TENDER DOCUMENT

FOR

CIVIL, STRUCTURAL & ELECTRICAL WORK
OF

TEMPORARY OFFICE SHED
FOR BHEL AT HRDI COMPLEX SECTOR 16A NOIDA

Opening Date:

This tender document contains…95….pages.

Part-I Technical-cum-commercial Bid 73 pages.

Civil & Electrical Page Part-II Price Bid 22 Pages.

NOTE: Part-I: To be submitted in separate sealed cover along with EMD and Tender Cost.

Part-II: To be submitted in separate sealed cover.

And Part-I & Part-II sealed covers should be put in outer envelope and super-scribing the name of work and due date of opening along with name and address of the tenderer.

PREPARED BY

M/S Architect Harish Tripathi & Associates D- 987, New Friends Colony,
Delhi 110065

Consulting Architects

BHEL PEM, NOIDA

INDEX

Clause No.	Description	Page No.
-	Salient Features Of The Tender Document	3-4
-	Technical Cum Commercial Bid	5-6
1-18	General Instruction To Tenderers (Section-I)	7-14
19-32	General Terms & Conditions (Section-Ii)	15-27
Annexure-A	Financial Viability	28
Annexure-B	Analysis Of Similar Jobs Executed / In Progress	29
Annexure-C	Monthwise Manpower Deployment Plan	30
Annexure-D	Status Of Tools & Plant And Monthwise Deployment Plan	31
Annexure-E	Analysis Of The Unit Rate Quoted	32
Annexure-F	Declaration Sheet	33
Annexure-G	Checklist And Schedule Of General Particulars	34-35
Annexure-H	Bank Guarantee For Security Deposit	36-38
Annexure-I	Agreement	39-42
-	Special Condition of Contract	43-72
-	Bill of Qty for Part-II Price Bid	73
-	Abstract Cost for civil/ Structural Works	74
-	Price Schedule for Interior & Civil/ Structural Works	75-85
-	Schedule of Qty for Electrical Works	86-94
-	Guide List of Approved Makes of Building Material	95
-	Guide List of Approved Makes of Material for Electrical Item	96

SALIENT FEATURES OF THE TENDER DOCUMENT

Unit:	BHEL PEM, Noida
Address:	BHEL PEM, at HRDI Complex Sector 16A Noida
Telephone No:	95-120-4368713 / 4329065
FAX No:	95-120-4329026
Tender Title:	Temporary Office Shed For BHEL
Tender Type:	Works Contract.
Brief Description:	----------
Estimated Contract Value:	Rs. 73 Lakhs
EMD Value:	(ii) Rs. 1.50 Lakhs
Security Deposit	(a) In case of work costing upto 10 lakhs : 10% of the contract value. (b). In case of work costing above Rs.10 lakhs and upto Rs.50 lakhs : 1 Lakh + 7.5 % of the amount exceeding Rs.10 Lakhs. (c). In case of work costing more than Rs50 lakhs : 4 Lakhs + 5 % of the amount exceeding Rs.50 Lakhs.
Tender Cost:	Free { Tender Documents to be downloaded from Web site :- www.bhel.com / www.bhelpem.com.

BHEL PEM, NOIDA

Date of issue of notification:	30-11-2007
Submission of Techno-commercial: &Price Bids by	20/12/2007 latest by 2:00pm
Date of opening of Techno-commercial Bid :	20/12/2007 at 3:00 pm
Date of opening of price bid:	After scrutiny of the techno-commercial bid.
Validity of offer:	90 days from the date of opening of tender
Earnest Money Deposit:	by demand draft only.
Date of commencement of work at site:	Within 15 days from the date of issue of letter of Intent.
Mobilization Advance:	NIL
Date of completion:	3 Months
Interim Payments:	Once in a month only.
Minimum value of work:	Rs. 10.0 Lakhs (Rupee Ten Lacs only for Running bills)
Rate of Interest for delayed payment	NIL
Defect Liability period	12 moths from the date of issue of completion certificate by Engineer.
Liquidated Damages	½% of contract amount for every week limited to maximum 10% of contract amount.
Language for communication	Hindi or English
Insurance, Duties & Taxes	To be provided & paid by contractor.
Service Tax	To be paid by BHEL against submission of copy of Service Tax Registration Certificate.
Assignment & Subletting	Not allowed without approval of Engineer Incharge
Escalation	NIL
Currency	Indian Rupees

BHEL PEM, NOIDA

TECHNICAL CUM COMMERCIAL BID

(To be furnished by the Bidders)

