



Gujarat Energy Transmission Corp. Ltd.

Transmission Division Office - Vartej
rediffmail.com

Name of work : Construction of C R Extension 220 KV Vartej Sub Station.

Tender documents for Tender Notice No: VRTD/T/Civil/35/2011. For Civil Works contain following :-

Tender Notice

- General Instructions to Tenderers
- Special note for pre-qualification.
- Scope of work
- Tender & Contract for works
- General Conditions of Contract
- Technical Specifications for Civil Works
- Appendix I to V
- Schedule B (to be submitted in a separate sealed cover)

**Signature of the Contractor:
(With rubber stamp & Date)**

**Executive Engineer (Tr.)
GETCO, TR. D.O. VARTEJ.**

Name of Work:- Construction of C R Extension 220 KV Vartej Sub Station.

I N D E X

- **Tender Notice**
- **General Instructions to Tenderers**
- **Special note for pre-qualification.**
- **Scope of work**
- **Tender& Contract for works**
- **General Conditions of Contract**
- **Technical Specifications for Civil Works**
- **Schedule A**
- **Schedule B**
- **Appendix I - Work Experience**
- **Appendix II - Works Tendered/In Hand**
- **Appendix III - Details of Personnel**
- **Appendix IV - Details of Machinery**
- **Appendix V - Performa showing the details of site visit.**

Tender Notice No: . VRTD/35/2011. for Civil Works

Sealed percentage rate tenders are invited in two separate sealed covers (Super scribed technical bid and price bid) for **Construction of C R Extension 220 KV Vartej Sub Station.** from Registered Contractors in appropriate class with GETCO/Central/State Government / Railway/Semi. Govt. and who has executed similar nature of work and magnitude successfully. Tenderer should down load the tender documents from this Website and submit the same as per instructions therein only by RPAD/Speed post

Sr. No.	Name of Work	Estimated Cost Rs.	Time Limit	Tender Fee Rs.	E.M.D. Rs.	Appropriate class
01.	Construction of C R Extension 220 KV Vartej Sub Station.	869466.00	3 month	900.00 (Non refundable)	8700.00	"E-1"

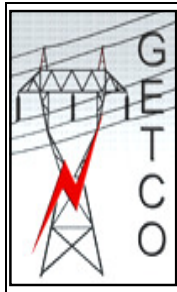
- 1) Last date of submission of tender :(Technical and Price bids):- 25/06/11
(only by RPAD / Speed post)(During working Hrs. up to 14.00 Hrs.)
- 2) Due date of opening Tech. bid:- 25/06/11 (at 15.00 Hrs.)
- 3) Validity of tender: **60 Days from the date of opening of Technical Bid.**

No tender shall be accepted / opened in any case after due date and time of receipt of tender, irrespective of delay due to postal services or any other reasons and the GETCO shall not assume any responsibility for late receipt of tender.

The Earnest Money Deposit and tender fee will be accepted only by Demand Draft on any Nationalized Bank / Scheduled Bank situated at "VARTEJ", drawn in favour of "GETCO, VARTEJ.". Tender without EMD and tender fee shall be rejected. Two separate demand draft for tender fee and EMD should be submitted with technical bid.

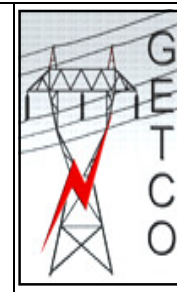
The GETCO reserves the rights to reject any or all tenders or accept any tender without assigning any reason thereof.

EXECUTIVE ENGINEER (TR)
GETCO, TR. D.O. VARTEJ.



Gujarat Energy Transmission Corp. Ltd.

Transmission Division Office - Vartej
rediffmail.com



GUJARAT ENERGY TRANSMISSION CORP.LTD.

GENERAL INSTRUCTIONS TO THE TENDEDERERS

Sealed percentage rate tenders are hereby invited for work of **Construction of C R Extension 220 KV Vartej Sub Station.**

The scope of work is explained in Tender Specification. The work shall be carried out according to the enclosed General Conditions, Technical Specifications & such of the working drawings approved by the GETCO, & drawings issued by the GETCO, as per the existing site conditions & requirements, the alterations shall be acceptable without any extra claims.

- 1.0 Tenders must be submitted in the enclosed schedule of work & quantities. Those received in any other form will not be accepted. They should be accompanied by a covering letter in which the bidder should give all information as called for in the specifications & any other point which he would like to be considered along with the tender.
- 2.0 Bidders are requested to pay an earnest money deposit by demand draft on any Nationalized / Scheduled Bank at VARTEJ for the amount as specified in the tender notice. This earnest money will be forfeited by the GETCO in case of successful bidder who, after his tender has been accepted, refuses to pay the security deposit, sign & complete the contract document before the validity of the offer. The earnest money will be refunded to all unsuccessful bidders after the award of contract or expiry of the validity of the offer whichever is later. **Tenders without payment of earnest money deposit are liable to be rejected.**

The Schedule-B shall be filled up with the quoted % above or below & shall be submitted along with Schedule -A in sealed envelope superscripted- **PRICE BID for Construction of C R Extension 220 KV Vartej Sub Station.**

- 3.0 Other Schedules for tools & tackles, equipments, personnel details etc., and all other necessary details shall also be submitted, superscripted- **TECHNICAL BID for Construction of C R Extension 220 KV Vartej Sub Station.**

4.0 "So as to reach the office of Executive Engineer(TR) GETCO,. Transmission Division Office, VARTEJ. Tenders will be opened on the day & time indicated in the tender notice in the presence of such bidders who wish to remain present.

5.0 The bidders shall note that no deviations from the technical specifications or commercial conditions with this bid are acceptable & it will be presumed that the bidder agrees entirely with the specifications & general terms & conditions of the contract.

6.0 Tenders received after time & date specified in the tender notice will not be accepted, in any case.

7.0 The work shall be completed within the period stipulated in the contract. However it may be noted that drawings shall be released progressively & site clearance arranged accordingly to the progress of work at site. Therefore the contractor has to organize & coordinate the works to suit these. In the event of any delay due to the above or due to any other reason not attributable to the contractor, reasonable extension in the completing the work may be given at the discretion & as decided by the GETCO but no compensation or idle charges will be paid to the contractor on this account under any circumstances.

8.0 The GETCO reserves the right to accept any tender irrespective of whether it is lowest or not or to reject all the tenders without assigning any reasons there of. Tenders departing from the technical Specification or the method of bidding in a radical manner may also be rejected.

10.0 The tenderers shall be presumed to have carefully examined the drawings,

conditions & specifications of the work & to have acquainted themselves with all the details of the site conditions, scope of work, locations, materials, geological & weather conditions/characteristics, labour conditions & in general necessary information & data etc. pertaining to & need of the work. (Proforma given in Appendix-V shall be filled and submitted with tender).

- 11.0 On acceptance of the tender the name(s) of the accredited representative(s) of the tenderer who would be responsible for taking instructions from the Engineers of the GETCO shall be communicated to the Executive Engineer (TR) Gujarat Energy Transmission Corporation, Transmission Circle Office VARTEJ.
- 12.0 All royalties, sales tax, toll tax, local tax, development charges & any other taxes Works Contract taxes etc. in respect of this contract shall be payable by the contractor & GETCO will not entertain any claims whatsoever in this aspect. Any statutory variation in future towards the above mentioned taxes that shall also be payable by the contractor & Gujarat Energy Transmission Corporation, Transmission Division Office VARTEJ shall not entertain any claim of whatsoever nature, during or after the completion of this tendered work. Proof of such payments made by the Contractor to the appropriate departments shall be produced to GETCO failing which appropriate amount shall be withheld on getting information / instruction from the concerned departments. The bidders must enclose last three year's Annual Accounts i.e. profit & loss account and balance sheet along with the tender submitted by them.
- 13.0 This specification is intended as a general description of quality envisaged for materials & workmanship & of the finished work. It is not intended to cover minute details. The work shall be executed in accordance with the best modern practice & to the complete satisfaction of the GETCO. Special techniques approved by the GETCO shall be used if & where found necessary. This specification shall have precedence if any thing contrary to this is stated elsewhere in the contract documents, the GETCO's decision shall be final & binding to the contractor on any issue arising out of such discrepancies.
- 14.0 No deviations from the Terms & Conditions of the Contract & / or Technical Specification stipulated in this Contract shall be permitted & the tenders received with deviations shall summarily be rejected.
- 15.0 The successful contractor will have to sign an agreement as per the Gujarat Energy Transmission Corporation Ltd.'s rules on stamped paper & the necessary stamp duty charges shall be borne by the contractor.
- 16.0 Bidders must submit the schedule of quantities & rates by quoting the % above or below the total estimated cost & other schedules duly signed & seal of the company. Any tender not bearing signature of the bidder & seal of the company on all the documents accompanying the tender is liable to rejection. Further it is specifically instructed that conditional tenders shall summarily be rejected.
- 17.0 The bidder shall carefully study the work to be carried. The GETCO will not pay any extra or rate for any reason in case the contractor claims, after acceptance of contract, to have misjudged the site condition.
- 18.0 The percentage quoted shall include cost towards of all materials, & machinery including equipments, fixtures, labour, constructional equipments, fuel, scaffolding, staging, ramps, walkways, approach and haul road, temporary works, etc. bearing permanent or temporary nature necessary for the completion of the work in all respects, except for those items specifically mentioned to be furnished by the GETCO. The contractor must also arrange for the transport of materials & include all such costs in the rates quoted by him for finished work.
- 19.0 The Quoted % above or below shall be written both in words, & figures & the units in words. If any discrepancy occurs between words & figures, then words shall prevail. The tender documents shall be written legibly & free from erasure, overwriting or conversions of figures, crossing out, initializing, dating & rewriting, shall be avoided.
- 20.0 During the execution of the work if it is found that the work is not progressing as per the Scheduled Progress Programme, approved by the GETCO & planned by the Contractor, due to the reasons attributable to the Contractor suitable action shall be taken as per Clause No.3 & 4 appearing in the GETCO's prescribed Booklet for "Tender & Contractor for Works"
- 21.0 The contract or any part thereof shall not be subject to change without the written permission of the Executive Engineer (TR), GETCO, Transmission Division Office, VARTEJ, or his authorized representatives.

- 22.0 Tender shall remain open for acceptance for a period of 180 days from the date of Technical bid opening & during this period no bidder shall be allowed to withdraw his tender. Any such withdrawals, during the said period will entail forfeiture of the earnest money deposited with the tender.
- 23.0 Further information required, if any, can be had from the office of the Executive Engineer (TR), , GETCO, Transmission Division Office, VARTEJ. But it must be clearly understood that the tenders must be received complete VARTEJ. in every respects by the due date & time.
- 24.0 The notice inviting tender, general instructions to the contractors & all documents of this tender shall form part of the contract.
- 25.0 The tender shall be accompanied by the following information attached in the form of proformas attached:
- i. Details of the works of similar type & magnitude carried out by the tenderer.
 - ii. Details of the other works tendered for & in hand on date of submission of this tender.
 - iii. Details of technical personal of the tenderer who will be made available for this work.
 - iv. Details of equipment machineries, plant & tools, tackles immediately available with the tenderer for use of this work.
 - v. Proforma showing the details of site visit by agency before quoting the tender.
 - vi. Bar Chart indicating how the tenderer intends to complete the work in the stipulated time limit.
- 26.0 The electric power, at site, will be made available at one mutually agreed points, free of cost (connection only) by GETCO. Further distribution will have to be carried out by the contractor as per requirements at their own cost. The necessary consumption charges will be recovered as per the tariff rate of GETCO from time to time as per GETCO's rules.
- 27.0 The contractor will have to make their own arrangement of water required for construction activity. However if GETCO supply water then in that case it shall be given at one point on chargeable basis as per GETCO's rules. The recovery towards consumption of water, if construction water is supplied by GETCO, shall be affected at the rates prevailing, during that period of consumption, in the GETCO.
- 28.0 Work under this contract shall be completed in all respects within 2 (Two) calendar months from the date of Letter Of Intent [LOI]. However, interim mile stones to be jointly fixed after issue of LOI.
- 29.0 Bidders must quote firm price only, till completion of work under contract, & this is to be confirmed by bidder while submitting his offer.
- 30.0 No escalation towards labour and material / fuel shall be paid in this execution of contract. Price quoted shall be firm. Contractor shall pay minimum wages to his labourers as per the Minimum Wages Act, 1948 & rules there under as applicable from time to time in pursuant to the State Government notification. The concerned contractor shall submit the details of the payment with due certificate of LWO/IRO of the GETCO
- 31.0 Each tenderer shall also submit a Declaration to the effect that tenderer is an engineering construction firm or an association of firm which has successfully carried out large works of this nature & has adequate organization & experienced personnel to handle this type & magnitude of work. Information should be also given regarding the constitution of the firm; it's authorized, subscribed & paid up capital, the date & place of registration, the place of business, the names of the directors & other relevant information.
- 32.0 In the case of non-Indian firms the declaration should also include an undertaking to the firm registered, within three months of the date of notice of the acceptance of the tender.
- 33.0 Failure to so, as required in above clauses, in registering the firm after due notice, the tender acceptance is liable to result in the annulment of the tender with forfeiture of the earnest money deposit & other penalties that may be leviable under the conditions specified in tender & contract documents.
- 34.0 Each tender shall contain the name, residence & place of business of person or persons making the tender & shall be signed by the tenderer with his usual signature with seal of the company.
- 35.0 Tender by partnerships shall furnish the full names of all partners. It shall be signed with the partnership name by one of the members of the partnership or by an authorized representative followed by the name & designation of the person signing.
- 36.0 An attested copy of the constitution of the firm with the name of partners shall be furnished. Whenever, whether in submission of the tender or later in other matters, the signatures are made by one person on behalf of Directors or a firm or a corporation, an attested copy of the resolution

of the partners or of law shall be supplied by the tenderer authorizing Witnesses & sureties shall be persons of status & probity, & their names, occupation & address shall be stated below their signatures. All signatures shall be dated.

- 37.0 Tenders by corporation shall be signed with the legal name of the corporation followed by the name of the state of incorporation & by the signature & designation of the president, secretary or other person authorized to bind it in the matter with rubber seal of the company.
- 38.0 GETCO reserves the right to delete any item of Schedule-B for which contractor shall not have any right to claim on this account.
- 39.0 The quantities in the attached Schedule-B are estimated quantities & may vary on execution up to any extent for individual items but over all shall remain within +/- 25% (Plus or Minus 25%) of the total contract value. The rates shall be firm for any such variations.
- 40.0 Each tender should be accompanied by a Solvency Certificate from a Nationalized / Scheduled Bank regarding the tenderers' financial stability to the extent of 20% of the cost of the work tendered.
- 41.0 The Bidders shall study the Conditions of site & shall resort to dewatering, where necessary, by appropriate methods & maintain reasonably dry areas to work at.
- 42.0 The Contractor shall prepare all required roads to execute various items of this Contract & arrange all transport of materials & all such costs shall be taken care of while quoting the rates. No extra payments shall be admissible towards such costs. On completion, this shall be cleared if asked by GETCO at no extra cost.
- 43.0 No idle charges shall be entertained by GETCO for any site conditions or any circumstances.
- 44.0 The Contractor shall take all requisite & necessary care to observe that no damage is occurred to the Existing structures, if any. For any damage to the Existing Structures of GETCO, the Contractor shall be held responsible.
- 45.0 The Bidders shall note:
- I. Percentage rates quoted shall cater for the cost of all materials & labour including all leads & lifts, tools, plants, consumables such as but not limited to fuels, lubricants, etc. cost due to mobilizing / demobilizing, temporary / permanent constructions
 - II. Percentage rates quoted shall include for the details of constructions, which are obviously & fairly intended & which may not have been specifically referred to in these documents but are essential for the satisfactory completion of the work.
 - III. Percentage rates shall be firm for variations up to any extent for individual items but overall shall remain within +/- 25% [PLUS OR MINUS 25%] of the total contract value.
 - IV. No price escalation on any account, will be payable.
- 46.0 Tenders which do not fulfill all the above conditions & those specified in the documents attached with this contract document or incomplete in any respect are liable to rejection.
- 47.0 The contractor shall have a separate Provident Fund Code of RPFC in the name of company. The contractor, who does not possess such separate P.F. code, shall not be considered for acceptance of tender. The contractor has to submit such certificate showing P.F. code along with tender.
- 48.0 **Effect and validity of Bid:** The submission of any bid connected with these documents and specification shall constitute an agreement that bidder shall have no cause of action or claim against the GETCO for rejection of his bid. The owner shall always be at liberty to reject or accept split any bid or bids at his sole discretion and any action will not be called into question and the bidder shall have no claim in that regards against the owner.
- 49.0 **Site visit:** The bidder is advised to visit the site and examine the site condition. Where in the work is proposed to be carried out and to get himself fully acquainted at his own responsibility for all information that may be necessary for quoting the tender bid (Proforma given in appendix-V shall be filled and submit along with tender) and entering in to contract. All cash and liabilities arising out of the site visit shall be at bidder account.
- 50.0 **Recoveries:**
- (I) In case of any damage to equipment/machinery or structure/building of GETCO or any public property due to negligence's of contractor or any other reasons attributed to contractor the decision of E.I.C. regarding the amount of recovery shall be final and binding.
 - (II) If the contractor fails to execute the work as per direction of E.I.C. within the time frame given GETCO shall get the work done through any other contractor and the cost of execution of such

work along with 15% overhead charges shall be deducted from contractor monthly bill over and above recovery as per rules.

51.0 Any information, dossier or revised offer once submitted during or after the date of submission of tender shall not be accepted.

52.0 The tender must reach to the office of Executive Engineer (TR), GETCO Transmission Division Office, VARTEJ, on or before due date and time of submission mentioned in tender notice. Any tender received after the due date and time of submission shall not be considered.

53.0 Once the offer submitted will not be returned back for any reason thereof in any case.

**Executive Engineer (TR)
GETCO, Transmission Division Office
VARTEJ.**

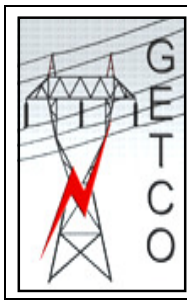
I/We accept the above conditions...

Contractor's Representative legible signature: _____

Name of the person: _____

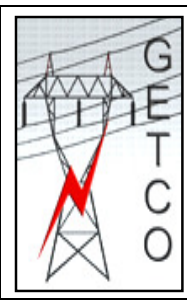
Seal of the company

Date & place: _____



Gujarat Energy Transmission Corp. Ltd.

Transmission Division Office - Vartej
rediffmail.com



Special note for pre- qualification

Name of work: - **Construction of C R Extension 220 KV Vartej Sub Station.**

The tender documents are for two separate bids i.e. technical bid (i.e. qualifying bid) and price bids (i.e. commercial bid). Following credentials shall be submitted with the technical bid with the for pre-qualification

- 1 Contractor should produce evidence of having experience in executing similar nature of jobs of not less than 60 % of tender amount and or quantity in a single contract along with the documentary evidence, preferably photo copy of orders secured from GETCO / Central / State Government / Railway / Semi- Government and satisfactory completion certificate from respective department.
- 2 Latest bank solvency certificate from any nationalized bank for a sum of Minimum 20% of estimated cost.
- 3 Separate provident fund code number towards registration of your firm with Regional P.F. Commissioner.
- 4 Contractor should submit evidence as a register contractor in appropriate class With Govt./ Semi. Govt.
- 5 The details of tools and tackles, owned and available for using in this work.
- 6 Contractor should produce audited copy of the Balance sheet with profit and loss account of last three Years.
7. Attested copy of Power of Attorney, if any, for signing the bid documents.

The commercial bid (i.e. Price bid) shown in tender documents comprising schedule B may please submitted in separate self addressed envelope provided with tender documents.

The technical bid shall be opened at 3.30 pm, if possible on 24/03/11. After scrutinize of the technical bid if party fail to fulfill the above requirement for pre-qualification, the price bids of such parties will not be opened. The price bid of qualifying parties thereafter shall be opened on the date and time communicated to qualified parties afterwards in the presence of parties.

The price bid shall invariably be accompanied with an earnest money deposit of **Rs. 8950/** and will be accepted by demand draft of any Nationalized Bank situated at Vartej drawn in favour of GETCO. The earnest money deposit in any other form shall not be accepted and no interest shall be payable on the earnest money deposit

The bid should be clearly subscribe with our reference number due date and title of work. The offer should be valid for acceptance for a minimum period of 6 months from the date of opening of technical bid.

**Executive Engineer (TR)
GETCO, TR. C.O. VARTEJ.**

Sign. Of Contractor

SCOPE OF WORK:

The scope of work shall be as follows:

- (1) The contractor has to make his own arrangement of water for construction activity at his own cost. However, if possible, on completion of bore well / open well only, the water supply line from GETCO will be given at one mutually agreed point. Further distribution will have to be carried out by the contractor as per their requirements at their cost on chargeable basis at the rates prevailing in GETCO during that period of consumption prevailing rate is Rs. 2/- per 1000 liter, if metered, otherwise recovery for water charges will be effected at two percent of the cost of items as executed in which the water supplied by GETCO, is used, as certified by the EIC.
- (2) All the royalties, taxes, government duties or any unforeseen expenses, if required to be made; shall be borne by the agency. The rates quoted shall be deemed to account all such factors after careful consideration of work and site condition. No extra claim shall be entertained in any circumstances on any account.
- (3) Earth work in filling and spreading in uniform layer of 150 mm thickness of selected yellow earth with necessary compaction dressing and watering as directed.
- (4) Any activity not specifically mentioned in the tender but necessary in the opinion of engineer in charge of work must be carried out for successful completion of the job.
- (5) Payment shall be made in respective items of the work order.
- (6) Before taking up construction activity; the agency has to cut the trees which obstruct the working, of any diameter, bushes, vegetations, i.e. roots, plant, shrubs, grass etc including stacking and crediting to GETCO as directed with no extra cost.

GETCO

TENDER AND CONTRACT FOR WORKS **(APPLICATION FOR WORKS CONTRACT)**

GENERAL RULES AND DIRECTIONS FOR THE GUIDENCE OF CONTRACTOR:

Notwithstanding anything contained to the contrary in the specification or tenders in subsequent exchange of correspondence, the conditions of contract shall be binding on the contractor and any change or variations expressed or implied, however made in the said conditions shall not be valid or operative unless expressly sanctioned by the GETCO. The contractor shall be deemed to have fully informed himself and to have special knowledge of the provisions of the conditions of contract herein contained.

1. All works proposed to be executed by the contract shall be noticed in one of the English and one of the vernacular local daily newspapers, stating the work to be carried of as well as the date of submitting and opening tenders and time allotted in carrying out the work. also the amount of earnest money to be deposited with the tender and the security deposit to be deposited by the successful tenderer and the percentage, if any, to be deducted from bills.
2. Copies of specifications, design, drawings, estimated rates, scheduled rates and any other documents required in connection with the work which will be signed by the Engineer-in-Charge for the purpose of identifications shall be open for inspections by the contractors at the office of the Executive Engineer during office hours.
3. Whether the works are proposed to be executed according to the specifications recommended by the contractor and approved by a competent authority on behalf of the GETCO, such specifications with designs and drawings shall form part of the accepted tender.
4. The tenderers and receipts for payments made on account of any work, when executed by a firm should be signed by all the partners except where the contractors are described in their tender as a firm, in which case the receipt shall be signed in the name of firm including the partners or some other person having authority to do so.
5. The tenderer at shall fill up the usual form stating at what percentage above or below rates specified, he is willing to under take the work. Only one rate or such percentage on all the estimated rates or schedule rates shall be mentioned.
6. Tenderer which propose any alternation in the work specified in the form in invitation to tender or in the time allowed for carrying out the works or which contain any other conditions of any sort, will be liable to rejection.
7. No single tender shall include more than one work, but contractors who wish to tender, for two or more works, shall submit a separate tender for each work. Tender shall have the name and the number of the works, of which they pertain be superscribed on the envelop.
8. The Engineer-in-charge or his duly authorised assistant will open tenders in the presence of any intending contractors who may be present at the time and will enter the amount of the several tenders in a comparative statement in a suitable form. In the event of a tender being accepted, the contractor shall there upon, for the purpose of identification, sign copies of the specifications and other documents. In the event of tender being rejected, the officer (Engineer-in-charge) shall authorise the paying officer concerned to refund the amount of the earnest money deposited to the contractor making the tender on his giving a receipt for the return of the money.
9. The officer, competent to dispose off the tenders, shall have the right of rejecting all or any of the tenders, without assigning any reasons thereof.
10. No receipt for any payment alleged to have been made by contractor in regard to any matter relating to tender of the contract shall be valid of binding on the GETCO unless it is signed by the Engineer-in-charge
11. The memorandum of work to be tendered for and the schedule of materials to be supplied by the GETCO and their rates shall be filled in and completed by the office of the Engineer-in-charge before the tender form is issued if a form issued, to an intending tenderer has not been so filled in and uncompleted he shall request the said office to have this done, before the completes and delivery his tender.

12. All works shall be measured, meet by standard measure and according to rules are custom and usual in the use in the GETCO, and no proposal to adopt alternative method will be accepted, the Engineer-in-charge decision as to what is "the usual method in use in the GETCO" shall be final.
13. Every contractor shall, except the registered contractor on the approved list of the GETCO, produced, along with the tender a solvency certificate from the collector of the District within which he resides, of a banker's certificate of his financial stability, if he fails to produce such a certificate his tender will not be considered.
14. All corrections and addition or pasted slips should be initialed.
15. Tenderer shall be deemed to have full knowledge of relevant documents, site conditions etc. whether inspected or not by him.
16. Submissions of tender by a contractor implies that he has read the instructions and condition of contract herein contained and has made himself aware of the scopes and specifications of the work to be done and conditions and rates at which stores materials etc. will be issued to him and local conditions and other factors bearing on the execution of the work.
17. Under no circumstances shall any contractor be entitled to claim enhanced rates for any item of contract without prior sanction of the competent authority.
18. These rules and directions shall form part of the contract.

TENDER AND CONTRACT FOR WORKS

I/We hereby tender for the GETCO (herein referred as "GETCO") of the work specified in the under written memorandum within the time specified Schedule B (Memorandum showing items of work to be carried out) and in accordance, in all respect, with the specifications, design, drawings and instructions in writing and as per annexed conditions of contract and agree that when the materials for works are provided by the GETCO such materials and rates to be paid for them shall be as provided in Schedule A hereto.

GETCO

MEMORANDUM

a) General Description of Work: **Construction of C R Extension 220 KV Vartej Sub Station.**

b) **Estimated Cost** : 869466.00
c) **Earnest Money** : 8700.00
d) **Security Deposit** : 43500.00

(1) Cash 2 ½ % of the contract amount.

(2) To be deducted 2 ½% from current work of first two R.A. bills in two equal installments.

e) Time allowed for the completion of work from date of written order to commence.

Should this tender be accepted I/We hereby agree to abide by and fulfill all the terms and provisions of the conditions of contract annexed hereto as applicable and in default thereof forfeit and pay to the GETCO the sums of money mentioned in the said conditions.

Receipt No. _____ Date _____ from the GETCO in respect of the sum of Rs. _____ (Rupees

_____ (the amount to be specified in figures and words) is herewith forwarded

representing the earnest money (the full value of which is to be absolutely forfeited to the GETCO should I/We not deposit the full amount of security deposit specified in above memorandum in accordance with clause-(d). Security Deposit of the said conditions / otherwise the said sum of Rs. _____ shall be refunded on surrendering the original receipt, in case of non-awardance of contract.

Signature of the contractor

Address of the contractor

Dated _____ day of _____ year

Signature of Witness

Address of Witness

Occupation

Dated: _____ day of _____ year.

The above tender is hereby accepted by me on behalf of the GETCO.

Executive Engineer (TR), GETCO, TR.C.O. VARTEJ, or his duly authorized assistant.

