, CENTURY, KITPLY, GREEN PLY, GREENLAM, MERINO, FORMICA
70	WPC DOOR SHUTTER AND FRAME	ALSTONE,HARDYSMITH DESIGNS,RAJSHREE, KAKA, FLEXIBOND

6. **I**n case of non-availability of the brand specified in the contract the contractor shall be allowed to use alternate equivalent brand of the material subject to submission of documentary evidence of non availability of the specified brand. The necessary cost adjustments on account of above change shall be made for the material.

Note: - (1) For any other items not included in the above list, the sample for the same shall be got approved from Engineer-in-Charge before procurement & use in the work.

Note: - The Chief Engineer-GNR, CPWD, Gandhinagar reserves the right of to add or delete any material and brands in the list of preferred makes of civil work.

SPECIAL CONDITIONS (REPAIR WORK)

1.0 The Special Repair work has to be carried out in a occupied residential building with occupants and the contractors shall quote his rates after studying site conditions. They are advised to inspect and examine the site and its surroundings and satisfy themselves with the nature of the site, the means of access to the site, the constraints of accommodation and want of space, they require, if any, or any other circumstances which may affect or influence their tenders as the work is to be carried out in occupied buildings.

2.0 Being a repair work all precautions, as not to damage the property, shall be taken by the contractor. If any damage is done to any structure etc., the same shall be made good by the contractor at his own cost and to the entire satisfaction of Engineer -in-Charge.

3.0 Dismantling of RCC, Masonry shall be done by using mechanical equipment. The required electric power shall be arranged by the contractor at his own cost. Alternatively, contractor may engage Generator for the power supply.

4.0 Utmost care shall be taken by the Contractor to ensure that the building rubbish is not allowed to fall on the floor below while dismantling the RCC members such as slabs, beams etc; but the same shall be collected in the gunny bags and brought to the ground through temporary hoist or pully and rope arrangement.

5.0 All the required materials shall be lifted to the upper floors through temporary hoist. Since the work is to be carried out in occupied buildings, lifting of materials through stair case / lift is not permitted.

6.0 The building rubbish obtained from the dismantlement shall be removed and disposed from the campus/ colony on day to day basis.

7.0 **SCAFFOLDING SYSTEM:**

All the scaffolding work required for the execution of work, either internal or external shall be provided by the contractor. All the scaffolding systems shall be so installed that they are able to take all incidental loads. They should also cater to the safety features for workmen. These shall be stiffened with bracings, runners, connection with the building etc. It shall be ensured that no damage is caused to the building due to scaffolding. Inadvertent damages caused, if any, shall be made good by the contractor at his own cost and to the entire satisfaction of the Engineer-in-Charge.

8.0 **PROTECTIVE FABRIC SCREENS:**

Protective Fabric screening shall be provided by the contractor with PVC sheet, Hessian cloth etc. covering full height of the structure. **Nothing extra shall be payable on this account.**

It shall be provided by properly stitching the screen, having adequate lapping on sides to prevent any rubbish from falling outside while demolishing, dismantling, guniting, plastering etc. and to protect passers -by from the falling debris. Screen material shall be fixed by suitable means to the frames of scaffolding etc. and it is to be ensured that sagging of screen does not hinder the repair process.

The contractor shall maintain the protective screen in acceptable working conditions for the entire duration of the repair work as required by the Engineer-in-Charge. All the windows, ventilators, RCC jallis and openings shall be suitably covered and protected, in advance so as not to cause any damage while doing the repair work. If any damage is caused or glass panes are broken, these shall be made good by the contractor at his own cost and to the entire satisfaction of Engineer-in-Charge.

9.0 **TEMPORARY BARRICADING:**

Proper temporary barricading, on ground, shall be carried out by the contractor to physically define the boundaries of the site of repair / construction activity, for restricted entry of only those involved with the work and to prevent any accidents, but with minimum inconvenience to the residents / occupants. Nothing extra shall be payable on this account.

10.0 **FALSE WORK:**

The false work required to be carried out to facilitate repair work shall be provided by the contractor and nothing extra shall be payable on this account.

11.0 All warning boards and displays, such as REPAIR WORK IN PROGRESS, KEEP AWAY FROM BUILDING, NO PARKING etc. along with sufficient supervisory staff on ground shall be provided by the contractor, wherever required. Nothing extra shall be payable on this account.