01	NAME OF WORK (Please tick the work quoted by you).	Temporary office shed for BHEL PEM at HRDI Complex
02	APPROX.ESTIMATED COST (Rs.)	Rs. ------
03	STIPULATED PERIOD	Three (03) months only
04	NAME OF THE CONTRACTOR	
05	ADDRESS (A) OFFICE (B) RESIDENCE	
06	QUALIFICATION	
07	STAFF STRENGTH (A)TECHNICAL (B)GENERAL	
08	PLANT/ EQUIPMENTS	
09	WHETHER COST OF TENDER DOCUMENT PAID. IN CASE OF DOWNLOAD OF TENDER DOCUMENT FROM WEBSITE, THE SAME SHOULD BE ENCLOSED IN THE FORM OF DD FOR Rs.500.00 FOR THE TENDER DOCUMENT IN FAVOUR OF BHEL, HERP, VARANASI.	
10	(a) SCOPE OF WORK (As per schedule of items) (b) ACCEPT TO EXECUTE IN TOTAL	UNDERSTOOD/ NOT UNDERSTOOD YES/ NO
11	FINANCIAL TURN OVER DURING LAST 3 YEARS	Year 03-04 - Year 04-05 - Year 05-06 -

BHEL PEM, NOIDA

12	EXPERIENCE CERTIFICATE FOR SUCCESSFULLY COMPLETED THREE (03) SIMILAR WORKS DURING LAST 7 YEARS OF THE VALUE NOT LESS THAN THE ESTIMATED COST OF PRODUCTION BLOCK AND THE BUILDING RESPECTIVELY. (Copy of completion certificate to be enclosed)	
13	EMD PARTICULARS (A) CASH (B) DEMAND DRAFT	
14	(a) WHETHER REGISTERED WITH GOVT. AGENCIES SUCH AS CPWD/ STATE PWD/ MES/ RAILWAY/ OTHER PUBLIC SECTOR UNDERTAKING ETC. (b) VALIDITY OF REGISTRATION	
15	BHEL'S PAYMENT TERMS	ACCEPTED / NOT ACCEPTED
16	Whether agreeable to make necessary statutory payments as per BHEL PEM, Noida terms.	YES/ NO

Signature Of Tenderer
(With Seal)

GENERAL INSTRUCTIONS TO TENDERERS

SECTION-I

1 This tender specification as a whole, furnishing all the details and other documents as required in the following pages, shall be duly signed and sent in a sealed cover (IN DUPLICATE) super-scribing the name of work as given in the tender notice.

2 The tender shall be addressed to: OFFICER INVITING TENDER AS INDICATED IN THE TENDER NOTICE.

3 Tenders submitted by post shall be sent as "REGISTERED/ SPEED/ COURIER POST " and shall be posted with due allowance for any postal delay. The tenders received after the due date and time of opening are liable to be rejected. Offers received by Telegram/telex/ Fax/ E-mail/ Internet may be considered as per terms of NIT.

4 Tenders shall be opened at the time and date as specified in the tender notice in the presence of such of those tenderers or their authorised representatives who may be present.

5 The tenderers shall closely peruse all the clauses, specifications and drawings indicated in the Tender Documents before quoting. Should the tenderer have any doubt about the meaning of any portion of the Tender Specifications or find discrepancies / omission in the Drawings or the tender documents issued are incomplete or shall require clarification on any of the technical aspect, scope of work etc., he shall at once contact the authority inviting the tender for clarification before submission of the tender.

6 Before tendering, the tenderers are advised to inspect the site of work and the environments and be acquainted with the actual working and other prevalent conditions, facilities available, position of material and labour. No claim will be entertained later on grounds of lack of knowledge.

7 Tenderer must fill up all the schedules and furnish all the required information as per the instructions given in various sections of the tender specification. Each and every page of the Tender Specification must be SIGNED, STAMPED AND SUBMITTED ALONG WITH THE OFFER by the Tenderer in token of complete acceptance thereof. The information furnished shall be complete by itself.

8 The tenderer shall quote the rates in English Language and international numerals. These rates shall be entered in figures as well as in words. In case of difference in rates between words and figures THE LESSER OF THE TWO will be treated as valid rate. For the purpose of tender, the metric system of units shall be used.

9 All entries in the tender shall either be typed or be written in ink. Erasure and over writings are not permitted and may render such tenders liable to summary rejection. All cancellations and insertions shall be duly attested by the tenderer.

10 QUALIFICATIONS OF TENDERERS: Only those tenderers who have previous experience in the work of this nature and description detailed in this tender specification are expected to quote. Offers from tenderers who do not have proven and established experience in the field of structural work are not likely to be considered. The estimated cost of work of Temporary office Shed. 73 Lakhs. The main qualifying criterion for the tenderers will be as given below:

(i) Average Annual financial turnover of the tenderer during the last 3 years, ending 31st March' 2007, should be at least 30% of the estimated cost of the work of the production block.