GETCO

CONDITIONS OF CONTRACTS

1. Definitions:

- (a) The Contract means the documents forming the tender and acceptance thereof, together with the documents referred to therein or individual work order in the case of term contract, including these conditions, schedules and / or additional conditions attached to the form of tender or individual work, order, rate schedule, the specifications and the drawings and all these documents as applicable taken together shall be deemed to form the contract.
- (b) The "Tender Document" means the form of tender, the applicable schedules and/or additional conditions and the specifications and/or drawings as issued to the contractors for the purpose preparing tender.
- (c) The expression "works" or "work" when used in the conditions of contract shall, unless there be something in the subject or context repugnant to such construction means, the works or the work contracted to be executed under or in virtue of the contract whether original or altered.
- (d) The "Contractor" means the individual or firm or company, whether incorporated or not, undertaking the works and shall include his or its legal personal representative, successors and permitted assignees.
- (e) "GETCO" means the GETCOs and the "Accepting Officer" means the officer who is authorised to sign and signs the contract on behalf of the "GETCO."
- (f) The letter "EE" means Executive Engineer who in the case of measurement and lump sum contract, direct the contractor and the letters "EE" means Executive Engineer" and "C.E." means Chief Engineer who administers and in the case of the term contracts directs the contract.
- (g) The "Engineer-in-charge" means all officers of the GETCO appointed by the Chief Engineer to supervise the works or part of the works.
- (h) "Approved" and "Directed" means the approval or direction of the Chief Engineer to Executive Engineer or the person deputed by him for the particular purpose.
- (i) "B.S." means the "British Standard" as issued by the British Standards institution. "A.S." means the American Standards as issued by the American Standard Institutions and "I.S." means the "Indian Standards" as issued by the Indian Standards Institutions. Wherever the above mentioned abbreviations are preferred to, in the specifications and / or work orders, they mean the addition with all amendments current at the date of issue of tender documents of work orders.
In the case of measurement and terms of contracts "Specifications" means those contained in GETCO schedule together with any amendments etc. embodied in the tender documents, "Drawings" refer to those accompanying the tender documents and/or any work orders referred therein.
- (j) The "Contract Sum" means the sum accepted or the sum calculated in accordance with the prices accepted in the tender and/or the contract rate as payable to the contractor for the full and entire executing and completion of works.
- (k) "The date of completion" is the date or dates of completion of the work or any part of the works set out or ascertained in accordance with the individual work orders and the tender documents or any subsequent agreed amendments thereto.

2. Security Deposit:

The contractor shall, within 10 days of the issue of Letter Of Intent, pay 2.5% of contract value out of 5 % as Security Deposit; the remaining 2.5% will be recovered from first two running account bills in equal installments. The Bank Guarantee from schedule bank in lieu of cash or government securities towards Security Deposit will be accepted providing amount of Security Deposit payable exceeds Rs. 10,000/- Security Deposit can also be paid as fixed deposit receipt as prescribed in Schedule "C". All damages, costs, charges, expenses and other sums which may be or may become due or payable by the contractor to the GETCO under the terms of the contract may be deducted from the cash in the proceeds of sale of the Securities/Bank Guarantee to deposited (which the officer or person to whom the same may be endorsed as aforesaid is hereby authorized to sell / to encash for that purpose) or from the interest of any such securities or from any sums due or which may become due to the contractor by the GETCO or from the whole or the balance unpaid as aforesaid of the encash

securities so deposited being repaid or transferred and returned as may be to contractor after the date on which the final bill is paid or after the expiry of the date up to which the contractor has to maintain the work in good order whichever is later.

3. Compensation for the delay:

The time limit allowed for carrying out the work as entered in the tender shall strictly observed by the contractor and shall be reckoned from the date on which the order to commence the work is given to the contractor. The work shall through out the stipulated period of contract the proceeds with due diligence (time being deemed to be essence of contract) and for delay, the contractor shall pay compensation, an amount equal to half percent per one week for the contract amount of work or such smaller amount as per the decision of the Competent Authority of the GETCO.

However, the total amount of compensation to be paid by the contractor, under the provision of the clauses shall not exceed 10 percent of the amount of contract value as decided by the competent authority of the GETCO. The penalty will be invariably deducted from the bills of the contractor and no refund will be given unless the competent authorities approves the reduction the reasons for delay attributable to GETCO as well as to party will be brought out clearly while putting the proposal for waiver reduction in penalty.

4. Action when whole of Security Deposit is forfeited:

In any case in which under any clause or clauses of this contract the contractor shall have tendered himself to pay compensation amounting to the whole of his security deposit (whether paid one sum or deducted by installments) or in the case of abandonment for the work owing to serious illness or death of the contractor or any other cause, the Executive Engineer on behalf of the GETCO, shall have powers to adopt, (a) below and any of the following courses under (b) and (c) as he may deem best suited to the interest of the GETCO.

(a) To rescind the contract (for which rescission notice of 10 days) in writing to the contractor under the hand of the Executive Engineer shall be conclusive evidence and in that case the security deposit of the contractor shall stand forfeited and absolutely at the disposal of the GETCO.

(b) To employ labour paid by the GETCO, to supply materials to carry out of the works or any part of the works debiting the contractor with the cost of the labour and the price of the materials (as to the correctness of which cost and price the certificate of the Executive Engineer shall be final and conclusive against the contractor) and crediting him with value of the work done, in all respects in the same manner and at the same rates as if it had been carried out by the

Contractor under the terms of this contract and in that case the certificate of the Executive Engineer as to the value of the work done shall be final and conclusive against the contractor.

(c) To order that the work of the contractor be measured up and to take such part thereof, as shall be unexecuted, out of his heads and to give it to another contractor to complete, in which case, any expenses, which may be incurred in excess of the sum, which would have been paid to the original contractor, if the whole work had been executed by him as to the amount of which excess expenses the certificate in writing of the Engineer-in-charge shall be final, conclusive and shall be borne and shall be paid by the original contractors and shall be deducted from any money due to him by the GETCO under the contract or otherwise from his security deposit of the proceeds sale thereof or a sufficient part thereof.

In the event of the above courses being adopted by the Executive Engineer the contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchased or procured any materials or entered into any engagements or made any advances on account of or with a view to the execution of the work or the performance of the contract. And in case the contract shall be rescinded under the provision aforesaid, the contractor shall not be entitled to recover or be paid any sum for any works thereof actually performed by him under this contract unless and until the Executive Engineer shall have certified in writing the performance of such works and the amount payable to him in respect thereof and he only be entitled to be paid the amount so certified.

5. Notice for unsatisfactory progress:

If the progress or a particular portion of the work is unsatisfactory the Executive Engineer whose decision shall be final, shall notwithstanding that the general progress of work is satisfactory; be entitled to take action under Clause 4(c) after giving the contractor 10 days notice in writing and the contractor will have no claim for compensation for any loss sustained by him owing to such actions.

6. Action in the case of Default by Contractor:

If any case in which any of the powers conferred upon the Executive Engineer by Clauses 4 and 5 hereof, shall have exercised and the same shall not have been exercised, the non exercised thereof shall not constitute a waiver of any of the conditions hereof and such powers shall not withstanding

be exercisable in any further case of default by the contractor for which, by any clauses hereof, he is declared liable to pay compensation amounting to the whole of his security deposit and liability of the contractor for past and future compensation shall remain unaffected in the event of the Executive Engineer taking action under sub clause (a) or (c) of Clause 4 he may, if he so desires, take possessions of all or any tools, plants, materials, and stores in such upon the work or the site thereof belonging to the contractor, or procured by him and intended to be used for the execution of the work of any part thereof paying for allowing for the same in account at the contract rates, or in the case of a contract rates not being applicable to current market rates to be certified by the Executive Engineer whose certificate thereof shall be final. In the alternative, the Executive Engineer may by notice in writing to the contractor or his clerk of works, foremen or other authorized agent, require him to remove such tools, plants, materials or stores from the premises within a time to be specified in such requisition to decisions to the contractor failing to comply with any such requisition, the decision of the Executive Engineer as to the expenses of any such removal and the amount of the proceed and expense of any such sale, be final and conclusive against the contractor.

7. Extension of Time Limit:

If the contractor shall desire an extension of the time limit for completion of the work on the ground of his having been unavoidably hindered in its execution or on any other ground, he shall apply in writing to the Executive Engineer and the Executive Engineer may, if in his opinion there are reasonable grounds for granting extension, recommend such extension as he may think necessary or proper. The decision of the competent authority in this regard shall be final and binding to the contractor. Any delay attributed to GETCO shall be compensated only by way of extending the limit.

8. Completion Certificate:

On completion of the work the Contractor shall be furnished with Completion Certificate by the Executive Engineer of such completion but no such certificate shall be given nor shall be the work considered to be complete until works are taken over and/or duly tested and put to operative as the case may be, nor until the work shall have been measured by the Engineer-In-Charge or where the measurement have been taken by his subordinated until they have received the approval of the Executive Engineer the said measurement being binding and conclusive against the contractor.

9. Effect of the Certificate:

No payment shall be made for any work estimated to cost less than Rs.1,000/- till after the whole of said work shall have been completed and certificate of completion given. But in the case of works estimated to cost more than Rs.1,000/- Contractor shall on submitting a monthly bill thereof, be entitled to receive payments. Proportionate to the part of the work then approved and passed by the Engineer-in-charge, whose certificate of such approval and a passing of the sum so payable shall be final and conclusive against the contract. All such intermediate payments shall be regarded as payment by way of advance against the final payment only and not

as payments for work actually done or completed and shall not preclude the Engineer-in-charge from requiring bad, unsound, imperfect or unskillful work to be removed and taken away and reconstructed or rejected nor shall any such payment be considered as admission of the due performance of the contract or any part thereof in any respect of the accruing of the claim nor shall conclude, determine or effect in any way the powers of the Engineer-in-charge as to the final settlement and adjustment of the accounts otherwise or in any other way, vary or affect the contract. The final bill shall be submitted by the contractor within one month of the date fixed for completion of work, otherwise the certificate of Engineer-in-charge of the measurement and of total amount payable for the work shall be final and binding on all parties.

10. Payment to Contractors:

The rates for several items of works estimated to cost more than Rs.1,000/- agreed to within shall be valid only when the item concerned is accepted, having been completed full, in accordance with the sanctioned specification. In case, where the items of the work, are not accepted, as so completed the Engineer-in-charge, may make payment on account of such items at such reduced rates, as he may consider reasonable in the preparation of final or running accounts bills.

11. Bills:

Shall be submitted by the contractor each month on or before the date fixed by the Engineer-in-charge, for all works, executed in the previous month and the Engineer-in-charge shall take or cause to be taken the requisite measurement for the purpose or having the same verified and the claim so far as it is admissible, shall be adjusted, if possible, within ten days from the presentation of the bills. If the contractor does not submit the bill, within the time fixed, as aforesaid, the Engineer-in-charge may depute a subordinate to measure up the said work in the presence of the contractor or his duly

authorized agent, whose counter signature in the measurement shall be sufficient warrant and the Engineer-in-charge may prepare a bill from such list which shall be binding on the contractor in all respects.

12. Supply of Materials to Contractor:

If the specification of the estimated work provides for use of any special description of material to be supplied from the GETCO's Stores or if it is required that the contractor shall use certain stores to be provided by the Engineer-in-charge (such material and stores and the prices to be charged thereof as here in after mentioned being so far as practicable for the convenience of contractor but not so as in any way to control, the meaning or effect of the contract specified in the schedule or memorandum here to annexed) the contractor shall be supplied with such materials and stores as may be required from time to time be used by him for the purpose of the contract only and the value of the full quantity of materials and stores so supplied shall be set off or deducted from any sum due to thereafter to become due to the contractor, under the contract or otherwise or from the security deposit or the proceeds of sale thereof if the deposit is held in Government Securities the same or a sufficient portion thereof, shall be sold for the purpose. All materials supplied to the contract shall remain the absolute property of GETCO and shall on no account be removed from the site of the work and shall at all time be open to inspection by the Engineer-in-charge. Any such materials un used and in perfectly good condition at time of completion or determination of the contract shall be returned to the GETCO's store if the Engineer-in-charge so requires by notice in writing given under his hands but the contractor shall not be entitled to return any such materials except with consent and he shall have no claim for compensation on account of any such materials supplied to him as aforesaid but remaining unused by him or for any wastage in or damage thereto. The contractor shall be responsible for the loss, destruction or deterioration of the materials, stores or articles supplied to him by the GETCO even if such loss, destruction or deterioration has occurred under any circumstances whatsoever beyond his control as if the materials, stores or articles so supplied were his property.

13. Works to be executed in accordance with specifications, drawings, orders etc.:

The contractor shall execute in whole and every part of work in the most substantial and workmanlike manner and both as regarding materials and in every other respect in strict accordance with the specification. The Contractor also shall confirm exactly, fully and faithfully to the designs, drawings and instructions in writing relating to the work signed by the Engineer-in-charge and lodged in his office and to which the contractor shall be entitled to have access for the purpose of Inspection at such office, or in the site of the work, during office hours and the contractor shall, also if he so requires, be entitled at his own expenses to make or cause to be made copies of the specification, and of all such designs, drawings and instructions as aforesaid.

14. Alteration in Specifications and Designs not to invalidate Contracts:

The Executive Engineer shall have powers to make any alteration, or addition to the original specification designs, and instructions that may appear to him to be necessary or advisable during the progress of the work and the contractor shall be bound to carry out the work in accordance with any instructions in this connection which may be given to him in writing, signed by the Engineer-in-charge and such alterations shall not invalidate the contract. Any additional work which the contractor may be directed to do in the manner above specified as part of the work shall be carried out by the contractor on the same conditions in all respect on which he agreed to do the main works, and at the same rates as are specified in the tender for the main work.

Where, however, the works is to be executed according to the designs, drawing and specifications recommended by the contractor and accepted by the competent authority, the alteration above referred to shall be within the scope of such designs, drawings, and specifications appended to the tender.

15. Rates for works not entered in Estimate or Schedule of Rate of the District:

If the additional and altered work includes any class of work for which no rate is specified in this contract, then such class of work shall be carried out the rates entered in the Schedule of Rates of the Division or at the rate mutually agreed upon between the Executive Engineer and the contractor, whichever are lower. If the additional or altered work for which no rate is entered in the Schedule of Rates of the Division is ordered to be carried out before the rates agreed upon then the contractor within seven days of date of receipt by him of the order to carry out the work inform the Executive Engineer for the rate which in his intension to charge for such class of work and if the Executive Engineer does not agree to this rate he shall be noticed in writing be at liberty to cancel his order to carry out such class of work and arrange to carry it out in such manner as he may consider advisable provided always that if the rates shall have been determined as lastly here in before mentioned then

in such case he shall only be entitled to be paid in respect of the work carried out or expenditure incurred by him prior to the date of the determination of the rate as aforesaid according to such rate or rates as shall be fixed by the Executive Engineer. In the event of dispute, the decision of the Executive Engineer of the Circle will be final.

16. Extension of Time Limit in consequence of Addition or Alteration:

The time limit for the work shall be extended in the proportion that the increase in its cost occasioned by alterations or additions bears to the cost of the original contract work and the certificate of the Engineer-in-charge as to such proportions shall be conclusive.

1. No compensation for Alternation in or Restriction of Work to be carried out. If at any time, after the execution of the contract documents the Engineer-in-charge shall, for any reason whatsoever, require the whole or any part of the work, as specified in the tender, to be stopped for any period or shall not require the whole or part of the work to be carried out at all or to be carried out by the contractor, he shall give notice in writing of the fact to the contractor who shall thereupon suspend or stop the work totally or partially as the case may be in any such case, except as provided here under the contractor shall have no claim to any payment or compensation what so ever on account of any profit or advantage which he might have derived from the execution, of the work in full but which he did not so derive in consequence of the full amount of work not having been carried out or on account of any loss that he may be put to on account of materials purchased or agree to be purchased or for unemployment of labour recruited by him. He shall not also have any; claim for compensation by reason of any alterations having been made in the original specification, drawings, designs and instructions which may involve any curtailment of the work as originally contemplated. Where however, materials have already been purchased or agreed to be purchased by the contractor before receipt by him of said notice, the Executive Engineer provided they are not in excess or requirement and are of approved quality and /or shall be compensated for the loss, if any, that he may put to in respect of materials agreed to be purchased by him. The amount of such compensation to be determined by the Executive Engineer whose decision shall be final. If the contractor suffers any loss on account of his having to pay, his labour charges during the period, during which the stoppage of work has been ordered under this clause the contractor shall on application be entitled to such compensation on account of labour charges as the Executive Engineer whose decision shall be final, may consider reasonable provided that the contractor shall not be entitled to any compensation on account of labour charges if, in the opinion of the Executive Engineer, the labour could have been employed by the contractor elsewhere for the whole or part of the period during which the stoppage of the work has been ordered as aforesaid.

18. No claim to compensation on account of loss due to delay in supply of materials by GETCO:

The contractor shall not be entitled to claim any compensation from GETCO for the loss suffered by him on account of delay by GETCO in the supply of materials entered in Schedule A where such delay is caused by:

- i. Difficulties relating to supply of railway wagons
- ii. Force Majeure
- iii. Act of God
- iv. Any other reasonable cause beyond the control of GETCO including Shortage of materials to be supplied by the GETCOs & difficulties in time by reaching at the site of any materials equipments.

In the case of such delay in the supply of materials, GETCO shall grant such extension of time for the completion of the works as shall appear to the Executive Engineer to be reasonable in accordance with circumstances of the case. The decision in the Executive Engineer as to the extension of time shall be accepted as final by the contractor.

19. Time Limit for Compensation Claims:

Under no circumstances, whatsoever, shall the contractor be entitled to any compensation from GETCO on any account unless the contractor has claimed in writing to the Executive Engineer within one month of the cause thereof.

20. Action and Compensation payable in case of Bad Work:

If at any time, before the security deposit is refunded to the contractor, it shall appear to the Executive Engineer or his subordinate in charge of the work that any work has been executed with unsound, imperfect or unskillful workmanship or with materials of inferior quality or that any materials or articles provided by him for the execution of the

work are unsound or of a inferior quality to that contracted for or are otherwise not in accordance with the contract, it shall be lawful for Engineer-in-charge to intimate this fact in writing to the contractor and then notwithstanding the fact that the work, materials or articles complained of, may have been inadvertently passed, certified and paid for, the contractor shall be bound forthwith to rectify or remove and reconstruct the work so specified in whole or any part, as the case may require or if so required shall remove the materials or articles so specified and provided other suitable materials or articles at his own charge and cost, and in the event of his failing to do so within a period to be specified by the Engineer-in-charge in the written intimation aforesaid the contractor shall be liable to pay compensation at the rate of one percent on the amount of the estimate for every day, not exceeding ten days during which the failure so continue and in the event of any such failure as aforesaid the Engineer-in-charge may rectify or remove and re-execute the work or remove and replace the materials or articles complained of, as the case may be, at the risk and expense in all respects of contractor should the Engineer-in-charge consider that any such inferior work or materials as described above may be accepted, or made use of, it shall be within his discretion to accept the same as such reduced rates as he may fix thereof.

Provided that in the case of any work of which visible check is not possible, if the Engineer-in-charge or his subordinate in charge of the work feels that such work has been executed with unsound, imperfect or unskillful workmanship or with materials of inferior quality, he shall take sample tests at random, cost of which shall have to be borne by the contractor and if after taking such test, part of such work is found to be defective in any respect or to have been executed with materials of inferior quality, then the contractor shall be paid for the whole work such amount as may be fixed by the office of the Engineer-in-charge on the basis of the lowest quality of work found by him in such samples tests.

Explanation: I

Sample Test shall mean:

- (i) In relation to poles fixed as line supports, the token of one pole out of every 100 poles after taking it out from its foundation for inspection.
- (ii) In relation to any other work, such test as may be considered necessary, by the Engineer-in-charge or his subordinate in charge of the work.

Explanation: II

Cost of the sample test shall mean cost incurred for the purpose of taking Samples & test and for restoring tested work to its original condition.

21. Work to be opened to Inspection, Contractor or Responsible Agent to be present:

All works under execution or in course of execution in pursuance of the contract shall at all times be open to the inspection and supervision of the Executive Engineer and his subordinate and contractor shall at all times, during the usual working hours and at all other times at which reasonable notice of the intension of the Executive Engineer or his subordinates to visit the works shall have been given to the contractor, during which period either he should be present to receive order and instruction, or have a responsible agent duly accredited in writing, present for that purpose. Orders given to the contractor's duly authorised Agent shall be considered to have the same force and effect as if they had been given to the contractor himself.

22. Notice to be given before work is covered up:

The contractor shall give not less than 5 days notice in writing to the Executive Engineer or his subordinates in charge of the work, before covering up or otherwise placing beyond the reach of measurement of any work, in order that the same may be measured and correct dimensions thereof, taken before the same is so covered up or placed beyond the reach of measurement and shall not covered up or placed beyond the reach of measurement and work without the consent in writing of Executive Engineer or his subordinate in charge of work, If any work shall be covered up or placed beyond the reach without such notice having been given or consent obtained, the same shall be uncovered at the contractor's expense, and in default thereof, no payment or allowance shall be made for such work, or for the materials, with which the same, was executed.

23. Contractor's Liabilities:

The Contractor shall supply, at his own cost, all materials (except such special materials, if any as may be supplied from the GETCO stored in accordance with the contract) plant, tools, appliances, implements, ladders, cordage, tackles, scaffolding and any temporary works which may be required for the proper execution of the work., in the original, altered or substituted form and whether included in the specification or other document forming part of the contract or referred to in these conditions or not and which may be necessary for the purpose of satisfying or complying with the requirements of the Engineer-in-charge as to any matter on which under these conditions, he is entitled to be satisfied or which he is entitled to require together with carriage thereof to and from the work, the contractor shall also supply without charge, the requisite number of persons for setting out works, and counting, weighting and assisting in the measurement of, examinations at the time and from time to time of the work or materials, failing this, the same may be provided by the Engineer-in-charge at the expenses of the contractor and the expenses may be deducted from any money due to the contractor under the contract or from his security deposit or the proceeds of sale thereof or of a sufficient portion thereof the contractor shall provide all necessary fencing and light required to protect the public from accident and shall also be bound to bear expenses of defense of every suit, action or other legal proceedings of law that may be brought by any person for injury sustained. Owing to neglect of the above precautions and to pay any damage and costs which may be awarded in any such suit, action or proceedings to any such persons or which may with the consent of the contractor be paid in compromising any claim by any such person.

24. Contractor Liable for all Damages:

Compensation for all damage done intentionally or unintentionally by contractor's labourer, whether in or beyond the limit of GETCO's property, shall be estimated by the Executive Engineer, or such other office, as he may appoint and the estimate of the Executive Engineer, subject to the decision of the Executive Engineer, on appeal, shall be final and the contractor shall be bound to pay the amount of the assessed compensation demand, failing which, the same will be recovered from the contractor as damages or deducted by the Engineer in charge from any sums that may be due to or become due from GETCO to the contractor under this contract or otherwise.

The contractor shall bear the expenses of defending any action or other legal proceedings that may be brought by any person for injury sustained by him owing to neglect of precautions to prevent the spread of fire and he shall also pay any damage and costs that may be awarded by the court if in consequence.

25. Rescission of Contract and Forfeiture of Deposit:

The contractor shall not assign or sublet, without the written approval of the Engineer-in-charge and if the contractor assign or sublet his contract, or attempt to do so or become insolvent or commence any proceedings to be adjudicated as insolvent or make any composition with creditors, attempt to do so, the Engineer-in-charge may, by notice in writing rescind the contract. Also, if any bribe, gratuity, gift, loan, perquisite, reward or advantage pecuniary or otherwise shall either directly or indirectly be given, promised or offered by the contractor or any of his servants, or agents, or any person to the employee of GETCO in any way relating to his office or employment or if any such officers or persons shall become in any way directly or indirectly interested in the contract, the Executive Engineer may, by 10 day's notice in writing, rescind the contract. In the event of a contract being rescinded the Security Deposit of the contractor shall there upon stand forfeited and be absolutely at the disposal of GETCO and the same consequences shall ensure as if the contract has been rescinded under clause 4 thereof and in addition the contractor shall not be entitled to recover or be paid for any work thereof actually performed under the contract.

26. Compensation:

All sums payable by a contractor by way of compensation under any of these conditions shall be considered as a reasonable compensation to be applied to the use of GETCO, without reference to the actual loss or damage sustained and whether any damage has not been sustained.

27. Change in the constitution of firm to be notified:

In the case of tender by partners of a firm, any change in the constitution of firm shall be forthwith notified by the contractor to the Executive Engineer for his information.

28. Works under direction of Executive Engineer:

All works to be executed under the contract shall be executed under the direction and subject to the approval of the Executive Engineer of the Circle, Engineer-in-charge for the time being who shall be entitled to direct at what point or points and in what manner they are to be commenced and from time to time carried on.

29. Decision of Executive Engineer to be final:

Except where otherwise specified in contract and subject to the power delegated to him by GETCO under the GETCO's rule, then in force the decision of the Executive Engineer of the Circle / EIC. for the time being shall be final, conclusive and binding on all of the specification, designs, drawings and instructions herein before mentioned and as to the quality of workmanship or material used on the or as to any other question, claim, right matter or thing whatsoever in any way arising out of or relating to the contract, designs, drawings, specifications, estimates, instructions, orders or these conditions or otherwise concerning, the works or the execution or failure to execute the same, whether arising during the progress of the work or after the completion or abandonment thereof.

30. Arbitration:

'ALL QUESTIONS, DISPUTES OR DIFFERENCES, WHATSOEVER WHICH MAY AT AN TIME ARISE BETWEEN THE PARTIES TO THIS CONTRACT IN CONNECTION WITH THE CONTRACT OR ANY MATTER ARISING OUT OF OR IN RELATION THERE TO, SHALL BE REFERRED TO THE "GUJARAT PUBLIC WORKS CONTRACTS DISPUTES ARBITRATION TRIBUNAL" AS PER THE PROVISIONS OF THE GUJARAT PUBLIC WORKS CONTRACTS DISPUTES ARBITRATION TRIBUNAL ACT, 1992.

The reference to arbitration proceedings under this clause shall not:

- a) Affect the right of the Engineer-in-charge to take possession of all or any tools, plants, materials and stores, in or upon the work or site thereof or belonging to the contractor or procured by him and intended to be used for the execution of the work or any part thereof.
 - b) Preclude the Engineer-in-charge from utilizing the materials purchased by the Contractor in any work or from removing such materials to other place, during the period the work is stopped or suspended in pursuance of notice given to the contractor under General Conditions.
 - c) Entitle the contractor to stop the progress of the work or carrying out the additional or altered work in accordance with the provision of General Conditions for the work where there is no specification.
 - d) Preclude the GETCO from getting the work done by another agency.
- Neither party is entitled to bring a claim to arbitration latest by the thirty days after the expiration of the defects liability period.
- The provisions of the Arbitration Act, 1996, Gujarat Public Works Contract Disputes Arbitration Tribunal Act, 1992 and rules made thereunder shall apply to the arbitration proceeding under this clause.

31. Stores to be obtained from GETCO:

The Contractor shall obtain from the GETCO Stores, such articles as are mentioned in Schedule 'A' which may be required for the work or any part of the work or in making up any articles required there fore or in connection therewith, unless he has obtained permission in writing from the Executive Engineer or obtained such stores and articles from elsewhere. The value of such stores and articles as may be supplied to the contractor by the Engineer-in-charge will be debited to the contractor in his account at the rate shown in the Schedule "A" attached the contractor and if they are not entered in said schedule they shall debited to him at cost price which for the purpose of this contract shall include cost of carriage and all other expenses whatsoever which may have to be incurred in obtaining delivery of the same at the stores aforesaid and further overhead charges 15%.

The Contractor shall be responsible for the loss destruction or deterioration of the materials, stores or articles supplied to him by the GETCO, even if such loss destruction or deterioration has occurred under any circumstances whatsoever beyond his control as if the material, stores or articles so supplied were his property. The contractor shall be responsible for returning the residual materials after completion of the contract and if fails to return, the balance material supplied to him by the GETCO, the cost of the residual materials will be recovered form the contractor at the market rate or stock issue rate whichever be higher at the time of materials account plus 15%.

32.1 Lump Sum in Estimate;

When the estimate on which tender is made, includes lump sums in respect of parts of the works the contractor shall be entitled to payment in respect of the items of works involved or the part of the work in question at the same rates as are payable under this contract or such items or if the part of work in question is not in the opinion of the Engineer-in-charge capable to measurement the Engineer-in-charge may at his discretion pay the lump sum amount entered in the estimate and the certificate in writing of the Engineer shall be final and conclusive against the contractor with regard to any sum or sums payable to him under the provisions of the clause.

32.2 Lump Sum Tenders:

Whenever lump sum tenders have been invited for building or other structures of the same type, design, the contractor shall submit his bill stated in Clause No.11 and the Engineer-in-charge not below the rank of Executive Engineer shall certify by general measurement or by other method considered suitable to him, the value of work done and the contractor shall be paid monthly a sum equal to 90% of the total value the work so certified, since the last payment, after deducting a part or whole of the secured advance if not already paid for the materials utilised on the works. An additional secured advance for any fresh materials brought on site will also be paid if certified by the officer not below the rank of Executive Engineer. After the work is completed final bill would be paid on the certification of officer not below the rank of Executive Engineer, that the work is done according to drawing and specifications attached to the tender. If any additions and alteration have been carried out, detailed measurements in respect thereof shall be recorded and extra payment or deductions are regulated as per item rates quoted by the contractor while submitting the tender and if there are any items in the additions and alterations for which the contractor has not quoted a rate, the payment shall be as per Clause 15 above.