12.0 Water and electricity shall be arranged by the contractor at his own cost. Nothing extra shall be payable on this account.

13.0 The site of work shall be always kept neat and clean due to constraints of working space in and around buildings. To avoid nuisance to the occupants, all building rubbish unserviceable materials shall be periodically removed from the premises to the approved municipal grounds and all necessary permissions in this regard have to be obtained by the contractor from the Municipal Authorities. Nothing extra shall be payable on this account.

14.0 Since the work is to be carried out in the occupied buildings, proper sequencing as regards dismantling of sanitary pipes, GI pipes, toilets etc. shall be done so as to cause minimum in convenience to the occupants besides taking care of the constraint of keeping the system functional during repairs by making temporary arrangements, as required. Nothing extra shall be payable on this account.

15.0 The area of dismantling / guniting / re-plastering / repairing as per relevant items etc. given in the tender may have to be got done in patches, at different heights / levels also for which nothing extra shall be payable.

16.0 Lifting of materials such as cement, sand, wooden planks etc. through the building lifts is prohibited. No mixing or off-loading etc. of mortar / cement concrete etc. over the open terrace / flooring shall be permitted. Arrangements as deemed it shall be made by the contractor for mixing/ lifting/off-loading all materials etc. at no extra cost.

17.0 **CREDIT FOR DISMANTLED MATERIAL.**

The contractor shall take away all the serviceable and unserviceable dismantled material, by way of purchase, on, as is where basis is. The credit to the department will be affected corresponding to the quantities being paid under the respective dismantling items.

18.0 **PROTECTION OF WORKS**

All finished Works shall be protected from damage that could arise from other construction activities. Work shall be planned and executed in such a manner that work completed by others is not damaged. The compliance of these provisions is deemed to be included in the quoted amount and nothing extra shall be paid on this account. The contractor shall maintain in good condition all work till the completion of entire work allotted to him. Engineer-in-Charge shall not be held responsible for any claims for injuries to persons/workmen or for structural damage to property happening from any neglect, default, want of proper care or misconduct on the part of the contractor or of any other of his authorized representatives / labour in his employment during the execution of the work. The compensation, if any, shall be paid directly to the department/authority/persons concerned, by the contractor at his own cost.

Neither the acceptance by the Engineer-in-Charge nor any payment for acceptance of the whole or any part of the work nor any extension of time nor any possession taken by the Engineer-in-Charge shall operate as a waiver of any portion of the contract or any power here in reserved or of any risk to damage. A waiver of any breach of the contract shall not be held to be a waiver of any other or subsequent breach.

Annexure II

GUARANTEE BONDS

Form Of Earnest Money Deposit Bank Guarantee Bond

WHEREAS, contractor..... (Name of contractor) (hereinafter called "the contractor") has submitted his tender dated ..... (date) for the construction of ..... (name of work) k) (hereinafter called "theTender")

KNOW ALL PEOPLE by these presents that we .....(name of bank) having our registered
office at ..... (hereinafter called "the Bank") are bound unto .....
(Name and division of Executive Engineer) (hereinafter called "the Engineer-in-Charge") in the sum of Rs. ..... (Rs. in words ....)
for which payment well and truly to be made to the said Engineer-in-Charge the Bank binds itself, his successors and assigns by these presents..

SEALED with the Common Seal of the said Bank this ..... day of ..... 20... . THE CONDITIONS of this obligation are:

(1) If after tender opening the Contractor withdraws, his tender during the period of validity of tender (including extended validity of tender) specified in the Form of Tender;

(2) If the contractor having been notified of the acceptance of his tender by the Engineer-in-Charge:

(a) Fails or refuses to execute the Form of Agreement in accordance with the Instructions to contractor, if required;

OR

(a) Fails or refuses to furnish the Performance Guarantee, in accordance with the provisions of tender document and Instructions to contractor,

We undertake to pay to the Engineer-in-Charge either up to the above amount or part thereof upon receipt of his first written demand, without the Engineer-in-Charge having to substantiates his demand, provided that in his demand the Engineer-in-Charge will note that the amount claimed by his is due to him owing to the occurrence of one or any of the above conditions, specifying the occurred condition or conditions.