(ii) Experience of having successfully completed similar works during last seven (07) years ending last day of the month previous to the one in which applications are invited should be either of the following:

(a) Three similar completed works costing not, less than amount equal to 40% of the estimated work.

OR

(b) Two similar completed works costing not less than the amount equal to 50% of the estimated cost.

OR

(c) One similar completed work costing not less than the amount equal to 80% of the estimated cost.

(iii) Party should be registered with PF & ESI. Contract agreement will not be signed till the documentary evidence for the same is submitted to BHEL. Parties who does not possess such registrations at the time of award of contract, will have to arrange the same within 15 days of issue of Letter of Intent, failing which EMD etc. will be forfeited and contract may be awarded to other party on the risk and cost of the failing party.

(iv) Parties with minimum completion period will be preferred.

11 DATA TO BE ENCLOSED : Full information shall be given by the tenderer in respect of the following. Non-submission of these informations may lead to rejection of the offer.

11.1 FINANCIAL STATUS : Financial viability as per proforma enclosed at ANNEXURE-`A'

11.2 INCOME TAX CERTIFICATES : A Certificate of Income tax

clearance from the appropriate authority in the forms prescribed.

11.3 PREVIOUS EXPERIENCE : A statement giving particulars (duly supported by documentary evidence) of the various service rendered/in progress for each similar works by the tenderer indicating the particulars of each work strictly as per proforma enclosed at ANNEXURE-B.

11.4 ORGANISATION CHART : Details of total manpower available categorywise on the roll of the party and their deployment plan as per proforma enclosed at ANNEXURE-`C'.

11.5 An attested copy of the Power of Attorney, in case the tender is signed by an individual other than the sole Proprietor, shall also be attached.

11.6 IN CASE OF AN INDIVIDUAL : His full name, experience, address and nature of business.

OR

IN CASE OF PARTNERSHIP FIRMS : The names of all the partners with addresses and their experience. A copy of the partnership deed/ instrument of Partnership duly certified by a Notary Public shall be enclosed.

OR

IN CASE OF COMPANIES : Date and place of registration including date of commencement certificate in case of public companies and the nature of business carried or by the Company. Certified copies of memorandum and Articles of Association are also to be furnished. Also indicate names, addresses and experience of the Directors.

11.7 A list of tools and plants (including cranes, tractor-trailers, winches, Derricks, welding sets etc., wherever applicable) that the tenderer is having and those that will be deployed on this job as per proforma enclosed at ANNEXURE-`D'.

11.8 Analysis of unit rate quoted as per proforma enclosed at ANNEXURE-`E'.

11.9 Declaration sheet as per proforma enclosed at ANNEXURE-`F'.

11.10 In addition to the above, any other particulars required elsewhere in tender documents.

11.11 Checklist and schedule of general particulars duly filled in, signed and stamped as per ANNEXURE-`G'.

NOTE : In terms of clauses 11.1 to 11.11 above, all the data required to be enclosed with

the tender need to be furnished neatly typed, signed and stamped in the given formats only (in the form of separate sheets) failing which the tender may be considered as incomplete and is liable for rejection. Documentary proofs wherever necessary also need to be enclosed.

12 EARNEST MONEY DEPOSIT : Every tender must be accompanied by the prescribed amount of Earnest Money Deposit in any one of the following forms.

12.1 Cash (As permissible under Income Tax Act) : The amount should be remitted by the party to the Cashier of Bharat Heavy Electricals Limited and cash receipt issued by him shall be enclosed alongwith the tender.

12.2 Pay Order or Demand Draft in favour of Bharat Heavy Electricals Limited, Noida U.P.

12.3 Tenders received without Earnest Money in full in the manner prescribed above will not be considered.

12.4 The Earnest Money Deposit of the successful tenderer will be retained towards part of Security Deposit.

12.5 In the case of unsuccessful tenderers, the Earnest Money will be refunded normally within fifteen days of award of work to the successful tenderer.

12.6 BHEL reserves the right of forfeiture of Earnest Money deposit in case the successful tenderer,

(a). After opening of Tender, revokes his tender within the validity period or increases his earlier quoted rates.

(b) Does not commence the work within the period as per LOI/Contract. In case the LOI /Contract is silent in this regard then within 15 days after award of contract.

NOTE : Bank Guarantee, Cheques, Money Orders or Postal Orders will not be accepted.

12.7 EMD shall not carry any interest.

13 AUTHORISATION AND ATTESTATION : Tenders shall be signed by persons duly authorised / empowered to do so. Certified copies of such authority and relevant documents shall be submitted alongwith the tenders.