33. Action where no specifications:

In the case of any class of work for which there is no such specifications as is mentioned in clause 1. such work shall be carried out in accordance with the divisional specifications and in there event of there being no divisional specifications, the work shall be carried out in all respects in accordance with the instructions and requirements of the Engineer-in-charge / consultant of the GETCO etc.

34. Industrial Labour Laws

1. Wages to be paid and time of payment etc. by the Contractor:-

- a) The contractor shall pay minimum of Rs._____ per day or as may be specified hereafter or fixed under minimum wages Act whichever is higher. The wages of every contract labour employed by him under this contract shall be paid by him before the expiry of 7th day of the last day of the month in respect of which the wages are payable (i.e. wages of a month have to be paid by him in the first week of the next month). The payment shall be disbursed in presence of Management Representative during the working hours in factory premises and the contractor shall get the entries certified in the register of wages by the Representative of the GETCO. Any default will result in cancellation of contract forthwith or elac the contractor shall be punishable to the extend of Rs.100/- fine per each day.
- b) The contractor shall give his telephone number and address to the GETCO so that in case of labour trouble etc., the contractor can be contacted. The contractor shall arrange to have his office outside the factory premises and the contractor keep himself present through out the working hours.

2. Labour Laws :-

- a) Person below the age of 18 years shall not be employed for the work.
- b) No female worker shall be employed in the night shift between 7.00 p.m. to 6.00 a.m.
- c) Contractor shall maintain a valid labour licence under the Contract Labour (Regulation and Abolition Act) for employing necessary manpower to be required by him. In the absence of such licence the contractor shall be liable to be terminated without assigning any reason thereof.
- d) The contractor shall at his own expense comply with all labour laws and keep the GETCO indemnified in respect thereof. Some of the major liabilities under various labour and industrial laws which the contractor shall comply with are as under :
 - i) Payment of contribution of wages of employer's contributions towards Provident Fund, Family Pension Scheme, Deposit Linked Insurance Scheme, Administrative Charges etc. at the rates made applicable from time to time by Government of Gujarat / Government of India or other Statutory Authorities.
 - ii) Payment of deposit in respect of each contract labour of the rate of RS.30/- with the office of the Commissioner of Labour as per the Contract Labour Act (Regulation & Abolition).

- iii) Licence Fee as prescribed under the contract Labour Act (Regulation and Abolition) and Rules framed there under depending upon the number of workmen employed by the contractor.
 - iv) Paid leave facility and wages as per the provision of the Factories Act at the rate of one day for every 20 days of working.
 - v) Identity cards as prescribed under the factories Act with photo affixed thereto, the same for identification.
 - vi) Payment of retrenchment compensation, notice pay and other liabilities as per Industrial Disputes Act. Any payment to the contractor's employees arising out of any claim of disputes under the Industrial Disputes Act – 1947 or any other laws.
 - vii) Provision of compensation in the case of accidental injury.
 - viii) Payment of crèche if the female labour employed is more than 30 numbers
 - ix) Maternity leave as per the provision of the Maternity Benefit Act.
- The above are some of the major liabilities of the contractor in addition to other liabilities prescribed under the various Labour Laws in force from time to time from Statutory Authorities like State Government / Government of India which the contractor shall have to comply with.

3. Provident Fund and Family Pension Scheme

The contractor shall submit along with his bill (month wise) a statement regarding deductions against employees provident fund and family pension scheme in respect of each concerned employees. Provident fund and family pension scheme at the rate of 12 % (or at the rates made applicable by the Government from time to time) of the wages. The contractor's contribution and his workers contribution towards provident fund and family pension scheme shall be deposited by the contractor with regional Provident Fund Commissioner, Ahmedabad.

Deposit Linked Insurance Scheme:-

The contractor shall have to deposit ½ % of the wages in-respect of employees who is a member of the Provident Fund as the contribution to the Deposit Linked Insurance Scheme with Regional Fund Commissioner, Ahmedabad.

Administrative Charges:-

Administrative charges for maintaining Provident Fund Account shall be deposited by the contractor with Regional Provident Fund Commissioner, Ahmedabad at the rates applicable.

Paid Leave Facility

Paid leave facility at the rate of one day for every 20 days worked by the contract labourer shall be provided by the contractor to his workers. He shall maintain Leave records/ Leave Cards for individual labourer which shall be duly verified and approved/ certified by the authorized officer of the GETCO.

7. Workmen's Compensation Fund and Employers Liability Insurance:-

The contractor shall cover all his employees under Workmen's Compensation Fund and under the Liability Insurance.

8 The contractor shall employ adequate number of experienced staff at site for daily supervision and for maintenance of various registers and records required under the law and contract. No payment for supervision shall be admissible.

9 Contractor To Indemnify The GETCO:

The contractor shall indemnify and keep indemnified the GETCO and every officer and employees of the GETCO and also Engineer-In-Charge and his staff against all actions, proceedings, claims, demands, costs and expenses whatsoever arising out of or in connection with the matters referred in above clauses and elsewhere and against all actions, proceedings, claims, demands, costs and expenses which may be made against the GETCO by any workman/ employee of the contractor or any sub contractor and / or from any liability may arise to any workman / employees of the contractor or any sub contractor under any laws, rules or regulation having the force of law including but not limited to claims against the owner under workman's compensation Act, 1923. The employee's Provident Act 1952, and / or the contract Labour (Abolition and Regulation) Act 1979. The GETCO shall not be liable for or in respect of or in consequence of any accident or injury to any workmen or other person in the employment of the contractor or his sub-contractors, and the contractor shall indemnify and keep indemnified the GETCO against all such damage and compensation and against all claims, demands, proceedings costs, charges and expenses whatsoever in respect thereof or in relation thereto.

10 Workmen's Compensation And Employer's Liability Insurance :-

Insurance shall be affected for all the contractor's for all the contractor's employees engaged in the performance of this contract. If any of the work is sub letted to the sub-contractor, the contractor shall require that he or his sub-contractor to provide workmen's compensation and employer's liability

insurance for the latter's employees unless such employees recovered under the contractor's insurance.

- 11 The GETCO reserves the right to terminate this rate contract at any time during its pendency without giving notice of termination or any reasons thereof.
- 12 The GETCO will be entitled to deduct directly from the bills, to be paid to the Sub-contractor and Labourers any sum or sums payable by contractor and which sum/sums the GETCO is required to pay as a principal employer on account of contractor's default in respect of all liabilities referred to in above clauses.
- 13 Nothing in the contract document stated shall in any wise constitute any workmen/ employees of the contractor or any sub-contractor as or to be workmen/employee of the power, or place obligation or liability in respect of any such workmen/ employee upon the GETCO.

NOTE:-The prevailing Act at the time of execution of work over and above act specified herein shall be binding to the contractor

35. **No Claim for Variation in Quantities of Work**

Quantities shown in the tender are approximate and no claim shall be entertained for quantities of work actually executed, being either more or less up to any extent than those entered in the tender or less than those entered in the tender or estimate.

36. **No Claim For Compensation for Delay in starting work**

No compensation shall be allowed for any delay caused into starting of work on account of acquisition of land and in the case of clearance for works or any delay in according sanction to estimates.

37. **No Claim for Compensation for delay in execution of work**

No compensation shall be allowed for any delay in execution of the work on account of water standing in borrow pits or compartment. The rates are inclusive for hard or cracked soil, excavation in mud, sub-soil water or water standing in borrows pits and no claim for an extra rate shall be entertained unless otherwise expressly specified & mentioned in the tender.

38. **Entering upon or commencing any portion of work**

The contractor shall not enter upon or commence any portion of work except with the written authority or instructions of the Executive Engineer or his subordinate in charge of the work, failing such the contractor shall have no claim to ask for measurement or payment for work.

39. **Method of Payment**

Payment to contractors shall be made by A/c payee cheques provided the amount exceeds Rs.50/-. Amount not exceeding Rs.50/- will be paid in cash. Generally payment may take 30 to 60 days after passing of bills depending on availability of fund.

40. **Acceptance of conditions on tendering for work.**

Submission to tender or acceptance of work order shall imply acceptance of these conditions of tender by contractor.

41. **Employment of Scarcity Labour**

If government declares a state of scarcity or famine to exist in any village situated within 20kms of the work, the piece worker / contractor shall employ upon such part of the work as are suitable for unskilled labour; any person certified to him by the Executive Engineer or by any person to whom Executive Engineer may have delegated this duty in writing to be in need of relief and shall be bound to pay such person wage not below the minimum, which Government may have fixed in this behalf from time to time. Any implementation of this clause shall be decided by the Executive engineer / Engineer-in-Charge whose decision shall be final and binding on the piece worker/contractor.

42 **Employment of Technical Persons**

The contractor who are registered under class 'A', 'B' and 'C' or such contractors who executes the works of Rs.5 lakhs and above shall employ the technically qualified personnel possessing minimum a Diploma of reconciled Technical institution, for executing the work of the GETCO.

Date:-

(Signature of Contractor)

Seal: s

Executive Engineer (TR)
GETCO, TR. C.O. VARTEJ

GETCO

GENERAL CONDITIONS OF CONTRACT

The contractor shall be deemed to have carefully examined the work & site conditions, the general conditions, the special conditions, specifications, schedules, drawings shall be deemed to have visited the site of the works & to have fully informed himself regarding the local conditions. Copy of Appendix V attached with tender shall have to be filled up before quoting the rate, for confirmation of site visit.

If there shall have any doubts as to the meaning of any portion of these general conditions or special conditions of the scope of work of the specifications or any other matter concerning the contract, he shall in good time before submitting his tender, send for the particulars thereof & submit them to the Engineer in writing in order that such doubt may be removed.

2.0 Data to be furnished by Contractor

- a. Prior to the commencement of work the contractor shall submit a bar chart showing detailed programme for completing the work within time limit to the S. E. for approval within a week of the date of LOI. .
- b. No change in the approved plan & layout shall be carried out without specific written approval of the Executive Engineer in charge.

3.0 Errors, Omissions & Discrepancies

In all cases of errors, omissions, doubts or discrepancies in the dimensions, or discrepancies in the drawings & items of work on specifications, reference shall be made to the Executive Engineer whose elucidation & elaboration shall be considered as authoritative.

The contractor shall be held responsible for any error that may occur in the work thorough lack of such reference.

4.0

- 4.0.5 Temporary structures may be erected by the contractor for storage sheds, offices, and residential etc. for non-commercial use on land, handed over to him at his own expense & with the permission of the GETCO. In any circumstances for constructing temporary structures contractor's use, GETCO free supply of materials shall not be made. If it is found that GETCO's free supply material are used for the works other than approved drawings, it will be recovered at penalized rate.
- 4.0.6 The contractor shall preserve all existing vegetation such as trees on or adjacent, to the works sites which do not interfere with the construction as determined by the GETCO.
- 4.0.7 The contractor shall take all possible precautions in felling trees authorized for removal to avoid any unnecessary damage to vegetation & trees not to be felled & to structures or to workmen, & shall be responsible for any damage if it occurs in such operations.
- 4.0.8 All produce from cutting of trees; grass etc. shall be the property of GETCO & shall be stacked at the directed places. No claim shall be made for such tree felling / cutting & stacking of trees/produce or grass etc. by the contractor.
- 4.0.9 The land shall as herein before mentioned be handed over to GETCO / Owner of Land immediately after the completion of the work under this contract. Also no land shall be held by the contractor longer than the GETCO shall deem fit & necessary & the contractor shall, on due notice by the GETCO, vacate & return the land which the Engineer In Charge may certify as no longer required by the contractor for purposes of the work.

5.0 Start of Work:

The contractor shall not enter upon or commence any portion of the work except with the written permission of the authority of the GETCO, failing which the contractor shall have no claim to ask for measurement of or payment for work & shall be responsible for any claims or damages that may arise due to such unauthorized commencement or entry. No compensation shall be allowed for any delay caused in starting the work on account of any delay in clearance of the work site.

6.0 Work to execute to the satisfaction of the GETCO's Engineers:

The contractor shall proceed with the work with diligence & expedition & the whole of the work herein specified as well as the mode of execution shall be under the supervision & the direction & shall be carried on to the entire satisfaction of the GETCO's site Engineers, who shall have full powers to order the contractor to alter, enlarge or diminish the form,

dimensions, positions, or quantities of any of the work or to make use of materials & workmanship of different descriptions & qualities from this herein specified. In the case of any class of work for which there are no Technical Specifications, these shall be carried out in accordance with the latest IS Codes & in the event of being no relevant IS Code, the works shall be carried out in accordance with the directions & instructions of the GETCO's Engineers at site.

7.0 Workmanship etc.:

The work shall be executed in thoroughly substantial manner with workmanship of best quality & strictly in accordance with the specifications & with the drawings, or with such other drawings or written instructions as may from time to time be furnished to the contractor, in accordance with terms of this contract & shall be completed in every respect with workmanship implied & necessary according to the fair interpretation & meaning of the same & should there be any discrepancy between the drawings & specifications or any difference or dispute as to the dimensions to be worked out or the mode of doing periodical quantity of the work to be executed or with respect to any subject arising out of this contract, the decision of the GETCO's authorized Engineers shall be final & binding on all parties.

7.0.1 Samples of descriptive Data:

Samples of descriptive data requiring approval shall be submitted by the Contractor to the GETCO's Engineers in good time before the use of such material to permit its inspection & testing & there-by the approval. The samples shall be properly marked to show the name of material, manufacture place or origin & the place where it is intended to be used etc. Failure of any samples to pass specified tests requirements; it shall be sufficient cause for the refusal to consider any further samples from that source.

8.0 Baselines & Grades:

The GETCO near to the site of work shall furnish one permanent Bench Mark. Semi-permanent baselines & cross lines shall be established at sufficiently spaced intervals with benchmarks by the Contractor at his own cost & risk. The contractor shall provide at his expense, all the required pillars, equipments, materials, & labour for the establishment of the grade lines & bench marks, for that the Contractor shall be responsible for their further maintenance during the execution of the actual work till the complete period of construction. The contractor shall be responsible for the proper execution of work to such lines & levels & grades as may be specified in the drawings, established, or indicated by the GETCO's Engineers. All the survey work, if required, shall be checked by the GETCO's engineers. However this shall not absolve the contractor for the correctness of survey/ temporary or permanent Benchmarks.

9.0 Contactor not to dispose off soil etc.:

The contractor shall not sell or otherwise dispose off or remove except for the purpose of this contract the sand, ballast, earth, rock or other substances or materials that may be obtained from any execution made for the purpose of this contract or produce upon the site at the time of delivery of the possession of the land but also such substances materials & produce shall be the property of the GETCO & shall be disposed off in the manner & place as directed by the GETCO's Engineers.

10.0 Gold, silver, Minerals, Oil Relics, etc. found on the Site:

All gold silver, oil relics, or other minerals, of any description & all precious stones, coins, treasures relic, antiquities, & other similar things that shall be found in or upon the site shall be the property of the GETCO. The contractor shall return the gathered things as above to the authorized representative of the GETCO.

11.0 Fencing, lighting & ventilation:

The contractor shall be responsible for the proper lighting, fencing, guarding & taking of all the necessary safety measures for all works comprised in the contract & or the proper provision of temporary roadways, footways, guards fences, caution notices etc. as far as the same may be rendered necessary by reasons for the work for the accommodation & protection of workmen foot passenger or other traffic & of the GETCO & occupiers of adjacent villages, property of the public & shall remain responsible for any accidents that may occur on account of his failure & timely precautions.

All the works & approaches shall be adequately illuminated with electric lights to the satisfaction of the GETCO's Engineers. The power & lighting connections, wiring equipment shall be subject to the inspection & passing by Electrical Inspector to GOG authorized under

the Indian Electricity Act. Any additions alterations or omissions shall be got approved from the GETCO's Engineers got certified from the Electrical Inspector. Work spots such as faces of excavation of borrow pits; filling area etc. shall be adequately illuminated with floodlights to the satisfaction of the GETCO's Engineers.

12.0 Explosive procurement & storage:

Explosives, petrol, oils, fuels, & other inflammable materials shall be stored strictly in accordance with the rules of the Explosive Department.

The contractor shall at his own expense construct & maintain proper magazines which are required for the storage of explosive & arrange for storage facilities for oils, petrol, fuels etc. for use in connection with the work.

The contractor shall at his own cost obtain the necessary license for the storage & use of explosives, oils, petrol, diesel etc. The GETCO shall not take any responsibility whatsoever in connection with the storage or use of explosives on the site, any accident occurs in the connection at site or nearby village or vicinity. All operations of the contractor in which or for which explosives are employed shall be at the risk of the contractor & upon his own responsibility.

13.0 Liability for accidents to persons:

13.0.1 The contractor or subcontractor shall indemnify the GETCO against any claims which may be made under the workman's compensation Act, 1923, or any statutory modification or other wise for or in respect of any damages or compensation payable in consequence of any accident or injury caused, by fault of contractor or subcontractor & sustained by any workmen or other person on the employment of the contractor or subcontractor. In every case in which by virtue of the provisions of subsection (1) of section 12 of the workman's Compensation Act, 1923, the GETCO is obliged to pay compensation to a workman employed by the contractor or subcontractor in execution of the work, the GETCO will recover from the contractor the amount of compensation so paid, and without prejudice to the rights of the GETCO under subsection 12 of the said Act, such amount will be paid back

to the GETCO in 30 days, failing which the GETCO will be at liberty to recover such amount of any part thereof by deducting it from the dues by the GETCO to the contractor under this contract or otherwise. The GETCO shall not be bound to contract any claim made against either of them under section 12, subsection (1) of the said Act, except on written request from the contractor & upon his giving to the GETCO full security for all costs for which the GETCO might become liable in consequence for entertaining such claims.

13.0.2 The contractor and/or subcontractor named in the contract shall indemnify the GETCO against all claims based upon injury or death to any person in the employment of the contractor or subcontractor, or to the third parties under paragraph (a) 2 or condition no.47 to the extent of any sums recovered under the insurance policy.

13.0.3 On occurrence of the accident which result on the death of workman employed by the contractor or subcontractor, which is so serious as to be likely to result in the death of any workman, the contractor shall within 24 hours of happening of such event intimate in writing to the Engineers of the GETCO the fact of such accidents. The contractor or subcontractor shall indemnify the GETCO against all loss or damage sustained, by the GETCO resulting directly or indirectly from his failure to give intimation in the manner aforesaid including penalties or fine if any, payable by GETCO as a consequence of GETCO's failure, to give notice under workman's compensation Act or otherwise to confirm to the provisions of the said Act in regard to such accident.

14 Liability for damage to works & materials:

14.0.1 The contractor shall during, the progress of the work, properly protect the works & the existing Ash Disposal pipelines & materials placed at his disposal or acquired for him by the GETCO, & shall remain answerable & liable for all accidents, damages. Loss etc. & shall be made good in the most complete & substantial manner by & at the sole cost of the contractor & to the reasonable satisfaction of the GETCO's Engineers. If the contractor fails to make good such losses, damages within the specified time given by the GETCO, the GETCO shall be at liberty to recover the amount towards such expenses fixed by the GETCO's Engineers & shall be recovered from the amount due under this contract to the contractor.

14.0.2 Further the contractor shall, at all times, protect & preserve all materials, machinery, equipments, Ash Disposal pipelines, allied structures such as spillway chambers, ADP, haul

road and ramps etc., materials & so acquired by himself or GETCO for the execution of the work. All reasonable requests of the GETCO's Engineers to enclose or especially protect any of the above shall be expeditiously complied with at no extra cost.

14.0.3 If the Engineer considers that the work, asked for in the aforesaid Para, is not sufficiently & satisfactorily protected by the contractor, on requests made for, the GETCO shall be entitled to arrange for such protections at his unfetter discretion & recover the cost thereof from the contractor.

14.0.4 Until the work shall be or deemed to be taken, over as aforesaid, the contractor shall also be liable for & shall be deemed to have indemnified the GETCO in respect of all damage or injury to any person or any property of the GETCO or of others in villages near by, occasioned by the negligence of the contractor or his workmen, or his subcontractor, or by defective /ill methods of working.

15 Materials, tools, machinery brought on the site of work:

All materials, tools & tackles, machinery etc. of the contractor brought to & delivered upon the site for the work shall be the time of their being so brought shall be deemed to be the property of the GETCO in its possession to be used for the purpose of the work & for that purpose only & shall not on any account be removed or taken away by the contractor or any other person without the permission of the GETCO's Engineers in charge, but the contractor shall be fully responsible for & loss, destruction thereof or damage thereto. The GETCO may have a lien on such materials, tools, tackles, machinery for any sum or sums which may at any time prior to the completion of the works be or owing to the GETCO by the contractor, under in respect of & dispose of any such materials, tools. Tackles, machinery in such a manner as the GETCO may think fit & to apply the proceeds in or towards the satisfaction of such sum or sums due or owing as aforesaid but subject to such lien & power of sale & disposal such surplus materials, tools, tackles, machinery shall belong to the contractor & may be removed & disposed off by him as he may think fit.

16 Access to site & work on site:

The Engineer or his authorized representative may if he considers fit from time to time enter upon any lands which may be in the possession of the contractor under this contract, for the purpose of executing any work not included in this contract & may execute by other contractors at his opinion & the contractor shall in accordance with the requirements of the Engineer, afford all reasonable facilities for execution of the works including occupation of lands by structure or other wise for any other contractor employed by the GETCO & his workmen or for the execution on or near site of the works not included in the contract. The contractor shall not be entitled for any extra claims on such executions.

17 Inspection of Works:

The GETCO's Engineers or their authorized representatives shall have at all times power to inspect the works, wherever in progress, either on site, on the contractor's premises in connection with this contract. Further, the contractor shall not allow any person other than GETCO's Engineers or their authorized representatives to the work sites. The contractor shall, during working hours, maintain supervisors of sufficient training & experience to supervise the work as a whole. All orders & directions given to such supervisors or other staff shall be deemed to have been given to the contractor. Further the GETCO may by due notice, desire a high ranking member of the supervisor staff of the contractor to be present on any specified inspection & the contractor shall comply with such directions.

18 Action & compensation payable in case of Bad Work:

If at any time before the refund of Security Deposit to the Contractor it appears to GETCO's Executive Engineers or subordinate and / or any authorized officer of the GETCO that the work has been executed with unsound, imperfect or unskilled workmanship or with materials of inferior quality or any materials or articles provided by him are unsound or of quality inferior to that contracted as specified in the Technical Specifications or other wise not in accordance with the contract, it shall be lawful for the GETCO to intimate that the works, materials, articles which may have been inadvertently passed, certified & paid to the Contractor. The Contractor shall be bound to rectify or remove & reconstruct the said work so specified at his own charge & cost & in the event of being failure to do so within specified period by the GETCO, the Contractor shall be liable to pay compensation at the rate of 1% per day on the amount of the estimate for the specified work. For the period up to 10 days this shall be

attended by the Contractor else the GETCO shall get these rectifications at the risk & expense in all respects of the Contractor.

19 Cleaning up:

19.0.1 The contractor shall at all time keep the construction areas & his labour colony & storage areas free from accumulation of waste, or rejected materials.

19.0.2 Prior to the completion of the work the contractor shall remove all rubbish from & about the premises, & tools, tackles, machinery, left out materials consumable, rejected materials, scaffolding etc. which are not the part of the permanent work/structure. The premises will be left fully satisfactorily to the GETCO's Engineers/representatives; thereafter only the completion certificate will be issued.

20 Contractor's inventory of equipments & machinery:

The contractor shall prepare & maintain an inventory of all machinery, equipments, temporary rolling stock, and plant purchased or hired for the use of this contract's execution.

21 Progress Schedule:

21.0.1 Contractor shall furnish a Construction Schedule on receipt of LOI or Work Order which ever is earlier, in quadruplicate, indicating the date of start, the monthly progress expected to be achieved & anticipated completion of each major items of the work under this contract & procurement of equipments, machinery & other materials. The schedule should be such as is practicable of achievement the whole work in the time limit & of the particular items on due date specified in the contract & shall have the approval of the GETCO's Engineers. Detailed schedules for each working season showing the progress month by month to be achieved is to be submitted to the GETCO. The GETCO is empowered to ask for more detailed progress schedule week by week for any item or for all items & the contractor shall comply when asked for.

21.0.2 The GETCO shall have, at all times the right without in any way violating this contract, or forming grounds for claim to alter the order of the works or any part thereof & the contractor shall after receiving such direction proceed in the order directed. The contractor shall revise the progress schedule accordingly & submit to the GETCO in four copies.

21.0.3 The contractor shall furnish sufficient machinery, equipment, labourers & materials shall work for such hours & shifts as may be necessary to maintain/achieve the progress of the scheduled, after getting written permission of Engineer In Charge.

21.0.4 The progress schedules shall be in the form of bar charts, statements &/or reports as may be necessary & directed by the GETCO's representatives.

21.0.5 Unsatisfactory Progress: In the case of unsatisfactory progress by the contractor not proceeding as per the Scheduled Programme approved by the GETCO, suitable actions shall be taken in accordance with Clauses No. 3 & 4 of the booklet prescribed by the GETCO for "Tender & Contract for Works".

22 Recoveries:

Recoveries due from the contractor, up to the end of the month previous to the one in which the bill is prepared shall be made from bills approved for payment every month or at other periods when the bills are prepared, for the enlisted, but not limited to, in the order of priorities & extents.

(a) Deduction on account of security deposit @2.5% in two parts, in first two RA bills.

(b) Penalty, if leviable,

(c) Expenditure, in full, incurred by the GETCO on contractor's behalf in labour, machinery, equipment etc.,

(d) Charges for services such as water & power supply, etc. in full,

(e) Hire charges for GETCO's or Government machinery if any,

(f) Other recoveries not specifically mentioned but recoverable.

23 Date of completion:

The contractor shall complete the whole work & hand over to the GETCO on or before the date specified in the work order.

Provided always that if in the opinion of the GETCO the completion of the works shall be delayed by any change of original design or by the order of the GETCO, of any altered, modified substituted or additional works or materials omitted or by strikes, lock outs or stoppages of labour, or revolution, riots, civil or political disturbance or by the contractor not

being given possession of the site or by the GETCO taking possession of & using the site or part thereof or the works or part thereof or any part of the work or delayed supply of material by the GETCO or by the not receiving any orders, drawings, instructions or directions in time or by the suspensions if the works or by fire, flood exceptionally bad weather tempest , storm or by from unforeseen circumstances(& whether the same shall be due to any act or omission of the GETCO or it's representatives) the GETCO may in the unfettered discretion thinks fit either forthwith or at a later time & from time to time notwithstanding that the prescribed or extended time for completion has expired or work have been completed, extend the date for the completion of the works to such a date as deemed fit as practical & acceptable.

24 Subletting of contract:

There will be generally no objection on the component parts if the work, being given over to responsible subcontractors but GETCO shall under no circumstances recognize these subcontractors & the responsibility of executing the work in the accordance with the conditions of contract will entirely rest on the main contractor. However written consent of EIC shall be obtained before subletting.

The main contractor will therefore always have the very responsible member, preferably a technical hand present on the works with power to sign all work orders issued on the site of work & to take requisite actions in the interest of efficient execution of work.

25.0 Other contracts for the suspension stoppage or curtailments of work:

If during the pendency of the contract the Engineer shall for any reason (which shall be unquestioned) whatsoever require the whole or any part of the work as specified in the contract to be suspended for any period or shall not require the whole or any part of the work as specified in the contract to be carried out at all by the contractor, he shall give notice in writing of the fact to the contractor who shall thereupon suspend or stop the work totally or partially as the case may be. In any case except as provided hereunder, the contractor shall have no claim to any payment or compensation whatsoever on account of any profit or advantage which he might have derived from the execution of the work in full but he did not so derive in consequence of the full amount of the work not having being carried out, or on account of any loss that he may be put on account of materials purchased or agreed to be purchased or for unemployment of labour recruited by him. He shall not also have any claim for compensation but reason of any alterations having been made in the original specifications, drawings, designs & instructions that may involve any curtailment of the work as originally contemplated. Where however, materials have already been purchased or agreed to be purchased by the contractor, before receipt of the aforesaid notice, the contractor shall be paid for such materials at the rate determined by the GETCO, provided they would have been useful for the work curtailed or stopped are not in excess of requirements are of approved quality & cannot be used on other contract works or otherwise by the contractor &/or shall be compensated for the loss if any, that he may put to, on respect of materials agreed to be purchased by him, the amount of such compensation to be determined by the GETCO, whose decision shall be final.