This Guarantee will remain in force up to and including the date* ..... after the deadline for submission of tender as such deadline is stated in the Instructions to contractor or as it may be extended by the Engineer-in- Charge, notice of which extension(s) to the Bank is hereby waived. Any demand in respect of this Guarantee should reach the Bank not later than the above date.

DATE ..... SIGNATURE OF THE BANK

WITNESS ..... SEAL

(SIGNATURE, NAME AND ADDRESS)

*Date to be worked out on the basis of validity period of 6 months from last date of receipt of tender.

FORM OF PERFORMANCE SECURITY (GUARANTEE)
BANK GUARANTEE BOND

In consideration of the President of India (hereinafter called "The Government") having offered to accept the terms and conditions of the proposed agreement between _____ and _____ (hereinafter called "the said contractor(s)" for the work _____ (hereinafter called "The said agreement") having agreed to production of a irrevocable Bank Guarantee for Rs._____ (Rupees _____ only) as security/guarantee from the contractor(s) for compliance of his obligations in accordance with the terms and conditions in the said agreement.

1. We _____ (hereinafter referred to as "the Bank) hereby undertake to (indicate the name of the bank) pay to the Government an amount not exceeding Rs._____ (Rupees _____ only) on demand by the Government.

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

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

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

4. We _____ further agree that the guarantee herein contained shall (indicate the name of the Bank) remain in full force and effect during the period that would be taken for the performance of the said agreement and that it shall continue to be enforceable till all the dues of the Government under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged or till Engineer-in-Charge on behalf of the Government certified that the terms and conditions of the said agreement have been fully and properly carried out by the said contractor (s) and accordingly discharges this guarantee.

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

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

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

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

Dated the _____day of_____for_____ (indicate the name of Bank)

GUARANTEE BOND TO BE EXECUTED BY THE CONTRACTOR FOR REMOVAL OF DEFECTS AFTER COMPLETION

IN RESPECT OF ALUMINIUM DOORS, WINDOWS VENTILATOR 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)……..

a contract (Hereinafter called Contract) WHEREAS THIS agreement is supplementary tothe…… dated……. ..... and made between the GUARANTOR OF THE ONE PART AND the Government of the other part, whereby the contractor inter alia, undertook to render the work in the said contract recited structurally stable, workmanship, powder coating, anodizing, coloring and sealing etc.

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

NOW THE GUARANTOR hereby guarantee that work executed by him will remain structurally stable and guaranteed against faulty material and workmanship, defective anodizing/ powder coating for five years to be reckoned from the date of completion of the work.

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.

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

IN WITNESS WHEREOF these presents have been executed by the obligator ..... and ..... for and on ..... By ..... 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.....

inthe presence of:-

1. ..... 2. .....

PART-C

SCHEDULE OF QUANTITY CIVIL

O/o ASSISTANT ENGINEER
CENTRAL PUBLIC WORKS DEPARTMENT
RAJKOT

Name of work : Clearing of jungle and grass, cleaning of roads and disposal of rubbish at SB office complex, Rajkot					
Item no.	**Description of Item**	**Quantity**	**Unit**	**Rate**	**Amount (Rs)**
	Earth Work				
1	Clearing jungle including uprooting of rank vegetation, grass, bursh wood, trees and saplings of girth up to 30 cm measured at a height of 1 m above ground level and removal of rubbish up to a distance of 50m outside the periphery of the area cleared.	20,000	Sqm	19.01	3,80,200.00
2	Clearing of grass and removal of the rubbish up to a distance of 50m outside the periphery of the area cleared.	10,000	Sqm	9.67	96,700.00
	Non Schedule				
3	Loading, transportation and disposal of grass, weeds, brushes, roots and other unserviceable jungle rubbish generated from clearing operations, to an approved dumping ground, from the additional lead beyond 50m and up to 1 km, including unloading and all lifts, completed as directed by the Engineer-in-charge.	80.00	Per trip	841.50	67,320.00
4	Sweeping and cleaning of existing road surface, including removal of dust, mud, dry leaves and loose debris, collection of rubbish and disposal at designated location, complete as directed by Engineer-in-charge.	1,700	Sqm	15.35	26,095.00
				Total	**5,70,315.00**