The GETCO may order the contractor to suspend any work on account of bad weather; rain or storm & such other adverse climate conditions & the contractor shall comply with the same. The contractor shall not be entitled to any compensation for such suspensions of work.

26.0 Other contractors:

Apart from this work, the other works connected with this work will be simultaneously going on either departmentally or through any other contractors. The contractors shall co-operate with others to their fullest extent & shall allow each other every facility & coordination for the execution of their works simultaneously & satisfactorily, during their action of machinery or execution of any other co-ordination works, the contractor will have to co-operate as directed buy the GETCO's Engineers in the charge of the works. In such cases the contractor shall not be entitled for any compensation on account of reduction or stoppage of labour force/machinery/equipments etc.

In the matter of dumps, haul, roads, drainage, diversion & the like, each contractor shall take into considerations the needs & the requirements of the other contractors if any working in the vicinity. Further no contractor shall take or cause to be taken any stops or action that may cause disruption, discontent or disturbance to the work, labour arrangements etc. to other

contractors. Any action, by any contractor, which the GETCO in the unquestioned discretion may consider as infringement of the above code, would be considered as a breach of the contract conditions & the GETCO may take such action as may deem fit against the contractor & the action taken shall be considered as final & binding.

27.0 Speed of work:

The contractor shall at all times maintain the speed of work to conform to the latest operative progress schedule but the GETCO may at any time with sufficient notice in writing direct the contractor to slow down or to accelerate any part or the whole work for any reason (which shall not be questioned whatsoever) & the contractor shall comply with such orders of the GETCO. The compliance of such orders shall not entitle the contractor to any claim or compensation.

28.0 Contract document & matters to be treated as confidential:

All documents, correspondence, decision & other matters concerning the contract shall be considered as of confidential & restricted nature by the contractor & he shall not divulge or allow access there to any unauthorized persons of any kind.

Access to the contractor's book:

Whenever it is considered necessary by the GETCO to ascertain the actual cost for execution of any particular item of work, the GETCO may do so by directing the contractor to produce the original invoices.

Interest on money due to the contractor:

The contractor shall not be entitled to receive the interest on the payment due to him upon measurements or otherwise or on any balance payable to the contractor. Also, contractor shall not be allowed to relate it with the progress of work at site in any case.

31.0 Measurements to be provisional & subject to correction:

Every measurement for running payment on account of work done be subject to adjustment or final measurements. In case there is disagreement between such intermediate & final measurements, the latter shall prevail.

31.A R/A BILLS: The contractor shall submit his R/A bill every month, which shall be processed in reasonable time after checking and recording the MB. The contractor shall be responsible to submit R/A bills well in time and shall depute his representative for joint checking of the measurements; so that the bills can be processed in time. The contractor shall take due care in this regard, failing to which consequences will be up to him.

32.0 Breach on part of GETCO not to annul contract:

No breach or non-observance on the part of the GETCO of any the agreements contained herein, shall annul this contract or discharge the contractor from the observance & performance thereof, or of any part thereof, but on application by the contractor & in the unfettered discretion of the GETCO an extension of time may be given to the contractor in respect of such breach or non-observance by the GETCO.

33.0 Labour conditions:

33.0.1 The contractor shall comply with the labour laws laid as may be current & shall furnish the returns & information as may be specified from time to time.

33.0.2 The contractor shall as far as possible obtain his requirements of labour, skilled & unskilled from the local areas.

33.0.3 The contractor shall pay wages as per the latest circulars applicable at the times for the minimum wages to be paid to unskilled, semiskilled & skilled labour prescribed by the Govt. of Gujarat.

33.0.4 The GETCO shall have the authority to remove from the work site any person, who may be considered unfit or undesirable & no responsibility shall be accepted by the GETCO for any delay or extra expense caused towards the completion of the work by such removal.

33.0.5 If Govt. declares a state of scarcity or famine to exist in any village situated within 10 Km. of the work site then the piece worker or contractor shall employ upon such parts of work, as are suitable for unskilled labour any person certified by the GETCO or by any person to whom the GETCO has authorized, & shall pay the minimum wages as fixed by the Govt. of Gujarat in this behalf. Any dispute that may arise in the implementation of the clause the decision of the Executive Engineer (civil) shall be final & binding.

33.0.6 The contractor shall provide reasonable facilities to the labour employed by him. The usual facilities are weather proof shelter for rest & meal, supply of wholesome drinking water, facilities for obtaining food, reasonable washing & sanitary facilities, special facilities for

women workers, suitable residential accommodation, general sanitation & health measures etc.

33.0.7 The implementation of any & all provisions of this clause in no way entitles the contractor to claim in this contract.

34.0 Local Laws:

34.0.1 All local laws in force at the time entering into the contract & those enacted there after shall be binding on the contractor & he shall abide by the same.

34.0.2 All import duties, sales tax & other local taxes shall be borne by the contractor & they shall be deemed to have covered by this quoted rate.

35.0 Performa returns:

The contractor shall maintain proforma, charts & details regarding machinery, equipments, materials labour, personnel & other matters as may be specified by the GETCO time to time.

36.0.1 Maintenance:

On completion of work satisfactorily, by agency, and after passing of final bill, the Security Deposit will be released by producing No Objection Certificate from concerned GETCO office.

36.0 Insurance:

38.0.1 The contractor shall procure, or arrange for the Subcontractor to procure insurance coverage in amounts approved by the GETCO & sufficient to protect against the following risks arising out of the work.

Accidents & professional & non-professional sickness of all labourers & personnel engaged in the work as required by Law pursuant to Workmen's Compensation Act, 1923 or Revised version thereof.

Injury or death to third parties including without limitation injury or death caused by any of the construction aids or vehicles or rented machinery, equipments used by the contractor or subcontractor whether at the site or elsewhere.

(3) Damage to contractors tools machinery, construction equipments form works, scaffolding materials etc. due to floods, earthquake or any such cause.

(4) Damage to the existing permanent structures of the GETCO & nearby villages, equipments of the GETCO or of the co-contractors working in the area for other works.

38.0.2 All the above conditions referred for the insurance cover, shall be in effect from the date of commencement of the work until the GETCO has accepted the work.

38.0.3 In the policies covering the insurances referred to above, the GETCO, contractor & the subcontractor shall be as co-ensured where possible.

38.0.4 The cost of insurance shall be borne by the contractor.

37.0 Liens:

Final payment to the contractor shall not be made until the contractor shall deliver to the GETCO receipts in full in lieu thereof, & in either case, an affidavit that so far he has knowledge or information the releases & materials for which in lien could be filed. If any lien remains unsatisfied after all the payments are made, the contractor shall refund to the GETCO all money that the latter may be compelled to pay in discharging such a lien, including all costs & a reasonable attorney.

Special conditions:

41.0.1 The successful Bidder, on receipt of Letter of Intent will submit within a week's time his planning/programme of works, for the scrutiny of the GETCO in a PERT/BAR Chart Format, clearly indicating the GETCO's inputs also.

41.0.2 Contractor will plan his work such that the works on all the fronts released by the GETCO, simultaneous works should progress in such a way that the entire job is completed in the scheduled time limit.

41.0.3 The work commencement date will start from the date of issue of letter of intent by the GETCO. However interim mile stone to be jointly fixed after issue of LOI.

41.0.4 The successful bidder will have to depute his authorized representative to attend progress review meetings to be held at site or the GETCO's TR.C.O. VARTEJ.

41.0.5 The contractor will be responsible for complying with all rules & regulation & the labour laws applicable to him & the GETCO will not be responsible for any lapses committed by them. If there is any claim from the Govt. Authority pertaining to the contractor the same amount will be deducted from the contractor's bill.

- 41.0.6 An adhoc payment shall be released @75% against the bill submitted, subject to adjustment in next R/A bill; over and above one R.A. bill in each month.
- 41.0.7 The contractor shall depute sufficient numbers of qualified engineers / Supervisors to look after work. The engineers / supervisors shall remain present at site at all the times. In no circumstances, contractor shall be allowed to continue work without engineering supervision.
- 42 **Payments shall be released on the availability of funds with the GETCO.**
- 43 **Contract:**
After the tender has been accepted by the GETCO, all orders or instructions to the Contractor shall, except as herein otherwise provided to, be given by the GETCO's Engineers at site on behalf of the GETCO for the speedy execution of the work.
- 44 **Employees Provident Fund:**
Bidders shall note that they possess P.F. Code No. in the name of the company [under Employees Provident Fund Organisation, Regional Office, Ahmedabad directive] obtained from the concerned Authorities of their respective jurisdictions.
- In the event of non-possession of the separate P.F. Code No. as detailed in the foregoing para, the offer shall summarily not be considered for the acceptance despite the offer is the lowest quoted offer in the price bid opening.

Executive Engineer (TR)
GETCO, Transmission Division Office,
VARTEJ.

We accept the above conditions...

Contractor's Representative legible signature: _____
Name of the person: _____
Seal of the company: _____
Date & place: _____

TECHNICAL SPECIFICATIONS:

General Conditions of Contract

1. The contractors shall, at their own expense make all necessary provisions for housing, water supply, and sanitary arrangements for their employees as well as for works and shall pay direct to the authorities concerned, all rates and taxes.
2. The contractor shall make their own arrangements for the necessary approach, road, for transport of their materials and be responsible for the compensation on account of damage to crop etc. & shall till completion of work.
3. All the royalty charges, Octroi and other duties & all taxes will be paid by the contractor and no extra be claimed on this account.
4. Godowns or sheds hired or constructed for storing of controlled materials and more particularly of cement shall be such as would prevent the materials from getting damaged in any way.
5. It will be absolutely incumbent on the contractors to have on the site of work only such of the materials as have been duly passed by the Engineer-in-charge. Materials that have been rejected must on no account be allowed to remain on the site, and in spite of written order to do so, any such rejected material is on the site beyond a period of 48 hours notice, the Engineer-in-charge shall have the right to remove it, at the risk and cost of the contractors and even to destroy it.
6. It must be distinctly understood that conditions of contract and of claims in respect of extra work, will not be allowed unless the works to which they relate is clearly without the spirit and meaning of the specifications or unless such works are ordered in writing by the Engineer-in-charge and claimed for in specified manner.
7. On completion of the work, the site shall be cleared by the contractor within the stipulated period, and ground brought to original state and they shall not be entitled for any extra claim on this account.
8. General Specifications of the relevant Indian standard specification shall also apply.
9. Damage to work clause

The works whether fully constructed or not and all materials, machinery plant tools, temporary buildings and other things connected there shall be at the risk and in the sole charge of the contractor, until the works have been delivered, completed to the satisfaction of the Engineer-in-charge and certificate from him to the effect is obtained. Until such delivery, the contractor shall at their own cost, take all the precautions reasonably necessary, to keep all the aforesaid works, materials, machinery, plant tools. Temporary buildings and other things connected with the works, free from any loss or damage and in the event of the same or any part thereof being lost or damaged, shall forthwith within the possible speed, reinstate and made good such loss or damage at contractor's own cost.

10. Any components or part of the work, shall not be given to any sub-contractor without approval of the competent authority of the GETCO. The whole responsibility of the execution of the work, as per the terms and conditions of the contract, will entirely rest of the main contractor. The main contractor shall always keep his responsible representative, preferably a technical hand, on work site with powers to sign M.Rs. and take necessary decision and implement the instructions issued in the interest of efficient execution of the works.
11. The Engineer-in-charge will fix the hours of work, and no work shall be executed beyond that period, during night time or in absence of the Engineer-in-charge of his authorized agent. The box measures shall be filled only in the presence of the engineer-in-charge or his authorized agent.

12. Contractor will be asked to present the sample of materials, and the approved samples will be preserved at the site of work, and no charge in the approved sample will be allowed, without the written permission of the Engineer-in-charge.
13. In any work is not executed according to the specifications, and the directions of the Engineer-in-charge, the same will be rejected, and the contractor has reexecute the same without any financial implication to the GETCO.
14. Contractor will have to communicate the name of his authorized agent, who shall be present on the works, and shall be authorized to sign the material requisitions, receive instruction given verbally or on the order book, on behalf of the contractor.
15. The contractor will have to sign the conditions of contract, and execute the agreements, send the list of previous works executed, solvency certificate and pay up the security deposits, falling to that, the tender will be rejected and earnest money deposited will be forfeited. The value of the stamp paper and stamp duty charges shall be borne by the contractor.
16. Tenderer must return the form of tender, with the specifications and the schedule of quantities, and rates and other schedules only signed on each page. Any tender not bearing signature of the tenderer on all the documents accompanying the tender is liable to be rejected.
17. Before submitting his tender, unit rates, which shall be for the finished work complete, including charges involved in testing, maintenance for a period of 12 months, the tenderer shall closely examine the specifications and carefully study the drawings and all documents, which form a part of the contract, to be entered into by the accepted tenderer.
18. The Tenderer must visit the site of works and see for himself the site conditions regarding water, labour conditions, rates approach road during all seasons and all other matters affecting the works before submitting the tender.
19. The submission of tender by a contractor implies that, he has read these instructions, the conditions of contract etc. and has made himself aware of the scope and specifications of the work to be done, and of conditions and rates at which stores will be issued to him, and local conditions and other factors bearing on the executions of the work. The GETCO will not therefore, after acceptance contractor's rate, pay any extra charge for lead or for any other reason. In case the contractor is found later on, to have misjudged the site conditions.
20. The tender document shall be written legibly and free from erasure, over writing or conversions of figures. Correction where unavoidable, shall be made by crossing out, initialing, dating and rewriting.
21. The GETCO or its officers, who accept tender, shall have the right of rejecting all or any of the tenders, and will not be found to accept the lowest offer not to assign any reasons whatever, for the rejection of any tender or all tenders.
22. The tender notice to tenderers shall form a part of the contract.
23. The entire work is to be completed, within the stipulated time limit from the date of issue of letter for commencement of the work by field office. The contractor will not be eligible for any extra for the idle period of works, or waiting period that may be required to suit other consideration, and no claims for compensations on account of such, will be considered. However in case of delay due to circumstances beyond the control of contractors, either in date of commencement or due to, waiting during construction, extension in time may be considered for completion of works, without any penalty to the GETCO.
 - i. The contractor shall keep full time qualified Civil Engineers at the site, who shall be fully authorized to receive and comply with such instructions, as given by the Executive engineer. The name of such Engineer with his qualifications and experience shall be intimated by the contractor. The Executive Engineer shall have the right to demand the removal of any technical personnel, skilled or unskilled workmen, who in his opinion are considered to cause bad workmanship in the execution of works or to cause indiscipline.
24. The department reserve the right to make any change in the design and the plans of the works and the contractor shall be bound to carry out them at the rates tendered. No claim or compensation will be allowed on this account.

25. Bills shall be submitted by the contractor monthly on or before the date fixed by the Executive Engineer, for all works executed in the previous months.
26. Should this tender be accepted I /We hereby agree to abide by and fulfill all the terms and provisions of the "Tender & contract for works" as applicable, and in default thereof to forfeit and pay to the GETCO the sums of money due.
27. The contractor shall keep instruction book on site, for taking site instruction from time to time. This book shall be made available on site whenever asked for.
28. The contractor shall pay wage to the workers, as per minimum wages act as declared by the Government time to time.
29. The contractor shall follow all labour laws of Govt.
30. Contractor shall arrange for testing of material to be used in the work or finished product, if desired by the Executive Engineer. The provision shall be made in the unit rate quoted for this.
31. The full value of the "Earnest Money Deposit" paid herewith, shall be forfeited to the GETCO, if the contractor fails to deposit the full amount of specified security deposit, within stipulated time.

32. CEMENT CONSUMPTION SCHEDULE

The proportion of cement with coarse aggregate and the fine aggregate for cement concrete works & with sand in case of cement mortar will be in accordance with the under mentioned schedule showing the consumption of cement in bags. The Engineer-in-charge will adjust the proportion of cement irrespective of the mix mentioned in the description of the items, to ensure the consumption of the cement as per prescribed schedule. The tendered rate will be considered to have been based on the consumption of cement in this schedule and nothing extra will be paid on this account.

- (a) If the quantity of cement shown as utilized in the work, is observed to be less than permitted as below then work will be accepted at reduce rate at the discretion of EIC, if deemed fit.

Table showing the cement required to be consumed in civil work items.

Sr. No.	Item Description	Unit	Cement to be consumed in Bags
1	2	3	4
1.	Masonry Works		
	a. B.B. Masonry in C.M. 1:6.	1 CMT	1.40
		1 CMT	1.70
	b. U.C.R. Masonry in C.M. 1:6	1 CMT	2.00
		1 SMT	0.20
	c. U.C.R. with pointing in C.M. 1:2		
		1 SMT	0.46
	d. 115 mm thick B. B. Partition in C.M. 1:4		
	e. –do- but with both sides plaster in C.M. : 1:3;12 mm thick.		
2.	Cement Concrete works without finishing		

	a. C.C. 1:1 ½ : 3	1 CMT	8.12
	b. C. C. 1 : 2 : 4	1 CMT	6.27
	c. C.C. 1 : 3 : 6	1 CMT	4.42
	d. C.C. 1 : 4 : 8	1 CMT	3.00
	e. C.C. 1 : 5 : 10	1 CMT	2.47
3.	Flooring		
	a. 25 mm thick I.P.S. in C.C. 1:2:4	1 SMT	0.25
	b. –do- 40 mm thick	1 SMT	0.35
	c. –do- 50 mm thick	1 SMT	0.45
	d. –do- 75 mm thick	1 SMT	0.60
	e. –do- 100 mm thick	1 SMT	0.75
	f. Cement for fixing marble Mosaic Tiles	1 SMT	0.13
	g. –do- White glazed tiles with 12 mm thick coating cement plaster for leveling.	1 SMT	0.25
	h. Terrazzo floor finishing 20 mm thick with 12 mm thick back coating cement plaster.	1 SMT	0.25
	i. Kotah stone flooring	1 SMT	0.20
4.	Bedding Below Flooring		
	a. 110 mm thick C. C. 1 : 4 : 8	1 SMT	0.35
	b. – do – C. C. 1 : 5 : 10	1 SMT	0.28
5.	Plastering & Pointing		
	12 mm thick C.P. in C.M. 1 : 3	1 SMT	0.13
	20 mm thick C.P. in C.M. 1:3	1 SMT	0.19
	20 mm thick sand faced in two layers.	1 SMT	0.20
	Cement Pointing 1 : 1	1 SMT	0.07
6.	Ground Sink 750 x 750 mm with dwarf wall 115 mm thick 40 mm IPS with 110mm. thick 1: 5: 10 bedding,	1 No.	0.75
7.	a. RCC water tank 1000 ltr. (1.2x1.2x0.9M with free GETCO)	1 No	6.50
	b. – do – size (2x2x0.9 M with free GETCO) (3000 Liters)	1 No.	13.00
8.	Kitchen Platform with 75 mm thick slab with 2 partition with 12 mm smooth plaster.		
	a. Size 2000 x 675 mm	1 No.	1.50
	b. Size 3000 x 675 mm	1 No.	2.50
9.	a. 75 mm quarter round vata in C.M. 1:2.	100 RMT	4.00
	b. 100 mm – do –	100 RMT	5.00
	c. 150 mm – do –	100 RMT	7.00
10.	Fixing W.C. Pan	1 No.	0.50

11.	a. Gully trap with chamber or 300x300mm. b. Nahnitrap	1 No. 1 No.	0.75 0.05
12	50mm thick RCC shelf in C.C. 1:1 ½ : 3	1 SMT	0.60
13	- do - precast cover 300 mm, wide 50 mm thick with smooth finishing on all sides.	1 RMT 1 SMT	0.16 0.60
14	Manhole chambers with 230 mm, thick masonry in C.M. 1:6 and depth upto av. 1000 mm incl. cement plaster in C.M. 1:3 inside, top and outside upto 150 mm depth. a. Size 900 x 450 mm b. Size 600 x 450 mm c. Size 600 x 600 mm d. Size 900 x 900 mm e. Size 450 x 450 mm f. Size 300 x 300 mm with 110 mm partition wall.	1 No. 1 No. 1 No. 1 No. 1 No. 1 No.	2.50 2.00 2.25 3.70 1.25 0.75
15	RCC hume pipe with filling joints in C.M. 1:1 and bed concrete 1:4:8 below joints 150 mm. thick a. 750 mm dia b. 650 mm dia c. 450 mm dia d. 300 mm dia e. 225 mm dia f. 150 mm dia	1 RMT 1 RMT 1 RMT 1 RMT 1 RMT 1 RMT	0.45 0.35 0.24 0.16 0.12 0.08
16.	Procelin Pipes (S.W.G. Pipes) a. 100 mm dia b. 150 mm dia.	1 RMT 1 RMT	0.06 0.08
17	150 mm dia half round gutter in C.C. 1:3:6	1 RMT	0.15
18	2500 mm dia x 300 mm deep of hollow masonry in C.M. 1:6 with C.C. 1:4:8 bedding & RCC slab cover, for soak pit.	1 No.	21 bags.

Note : (1) Consumption figures mentioned against each item is for theoretical consumption. This consumption may vary $\pm 5\%$

(3) In the case of plaster to masonry walls, an extra quantity of 1 Cft to mortar for every 100 sq.ft. of area may be allowed at the discretion of EIC.

For Protection wall at GPPL site --

NO	ITEM DISCRIPTION	NO	L	B	D	QTY.	TOTAL QTY.
1	Excavation in Ordinary Soil						
	For Toe Wall	1	60.00	1.20	1.00	72.00	SAY 75.00 CMT
2	C.C. (1:4:8)						
	P.C.C. For Toe Wall	1	60.00	1.20	0.30	21.60	SAY 25.00 CMT

3	C.C(1:2:4)						
	Toe Wall	1	60.00	0.60	1.70	61.20	SAY 65.00 CMT
4	T.M.T. Reinforcement						
	. @ 50 Kg/ Cmt	65	50.00	-	-	3250.00	SAY 3250 KG.
5	Bela Masonry						
	At 3 m c/c	20	4.00	0.23	0.50	9.20	SAY 10.00 CMT
6	Murram Filling						
		0.5	60.00	4.00	1.50	180.00	SAY 190.00 CMT
7	Rubble Pitching						
		1	60.00	4.00	-	240.00	
		1	60.00	1.00	-	60.00	
						300.00	
	Deduction of 25%Voids					75.00	
						225.00	SAY 230.00 CMT
8	20 mm SF Plaster						
	Toe wall Top	1	60.00	0.60	-	36.00	
	River side	1	60.00	-	1.00	60.00	
						96.00	SAY 100.00 CMT
9	Cement Pointing						
		1	60.00	4.00	-	240.00	
	Deduction						
	Masonry	20	4.00	0.23	-	18.40	
						221.60	SAY 225.00 SMT

General: Please refer latest edition of relevant Indian Standard Specification of Code i.e. B.I.S.

General relevant I.S. of B.I.S. shall prevail for all items including materials, measurements etc.

The Item wise detailed specifications are intended for full description of items covered by Schedule "B". The specifications are not however intended to cover every detail and the works shall be executed according to the spirit of the specifications below and the best prevailing P.W.D. practice. The clarification to any clause in detailed specifications shall be sought from the latest edition of relevant I.S. specification and codes. Where these specifications are at variance with the specification laid down in the I.S. Books stated above, the former will be applicable. As regarded matters not covered by any of the above specification, the decision of the Executive Engineer-in-charge shall be treated as final and shall be binding upon the contractor. The contractor is expected to get clarified any doubt about specification, etc. before tendering by discussing with Executive Engineer.

DETAILED SPECIFICATIONS

Item No.1:-Dismantling the C.C. or R.C.C. work for foundation and building work and throwing/stacking the dismantled stuff as directed, within the lead of 500 Mtr. Radioed, dressing etc. complete as directed by E.I.C.

Area of plain cement and R.C.C. work to be dismantled, shall be separated by providing necessary barricaded, and providing watchman to avoid any accident in the area. All precaution shall be taken to see that, the structure, machinery, equipment in the area not damaged. If desired by authority, all equipments, machinery, etc shall be covered with tarpolin or plastic covering without any extra cost.

Rate quoted for the item shall be inclusive of providing all labour, tools, tackles, and scaffolding, wherever required. Payment shall be made for actual cu. Meter of concrete dismantled as per drawing of as directed or details furnished at site. (Area shall be cleaned everyday, when work is to be stopped or even work is in progress during day, if required, in case of plant area or other places).

Item No. 2:-Dismantling the B.B./Bella/U.C.R. masonry work in C.M. or L.M. including scaffolding and throwing away the dismantled stuff within the lead of 500 Mtr. Radius & stacking of the useable materials at the places, etc. complete as directed by E.I.C.

Area to be dismantled shall be marked with paint and got approved before starting the work. Specification of item No.1 shall be applicable to this item also. Wherever opening is to be made in masonry work, sides of the opening made, shall be finished with cement mortar 1:3 to line and level as instructed. Rate quoted is inclusive of this. Cement shall be used as per the terms detailed in schedule.

Item No.3:-Dismantling the barbed wire fencing pinned with R.C.C./P.S.C./Angle or wooden posts from all rows & diagonals & bundling & stacking the barbed wires as directed by E.I.C. etc. complete.9PAYMENT WILL BE MADE IN RMT. OF COMPLETE FENCING WORK IRRESPECTIVE OF NO OF ROWS.) (For 6Nos Horizontal & 2 Nos. of rows)

Care shall be taken to see that, the labour engaged on job are not injured during removal of fencing. The barbed wire row shall be immediately bundled after removing.

The payment shall be made in running meter of complete fencing work irrespective of Nos. of rows i.e. on actual running meter fencing. Rate quoted shall be inclusive of crediting the removed barbed wire to the deptl . Store.

Item No.4:- ---DO---as above but for 3 NOs. Horizontal & 2 Nos of diagonal rows.

Same specifications shall be applicable as per of Item No. 3.

Item No. 5:-Labor charges for removing the chainlink fencing panel with nuts & bolts from Angle supports, including stacking the same as directed by E.I.C.

Specifications of Item No. 3 & 4 shall be applicable.

Pannels and nut bolts removed shall be credited to the Dptl. Store.

Payment shall be made for Nos. of panels removed and credited to store.

Item No.6:-Removing the existing post P.S.C. or Angle iron from concrete without damaging the post & stacking etc. complete as directed by E.I.C.

Fencing post shall be removed completely from the ground in full length. Foundation concrete shall be removed completely from post. The removed post shall be credited and stacked at the Deptl store.

Payment shall be made on actual Nos. of posts removed. Any damages to the post shall be made good by the contractor at his own cost.

Item No. 7:-Removing :

wooden/steel frame door/window/ventilator with shutters from masonry or concrete work without damaging the same, including sacking the same, etc. complete as directed by E.I.C. While removing the door/window/ventilator etc., care shall be taken to see that, none of the members or walls etc. are damaged. Shutters of the door/window ventilators shall be removed first. In case of glass panels or glass louvers, they shall be removed first, and stacked separately, so that they do not get damaged. All fittings, screws, etc. removed, shall be kept and credited separately. Rate quoted shall be inclusive of making necessary holes in masonry for removal of frame. In case of grill fixed to window of ventilators, and required to be removed, it shall be removed and credited without any extra cost. Any opening made in masonry shall be plugged properly and plastered to match with surface, if required.

Payment shall be made on the actual area of door/window/ventilators removed. i.e. outside to outside. Of frame, excluding hinges of frame in floor. All necessary tools, tackles, labours, scaffolding, etc. required shall be arranged by contractor, and rate quoted shall be inclusive of all. All the removed materials shall be credited to Deptl. Store.

Item No.8:-Labour charges for fixing the old door/window/ventilator in position as directed, including doing minor repairing & providing new hold fasts, making grooves in the wall & Fixing in C.C. and supplying and painting 2 coats of oil painting of approved make etc. complete as directed by E.I.C.

Door, window, ventilator to be fixed shall be issued from deptt. Store. They shall be transported to the place of fixing. Minor repairs to wood work shall be attended before fixing. Hold fasts of M.S. flat 20m.m.x4m.m. and 250 m.m. long shall be fixed as directed. Any missing screw etc., shall be provided and fixed by the contractor. Necessary opening in wall for fixing of frame shall be made carefully, so as not to damage masonry & other structure. The frame shall be fixed in line, level and plumb in the wall. Two coats of approved quality tint and make oil paint shall be applied after fixing the shutters with frame, and cleaning the old paint with sand paper, filling the voids etc. with putty. Painting shall be carried out only after the same is cleared by competent authority.

Rate quoted shall be inclusive of fixing the frame in C.M. 1:3, and smooth plastering to all sides. Payment shall be made on square meter bases, as per item No. 7. if the window, ventilator are provided, with bars or grill, the rate quoted shall be inclusive of oil painting the frame.

Item No.9:-Labour charges for fixing fabricated chain link fencing panel to vertical angle posts by means of nuts & bolts as per drawing including 2 coats of aluminium or any shade of oil painting to the entire panel etc. complete as directed by E.I.C. (PANEL WILL BE SUPPLIED FREE OF COST BY THE DEPTT. & REQUIRED NUTS & BOLTS WILL BE SUPPLIED BY THE CONTRACTOR AT HIS OWN COST.)

The chain link panel shall be supplied free of cost at Deptt. Store and the contractor has to cart the same at the place of use. The chain link panels shall be fixed in

line, level with the angle posts. Necessary nuts & bolts required shall be arranged by the contractor at his own cost.

After panels are erected and properly cleaned and approved for painting, the panel & angle posts shall be painted with 3 coats of approved quality and make of alluminium or any shade of enamel paint.

The payment shall be made on Nos. of panels fixed based on unit rate quoted.
Item No.10:-Labour charges for fixing fabricated angle posts in concrete in line level & plumb, including 3 coats of oil painting ec. Complete as directed by E.I.C.(ANGLE POSTS WILL BE SUPPLIED FREE OF COST BY DEPTT.)

The fabricate angle posts shall be supplied free of cost at Deptt. Store, and the contractor has to cart the same at the place of use. The angle post shall be fixed in line level and plumb as directed in foundation concrete 1:4:8 of 30c.m.x35c.m.x45c.m. deep including necessary excavation for foundation pit in any type of soil, murrum, soft rock etc. complete. The cement for concrete shall be supplied by the contractor; the foundation concrete shall be cured for min. 10 days.

The angle post shall be painted with 3 coats of approved quality and make of alluminium or any shade of enamel paint.

The payment shall be made on Nos. of angle post fixed, based on unit rate quoted.

Item No. 11:-Removing the existing tiles, kotah stone flooring including base concrete, throwing away the stuff as & where directed within a radius of 500 mtrs. Etc. complete as directed by E.I.C.

The tiles or kotah stone flooring shall be removed carefully, so as to have minimum to tiles or kotah stones.

Removed useable tiles or kotah stones shall be stacked separately as directed. The base concrete of the flooring shall be removed completely and disposed off at the places shown. The useable materials are to be credited to Deptt. Store.

The payment shall be made on the actual floor area removed in square meter. Rate quoted shall be inclusive of all tools, labours, transportation etc.

Item No. 12:- Removing the existing tiles, kotah stone flooring including base concrete, throwing away the stuff as & where directed within a radius of 500 mtrs. Etc. complete as directed by E.I.C. –but I.P.S. flooring.

Specification of item No. 11. shall be adhere to wherever applicable.

Item No.13:-Removing existing plaster work including scaffolding & throwing away the stuff to a lead of 300 Mtrs. Radius etc. complete as directed by E.I.C.

Specification of Item No 11 shall be adhered to wherever applicable.

Item No. 14.-Removing existing W.C. Seat including all pipe connections .including throwing away the stuff to a lead of 300 Mters. Radius etc. complete as directed by E.I.C.

The specification will be applicable as per wording of the item, and as directed by E.I.C.

Item No.15:-Dismantling /Removing G.I. Pipes, G.S.W. pipes, AC/PVC rain water, G.I. pipes, with fittings, clamps, including Excavation, stacking the materials, with all leads an lift, and crediting the same, in Deptt. Store. etc. complete as directed by E.I.C.

The specification shall be adhered as per description of the item, and as directed by E.I.C.

Item No.1 6 : Excavation for foundation in trenches in ordinary soil, sand, clay, soft murrum upto 2M depth, including strutting, shoring wherever necessary and refilling the sides of trenches and throwing away the extra stuff, within the lead of 300Mtrs. radius, dressing etc. complete as directed.

The contractor will, at his own expense, clear the Site, set out all works and provide all necessary labour, pegs, string etc. to enable Engineer to check all setting out and contractor will correct all error.

Foundation trenches must be checked by the Executive Engineer or by the authorized representative before any concrete is placed. The bottom of foundation trenches must be accurately excavated as shown in the drawing and leveled thoroughly; if dry, shall be watered and consolidated before concrete work is started; if water is meeting with, the contractor will have to dewater the foundation and provide necessary shoring and shuttering, for which nothing extra will be paid. If differences of levels have to be provided, it shall be done by means of vertical steps unless otherwise directed by the Engineer-in charge.

The excavation for foundation shall be excavated to the depths shown on the drawing or to suit ground or less depth, as the character of the ground, necessitates ensuring stable and solid foundation and will be as directed by the Engineer-in-charge. For extra depth of foundation so excavated, no higher rates will be paid.

The contractor is held responsible that the foundations are excavated as nearly as possible to the correct width and depth as directed by the Engineer-in-charge. If any excess excavation is done owing to mistake on the part of the contractor or his staff, the extra excavation will not be paid for, and this extra excavation will have to be filled up with cement concrete as specified for foundation, at this cost. Under no circumstances the extra depth excavated will be allowed to be filled up, with any other material.

All excavated stuff, if approved, will have to be filled up in the side trenches of the foundation and plinth, in layers, by breaking clods and watering, after the foundation and plinth masonry is checked and approved by the Engineer-in-charge. No payment will be separately made for filling these side trenches, which shall be filled in 200 mm layers, duly watered and rammed properly to get designed density.

The surplus earth will have to be spread, to make up the adjacent ground (if necessary) or otherwise shall be removed from the site and disposed off, as directed by the Engineer-in-charge, within a lead of 300 meters. No extra payment will be making for doing this work.

The excavated stuff shall be stacked at the place, shown by the Engineer-in-charge or his authorized agent, so that no surcharge is created on the excavated trench edge and sliding may not make place. In case the stuff is found not usable the same shall be stacked separately away, so that it may not get mixed with the selected material for backfilling.

Safety code for excavation I.S.3764 shall be followed.

If excavation is done during rainy season, Contractor shall make pali of earth around excavated area, to see that the excavated pit is not filled up with water. Contractor may make allowance in the rate, if he thinks that sides slopes will be required keeping in mind nature of the soil and safety of excavation.

The rate quoted shall be inclusive of all labour, materials, tools, tackles, machinery etc. for all operation mentioned above. Payment shall be made for excavated net quantity as per plan, plus permissible side slope wherever necessary as per I.S.

Item No. 17: Providing B.B masonry in foundation and up to plinth level in c.m. (1 : 6) including racking out joints up to 12mm depth, required scaffolding, curing etc. complete as directed.

Only standard size bricks duly approved and conforming to I.S. 1077, latest edition or approved locally available size as per British system, till Govt. has allowed use of the same. In case quality of local brick is not found suitable, contractor will have to procure the approved quality of bricks from other places without any extra charge or compensation. As far as possible bricks of different size shall not be used in same work, however, in exceptional case Engineer-in-charge may permit same considering suitability.

Bricks shall have uniform surface, straight edges, giving ringing sound, properly uniformly burnt. If desired crushing strength, absorption test etc. shall have to be arranged by contractor without any extra cost. Sample of brick shall be got approved before collecting bricks on site and bricks collected on site shall confirm to approved sample.

Cement mortar shall be as specified in the item. Mortar used for the work shall be stiff as per I.S. 2250.

Before brick laying is started, brick shall be wetted to saturation point, by immersion or watering. Brickwork shall be carried out in approved bond, generally English Bond.

Brickwork shall be carried out in line and level. Each brick laid on mortar bedding shall be pressed properly so that it spreads all-round. Joints between bricks shall be not more than 10mm and not less than 5mm. Joints shall be properly filled with trowel edge. Brickbats or half brick shall not be used, except at corner or where absolutely necessary and permitted.

Each layer of brick shall be in line and plumb. Checking shall be done for verticality of the work. Vertical joint shall be perfectly vertical and horizontal joints shall be perfectly horizontal. Brick works shall be raised in uniform height and no height shall be more than 1.2 meter than other. When joint is to be left for further work, it shall be step joint. Work shall be carried out as per I.S. Code for brick laying.

Mortar that can be utilized within initial setting time of the cement, shall be mixed with water. Mortar shall be prepared on pucca platform or on steel plates platform. Mortar shall be uniformly mixed dry and then required quantity of water shall be added. If work demands, mixing of mortar in machine, same shall have to be arranged without any extra cost.

All joints vertical and horizontal shall be properly racked out to a depth of 12 mm when mortar is green and soft. The exposed faces of walls are to be provided with flush joint. Brickwork shall be cured with water for a period of 10 days, keeping constantly moist. During rainy season green work shall have to be protected from rain, by covering it with suitable covering.

Work shall be measured in volume. Any opening more than 0.5 sq.m. area shall be deducted. No payment shall be made for keeping in masonry, any pipe, sleeves, etc. supplied by department. Thickness of brick shall be paid as per standard practice half brick, full brick, 1 ½ bricks etc. as shown on drawings.

Item No. 18 Providing B. B. Masonry in C.M. (1:6) for super structure, including racking out joints 12 mm depth, scaffolding curing etc. complete as directed.

Specifications of items No.1 shall be applicable. Racking out of joints shall be done when masonry is green and mortar is wet.

Scaffolding for working, shall be fixed properly. Proper size of bullies, bamboos shall be used for wooden scaffolding. They shall be properly supported in wall, on ground and tied with string. Scaffolding shall be with arrangement to take load of materials and men working I.S. 3696 shall be followed for safety of scaffolds and ladders. Contractor shall make arrangement for proper approach with ladders etc. for inspection of work.

In case of structure with G.F. only, rate shall be applicable for parapet on terrace.

Item No. 19 Providing 112 mm thick B.B. Masonry partition wall in cm. (1:4) including racking out joints up to 12 mm depth, scaffolding, curing etc. complete (for all floors) as directed by E.I.C. with 6 mm dia bars 2 nos. at every fourth layer. Steel to be brought by the contractor.

Item No. 11 Same as Item No. 12 but with 6 mm Φ bar 2 Nos. at every fourth layer.

The specification of Item No. 10 shall be applicable for quality of bricks, mortar and workmanship. Brick work shall be in complete line and level and full bricks shall be used for work.

Payment shall be made for actual sq. meter of wall constructed.

Section : D : CONCRETE

GENERAL:

I PROPORTION:

The Proportion of fine, coarse aggregates and cement shall be as specified in item of tender where nominal mix is to be used. Proportion of material shall be carried out such that the proportion of materials is readily verifiable. Material must be measured in boxes of steel or wooden, approved by EIC. Box to be used for which aggregate, its size etc. shall be clearly marked on box. No ramming of boxes will be permitted. Slight variation in proportion for technical requirement will have to be carried out without any extra cost. Boxes shall be filled in presence of authorized agent of Board and work shall be carried out during working hours fixed by Board or approved by Engineer-in-charge.

Where strength of concrete is specified instead of nominal mix, contractor will have design mix for the specified strength as provided in IS code for design mix. Proportion shall be used on weight of ingredients of concrete using specified size of the coarse aggregate in item. If ordered, contractor will have to get economical design from Gujarat Engineering Research Institute or other approved institution.

Where permitted, in case of small works, proportional of weight basis can be converted to volumetric for use at site with maintaining same quality of aggregates as used in designing the mix. Design mix shall be got approved and minimum cement if specified shall have to be used.

Any change in source of aggregate will require redesigning of the concrete mix.

The engineer shall have right to inspect the source of materials used and contractor will have to arrange for testing of material, if ordered, without any extra cost.

II MATERIALS:

Coarse aggregate & fine aggregate i.e. black Trap metal, Grit, sand etc. shall conform to IS 353 for aggregate from natural source. Aggregates shall be strong, hard, durable, free from foreign materials and adherence. If found necessary, contractor shall have to arrange testing of aggregate according to IS 2386 & IS 576.

Coarse aggregate shall be of specified size in the item viz 40 mm, 20 mm, 10 mm etc. Where gradation is to be done in mix design, it shall be properly graded. Coarse aggregates shall be free from mica, shale etc. The pieces shall be angular in shape having granular or crystalline surface, triangular, flaky & laminated should not be used. If ordered by Engineer-in-charge, aggregates shall have to be screened or washed. Samples of coarse aggregates to be used shall be got approved and source of approved quality material shall not be changed without prior approval.

Sand shall be clean river sand of quality approved as per IS confirming to gradation zones. Sand shall have fineness modulus of not less than 2.2 or more than 3.2.

When sufficient quantity of aggregates are to be collected. they shall be stacked separately in piles to avoid inter mixing. Mixing of earth, organic materials and other foreign materials shall be avoided. Rakers shall be used for lifting of coarse aggregates. Coarse aggregate having specific gravity of less than 2.6 shall not be used.

Cement shall be ordinary Portland cement unless otherwise specifically specified. One bag of cement is considered 50 kg. of cement. If cement is to be procured by contractor from outside,

certified report that cement confirms to the provision of I.S. shall be furnished if demanded. If necessary, testing will have to be carried out, in approved laboratory without any extra cost. For compressive strength and initial setting time test as per I.S.456.

Water to be used for mixing and curing shall be potable water free injurious and deleterious materials confirming to IS 3025, proper storing facility at site shall be provided by contractor and see that water do not get contaminated – The suitability of water for making concrete shall be ascertained. Water shall confirm to the test as given in I.S.3025.

(III) MIXING:

Ingredients i.e. cement, sand and coarse aggregates shall be measured by weigh batcher or volumetric boxes as specified or approved. Boxes for each component shall be prepared for such quantity that will be required for one bag of cement.

All ingredients shall be mixed in mechanical mixer. Ingredients shall be first mixed dry for 1 minute and then required quantity of water is added as per design and mixed for minimum 1 ½ minutes till concrete is uniform. Entire concrete in the mixing drum shall be discharged in pre operation before raw materials for second batch is feed into the drum.

Concrete which can be laid before initial setting time of cement shall be prepared. Party set or tempered concrete shall not be used. Mixer machine, weigh batcher etc. shall be cleared after completion of work. Mechanical mixture shall comply to I.S.1791.

For checking consistency and workability of concrete, slump test shall be carried out as per IS 1199 if desired by Engineer-in-charge.

(IV) LAYING:

Before laying of concrete, shuttering and reinforcement shall be got checked. Where inserts are to be provided, they shall be fixed properly at places shown. Concrete shall be laid on cleaned surface. Concrete shall be laid such that ingredients do not get separated and on segregation of concrete is caused. Concrete shall be consolidated properly with vibrators or other approved method according to the requirement of jobs. Joints in concrete shall be left as shown or as directed by Engineer-in-charge. Where concrete is to be place from height, necessary chute shall be provided.

(V) CURING:

Concrete work shall be cured for minimum period of 15 days. Horizontal surface shall be cured by ponding and vertical surface shall be kept wet by tying gunny cloth or gunny bags and keeping them wet by spraying or sprinkling water. Where structure is at higher level contractor shall arrange for pumping arrangement for water. Water tight sump may be prepared on site or storing of water for curing and other uses.

Curing is important for gaining strength of cement structure. Hence full proof arrangement is required to be made. If curing is found sufficient, the same shall be arranged by department as risk and cost of contractor and charges as per rules shall be recovered from contractor's bills.

(IV) FINISHING

Concrete work where specified in item as exposed surface shall be plastered 12mm thick in CM 1:3 as per specifications of plastering item. Any finishing required to make surface in level of flush to adjoining surface shall be made by contractor with mortar specified portion of concrete. Cement required to plastering of finishing shall be drawn separately. In plastering of slab bottom, chhajjas etc. wherever patta, groove, bend etc. are shown same shall be executed in this item without any extra cost. Where slopes is to be given for drainage and is not provided properly will have to be done without any extra cost. Edges of beam, pillars, etc. where chamfering is shown or instructed shall be done without extra cost.

If concrete surface is found honey combed and same is rejected by Executive Engineer, it shall have to be dismantled and recasted by contractor without any extra cost at his risk and cost.

(VII) SHUTTERING:

The form work shall be rigid, sufficiently strong and well anchored to bear the load which it has to take without any distortion. It shall be backed sufficient so as not to budge of twist. Form work

shall be of steel plates or plywood. Where exposed surface is desired, plywood shuttering will have to be provided. All surface coming in contact with concrete shall be applied with shuttering oil after cleaning properly. Props supporting from work shall rest on pucca platform. Adjustment of height shall be done with wooden wedges. Spacing of props shall be as instructed by Engineer-in-charge of work.

Form work shall be got checked from the Executive Engineer or his authorized agent and on clearance only, further work should be done. Necessary opening, in form work, for providing hooks, kada or other inserts will have to be made by contractor, as instructed, without any extra cost.

Removal of form work shall be carried out slowly and at the specified period as under. In case it is ordered to contractor to keep for more period, considering quality of cement or other factors, same will have to be done by contractor. Minimum period of deshuttering shall be as under.

1. Vertical surface 24 hours.

2. Slab upto 4.5M span 8 days

More than 4.5M span 14 days

3. Beam soffits (bottom) 20 days

Removal of shuttering shall be done only on getting clearance from Ex. Engr. in charge of work.

Various IS. Specifications for scaffolding materials and code of practice shall be followed.

(VIII) MEASUREMENT & PAYMENTS:

Unless otherwise specified separately, item of concrete work shall be inclusive of shuttering work required for the same with scaffolding, ladders etc., No separate payment should be made for keeping holes, pockets, keeping inserts in position etc.

Payment of concrete work shall be made on basis of lowest rate quoted for the items, no deduction will be made for reinforcements, opening of less than 1/20 Sq.M.in area where measurement is in sq.m. 1/150 cu.m. where concrete is to be measured in CU. M.

Rate quoted for the item shall be inclusive of all materials, ingredients, labour, mixer & other machinery, shuttering, scaffolding, laying in position and fixing of all inserts curing other requirements for the complete execution of item.

ITEM NO. 20 : Providing and laying c.c. (1:4:8) for foundation and plinth with brickbat or gravel or picked up metal or hand broken stone, of size 40 to 60 mm as coarse aggregate, including mixing, watering, ramming, consolidation etc., complete as directed.

General specification for concrete work shall be applicable. Coarse aggregate to be used shall be approved quality of well-burnt brickbats, gravel or metal. Proportion of ingredients shall 1:4:8 i.e. one part of cement 4 parts of sand & 8 parts of coarse aggregate.

Coarse and fine aggregate shall be clean, free from foreign materials. Brickbats shall be from well-burnt bricks. No debris or used bricks with mortar shall be allowed as brickbats. Aggregates shall be well graded of size specified. Where thickness of concrete is more than 150 mm it shall be laid in 2 layers. Each layer to be consolidated with rammers properly. Second layer shall be laid only after first layer is completed and cleared for laying second layer.

Before placing concrete for base in trenches or below column footing etc., area shall be cleared of all injurious and foreign materials, bottom shall be moisten with water so as not to absorb water of concrete.

After laying of concrete, it shall be checked for top level to be provided and for correct thickness.

Curing shall be done for minimum period of 8 days. If sufficient arrangements of curing is not found satisfactory, Board may arrange for curing work at the cost of contractor.

Payment shall be made for cu. mtrs. of concrete laid as per details given in drawing or as directed as site.

ITEM NO. 21: Providing & laying C.C. (1: 2 : 4)/M-15 or C.C. using 12mm to 20mm size black trap machine crushed metal for all types of RCC structure like coping, lintels, slabs, RCC parapet, Paradi, staircase, steps, landing slab, chhajas, shelves, footing, columns, beams etc. including mixture machine, necessary shuttering, ramming watering and finishing honey combed surface if any, scaffolding etc. completed for all floors.

The general specification of cement concrete shall be applicable. Item provides for all kinds of RCC work for building, for building, for all floors i.e. all elevations as per drawings, item includes shuttering work also.

Honey combed surface, if any, shall be finished with C.M. 1:2, However if it is felt by Engineer-in-charge that Honey combing is more and structure is required to be recast it shall be done by contractor with dismantling of original concrete. Nothing extra shall be payable for dismantling as well as recasting work.

Whenever surface if bulged or not found in line & level, contractor will have chip out, finish and bring in line & level without any extra c

ITEM NO. 22 : Providing and laying c.c. (1:3:6) for foundation and plinth with brickbat or gravel or picked up metal or hand broken stone, of size 20mm to 25 mm as coarse aggregate, including mixing, watering, ramming, consolidation etc., complete as directed.

General specification for concrete work shall be applicable. Coarse aggregate to be used shall be approved quality of well-burnt brickbats, gravel or metal. Proportion of ingredients shall 1:4:8 i.e. one part of cement 4 parts of sand & 8 parts of coarse aggregate.

Coarse and fine aggregate shall be clean, free from foreign materials. Brickbats shall be from well-burnt bricks. No debris or used bricks with mortar shall be allowed as brickbats. Aggregates shall be well graded of size specified. Where thickness of concrete is mote than 150 mm it shall be laid in 2 layers. Each layer to be consolidated with rammers properly. Second layer shall be laid only after first layer is completed and cleared for laying second layer.

Before placing concrete for base in trenches or below column footing etc., area shall be cleared of all injurious and foreign materials, bottom shall be moisten with water so as not to absorb water of concrete.

After laying of concrete, it shall be checked for top level to be provided and for correct thickness.

Curing shall be done for minimum period of 8 days. If sufficient arrangements of curing is not found satisfactory, Board may arrange for curing work at the cost of contractor.

Payment shall be made for cu. mtrs. of concrete laid as per details given in drawing or as directed as site.

ITEM NO. 23 :Providing & laying M.S. reinforcement in position including cutting, bending, hooking &binding the reinforcement with approved quality of binding wire etc. completed as per design(Providing chairs &supports etc. will be paid for under the item)

(A) Plain bars:

Plain bars to be used shall confirm to grade Fe-415 to IS 1786. The specification specified above shall be applicable. Rerolled bars shall not be used. Wherever specified in drawing or where instructed plain bars shall be used.

(B) Tor steel:

The general specifications as specified above shall be applicable. Bars shall confirm to grade Fe-415 and IS 1786.

Item No. 24. Providing and placing 40 mm thick and 300 mm to 450 mm wide PSC/RCC cover (for clear span upto 1.2 meters) in proportion (1:1.5:3) or M. 200 with necessary reinforcement or 10 mm Ø, 4 Nos. of bars and 6 mm distribution bars at 150 mm c/c as per drawing and design including finishing the all surfaces with cement plaster, curing by placing in water

pond for seven to ten days, necessary M.S. Bar lifting arrangement etc. completed as per drawing or as directed.

For concrete work general specifications of concrete and for reinforcement specification for reinforcement as per item No. 19 shall be applicable. Thickness of the cover to be prepared shall be 50 mm. Covers shall be prepared on pucca platform prepared for this work with smooth surface. Crude oil or shuttering oil shall be applied on surface before casting of covers. Side shuttering shall be with bolting arrangement to keep edges straight. Top surface and side shall be finished smooth.

Hooks for lifting shall be provided at places shown and of approved design. Curing of the covers shall be done for 10 days. For this marking of, date of, casting shall be made on cover. Rate quoted shall be inclusive of fixing of cover on trenches on site.

Payment will be made on sq. metre basis. Rate quoted shall be for all materials, labour, tool, plants, etc. required for job.

Section: E: PLASTERING

Item No. 25 : Providing 12mm to 15mm thick cement plaster in c.m. (1:3) including finishing the surface smooth cement near finishing, necessary drip molding, scaffolding, curing etc, complete with 3 coats of white or color wash as directed (for all floors).

Cement to be used for this work shall be confirm to I.S. 269 or I. S. 1489 as the case may be. Water shall be potable water free from impurities. Sand shall confirm to IS. 1542. Sand shall be free from dust, clay, fine silt, organic impurities etc.

Before plastering work is started joints of brickwork, if not racked during masonry work shall be racked out 20mm deep. Racking of joint shall be done such that masonry work is not damaged. Where plastering is to be done on old plastered surface or concrete surface it shall be roughened to provide sufficient bonding for plaster. Surface to be plastered shall be thoroughly wetted for 6 hours before plastering work is commenced. Plastering work shall be carried out only after surface to be plastered is examined and Okayed by the Engineer.

Cement and sand shall be mixed dry in proportion specified in item. Water shall be added after uniform dry mix is prepared, just enough to form workable paste. Patches of plaster of 100mm x 100mm should be prepared at 3 meters apart horizontally and vertically to correct plane and to specified thickness. In case of ceiling, plastering shall be truly horizontal.

Plastering shall be done in single coat or two coats as per item and according to thickness specified. Mortar shall be dashed with surface with trowel and then worked with wooden straight edge or aluminum straight edge box section. Surface shall be finished smooth to the satisfaction of Engineer. Lime neeru or cement neeru as specified in item shall be applied and finished smooth by working with trowel.

Portion in which dado or skirting is to be provided shall be marked and left un plastered. At junction of ceiling and wall, wall shall be plastered about @ 300mm ht. with ceiling and further portion shall be plastered with wall plastering.

Plastered surface should be cured for minimum period of 7 days. Marking shall be done on wall indicating the date of plastering, to observe, curing is done for required period. Plastering work done shall be checked from department's authorized agent regularly at the end of day's work and any rectification to be carried out, shall be attended immediately.

Plastering shall be measured for actual area plastered in square meter and paid accordingly. Doors, windows, ventilators, opening etc. shall be deducted. Rate quoted shall be inclusive of plastering any type of surface, finishing corner, angles, providing, groove, drip molding in chhajas etc. necessary scaffolding for plastering with all materials, labour, tools etc. complete with 3 coats of white or color wash.

Wash shall be prepared from fresh lime slacked on the spot. Lime shall be stirred till it attains, consistency of thin cream. It shall be screened with cloth. Gum or additive like fevicol, for

plastering shall be added in proportion as instructed at site or as per manufacture's specifications. Little indigo shall be added to get proper whiteness. In no circumstances, salt shall be added as gumming material.

White washing shall be applied in 3 coats. Each coat shall be applied and allowed to dry and before applying second coat approval of Engineer shall be obtained. In case of color wash approved quality coloring tube or matter shall be added to get required color. Before applying white or color wash surface shall be properly cleaned.

Where painting is to be done with distemper same shall be applied as per manufacture's instructions and as per details given in Section F.

Item No. 26: Providing 12mm to 15mm thick sand faced cement plaster in single coats, in c.m. (1:3) finishing with sand faced machine or sponge including making grooves in plaster, curing scaffolding etc., complete as directed.

Specification of item No. 1 shall be applicable. Sand faced plaster shall be done in single coats. of 12mm shall be applied in c.m. (1:3) of plaster shall be with selected coarse sand. and brought to plane surface water shall be absorbed by special sponge piece so that sand particles are observed on the surface. Sample piece shall be prepared first and got approved and whole work shall be carried out accordingly.

Final coat of lime or cement neeru finish is not to be provided in this item. Surface shall be cured for minimum 10 days after coat is applied. Wherever shown in drawing or directed necessary groove, drip molding etc., shall be provided. Rate quoted shall be inclusive of materials, labour, tools, plant and scaffolding in execution of item for all floors.

Item No. 27 : Providing 75mm quarter round water proofing cement vata in c.m. (1 : 2) at junction of walls and slab in parapets, weather sheds, cantilever, including finishing the top with smooth cement finishing using water proofing compound, curing etc. complete directed.

Cement and sand to be used for this work shall be as per standards specified in item of concrete and plastering work. Cement and sand mortar shall be in proportion of one part of cement and two parts of sand. Water proofing compound approved by competent authority shall be added as per the details supplied by manufacturer. All ingredients shall be mixed dry to from uniform mixing.

Surface where vata is to be provided shall be roughened so as to give proper bond with mortar. Surface shall be cleaned and watered before work is started.

Water shall be added to dry mix in the required quantity to form workable paste. Cement water slurry shall be applied to the surface before mortar for vata is applied.

Vata shall be finished smooth in shape. A sample of vata shall be prepared and got approved.

Work shall be cured for minimum 10 days. After curing period is over, 3 coats of white or color wash shall be provided to the vata as instructed by Engineer.

Payment shall be made on actual running meters of vata provided based on unit rate quoted which shall be for all heights as per drawing.

Item No. 28 :- Removing the existing damaged plaster 150 m.m. wide on both sides of cracks and filling the cracks with cement mortar in 1:1, fixing the 18 gauge wire mesh having width 200 to 300 m.m. with nails and finishing the surface with cement plaster I C.M. (1:3) in such a way, that the surface is leveled with the existing surface, The item includes providing & fixing 18 gauge wire mesh by means of nails, & finishing & including scaffolding etc. completed as directed by E.I.C.

The specification shall be adhered to the description of the item, & as directed by E.I.C.

Item No. 29:- Scraping the white wash from wall surface, ceiling, etc. with sand paper, including cleaning the scales & floor, scaffolding etc. completed as directed by E.I.C.

Existing white or coloured surface is to be scrapped before application of other distemper of paint. Surface shall be cleaned with sand paper , and white wash shall be completely removed, care shall be taken to see that, scratches are not observed on surface, & not any damaged is done. After all white wash is removed or at end. Of days work floor be cleaned with water. Necessary scaffolding shall be provided by the contractor.

Payment shall be made for actual sq. Meters of area scrapped, and white or colour wash is removed completely, as instructed by E.I.C. Rate quoted shall includes cleaning walls. ceilings. floor etc.

Item No.30:-Scraping the white wash from wall surface, ceiling, etc. with sand paper including cleaning the scales floor scaffolding etc. complete as directed by E.I.C.-but oil painting on Iron works. with emery paper.

For removal of paited Iron work like, grill work, truss, columns and other structures. Scrapping shall be done by using emery paper. Care shall be taken, So that, no damage is done to surface. Surface of structure shall be completely cleaned by removal of paint applied. Specification of item No. 29 for cleaning shall be applicable. Payment shall be made for Sq. meter of area scrapped , and cleaned as instructed.

Item No.31:- Scraping the white wash from wall surface, ceiling, etc. with sand paper including cleaning the scales floor scaffolding etc. complete as directed by E.I.C.-but oil painting on wood works with sand paper.

The specification of item No.30 shall be followed. Paint on wood work shall be removed by using sand paper. For payment, it shall be paid I Sq. meter. For door, window, vetlator etc. 2 times measurement of one side shall be paid for fully paneled window, door, and ventilator, and partly glazed and partly paneled, 1&1/2 times of one side, and for fully glazed, one side. This will include all frame etc. complete.

Item No.32:- Scraping the white wash from wall surface, ceiling, etc. with sand paper including cleaning the scales floor scaffolding etc. complete as directed by E.I.C.-but For Distemper/Plastic paint, with sand paper.

The specification of item No. 29 shall be followed.

Item No.33:-Providing & applying 2 coats of white or colour wash, including necessary Scaffolding etc complete as directed by E.I.C.

Where new surface to be painted, it shall be cleaned properly. All dust, loose

Material on surface shall be removed. All depressions, etc. on surface, holes etc. shall be filled

And leveled, in case of old surface, to be painted. If scrapping of old white wash/painting is included, the same shall be done as provide in scrapping item.

The wash shall be prepared from fresh lime slacked on spot. 5 liters of water is to Be added to 1 kg of slacked lime. The slacked lime shall be stirred up till it attains consistency of thin cream. When properly mixed, it shall be stained through cloth. Gum 40 gm. In 10 liters. Water, or fevicol as per manufacturer's instructions. Shall be added in the wash to have stickiness. White wash shall be applied 2 or 3 cats as per item. Indigo at 2 gm. Per kg. of lime shall be added in the wash to get bright whiteness. Sufficient quantity shall be prepared in one batch so that on application, is not observed due to various batch.

The coat shall be laid vertical and horizontal alternatively. Second coat shall be applied only after previous coat has dried, and approved by E.I.C. Surface to be washed shall be got approved before commencing work, and as per completion of work. If surface not found non uniform and in patch, whole surface will have to be given additional coat without any extra cost, to give uniform wash application.

Rate quoted shall be for material, labour, scaffolding, cleaning of surface, before starting work, and cleaning floor, door, window, etc. after completion of work. If surface found powdery, work shall be rejected.

Measurement shall be taken as per I.S.1200 (part-13) 1987 (forth revision) and deduction for the opening shall be made as follows as case may be.

1) Dedctions:

For jambs, soffits, sills, etc. for opening not exceeding 0.5 S.mt. each in area, for ends of joints, beams, posts, girders, steps, etc. NOT EXCEEDING 0.5 S.Mtr in each area, ad for openings, exceeding 0.55 S.Mtr, and not exceeding 3 S.Mtr. each in area. Deductions and additions shall be made in the following manner.

- a) No deduction shall be made for ends of joints, beams, posts etc. and opening not exceeding 0.5 S.Mtr. each and no addition shall be made for reveals, jambs, soffits, sill of the opening nor for finish around ends of joints. Beams, posts, etc.
- b) Deduction for openings exceeding 0.5 S.Mtr. but not exceeding 3 S.Mtr. each shall be made as follow

1) When bth faces of wall are provided with the same finish. Deduction shall be made for one face only.

2) When each face of wall is provided with a different finish, deduction shall be made for that side, on which width of reveal is less than that of the other side, but no deduction shall be made on the other side, where width of reveal on both faces of wall are equal, deduction Of 50 percent of area of opening

On each face shall be made from area of finish.

3) When only one face is treated and other face is not treated, full deduction shall be made, if width of reveal on the treated side is less than that on the untreated side. Neither deduction for the opening, nor addition for reveal, jambs, soffits, sill, etc. shall be made.

4) When width of door frame is equal to thickness of wall or is projecting beyond the thickness of wall, full deduction for opening shall be made from each face of wall.

5) When the reveal is is only one side, full deduction for the face having no reveal shall be made, and for the face having reveal, deduction of 50 percent of the opening shall be made.

2) In case of opening of areas above 3 S.Mtr. each, deduction shall be made for openings, but jambs,soffits, and reveals shall be measured.

3) no deduction shall be made for attachments, such as casings, conduits,pipes, Electric wiring, and the like.

4) Corrugated surface shall be measured flat as fixed and not girthed. Quantities so measured shall be increased by the following percentages, and the resultant shall be included in general areas.

- | | |
|---|------------|
| a) Corrugated sheet | 14 percent |
| b) Corrgated asbestos cement sheet | 20 percent |
| c) Semi-corrugated asbestos cement sheet | 10 percent |
| d) Nainital pattern roofs (plain sheeting with rolls) | 10 percent |
| e) Nainttal pattern roofs with corrugated sheets | 25 percent |

Item No.34:- Providing & applying 3 coats of oil bound distemper of approved shade and made including scaffolding touching with putty, smoothening the surface etc. complete. As directed by E.I.C.

Distemper of approved brand and manufacturer be used. The shade to be applied shall be got approved from Engineer before application. The surface to be distempered shall be cleaned as described in specifications of No. 5. Uneven surface or holes etc., in surface, shall be made to

correct plane by filling holes and putty application. Distemper shall be added to quantity, of water as specified by manufacturer. It shall be mixed uniformly and stirred, before & during use, to maintain even consistency. Quantity that can be used in a day shall be prepared.

If primary coat of whitening is specified, it shall be applied before application of distemper. The surface shall be applied with painting brush horizontal first and then vertically. This will constitute one coat. Subsequent coat shall be applied only after previous coat has dried and approved by Engineer. Numbers of coats as specified in item shall be applied. The finished surface shall be even and uniform and shall show no brush marks. Enough quantity of distemper shall be prepared to complete one room at a time. Application of distemper in a room shall be completed in same day.

After completion of work, floor, doors, windows, cup boards etc. shall be cleaned and stains on them shall be removed.

Payment shall be made on actual area painted with distemper on basis of rate quoted which shall be inclusive of all material, labour, scaffolding, additives if any.

Item No. 35 :- Providing and applying 2 coats of Acid/Alkali resisting paint of approved shade and make to wall, ceiling, including filling putty, smoothening the surface scaffolding etc., complete, as directed by E.I.C.

Acid/Alkali resisting painting of approved brand and tint be got approved before, collecting. Surface shall be cleaned as described in item of distempering. One coat of primer shall be applied to the surface, after same is made even with putty application. Primer shall be of same manufacture and suitable for Acid. Alkali resisting paint.

Acid & Alkali resisting paint shall be applied in 2 to 3 coats as per item, with either brush or with spray painting. Uniform painting on surface shall be done & got approved. manufacturers instructions regarding use of paint be followed.

1. MEASUREMENT OF PAINTING (IS 1200(Part. 15) - 1987) :

Painting, except where otherwise stated, shall be measured in square meters.

1.1 No deduction shall be made for opening not exceeding 0.5m² each, and no addition shall be made for painting to beading, molding, edges, jambs, soffit, sills etc, of such openings.

2. In case of fabricated structural steel and iron work, priming coat of paint shall be included with fabrication. Subsequent coats of paint shall be measured separately on the basis of weight of steel work and iron work or in square meters. The weight/area of steel, sheet plate and strip, rolled steel sections, steel rods and steel strips forged steel, steel casting and steel tubes shall be taken from relevant Indian standards. If rivet heads, bolt heads (with or without washers), nuts (with or without washers and including projecting portion of shank) are picked out in a line different from that of adjacent work, these shall be enumerated and measured as extra over.

Note: - No addition shall be made to the weight calculated for the purpose of measurement of steel and iron work for the paint applied either in shop or at site.

3. Painting work upto 10 cm in width or in girth and not in conjunction with similar painted work shall be measured in running meters and shall include cutting to line where so required.
- 3.1 Cutting to line, where not included in the item, shall be measured separately in running meters.
4. Small articles upto 0.1 m² of painted surface, where not in conjunction with similar painted work, shall be enumerated.

Painting on different types of work shall be kept separate and surface to be painted shall be described. It shall be stated whether measurements are flat or girthed. Alternatively, different surface may be grouped into one general item, areas of uneven surfaces being converted into equivalent plain areas in accordance with Table 1.

TABLE- 1 EQUIVALENT PLAIN AREAS OF UNEVEN SURFACES**(Clause 3.5)**

Sr. No.	Description work	How measured	Multiplying Factor
1.	2.	3.	4.
i)	Paneled or framed & braced or ledged & battened or ledged, battened or ledged, battened and braced joinery.	measured flat (not girthed) including CHOWKAT or frame. Edges, chocks, cleats etc. shall be deemed to be included in the item.	1.30 (for each side)
ii)	Flush joinery.	Measure flat (not including CHOKAT or frame. Edges, chocks cleats, etc. shall be included in the item.	1.20 (for each side)
iii)	Flush shutter.	Measured flat over all.	1.20 (for each side)
iv)	Fully glazed or joinery.	Measured flat (not girthed) including CHOKAT or frame, Edges, chocks, cleats etc. shall be deemed to be included in the item.	0.80 (for each side)
v)	Partly paneled and partly glazed or gauzed joinery.	Measured flat (not girthed) including CHOKAT or frame, Edges, chocks, cleats etc. shall be deemed to be included in the item.	1 (for each side)
vi)	Fully Venetian or louvered joinery.	Measured flat (not girthed) including CHOKAT or frame. Edges, chocks, cleats etc. shall be deemed to be included in the item.	1.80 (for each side)
vii)	Weather boarding.	Measured flat (not girthed) supporting frame-work shall not be measured be included in the frame.	1.20 (for each side)
viii)	Wood shingle roofing	measured flat (not girthed)	1.10 (for each side)

ix)	Boarding with cover filets and match boarding.	Measured flat (not girthed)	1.05 (for each side)
x)	Tile and slate battering	Measured flat overall no deduction shall be made for open spaces.	0.80 (for painting all over)
xi)	Trellis (or JAFFRI) work one-way or two way.	Measured flat overall no deduction shall be made for open spaces, supporting members shall not be measured separately.	2 (for painting all over side)
xii)	Guard bars, balustrades gates, gratings, grills expanded metal and railings.	Measured flat overall no deduction shall be made for open spaces, supporting members shall not be measured separately.	1 (for painting all over)
xiii)	Gates and open palisade fencing including standards, braces, rails stays etc.,	Measured flat overall no deduction shall be made for open spaces, supporting members shall not be measured separately. (sec Note. 1)	1 (for painting all over)
xiv)	Carved or enriched work	Measured flat.	2 (for each side)
xv)	Steel roller shutters.	Measured flat (size of opening) overall; jambs guides, bottom rails and locking arrangement etc., shall be included in the item (top cover shall be measured separately)	1.10 (for each side)
xvi)	Plain sheet steel doors and windows.	Measured flat (not girthed) including frame, edges, etc.,	1.10 (for each side)
xvii)	Fully glazed or steel doors and windows.	Measured flat (not girthed) including frame, edges, etc.,	0.50 (for each side)
xvii)	Partly paneled and partly glazed or gauzed steel doors.	Measured flat (not girthed) including frame, edges, etc.,	0.80 (for each side)
xix)	Collapsible gate.	Measured flat (size of opening)	1.50 (for painting all over)

Note 1:- The height shall be taken from bottom of lowest rail, if palisades, do not go below it or from lower end of palisades if they project below lowest rail, upto top of palisades, but not upto top of standards if they are higher than palisades.

Note 2:- Where doors, windows, etc., are of composite types other those included in this table different portions shall be measured separately with their appropriate coefficients, centre line of common rail being taken as the dividing line between the two portions.

Note 3:- Measurement of painting of doors, windows, collapsible gates, rolling, shutters, etc, as given in this table shall be deemed to include painting, if required of all iron fittings in the same shade.

Note 4:- When two faces of a door, window, etc., are to be treated with different specified finishes, measurable under separate items, edges of frame and shutters shall be treated with one or the other type of finish and measurement thereof shall be deemed to included in the measurement of the face treated with that finish.

Note 5:- In case where shutters are fixed on both faces of a frame, measurement for the door frame and shutter on one face shall be taken in the manner already described, while the additional shutter on the other faces shall be measured exclusive of the frame.

Note 6:- Where shutter is provided with clearance exceeding 150 cm at top and/or at bottom, such openings shall be deducted from the overall measurement and relevant co-efficient applied.

6. Corrugated sheet surfaces and Nainital pattern roof surfaces shall be included with plain surfaces after increasing their areas by the following

- | | |
|--|---------------|
| a) Corrugated sheets. | : 14 percent |
| b) Nainital pattern roof (plain sheets with rolls) | : 10 percent. |
| c) Nainital pattern roof with corrugated sheets. | : 25 percent |
| d) Asbestos cement sheets. Corrugated | : 20 percent |
| e) Asbestos cement sheets, semi-corrugated. | : 10 percent |

Payment shall be made for actual area in Sq. mtr. covered with paint or on weight basis as specified in item unit.

Painting shall be done such that all hidden locations are not left out. Care shall be taken to see that floor, walls and other surfaces are not spoiled due to paint stains. Paints stains shall be removed and cleaned with thinner or other approved means. Special care shall be taken while painting over bolts, nuts, rivets, over laps, etc.

Item No. 36:-Providing & applying 2 coats of OIL PAINT of approved shade & make to IRON WORK including cleaning the surface by coarse paper, scaffolding, etc complete as directed by E.I.C.

Surface to be painted shall be cleaned of oil paint, rusting, grease, dust and other foreign adherence. Coarse & fine emery paper shall be used for cleaning surface, according to requirement of cleaning.

Sample of paint shall be got approved, and paint shall be collected of same brand, manufacture and tint.

On the prepared surface after removal of oxide formation dust etc. Primer coat of readymade primer shall be applied on new surface. Prime shall be of same manufacture of paint. The primer shall be applied with brush or spray painting, worked well in to the surface and spread even and smooth. The painting shall be done bur crossing and lying off. It consist of covering area with paint, brushing surface for first times over and then brushing alternatively in opposite direction, and finally lightly in a direction right angle to the same. This will constitute one coat.

5. MEASUREMENT OF PAINTING (IS 1200(Part. 15) - 1987) :

Painting, except where otherwise stated, shall be measured in square meters.

1.1 No deduction shall be made for opening not exceeding 0.5m² each, and no addition shall be made for painting to beading, molding, edges, jambs, soffit, sills etc, of such openings.

6. In case of fabricated structural steel and iron work, priming coat of paint shall be included with fabrication. Subsequent coats of paint shall be measured separately on the basis of weight of steel work and iron work or in square meters. The weight/area of steel, sheet plate and strip, rolled steel sections, steel rods and steel strips forged steel, steel casting and steel tubes shall be taken from relevant Indian standards. If rivet heads, bolt heads (with or without washers),

nuts (with or without washers and including projecting portion of shank) are picked out in a line different from that of adjacent work, these shall be enumerated and measured as extra over.

Note: - No addition shall be made to the weight calculated for the purpose of measurement of steel and iron work for the paint applied either in shop or at site.

7. Painting work upto 10 cm in width or in girth and not in conjunction with similar painted work shall be measured in running meters and shall include cutting to line where so required.
- 3.2 Cutting to line, where not included in the item, shall be measured separately in running meters.
8. Small articles upto 0.1 m² of painted surface, where not in conjunction with similar painted work, shall be enumerated.

Painting on different types of work shall be kept separate and surface to be painted shall be described. It shall be stated whether measurements are flat or girthed. Alternatively, different surface may be grouped into one general item, areas of uneven surfaces being converted into equivalent plain areas in accordance with Table 1.

TABLE. 1 EQUIVALENT PLAIN AREAS OF UNEVEN SURFACES

(Clause 3.5)

Sr. No.	Description work	How measured	Multiplying Factor
1.	2.	3.	4.
i)	Paneled or framed & braced or ledged & battened or ledged, battened or ledged, battened and braced joinery.	measured flat (not girthed) including CHOWKAT or frame. Edges, chocks, cleats etc. shall be deemed to be included in the item.	1.30 (for each side)
ii)	Flush joinery.	Measure flat (not including CHOKAT or frame. Edges, chocks cleats, etc. shall be included in the item.	1.20 (for each side)
iii)	Flush shutter.	Measured flat over all.	1.20 (for each side)
iv)	Fully glazed or joinery.	Measured flat (not girthed) including CHOKAT or frame, Edges, chocks, cleats etc. shall be deemed to be included in the item.	0.80 (for each side)
v)	Partly paneled and partly glazed or gauzed joinery.	Measured flat (not girthed) including CHOKAT or frame, Edges, chocks, cleats	1 (for each side)

		etc. shall be deemed to be included in the item.	
vi)	Fully Venetian or louvered joinery.	Measured flat (not girthed) including CHOKAT or frame. Edges, chocks, cleats etc. shall be deemed to be included in the item.	1.80 (for each side)
vii)	Weather boarding.	Measured flat (not girthed) supporting frame-work shall not be measured be included in the frame.	1.20 (for each side)
viii)	Wood shingle roofing	measured flat (not girthed)	1.10 (for each side)
ix)	Boarding with cover filets and match boarding.	Measured flat (not girthed)	1.05 (for each side)
x)	Tile and slate battering	Measured flat overall no deduction shall be made for open spaces.	0.80 (for painting all over)
xi)	Trellis (or JAFFRI) work one-way or two way.	Measured flat overall no deduction shall be made for open spaces, supporting members shall not be measured separately.	2 (for painting all over side)
xii)	Guard bars, balustrades gates, gratings, grills expanded metal and railings.	Measured flat overall no deduction shall be made for open spaces, supporting members shall not be measured separately.	1 (for painting all over)
xiii)	Gates and open palisade fencing including standards, braces, rails stays etc.,	Measured flat overall no deduction shall be made for open spaces, supporting members shall not be measured separately. (sec Note. 1)	1 (for painting all over)
xiv)	Carved or enriched work	Measured flat.	2 (for each side)
xv)	Steel roller shutters.	Measured flat (size of opening) overall; jambs guides, bottom rails and locking arrangement etc., shall be included in the item (top cover shall be measured separately)	1.10 (for each side)
xvi)	Plain sheet steel doors and windows.	Measured flat (not girthed) including frame, edges, etc.,	1.10 (for each side)
xvii)	Fully glazed or steel	Measured flat (not girthed) including frame,	0.50 (for

	doors and windows.	edges, etc.,	each side)
xvii)	Partly paneled and partly glazed or gauzed steel doors.	Measured flat (not girthed) including frame, edges, etc.,	0.80 (for each side)
xix	Collapsible gate.	Measured flat (size of opening)	1.50 (for painting all over)

Note 1:- The height shall be taken from bottom of lowest rail, if palisades, do not go below it or from lower end of palisades if they project below lowest rail, upto top of palisades, but not upto top of standards if they are higher than palisades.

Note 2:- Where doors, windows, etc., are of composite types other those included in this table different portions shall be measured separately with their appropriate coefficients, centre line of common rail being taken as the dividing line between the two portions.

Note 3:- Measurement of painting of doors, windows, collapsible gates, rolling, shutters, etc, as given in this table shall be deemed to include painting, if required of all iron fittings in the same shade.

Note 4:- When two faces of a door, window, etc., are to be treated with different specified finishes, measurable under separate items, edges of frame and shutters shall be treated with one or the other type of finish and measurement thereof shall be deemed to included in the measurement of the face treated with that finish.

Note 5:- In case where shutters are fixed on both faces of a frame, measurement for the door frame and shutter on one face shall be taken in the manner already described, while the additional shutter on the other faces shall be measured exclusive of the fame.

Note 6:- Where shutter is provided with clearance exceeding 150 cm at top and/or at bottom, such openings shall be deducted from the overall measurement and relevant co-efficient applied.

6. Corrugated sheet surfaces and Nainital pattern roof surfaces shall be included with plain surfaces after increasing their areas by the following

- a) Corrugated sheets. : 14 percent
- b) Nainital pattern roof (plain sheets with rolls) :10 percent.
- c) Nainital pattern roof with corrugated sheets. : 25 percent
- d) Asbestos cement sheets. corrugated. : 20 percent
- e) Asbestos cement sheets, semi-corrugated. : 10 percent

Payment shall be made for actual area in Sq. mtr. covered with paint or on weight basis as specified in item unit.

Painting shall be done such that all hidden locations are not left out. Care shall be taken to see that floor, walls and other surfaces are not spoiled due to paint stains. Paints stains shall be removed an cleaned with thinner or other approved means. Special care shall be taken while painting over bolts, nuts, rivets, over laps, etc.

Item No. 37:-Providing & applying 2 coats of OIL PAINT of approved shade & make to WOOD WORK including cleaning the surface by coarse paper, scaffolding, etc complete as directed by E.I.C.

The specifications of item No. 36 shall be applicable. Surface to receive paint shall be prepared with sand papering, the wooden surface , removing dust, loose particles, of paint, grease, etc. All the holes and space in joining etc. shall be filled with lappi.

Approve make and quality paint shall be procured. Paint shall be in sealed tins. And opened in presence of E.I.C. or his authorized agent. Small quantity of paint shall be taken and other shall be covered. Similarly when it is not used, it shall be kept properly closed.

Care shall be taken to see that, stains if paint are not left on floor, wall, glass, etc. Paint reaches to all faces, corners, hidden parts, etc...or member.

Item No. 38:- Providing and applying 2 coats of snowcem or equivalent cement paint, including cleaning surface and watering curing scaffolding etc. complete. As directed by E.I.C.

Waterproof cement paint snowcem or equivalent quality shall be of approved brand and manufacture and shall be applied on surface as per manufacturer's specifications.

For preparation of surface and primer, the specifications of item No. 9 shall be applicable, water proof cement paint shall be mixed in such qty. that can be utilized in one hour, Paint prepared as specified in item No. 9 or as per manufacture's specifications shall be stirred well during application. It shall be applied such that direct heat of sun is avoided during application. Next coat is applied after previous coat has set for 24 hours. Next coat shall be applied without wetting of surface, 2 or 3 coats of paints shall be applied as specified in item to get uniform shade.

Painted surface shall be cured for 7 days by sprinkling water and keeping it wet.

Rate quoted shall be including of cleaning of surface before applications of paint, cleaning area after application including stain removal, scaffolding curing etc., complete.

General:-

Relevant I.S. of B.I.S. Shall prevail for all items including material, measurements etc.

Section: G: DOORS WINDOWS, CUP BOARD, WOOD WORKS.

WOOD WORK GENERAL

The timber shall be of best quality bulsari teak or equivalent teak approved by Executive Engineer. Decision of Executive Engineer in this connection will be final. If desired by Executive Engineer, contractor shall have to arrange testing of wood samples selected by department at random, in the laboratory as instructed by department. Sample of wood approved shall be preserved and contractor shall procure wood of the approved quality only. The source of wood shall be informed to the Engineer-in-charge.

The timber to be used for wood work shall be well seasoned, closed grains, uniform texture, free from knots, rots, soft, cracks, mend, spongy spots etc. The size of frame and all members shall be final size after planning and finishing. Undersized wooden members shall not be accepted. Wood of inferior quality, undsize shall be liable to rejection.

When frames or other members are ready they shall be got checked from Engineer-in-charge and got approved for quality and workmanship. Primer coat of paint shall be applied only after clearance by Engineer-in-charge. If the wooden members are found warped, shrinked or with bad workmanship within guarantee period, the same shall have to be replaced by contractor without any extra cost and to the satisfaction of engineer-in-charge.

Before fixing, the frame of door it shall be provided with six nos. M.S. flat 37mm x 6mm and 300 mm long hold fasts fixed to the frame, with screws as directed. Hold fast shall be with split end and bent at right angle to hold fast. Holes shall be provided at other end of hold fast for fixing of screws. Sample of holdfast shall be got approved from Engineer-in-charge. Windows and cupboard shall be provided with 4 Nos. or 2 Nos. of hold fast according to the size of frame and as instructed by Engineer-in-charge in addition to horns projecting minimum 75 mm on both sides of top & bottom members. The side of frame to be embedded in the wall or in touch with wall or floor, shall be applied uniform thick coat of coal tar.

The frame shall be rebated on one side (or both sides) 12 mm deep and of full thickness of shutter and to have a return bead on the other to be chamfered or rounded as directed by Engineer-in-charge. Wherever M.S. Bars of 16 mm diameter are specified in frame as grill in windows or ventilator, they shall be provided at 100 mm c/c and shall be locked in frame for minimum 40mm deep. if M.S. flat is to be provided the flat of size 50 x 10 mm, 1 or 2 Nos. as specified, they shall be provided.

Shutters

The thickness of shutter and members of shutter frame shall be as per details given in drawing or supplied at site. Size specified shall be after planning & finishing without painting. Where single plank is specified single plank shall be used. The joint shall be tongue and groove joint. Shutter shall be single or double shutter as per drawing and details given or as directed at site. For paneled doors the panel to be raised feather tongued into style and rails with beaded edges on both sides. Thickness of styles & rails shall be 37 mm and that of panel shall be 30 mm. The arrangement of pannels shall be as directed by the Engineer-in-charge and his decision will be final. The shutter styles, top, bottom, lock and frieze rods to be molded on both sides. The sample of shutter shall be got approved before taking work on full scale. Size of bottom, top & lock rail and ledges shall be as instructed by Engineer-in-charge.

Joints :

All jointing shall be brought on all faces and finished off by hand with sand paper with slightly rounded areises.

The joints shall be pinned with hard wood pins and put together with fevicol. Joining shall be by means of mortise and tennon or dovetailed joints as approved. Any joinery work, which shall split, fracture, shrink or shows flap or other defects shall be removed and replaced with sound material at the contractor's expenses.

Fixtures and fastening :

Oxidized iron, brass or aluminum fixtures as specified in item shall be provided in best workmanship, maintain level and line with approved quality and size screws. Screw shall be never hammered but driven with screwdriver. The fixture to be used shall be got approved first and approved samples of all fixtures shall be kept on site easily available for inspection.

1. For main door.

- | | | |
|----|--|----------|
| 1. | 300 mm long 16 mm dia aldrop | 1 No. |
| 2. | 300 mm long flat latch. | 1 No. |
| 3. | 100 mm long but hinges or 150 mm
long or suitable parliamentary hinges. | 3 Pairs. |
| 4. | 150 mm long tower bolts. | 2 Nos. |
| 5. | 100 mm long handles (150 mm long). | 2 Nos. |
| 6. | Door catchers | 2 Nos. |
| 7. | Magic eye. | 1 Nos. |

2. Internal door.

- | | | |
|----|---|----------|
| 1. | 250 mm long 16 mm dia aldrop | 1 No. |
| 2. | 250 mm long flat latch. | 1 No. |
| 3. | 100 mm butt or 150 mm hinges or suitable
Parliamentary hinges. | 3 Pairs. |
| 4. | 100 mm long tower bolts. | 2 Nos. |
| 5. | 100 mm long handles 150 mm long. | 2 Nos. |
| 6. | Door catchers | 2 Nos. |

For bath & door 16 mm dia 250 mm long aldrop and one handle on both sides shall be provided.

3. Windows

- | | | |
|----|---|--------|
| 1. | 75 mm long butt hinges or parliamentary hinges 2 to 3 pair as per size. | |
| 2. | 100 mm tower bolts | 4 Nos. |
| 3. | 100 mm handles. | 2 Nos. |
| 4. | 150 mm hook eye or stopper of approved quality. | 2 Nos. |

4. Ventilator.

- | | | |
|----|-----------------------|--------|
| 1. | 75 mm butt hinges | 1 Pair |
| 2. | 100 mm tower bolts. | 1 Nos. |
| 3. | 150 mm long hook eye. | 2 Nos. |

5. Cupboard.

- | | | |
|----|------------------------|----------|
| 1. | 75 mm long butt hinges | 2 Pairs. |
| 2. | 100 mm handles | 2 Nos. |
| 3. | 100 mm tower bolt. | 2 Nos. |
| 4. | Pivot. | 2 Nos. |
| 5. | Ball catcher. | 1 No. |

The Nos. of fixtures shown above is for general arrangement but in case some change is felt necessary on site it shall be made by Executive Engineer on site and shall be binding to the contractor.

Glazing:

For all glazing of doors, windows, ventilators and cupboards all glasses shall be of best quality free from bubbles, smoke wanes, air hole, specks and other defect. Sheet glass, ground for clear as approved and instructed shall be of 3 mm thickness. The glasses shall be fixed with wire nails and putty of best quality or wooden bead of required size to flush with style or sash bar etc. The putty and the wooden battens should be finished with 3 coats of oil paints matching with other paint of doors, windows and ventilators. At the time of handing over the glazing work shall be intact. Any damage shall have to be replaced by the contractor without any extra cost.

Erection:

All doors, windows, ventilators, cupboards shall be erected in line, level and in one plane to the elevation shown in the drawing or directed by Engineer in charge at site.

Painting:

All doors, windows, ventilators, cupboard shall be given 3 coats of approved quality, brand and shade of oil paint. Each coat of paint shall be allowed to dry thoroughly before next coat is applied. The work shall not show any brush marks, ridges or drops of paint and no puddles in the corner of panels or molding etc., shall be left.

Specification of section "F" for item no. 16 shall be applicable.

Measurement:

For payment purpose of doors, windows, ventilators and cupboards, measurement will be paid outside to outside of the frame in square meter basis.

Item no 39:-Providing & fixing in position 35 m.m. thick fully paneled teak wood door with single or double shutter with 100m.m.x35m.m. size style & top rails & bottom rail of 125m.m. x35 m.m. & lock rail 175m.m. x 35 m.m. including 100 m.m. to 125 m.m.x 20 m.m. thick equal size vertical battens in panels with tongue & groove joint arrangement as per drawing without fixtures & fastening, but with 3 Nos. of 100m.m long butter parliamentary hinges for each flap of double shutter and 150 m.m. long to single shutter, as per instruction, including 3 Nos. of M.S. flat hold fast grouted in wall on each side, 3 coats of oil painting of approved shade & make etc. complete as per drawing & as per directed by E.I.C. (FIXTURES, HINGES & HOLD FASTS WILL NOT PAID SEPERATELY.) ---Only Shutters with fixtures & fastenings.

General specifications for wood work ill hold good for this item. Sample of door shall be prepared and got approved before taking work on full scale. All frame & sutters shall be got approved before applying primer coat of paint and erecting on site. Fixtures except hinges and hold fasts will not be paid separately in item of providing for them.

Paint of approved make, brand, and tint shall be got approved. Paint shall be confirming to I.S. Standard and of quality equal to 'Apolite'

Item No. 40:-Providing & fixing built in wall teak wood cup-board and 35m.m. thick shutter with 12m.m. thick NOVAPAN BHUTAN BOARD/ECO BOARD or its equivalent exterior grade phenol formeldihade resin bonded weather resistant melamine faced pre-laminated particle board as panel, without fixtures and fastenings but with 3 Nos. of hinges and hold fasts on each flap of shutter including 3 coats of painting of approved shade and make to the wood work etc. complete (WOODEN SHELVES SHALL BE PAID SEPERATELY.) as directed by E.I.C.

Only shutter with fixtures & fastenings

The specification of item No39 shall be applicable. Melamine faced weather proof plywood shall confirm to I.S.3187. Teak leaping shall be on faces of panels of shutters. Angle iron frame shall be provided with one coat of Red oxide and 2 coats of approved brand, quality, and tint,oil paint to give uniform painting. As panels are of melamine finished, no painting is required for the same. Sample of melamine faced weather proof plywood ,to be used shall be got approved and procured approved color only.

Item No.41.- Priding & fixing P.V.C. shutter in single or double leaf of 20 m.m. thick with shutter outer frame top bottom and styleof size 54x24x1.80mm thick and locking rail are of size 100x24x1,80mm thick panels are made from PVC section 200x20x1mmthick including fixing & joints with providing 3 Nos. of 100 mm long hinges on each frame. The material is approved ISI brand, color, & tint as per drawing & instruction of E.I.C. (o be used for bath & W/C only.) (Measurement shall be paid for clear size of shutter only)—But with fixtures.

B5 ALUMINIUM WORKS (FOR ITEM NO. 41 & 42)

B5.01 General:

Aluminium doors, windows etc. shall be fabricated from approved extruded sections and the manufacture and installation shall be carried out by approved specialized agency. Unless otherwise specified the fabrication shall be done with heavy gauge extruded box section. The sections free of scratches shall be of the sizes and details as shown on drawings. The details shown on the drawings indicate generally the sizes of the components parts and the general standards. These may be varied to some extend to suit the standards adopted by the manufacturers of the aluminium work.

All materials and details especially the weather-strip, gaskets and sealants shall be of approved high quality material capable of resisting the local climatical and environmental requirements.

B5.02 Shop Drawings and Samples

The Contractor shall submit complete shop drawings and samples of each type of door, windows, ventilators and other aluminium work, to the Engineer for his approval. The shop drawings shall show full size sections of doors, windows, etc. thickness of metal, details of construction, details of glazing, anchoring details, hardware as well as connection of curtain wall windows, doors and other metal work to adjacent work. Samples of all joints and method of fastening and joining etc. also shall be submitted to the Engineer for approval well in advance of commencing the work. Samples of the actual work shall be installed at the site and got approved before proceeding with the work.

B5.03 Sections:

The aluminium extrusions shall be of approved make. The sections shall be extruded from aluminium alloy of commercial quality and free from all defects impairing appearance, strength and durability. Hollow Box sections shall be extruded from Aluminium alloy as per IS : 1285. The permissible dimensional tolerances of the extruded sections shall be such as not to impair the proper and smooth functions / operation and appearances of doors and windows. For any excess weight of section used nothing extra shall be paid.

- a) Minimum tensile strength – 19 kg/mm².

- b) Maximum allowable deviation in length from a straight line of 0.5 mm / meter.
- c) Maximum allowable deviation from straight of 1 degree.
- d) Maximum permissible twist of 0.5 mm.
- e) Maximum variations in flatness of not more than $0.125 \times \text{width}/25$.

B5.04 Anodizing / Power Coating:

5.04.1 All aluminium material used shall be colour anodized for protection against corrosion in marine environmental in approved shade. The anodic coating shall conform to IS : 1868-1968 and shall be of AC20 grade with minimum thickness of 20 microns when measured as per IS660/2-1970 and density shall be atleast 32 mg/sqm. The anodic coating shall be tested in an approved laboratory by Eddy current method as per IS:6012 for thickness. Sulphuric acid shall be used as per electrolyte for the anodic process. Prior to anodizing all aluminium shall be rendered uniform in appearance free from disfiguring scratches, stains or other blemishes and etched in a caustic soda solution. Requisite tests shall also be carried out at the site as required by the Engineer and the contractor shall arrange all assistance and equipments required for the purpose.

B5.05 Protection and Handling

All Aluminium members shall be wrapped with approved self adhesive non-staining PVC tapes, and crated in a suitable manner to protect the material against any damage during transportation. The loading, unloading, storing shall be carried out in an approved manner with utmost care.

B5.06 EPDM Gaskets:

EPDM gaskets of approved make, size and profile shall be provided and installed at all locations as shown and as called for to render the installation absolutely air and weather tight.

B5.07 Sealant:

The gaps between the Aluminium member and the perimeter also any gaps in the door and window sections themselves shall be racked out as directed and filled with silicon sealant or any other sealant of approved make and colour and make to ensure complete water-tightness.

The silicon sealant shall be of such colour, and compositions that it would not stain the masonry / concrete work, shall receive paint without bleeding, will not sag or run and shall not set hard or dry out under any conditions of weather. Silicon sealant shall be applied with a special gun as per manufacturers recommendation.

B5.08 Aluminium Doors & Windows

B5.08.1 Doors:

The kick panel shall be of 1.25 mm aluminium alloy sheet conforming to IS Designation NS 3-1/2H of IS 737-1965. Specification for Wrought Aluminium and Aluminium Alloys Sheet and strip (for general engineering purposes) and shall be screwed to the frame and the glazing bar. The hinges shall be stainless steel frictional hinges of same type as in windows but of large size. The hinges shall normally be of 50 mm projecting type. Non projecting type hinges may also be used if approved. The handles for door shall be of specified design and of same specifications as the Windows. A suitable lock for door openable either from outside or inside shall be provided. In double shutter doors, the first closing shutter shall have a concealed aluminium alloy bolt at top and bottom. It shall be so constructed as not to work loose or drop by its own weight.

Single and double shutter doors may be provided with a three way bolting device. Where this is provided in the case of double door, concealed aluminium bolts may not be provided.

B.5.08.2.1 Side-hung Windows and Ventilators

For fixing stainless steel hinges, slots shall be cut in the fixed frame and the hinges inserted inside and may be riveted to the frame. The hinges shall normally be of the projecting type not less than 65 mm and not more than 75 mm wide. The pins for hinges in case of non-oxidised work shall be of stainless steel of non-magnetic type or of suitable aluminium alloy. However, in the case of anodised work, only suitable aluminium alloy for pins shall be used. Friction hinges shall be provided for side-hung shutter windows – in which case peg stay will not be required. In case of non-friction type hinges, peg stay which shall be either of cast aluminium conforming to IS Designation A.5.M of IS:617-1959 or folded from IS Designation NS4 aluminium alloy sheet conforming to IS:737-1955. It shall be 300 mm long complete with peg and locking bracket and shall have holes for keeping the shutter open in three different positions. The peg and locking brackets shall be riveted or welded to the fixed frame.

The handle for side-hung shutters, shall be of cast aluminium conforming to IS Designated A.5.M. of IS:617-1975 and mounted on a handle plate or welded or riveted to the opening frame in such a way that it could be fixed before the shutter is glazed to match the window. The handle shall be anodised. The handle shall have a two point nose which shall engage with an aluminium striking plate on the fixed frame in the slightly open as well as in closed position.

5.08.2.2 Sliding window shall have fixtures like approved nylon encased rollers, locks handles etc.

5.08.3 Protection & Final Cleaning

The doors and windows shall be suitably protected from damage until handling over. Care shall be taken not to use the doors and windows for support, centering, etc. and no scaffolding or other materials and devices shall rest on these. All the openable members shall be kept firmly closed. The PVC wrapping shall be retained till the glazing work is commenced. After the glazing and all work connected with installation of doors/windows is complete all aluminium work shall be cleaned with a suitable thinner and left in clean unblemished and in an openable condition.

5.08.4 Fabrication

All jointing shall be mechanical type. The aluminium sections joints shall be designed to withstand a minimum wind load of 175 kg. per sqm. The design shall also ensure that the maximum deflection of any framing shall not exceed $l/175$ of the span of the member. All members shall be accurately machined and fitted to form hairline joints prior to assembly. The jointing accessories such as cleats, brackets, etc. shall be of such material as not to cause any bimetallic action. The design of the joint and accessories shall be such that the accessories are fully concealed. The fabrication shall be done in suitable sections to facilitate easy transportation, handling and installation. Adequate provisions shall be made in the door and window members for anchoring to support and fixing of hardware and other fixtures as approved by the Engineer. The fabricated frames shall be square and flat with corners in a true right angle.

B5.08.5 Installation

Just prior to installation, the doors, windows, etc. shall be stacked on edge on level bearers and supported evenly.

Unless otherwise shown window/door frames shall be fixed to openings with 20 mm thick aluminium sub-frames. Width of sub frame shall be exactly the same width as the frames. The sub-frames shall be pre-fixed to the masonry surrounds with approved fasteners. The face of sub frames shall be in true line, level and plumb.

When the sub-frame is properly secured and all major internal and external finishing works are completed, the assembled doors / windows shall be placed in correct final position in the opening and fixed to the sub frames by cadmium plated machine screws of required size and spacing suited to the purpose.

Sizes, details, spacing, etc. given above are approximate and indicative only. They can be varied at the option of Engineer to suit particular sizes and situations and the contractor shall carry out the instructions of the Engineer in this regard at no extra cost to the owner. The contractor may suggest alternative methods of fixing and anchoring for consideration of the engineer while the decision of the engineer in this regard shall be final and binding.

In the case of composite windows and doors, the different units are to be assembled first. The assembled composite units shall be checked for line, level and plumb before final fixing is done. Units may have to be assembled in their final location if the situation so warrants.

Where aluminium comes into contact with masonry, concrete, plaster or some dissimilar metal, it shall be coated with an approved insulation lacquer or plastic tape to ensure that electro-chemical corrosion is avoided. Insulation material shall be trimmed off to a clean and flush line on completion.

The contractor shall be responsible for assembling composite units, bedding and pointing with mastic inside and outside, at the transoms and mullions placing the doors, windows etc. in their respective openings.

Item No. 42:-Providing & fixing P.V.C. door frame size 48x40x1.80 m.m. thick with inserting country wood in hollow part with necessary hold fasts & grouting in wall with single or double shutter of 24 m.m. thick outer frame, top, bottom & style size 54x24x1.80 m.m. thick, and lock rail size 100x24x1.80 m.m. thick panels are made from P.V.C. section 200x20x1 m.m. thick, including fixing & jointing by approved means and providing suitable corners and at all joints with providing 3 Nos. of 100 m.m. long hinges on each flap of door including fixing with frame. The material approved I.S.I. brand color & tint. As per drawing and instruction of E.I.C. (To be used for Bath & W/C. only) but with fixtures.

General specifications of wood work shall be applicable. Aluminum section to be used shall be standard section as per relevant IS standards. PVC paneling materials shall be Sintex or its equivalent make. Sample of PVC panel to be used shall be submitted with the sample. For angle iron frame, specifications of item No. 41 shall be applicable. Workmanship expected is best workmanship with specifications as described in item

Item No.43:-Providing & fixing Bajari or figure glass after removing the existing broken glass from the window/door ventilator and bedding in putty & fixed with new wooden bedding with painting & including the cost of wooden bedding of first class wood & necessary cutting of the glass. This work includes removal of hard putties from the windows and fixing the glass with new putty & G.I. pins, including supply of all materials for the successful completion of the work.

Glazing:

For all glazing of doors, windows, ventilators and cupboards all glasses shall be of best quality free from bubbles, smoke wanes, air hole, specks and other defect. Sheet glass, ground for clear as approved and instructed shall be of 3 mm thickness. The glasses shall be fixed with wire nails and putty of best quality or wooden bead of required size to flush with style or sash bar etc. The

putty and the wooden battens should be finished with 3 coats of oil paints matching with other paint of doors, windows and ventilators. At the time of handing over the glazing work shall be intact. Any damage shall have to be replaced by the contractor without any extra cost.

Erection:

All doors, windows, ventilators, cupboards shall be erected in line, level and in one plane to the elevation shown in the drawing or directed by Engineer in charge at site.

Item No. 44:-Providing & fixing 'Z' section window fully glazed/fully paneled/partly paneled/ & partly glazed with window outer frame of M.S. Angle 30x30x5 m.m. and frame of shutter with 'Z' section of F7B and middle section of 4B and 'T' section of size 20x20x3 m.m. thick for holding glass & panels of 14 gauge M.S. sheet and 4 m.m. thick figure glass/opaque approved quality glass fitting with required putty and pins and 12 m.m. square bar @ 100 to 125 m.m. C/C as guard bar welded with frame, including painting with 3 coats of oil paint with one coat of primer of approved shade, tint and make etc. as per drawing, design and as directed by E.I.C. but with all fixtures.

Steel door, windows, ventilators shall conform to IS 4351 and 1038. Doors Windows and ventilators shall be of size as specified and as described in item. Doors, windows, and ventilators shall be of approved manufacturer. Source of purchase shall be informed and sample shall be got approved. All steel doors/windows shall be pressed door/window of 18 gauge flush type with or without removable transverse. All doors/windows shall be provided with 3 way bolting device, locking arrangement, handles on both side.

Rate quoted will be with glazing, 3 m.m. thick glass free from blemish. The workmanship shall conform to relevant IS. Rate quoted shall be inclusive of erection at site, in line & level with hold fasts, painting, glazing, with glazing clips and putty or bead etc. complete. Painting shall be carried out as per specifications of oil painting of oil painting in section F.

Payment shall be made on actual square meters of doors, windows or ventilators provided as per dimensions specified on drawing.

Item No. same as per item No. 44 but with single M.S. sheet panel in the centre & beading of M.S. plate on both the sides.

The specifications of Item No. 44 shall be applicable. M.S. sheet panel in the centre & beading of M.S. plate on both sides, and m.s. bead on both sides of sheet shall be provided and screwed with frame.

The specification of Item No. 44 shall be applicable. Windows shall be as per I.S. standards. For wood and glazing, general specifications of wood work shall be applicable. 12 m.m. square bars shall be welded to frame, with provision for operating handles and stays. Sample of window is allowed to manufacture from other than standard manufacturer, shall be got approved. It shall be equivalent to Godrej or similar standard make. All wood & steel structure shall be given 3 coats of painting of approved quality, make, and tint, oil paint.

Item No.45:-Providing & fixing approved quality of cupboard with frame underneath the cooking platform with 75x90mm. teakwood frame, 25mm. thick teakwood shutter of appropriate size of style & rails with 20 gauge approved quality of G.I. wire mesh jali (MOSQUITO PROOF) as panel fixed with teakwood battens 3 coats of oil painting of approved shade & make without fixtures & fastening, but with 2 Nos of 75mm. hinges on each side flap of shutter etc. complete as per drawing.(SHELVES WILL BE PAID SEPARATELY.)

The general specification of wood work shall be applicable, G.I. 20 gauge mosquito proof jali shall be fixed to shutter frame. Shutter shall be prepared as per details given or as per detailed drawing. 3 coats of oil painting shall be provided of approved make, brand, & tint. Sample of wire mesh to be used shall be got approved before collecting.

Item No.45A:-Providing & fixing approved quality of DEODAR wooden shelves 25mm. thick net over necessary 30x30x5mm. M.S. angle iron brackets at 1.0 Mt. C/C fixed with screws including batten patty in front & side of size 45x10mm. as per instruction 3 coats of oil

painting including primer of approve shade & make on wood work & steel work completed as directed by E.I.C.(WIDTH OF THE PLANKS SHOULD NOT LESS THAN 150MM.)

Deodar wood shelves of 25mm. thick shall be provided with boarder of tekwood batten and shall be supportd on M.S. angle iron brackets of 25x25x3mm. size. Design shall be got approved. 3 coats of oil painting shall be provided to supports and planks.

Item No.46:-Providing & fixing 50 mm.dia. G.I. pipe as railing wherever required including fixing the necessary hold fasts at the end/middle and grouting the same in wall with concrete as directed in line & level and 3 coats of oil painting of approved shade & make etc. complete.

50 mm. dia. G.I. pipe shall be class C confirming to I.S.specifications. Railing shall be fabricated as per detail drawing or as instructed at site in two raws. Pipe shall be provided with necessary hold fasts at the end. And in the intermidents also. The necessary pockpckets in concrete, brickworks etc. to be made and grouted with C.C.(1:2:4). Care shall be taken to see that pipe shall be in line & level. Pipes shall be provided with 3 coats of oil painting of approved shade, make & tint, to give uniform painting.

Measurements shall be paid as per running metre of railing.

Item No.47:- Providing & laying 50 mm. thick I.P.S. flooring in C.C.(1:2:4) icluding finishing the floor with smooth cement slurry, makin diagonal lines, curing etc. complete as directed by E.I.C.

General specification of concrete work shall be applicable, I.P.S flooring is to be laid on 1:5:10, 100mm thick concrete base. Proportion of concrete shall be one part of cement, five parts of sand and ten parts of coarse aggregates by volumetric measures. Before sub grade is laid proper consolidation of earth fill shall be done & sub grade leveled. Only on approval of sub grade base, concrete shall be laid. Pegs or rod shall be driven to give uniform level and thickness of 100mm. On this prepared base 40mm thick 1:2:4 concrete by volumetric mix shall be provided. Proper slope shall be given in base concrete, if slope is shown. 40mm thick 1:2:4 concrete shall be properly consolidated by vibrator or tempering and top surface shall be finished smooth, polished with smooth cement slurry. Diagonal lines shall be marked in pattern as directed, to form square of size desired. Finished surface shall be cured for period of 8 days. Rate quoted shall be inclusive of both, base concrete & topping; materials, labours, tools, plant etc., complete required for completion of item.

Specifications of above item shall be applicable. Item is withot C.C.1:5:10 bedding however cost of cement C.C.!: 2:4 shall be on contractor`s Account.

Payment shall be made on square meters of I.P.S. flooring carried out as above.

Item No.48:-Providing & laying 20 to 25 mm tthick POLISHED KOTAH STONE MACHINE CUT EDGES on all sides of approvwd quality in floor & dedo in (1:2) lime mortar bedding & setting the stone in cement slury filling the joints with cement, curing, machine polishing etc. complete as directed by E.I.C. (a) 300 x 300mm. size with one side polished & machine cut edges.

20 to 25mm thick polished kotah stone shall be of approved quality. It shall not be laminated and shall be of uniform color and size. Size of the stones shall as specified in the item. One face of the stone shall be machine polished and edges shall be machine cut. Joints shall be very thin joint, and shall be in line or pattern approved. Rear surface shall be grooved or recessed in parts to provide key for mortar. Kotah stone shall be laid on plastered surface prepared in one plane in c.m. 1:3 as per item. Kotah stone shall be set in c.m. 1:2 for flooring. Surface of Kotahstone shall be laid to true plane, level or to fall, as directed. Joints shall be uniform and as thin as possible and in pattern approved. For flooring the joint shall be in straight, line. The joint shall be filled with white or color cement according to Kotah stone.

Item No. 49:- Providing and fixing white / colour spartek / Kajeria / Nittco Johnson or its equivalent make glazed tiles, in flooring, skirting and dado including fixing the same in cement mortar bedding (1:2) and 12mm thick back coating of cement plaster in c.m. 1:3 for base filling the joints with white cement, neatly finishing the joints to expose only white surface, curing etc. complete.

Tiles to be used shall be first quality glazed tiles of Johnson, Somani or other approved make. Tiles shall be hard well and evenly glazed, free from cracks, straight edges and in one plane. Rear surface shall be grooved or recessed in parts to provide key for mortar. Tiles shall be laid on plastered surface prepared in one plane in c.m. 1:3 as per item. Tiles shall be set in c.m. 1:2 for flooring. Surface of tiles shall be laid to true plane, level or to fall, as directed. Joints shall be uniform and as thin as possible and in pattern approved. For flooring the joint shall be in straight, line. The joint shall be filled with white or color cement according to glazed tiles.

Dado or skirting shall be fixed on plastered surface with cement paste applied on back of tiles. Corner pieces and boarder shall be fixed as directed. For fixing tiles for w.c. flooring, tiles shall be cut in required shape in best workmanship like machine. Any opening for pipe bracket etc., they shall be fixed such that it comes on junctions of tiles.

Rate quoted shall be for providing 12mm plaster base, bedding of c.m. 1:2 for setting tiles, providing & fixing tiles with necessary corner pieces and border pieces: all materials, labour, tools etc. complete.

Payment shall be made on actual square meter of area paved with glazed tiles in square meters.

Square meter of area paved with glazed tiles in square meters.

Section: M: WATER SUPPLY

General G.I. piping

G.I. pipe be used for water supply shall be of class 'c' confirming to I.S. Specifications. It shall be fixed with suitable clamps, for concealing with necessary groove in wall and finishing with C.M. When pipe is to be laid underground necessary excavation shall be done to level required. Pipe shall be given 3 coats of coal tar. For joining pipes specials of approved quality (extra thick) shall be used. If item provide painting of pipe same shall be painted with approved brand quality and tint enamel paint. All specials shall be provided as instructed/.

Skilled plumber shall be employed on job. Pipes shall be laid as per detailed drawings or as directed on site. Generally shortest route shall be followed. At connection of pipe with special, joint shall be made water tight with hemp rope and zinc white or taflon tape.

On completion of laying of pipe and before sealing of concealed pipe and underground pipe, leak proof test shall be given.

All the piping work shall be measured in running meter and rate quoted shall be inclusive of all special required and all operations required for cutting, threading, joining, excavation, making groove in wall, sealing grout, backfilling, providing clamps with screws, painting etc. complete.

Item No. 50 , 51, & 52 :- Providing and laying approved best quality of medium grade G.I. water pipe including necessary excavation upto 750mm depth refilling the trenches including with all necessary fitting like elbow, tee, union nipple, plug etc., giving water tight test etc., complete.

(a) 15mm dia pipe weighting 1.21 kg/Rmt.

(b) 20mm dia pipe weighting 1.51 kg/Rmt.

(c) 25mm dia pipe weighting 2.42 kg/Rmt.

General specification of water supply piping shall be followed. Rate shall be quoted for the diameter specified with all specials required for completing pipe work as per drawing or as directed.

I Item No. 53 7 54:-Providing and fixing approved best quality I.S.I. approved heavy G.M. wheel valves.

(a) 20mm dia valve.

(b) 25mm dia valve.

G.M. wheel valve shall be 'Leader' or equivalent confirming to I.S.S. shall be got approved before collecting on site. Inner surface of valve shall be smooth and spindle shall properly get fixed on seal. It shall be leak proof and tested quality as per I.S. Wherever G.M. wheel valve is provided below G.L. it shall be housed in a chamber with cover. Rate shall be quoted according to the sizes of wheel valve specified. Rate quoted should be for supplying and fixing in position and giving leak proof test.

Payment shall be made on actual number of G.I. wheel valves provided and fixed as per item.

Item No. 55:- Providing and fixing 15mm dia brass C.P. screw down bib cock of approved quality having 250 to 300 gm weight.

15mm dia brass C.P. screw down bib cock shall be Prince or equivalent I.S.I. brand and shall be got approve from Engineer-in-charge. It should be leak proof and it shall weight 250 to 300 gm per number. Rate quoted shall be for providing as well as fixing of the bib cock with all required materials for fixing and shall be paid per number fixed

Item No. 56 :-Providing & fixing 90 mm dia. OD (2.5 Kg per sq. cm.) Finolex Brand PVC rigid pipe for rainwater including necessary fittings like bend, shoe, cowl etc. fixing the pipes to the wall in plumb bymeans of G.I. Clamps of 18 gauge sheet with 1 to 1.5 meter distance, including joining the pipe with approved solution etc. complete as directed by E.I.C. 3 coats of white or color wash if required etc. complete as directed by E.I.C.

As per manufacturer's specifications and description of the item and as per directed by E.I.C.

Item No. 57 : Providing and fixing (heavy duty) C.I. soil pipe for drainage line including necessary fitting like bend, tee, y bend, plug bend etc. fixed with wall by means off clamp and nails, filling the joints with cement etc. complete.

(a) 75 mm Ø Pipe.

C.I. soil pipe of specified diameter shall be as per I.S. specification, provided for drainage line. All fitting required for pipe line shall be provided as per drawing or as directed at site. Plug bend, plug tee or plug, shall be provided as per necessity for inspection and cleaning immediately at connection near wall on each floor, regarding laying and joining, specification of item No. 1 shall be followed. Curing of joints shall be carried out for minimum period of 10 days. M.S. clamp shall be given 3 coats of anticorrosive paints as per item No. 17 of Section F.

Measurement shall be taken for actual line laid with specials, and paid for on running meters of pipe line laid, based on unit rate quoted.

Item No. 58 & 59 :- Providing and fixing S.W. glazed pipe for sanitary connection (sewer drain pipe) with necessary slope, including excavation, refilling trenches, the providing 150mm thick B.B.C.C. 1:4:8 below joints, filling the joints with c.m. (1:1) curing etc. complete. As directed by E.I.C.

(a) 100 mm Ø Pipe.

(b) 150 mm Ø Pipe.

Stoneware glazed pipe of specified diameter shall be uniformly glazed, confirming to I.S. specification laid for same. Necessary excavation for laying pipe line in level given, shall be made and pipe laid precisely to that level. Pipe shall be joined in c.m. 1:1 and B.B.C.C. 1:4:8 150mm thick shall be provided below joints so as joints are not affected due to any settlement. Joints shall be cured for period of 10 days minimum. After curing period is over trench is backfilled, and fill consolidated. For excavation and backfilling specifications in Section B for respective item shall be followed. Leak proof test be given before backfilling.

Payment shall be made for Rmt. of pipes laid as described in item.

Item No. 60:- Providing and fixing RCC covers for drainage manholes/chamber of various size, as directed by E.I.C.

C) 450x600 mm. size or any size. For concrete work general specifications of concrete and for reinforcement specification for reinforcement as per item No. 19 shall be applicable. Thickness of the

cover to be prepared shall be 50 mm. Covers shall be prepared on pucca platform prepared for this work with smooth surface. Crude oil or shuttering oil shall be applied on surface before casting of covers. Side shuttering shall be with bolting arrangement to keep edges straight. Top surface and side shall be finished smooth.

Item No.27 : Providing & fixing White Orrisa Pan type porcelain w.c. seat of approved quality of 58 cm size including trap, necessary C.I. piping with plug bends up to soil chamber for G.F. and up to the outside wall for floors including porcelain foot rests etc., complete in working condition. & AS DIRECTD BY e.i.c.

Indian type w.c. if specified size shall be of first quality and of approved make according to I.S. Specifications. It shall be fixed in B.B.C.C 1:5: 10 shall be provided in 115mm portion with required slope towards w.c. pan. Top surface shall be finished as per specified in item of I.P.S glazed or ordinary tiles, which shall be as per item. W.C. shall be provided, with pipe from flush cock to pan, for flushing arrangement, trap with w.c. pan and 100mm C.I. pipe for trap to chamber with plug bend. For W.C. on floors, pipe with plug bend shall be provided upto main soil pipe line in wall. Foot rest of approved quality and shape shall be provided and fixed. All joints shall be in c.m. 1:1 and leak proof test be given.

Rate quoted shall be for providing & fixing w.c. pan with all other accessories specified and whole thing shall be paid per No. of w.c. pan provided and fixed.

Payment will be made on No. basis. Rate quoted shall be for all materials, labour, tool, plants, etc. required for job.

Item no.62:- Providing & supporting the existing slab of control room/building with wooden /steel pipe support to carry full load of slab so as to make free the loading over the existing walls for special repairs to be carried out in relevant items including carting ,removing etc. complete as per the instruction of the E.I.C. (support should not be removed till the main job of work is over and after permission if Engineer In Charge.) Payment shall be made after completion of main job and removal of support from the work etc. complete.

The specifications shall be applicable for the item of shuttering, & as directed by E.I.C. & as per descriptions of the item.

Payment will be made on Sq. meter basis. Rate quoted shall be for all materials, labour, tool, plants, etc. required for job.

Item No. 63:-Cleaning the existing colony main septic tank of appropriate size and removal of all deposited, settled debris, sludge, sewage thoroughly & disposing the same outside the sub station area as directed and cleaning the tank neatly, for reusing purpose including all tools, tackles, labours, machinery if necessary etc. complete as directed by E.I.C.

The specifications shall be applicable for the item as directed by E.I.C. & as per descriptions of the item.

Payment will be made on of job basis. Rate quoted shall be for all materials, labour, tool, plants, etc. required for job.

Item No.64:-Providing and adding water proofing liquid "Plast-o-proof" from perma or its equivalent during the mixing of concrete in mixture machine for R.C.C. work as per directive of E.I.C. Rate of consumption of water proof liquid is to be used as per manufacturer's instruction (as per rate analysis)

The manufacturer's specifications shall be applicable & as directed by E.I.C.

item No.65:-Painting of existing chain link fencing angle frame and bidding flats including removing/scraping existing paint rust etc. by sand paper and paint 2 coats of approved make silver paint as directed by E.I.C.

The specifications of painting work to the IRON WORK shall be applicable, & as directed By E.I.C...

Payment will be made on No. Of panel basis Rate quoted shall be for all materials, labour, tool, plants, etc. required for job.

Item no. 66:-Painting of existing M.S. angle post of chain link fencing including removing of existing paint and rusting and applying 2 coats of oil paint as directed by E.I.C. or Approved shade & make etc. complete

The specifications of painting work to the IRON WORK shall be applicable, & as directed By E.I.C.. Payment will be made on No. Of angle post basis. Rate quoted shall be for all materials, labour, tool, plants, etc. required for job.

Item No.67:-Removing existing damaged tarfelting work by chipping using chemical and wire brush etc. including disposing the same within the lead of 300 mtr. Radius . work are to be carried out as per th instruction if Engineer-In-Charge.

The specifications shall be applicable, as directed By E.I.C..

Payment will be made on Sq. meter basis. Rate quoted shall be for all materials, labour, tool, plants, etc. required for job.

Item No.68:-Repairing of existing door, window, ventilator, cupboard, etc. by making oiling and with minor repairing and I n working condition including providing new fixtures and fastening which are missing/broken, i.e. like hinges, tower bolt, chapras, aldrops, etc as per existing manner as directed by Engineer-In Charge.

The specifications shall be applicable, as directed By E.I.C...

Payment will be made on No. basis. Rate quoted shall be for all materials, labour, tool, plants, etc. required for job.

Item No.69:-Providing & Laying form work of 6 mm. thick M.S. plate and 50x50x6mm. M.S. angle with providing runners & rafter at @1.00 meter C/C on both ways, Providing vertical adjustable angle support at each junction point of runners and rafter by making square column of M.S. Angle with required diagonal tie with nut bolts or welding as 1?2 height of shuttering for Extra strengthening and giving required slope, leak proof work as per instructions. Measurement will be paid on top flat area of form work only. With all required materials, tools, tackles etc. This work is to be carried out in live control room and hence proper care should be taken, for any accidentor any power failure during entire work etc. complete as directed by Engineer-In Charge.

The specifications shall be applicable, as per description of the item & as directed By E.I.C..Payment will be made on Sq. meter basis. Rate quoted shall be for all materials, labour, tool, plants, etc. required for job.

For Water proofing (IPS) / Anti termite treatment:

“The contractor shall submit performance of the above treatment item at the rate of 20% of cost of item of work order in the from of FDR of Schedule bank / Nationalised bank in favour of GETCO E E (TR), VARTEJ for a period of five years from actual date of complication of work on non judicial stamp paper of appropriate value in approved format of GETCO. In the event of unsatisfactory performance of above treatment work, the EE (TR), VARTEJ shall carryout necessary remedial/rectification work that may be necessary in the opinion of GETCO at no extra cost failing which FDR shall be enchased by GETCO. The FDR shall be released only after satisfactory complition of performance period of five years.”

For GUJARAT ENERGY TRANSMISSION CORPORATION LIMITED

**EXECUTIVE ENGINEER (TR)
GETCO, TR. D.O. VARTEJ.**

SIGNATURE OF CONTRACTOR

We accept the above conditions...

Contractor's Representative legible signature: _____

Name of the person: _____

Seal of the company

Date & place: _____



**Name of Work:- EXTENSION OF CONTROL ROOM & BATTERY ROOM
AT 220 K.V. VARTEJ S/S DIST. BHAVNAGAR.**

"SCHEDULE-B"

SR. No.	DESCRIPTION	QTY.	UNIT	RATE	AMOUNT
1	Demolition including stacking of serviceable materials and disposal of un serviceable materials with all lead and lift [1]. R.C.C. work [R&B SOR P NO62 INO20.3[I]]	2.00	Cmt	254.00	508.00
2	Demolition of brick work and stone masonry including stacking of un serviceable materials and disposal of serviceable materials with all lead and lift (ii) In cement mortar [R&B SOR P NO 62 INO 20.11[II]]	21.00	Cmt	133.00	2793.00
3	Dismantling tiles or stone floors laid in mortar including stacking of un serviceable materials and disposal of serviceable materials with all lead and lift. [R&B SOR P NO62 INO 20.23]	10.00	Smt	11.60	116.00
4	Removing wooden / steel/Allu. frame door / window / ventilator with shutters from masonry or concrete work without damaging the same including stacking the same etc., complete as directed by E.I.C. [GETCO SOR A-13]	7.00	Smt	40.00	280.00
5	Dismantling / Removing GI pipes, G.S.W. pipes, AC/PVC rain water, G.I. pipes with fittings clamps, excavation including stacking the materials with all lead and lift and crediting the same in GEB store etc. complete as directed by E.I.C. [GETCO SOR A-21]	45.00	Rmt	14.00	630.00
6	Dismantling sanitary fittings like wash basin, W.C. pan, Indian and European type flushing tank etc. including stacking the materials with all lead and lift. [R&B SOR P-63,I NO./16 0.0]	3.00	No.	96.00	288.00

7	Excavation for foundation up to 1.5 Meter depth including sorting out and stacking of useful materials and disposing of excavated stuff up to 50 Meter lead. (a) Loose or soft soil [R&B SOR P-16,I NO./1 0.0]a	40.00	cmt	47.00	1880.00
8	Excavation for foundation up to 2.50 Meter depth including sorting out and stacking of useful materials and disposing of excavated stuff up to 50 Meter lead. (b) Dense or hard soil [R&B SOR P-16,I NO./1 0.0]b	62.00	cmt	60.00	3720.00
9	Filling in plinth with sand under floors including watering ramming, consolidating and dressing etc. complete. {R&B S.O.R. Page No 17 Item No 7/4.24}	21.00	cmt	340.00	7140.00
10	Brick work using common Burnt clay building bricks having crushing strength not less than 35 Kg./Sq.cm. In foundation and plinth in cement mortar 1:6 (1cement : 6 fine sand) Conventional [R&B SOR P NO 25 INO6.13 B]	7.00	Cmt	2026.00	14182.00
11	-----DO AS ABOVE BUT FOR--- brick work in super structure above plinth level up to floor two level. Conventional [R&B SOR P NO 25 INO 0.10 B &6.13B]	28.00	Cmt	2091.00	58548.00
12	Providing and laying cement concrete 1:3:6 (1-cement : 3- coarse sand : 6- hand broken stone aggregates 40 mm. nominal size) and curing complete excluding cost of from work in : (a) Foundation and plinth. {R&B SOR P NO 18 I.NO 5.3.2]	16.00	Cmt	1758.00	28128.00
13	Providing & laying control cement concrete M-25 as per mix design exposed work with curing etc. complete including the cost of ply wood / steel sheathing form work & adjustable tubular steel supports / Props. but excluding the cost of reinforcement.G.F+F.F+Stair Cabin FOOTING (Approved rate of H.O. At 66 KV Trapaj S/S.)	7.00	Cmt	4784.00	33488.00
14	Providing & laying control cement concrete M-25 as per mix design exposed work with curing etc. complete including the cost of ply wood / steel sheathing form work & adjustable tubular steel supports / Props. but excluding the cost of reinforcement.G.F+F.F+Stair Cabin COLUMNS (Approved rate of H.O. At 66 KV Trapaj S/S.)	10.50	Cmt	5795.00	60847.50
15	Providing & laying control cement concrete M-25 as per mix design exposed work with curing etc. complete including the cost of ply wood / steel sheathing form work & adjustable tubular steel supports / Props. but excluding the cost of reinforcement.G.F+F.F+Stair Cabin BEAMS (Approved rate of H.O. At 66 KV Trapaj S/S.)	12.00	Cmt	5299.00	63588.00

16	Providing & laying control cement concrete M-20 as per mix design exposed work with curing etc. complete including the cost of ply wood / steel sheathing form work & adjustable tubular steel supports / Props. but excluding the cost of reinforcement.G.F+F.F+Stair Cabin :SILL,LINTEL,CHHAJJAS (Approved rate of H.O. At 66 KV Trapaj S/S.)	2.00	Cmt	4838.00	9676.00
17	Providing & laying control cement concrete M-25 as per mix design exposed work with curing etc. complete including the cost of ply wood / steel sheathing form work & adjustable tubular steel supports / Props. but excluding the cost of reinforcement.G.F+F.F+Stair Cabin SLABS (Approved rate of H.O. At 66 KV Trapaj S/S.)	10.00	Cmt	4838.00	48380.00
18	Providing & laying control cement concrete M-20 as per mix design exposed work with curing etc. complete including the cost of ply wood / steel sheathing form work & adjustable tubular steel supports / Props. but excluding the cost of reinforcement.G.F+F.F+Stair Cabin SLABS (Approved rate of H.O. At 66 KV Trapaj S/S.)	11.00	Cmt	4108.00	45188.00
19	Providing T M T. bar reinforcement for R.C.C. work including vending binding and placing in position complete up to floor two level. (Approved rate of H.O. At 66 KV Trapaj S/S.)	4.00	M.T.	40000.00	160000.00
20	Providing 15 mm. Thick cement plaster in single coat on Brick/concrete walls for plastering up to floor two level and finished even and smooth in: Cement mortar 1:3 (1 cement : 3 sand)Neeru plaster [R&B SOR P NO 52 INO 17.60 [I]]	370.00	Smt	88.00	32560.00
21	Providing 20 mm. Thick sand faced cement plaster in double coat on Brick/concrete walls for plastering up to floor two level (i) Consisting of 12 mm thick backing coat of Cement mortar 1:3 (1 cement : 3 sand)and (ii)8 mm thick finishing coat of Cement mortar 1:1 (1 cement : 1 sand)etc. [R&B SOR P NO 52 INO 17.95 [9]]	120.00	Smt	152.00	18240.00
22	Providing cement vata (10 cm x 10 cm size) quarter round in cement mortar 1:1 including neat cement finishing watering etc. complete. {R&B S.O.R.(2007-08) Page No 53 Item No.15/0.0}	10.00	Rmt	15.80	158.00

23	Providing and fixing approved quality ORISSA PAN water closet squatting pan size 580mm including providing and fixing 100mm size P or S trap jointing tap with the pan and soil waste pipe and with G.I. inlet connection for flush pipe with W.C. pan and chromium plated brass half turn flush cock of approved quality of 25mm dia etc. complete. (Approved rate of H.O. At 66 KV Trapaj S/S.)	1.00	No.	1256.00	1256.00
24	Providing and fixing urinal of approved quality including connection with trap and with integral longitudinal flush pipe concealed outlet (A) squaring plate pattern white earthenware 550mm x 300mm (Approved rate of H.O. At 66 KV Trapaj S/S.)	2.00	No.	826.00	1652.00
25	Providing and fixing approved quality wash basin of size 550x440mm with single hold pillar tap with C.I. or M.S. brackets painted white / colour including cutting holes and making good the hole including pillar tap, stop cock, PVC connection and PVC waste pipe to be concealed with bottle trap. (Approved rate of H.O. At 66 KV Trapaj S/S.)	1.00	No.	1347.00	1347.00
26	Providing white washing with lime on wall surfaces (three coats) to give an even shade including thoroughly brooming the surface to remove all dirt, dust, mortar drops and other foreign matter. (Approved rate of H.O. At 66 KV Trapaj S/S.)	150.00	Smt	5.30	795.00
27	Providing distempering (three coats) with oil bound distemper of approved brand and manufacture and of required shade on undercoated wall surface to give an even shade over and including a priming coat with distemper primer of approved brand and manufacture after thoroughly brushing the surface free from mortar droppings and other foreign matter and also including preparing the surface even and sand papered smooth. (Approved rate of H.O. At 66 KV Trapaj S/S.)	115.00	Smt	50.00	5750.00
28	Providing & applying 2 coats of ACID / ALKALI resisting paint of approved shade & make to wall, ceiling including filling putty smoothing the surfaces scaffolding etc., complete as directed by EIC [GETCO SOR F-7 A]	70.00	Smt	67.00	4690.00
29	Providing & applying 2 coats of APCOLITE APEX or its equivalent ACRYLIC EXTERIOR paint on existing plastered surface or approved makes & shade including finishing & thinning as per manufacturer's instruction. A gap of 6 hrs. should be given between 2 subsequent coats. The work should be carried out strictly as per manufacturer's specifications and requirement etc., complete as directed by E.I.C. (Approved rate of H.O. At 66 KV Trapaj S/S.)	120.00	Smt	64.00	7680.00

30	Providing and laying approved quality polished Kotah stone slab(25mm th.) flooring including using 35x25mm approved quality machine cut, marble strip over 20mm (average) thick base of cement mortar 1:6 (1 cement : 6 course sand or L.M. 1:1.5 laid over and jointed with grey cement slurry including rubbing and mirror polishing using polishing machine with grinding six emery's of different no. including using special chemical powder for polishing including white cement coating two times during polishing for filling up minute holes or cracks in joints etc. comp. (Approved Rate rate of H.O. At 66 KV Dudhala-2 S/S)	50.00	Rmt	740.00	37000.00
31	Providing & fixing approved quality ceramic vitrified tiles(8mm thick) of best quality matt/glossy finish of Johnson/Kajaria/Nittco or its equivalent make of required size for flooring, skirting etc. including fixing the same in cement mortar (1:2) setting with ready made tile adhesive as recommended by manufacturer's including fillings of joints mixed with pigmented cement slurry of matching shade etc. complete - For battery room. (Approved rate of H.O. At 66 KV Trapaj S/S.)	26.00	Smt	645.00	16770.00
32	Providing and laying white coloured glazed tiles 6mm thick in flooring, dado, treads of steps and landing laid on bed of 12mm thick cement mortar 1:3 [cement :3 coarse sand finished with flush pointing in white/co lour cement [R & B SOR Page No. 45 Item 8]	51.00	Smt	593.00	30243.00
33	Providing and fixing to wall, ceiling and floor galvanized mild steel tubes (Medium grade) of the following nominal bore, tube, fittings and clamps included Required excavation making good the wall, ceiling and floor. (A) 15 mm. [R & B SOR Page No.67 Item 23.2 A]	30.00	Rmt	146.00	4380.00
34	-----Do as above but for 25mm Dia----- [R & B SOR Page No.67 Item 23.2 C]	30.00	Rmt	257.00	7710.00
35	Providing & Fixing FINOLEX brand or equivalent rigid P.V.C. Pipe for rain water (2.5kg/cm2) including necessary fittings like bend shoe, cowl etc., & fixing the pipes to the wall in plumb by means of G.I. Clamps of 18 gage sheet with 1 to 1.5 meter distance, filling the joints approved solution etc., complete as directed by E.I.C. 110mm. dia. O.D., P.V.C. Pipe. [GETCO SOR N-1 A[b]	30.00	Rmt	156.00	4680.00

36	Providing and fixing gun metal check or no return fullway wheel valve (25mm dia.) {R&B Page No 71 Item no 31.23.99(C)}	2.00	No.	467.00	934.00
37	Providing and fixing screw down bib tapes of following size [A] Brass screw down bib tap polished bright [i] 15mm dia [R & B SOR Page 70 Item 28 A-1]	3.00	No.	188.00	564.00
38	Providing & fixing P.V.C. Nahani trap of approved size & make with additional aluminum perforated jali cover & C.I.Pipe outside the wall with plug, bend, etc., complete as directed by E.I.C. b)100mm.dia. [GETCO SOR Page 65 Item 6-A b]	3.00	No.	127.00	381.00
39	Providing and fixing approved quality S.W. gully trap with C.I. Grating, brick masonry chamber and water tight C.I. cover with frame of 300 mm x 300 mm size (inside) with standard weight. (B) 150 mm x 100mm size P or R type. (Approved rate of H.O. At 66 KV Trapaj S/S.)	3.00	No.	1038.00	3114.00
40	Constructing brick masonry chamber for under ground C.I. Inspection chamber and bends with bricks having crushing strength not less than 35 Kg/cm ² in cm. 1:5 C.I. Cover with frame (light duty) 455 mm. X 610 mm. Internal dimensions, total weight of cover with frame to be not less than 38 Kgs. weight of cover 23 Kg. and wt. of frame 15 Kg) R.C.C. top slab with 1:2:4 mix(1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm. size) foundation concrete 1:5:10 inside plaster 15 mm. thick with cement mortar 1:3 finished smooth with a floating coat of neat cement on walls & abed concrete etc. complete. (I) inside dimensions, 455 mm. 610 mm. And 450 mm. Deep for single pipe line. R&B S.O.R.(2007-08)Page No 75 Item no 16.24.4	5.00	No.	2223.00	11115.00
41	Providing & Fixing light type C.I. Manhole covers with water tight C.I. Frame & fixing the same in concrete etc., complete as directed by E.I.C.i)600X600mm. Size. GETCO/SEC-N/IN15(f)/PN-67)	3.00	No.	632.50	1897.50

42	<p>Providing & fixing approved quality aluminum anodized sliding windows having standard section using extruded section fabricated by standard manufacturers with 20 Microns silver colour anodizing as per drawing (Main frame 61.85mm x 31.75mm x 1.5mm/0.784kg/mt.& Shutter 40mmx18mmx1.55mm/0.547kg/mt) windows shall be of 4 mm thick. Triveni ,Saint Gobbin 'HB4' plain glass glazing rubber gasket and necessary hardware, handles cum locking arrangement etc. Complete unit shall be fabricated from aluminum section conforming to HE9WB designated to IS 1285/1980 for its chemical and mechanical properties. Anodized shall be conforming to IS 1868/1968. All joints shall be mechanically joint having secured with specially design MS. Zink plated heat arrangement. No welding process shall be allowed in the unit. (Approved rate of H.O. At 66 KV Trapaj S/S.)</p>	11.00	Smt	3000.00	33000.00
43	<p>Providing and fixing approved quality partly pannelled/ partly glazed double leaf anodised alluminium entrance door using extruded section fabricated by standard. manufacturer with frame of 101.50x44.50mm rect. sec. having thickness 2.1 mm & weighing approx 1.60 kg/rmt & door shutter of 114.30 x 44.45 mmx1.55mm weighing approx. 1.36kg/RMT for top & bottom section and 47.62 x 44.45 mm x1.55mm weighing approx. 0.88kg/RMT for vert. style & 150 x 44.45 mm for lock rail having thickness 2.2mm & weighing 2.36 approx.kg/rmt and floor spring door closure of approved make and using 5mm thick approved quality HB4 plain glass with glazing deep rubber gasket, necessary hardware, handle cum locking arrangement and using alluminium sheet on both side with plywood in between for pannel including S.S. hinges(3 nos. on each shutter) and all fixtures/ fastening of anodised section with all labours & materials etc. complete as per drawing & manufacturer's specification.</p>	3.00	Smt	3105.00	9315.00
	<p>Complete unit shall be fabricated from aluminum section conforming to HE9WB designated to IS 1285/1980 for its chemical and mechanical properties. lodization shall be conforming to IS 1868/1968. (Approved rate of H.O. At 66 KV Trapaj S/S.)</p>				

44	Providing & fixing approved quality FRP door having FRP frame of size 100x50mm & 28mm thick FRP shutter with Depressed Panel shutter having extra reinforcement on side and edges and in Gel coat finish. The core of the shutter is to be filled up with injected fiber extinguishing grade polyurethane foam done in situ along with embedded wooden pieces for stiffening and also for fixing hinges and fixtures. The whole FRP frame and shutter is to be water proof, weather proof, termite proof and resistance to mild acid/Alkali resistance including SS hinges with necessary screws and aluminum fixture and fastenings etc complete. 28mm th. shutter & 100x50mm frame. (Approved rate of H.O. At 66 KV Trapaj S/S.)	6.00	Smt	3343.00	20058.00
45	Providing & laying water proofing treatment on terrace including applying neat cement slurry 2.75 Kg / sq.mt. On cement admixed with water proofing component after cleaning the surface, Laying cement concrete with brick bat 75mm to 100mm thick with 50% of C.M. 1:5 to required slope including ramming at junction of wall and slab, after two days of proper curing applying a second coat of cement slurry, finish the surface with 20mm thick C.M. 1:4 china mosaic flooring and finally finishing flooding 75mm deep with water on terrace for a period of two week. The contractor shall submit performance guarantee of the water proofing item at the rate of 20 % of cost of item of work order in the form of FDR of Schedule Bank/ Nationalized Bank in favor of GETCO (A/C Agency) for a period of 5 Years from actual date of completion of work stamp paper of appropriate value in approved format of GETCO. (Approved rate of H.O. At 66 KV Trapaj S/S.) (Approved rate of H.O. At 66 KV Trapaj S/S.)	80.00	Smt	384.00	30720.00
46	Providing & fixing MS Grill of approved quality & design weighing 25 to 30 kg/smt. as per drawing & as directed with necessary grill door (if required) including welding or bolted fixtures and fastening. M.S. Flat hold fasts, 300mm long, 16mm dia. aldrop & 300mm. long tower bolt necessary with handles etc. with 3 coats of oil painting of approved shade & tint with with one coat of red oxide primer including grouted hold fast in CC (1:2:4) etc. complete as directed by EIC. (Approved rate of H.O. At 66 KV Trapaj S/S.)	275.00	Kgs	64.00	17600.00

47	Providing & placing 50mm thick & 300mm wide prestressed concrete cover (for clear span of up to 1.2 meter in proportion (1:1:5:3) or M-20 necessary reinforcement of 4mm dia HT steel wire-4 Nos. bars and 4mm dia. distribution bars at 150 mm C/C as per drawing & design including providing necessary M.S. bar hooks for lifting arrangement & vibrating with vibrators. Finishing all the surfaces, curing by placing in water pond for ten days etc. complete as directed by E.I.C. (The rate includes cost of all material required, labour charges, transportation, loading, unloading etc. (Approved rate of H.O. At 66 KV Trapaj S/S.)	10.00	Smt	385.00	3850.00
48	Providing and fabricating and erecting MS angle posts, racks, covers & trays for cable trench using structural steel angels, sheets and flats etc. of approved steel manufacturer as per drawing & design including cutting, welding & fixing hold fast in wall with C.C. & one coat of red oxide primer & coats of oil paint of approved shade & make etc. completed as directed by EIC.(All materials required for the work to be brought by the contractor). (Approved rate of H.O. At 66 KV Trapaj S/S.)	40.00	Kgs	67.00	2680.00
49	Providing and laying (to level or slopes) and jointing with stiff mixture of cement mortar in proportion 1:1 approved quality salt glazed stoneware pipes following nominal internal diameters including testing of pipes and joints complete.(A) 150mm dia (Approved rate of H.O. At 66 KV Trapaj S/S.)	40.00	Rmt	198.00	7920.00
50	Providing & laying rigid 4kg/cm ² PVC drainage pipe including necessary fittings like bend, tee, Y bend plug etc. fixed with wall by means of clamps & nails with water tight joints by approved solution etc. complete as directed by EIC.(B) 100mm dia. Pipe (Approved rate of H.O. At 66 KV Trapaj S/S.)	30.00	Rmt	200.00	6000.00
51	Providing & fixing approved quality readymade P.V.C. water tight storage tank of 1000 liters capacity made from linear low density polythene & low density polythene LDPF product confirming to I.S. : 10146-1982 with cover including providing & fixing one 20mm dia, float valve ball-cock, one 20mm dia G.I. over flow pipe of length up to 0.30 Mt. including making all connection for inlet/outlet etc. complete as directed by E.I.C. (Approved rate of H.O. At 66 KV Trapaj S/S.)	1.00	No.	4600.00	4600.00

52	Providing & Supporting the existing slab of control room/building with wooden steel pipe supports to carry full load of slab so as to make free the loading over the existing walls for special repairs to be carried out in relevant items including carting, removing, etc. complete as per instruction of E.I.C.(Supports should not be removed till the main job of work is over and after permission of Engineer incharge).Payment shall be made after completion on main job and removal of support from the work etc. complete.(GETCO/SEC-R/IN20/PN-94)	31.00	Smt	46.00	1426.00
	TOTAL (Rupees)	>>>			869466.00

Executive Engineer (TR)
GETCO – VARTEJ.

I/WE AM/ARE WILLING TO CARRY OUT THE ABOVE WORK AT (@) _____%
ABOVE/BELOW (PERCENTAGE SHOULD BE WRITTEN IN FIGURES AND WORDS)
PERCENTAGE ABOVE/BELOW) THE TENDER AMOUNT WORKS OUT. RS. _____
RUPEES (IN WORDS)_____

SIGNATURE OF CONTRACTOR
Seal of the company:

EXECUTIVE ENGINEER (TR)
GETCO, TR. C.O. VARTEJ.