14 VALIDITY OF OFFER : THE OFFER SHALL BE KEPT OPEN FOR ACCEPTANCE FOR A MINIMUM PERIOD OF THREE (03) MONTHS FROM THE DATE OF OPENING OF TENDERS. In case Bharat Heavy Electricals Limited calls for negotiations, such negotiations shall not amount to cancellation or withdrawal of the original offer which shall be binding on the tenderers.

15 EXECUTION OF CONTRACT :The successful tenderer's responsibility under

this contract commences from the date of issue of the Letter of Intent by Bharat Heavy Electricals Limited. The successful tenderer shall be required to execute an agreement in the prescribed form as per ANNEXURE-`I' with BHEL within a reasonable time after the acceptance of his tender and in any case before submitting the first bill for payment.

16 SECURITY DEPOSIT : Upon acceptance of tender, the successful tenderer must deposit the required amount of security deposit within the time specified in the Letter of Intent for satisfactory completion of work.

16.1 The total amount of Security Deposit shall be as follows:

(a) In case of work costing upto 10 lakhs : 10% of the contract value.

(b). In case of work costing above Rs.10 lakhs and upto Rs.50 lakhs : 1 Lakh + 7.5 % of the amount exceeding Rs.10 Lakhs.

(c). In case of work costing more than Rs50 lakhs : 4 Lakhs + 5 % of the amount exceeding Rs.50 Lakhs.

16.2 The Security Deposit will be deposited within 15 days from the date of issue of Letter of Intent but before start of work in any one of the following forms:-

(a). The total Security Deposit as indicated in the Letter of Intent in cash (As permissible under Income Tax Act).

(b) Pay Order, Demand Draft in favour of BHEL. c) Local cheques of scheduled banks, subject to realization.

d) Securities available from Post Offices such as National Savings Certificates, Kisan Vikas Patras etc. (Certificates should be held in the name of Contractor furnishing the security and duly pledged in favour of BHEL and discharged on the back).

e) Bank Guarantee from Scheduled Banks / Public Financial Institutions as defined in the Companies Act subject to a maximum of 50% of the total security deposit value. The balance 50% has to be remitted either by cash or in the other form of security. The Bank Guarantee format should have the approval of BHEL.

f) Fixed Deposit Receipt issued by Scheduled Banks Public Financial Institutions as defined in the Companies Act . The FDR should be in the name of the contractor, A/C BHEL, duly discharged on the back.

g) Security deposit can also be recovered at the rate of 10% from the

running bills. However in such cases at least 50% of the Security Depos it should be collected before start of the work and the balance 50% may be recovered from the running bills.

h) EMD of the successful tenderer shall be converted and adjusted against the security deposit.

16.3 The security deposit shall not carry any interest.

NOTE: Acceptance of Security Deposit against Sl. No. (d) and (f) above will be subject to hypothecation or endorsement on the documents in favour of BHEL. However, BHEL will not be liable or responsible in any manner for the collection of interest or renewal of the documents or in any other matter connected therewith.

16.4 Security deposit shall not be refunded to the contractor except in accordance with the terms of the contract.

16.5 The validity of the Bank Guarantee furnished towards Security Deposit under (e) above shall be upto the period of completion of work as stipulated in the Letterof Intent + 1 month and the same will be kept valid by proper renewal till the satisfactory completion of the Guarantee Period.

16.6 If the value of the work done at any time exceeds the contract value, the Security Deposit shall be correspondingly enhanced and the extra Security Deposit shall be immediately deposited by the Contractor or recovered from payments due to him.

16.7 Failure to deposit the Security Deposit within the stipulated time, may lead to forfeiture of Earnest Money Deposit and Cancellation of the award of work.

16.8 If any part of Security Deposit of the Contractor is held in the form of approved securities, it shall be kept transferred in the name of Bharat Heavy Electricals Limited, in such a manner that the same can be realised fully without referring to the Contractor. BHEL shall not be responsible for any depreciation in the value of the Security while in BHEL's custody or for any loss of interest thereon.

16.9 BHEL reserves the right of forfeiture of Security Deposit in addition to other claims and penalties in the event of the contractor's failure to fulfil any of the contractual obligations or in the event of termination of contract as per terms and conditions of contract. BHEL reserves the right to set off the Security Deposit, against any claims of any other contracts with BHEL.

16.10 RETURN OF SECURITY DEPOSIT : If the contractor fully performs and completes the work in all respects to the entire satisfaction of BHEL and presents an absolute "No Demand Certificate" in the prescribed form and returns properties belonging to BHEL taken, borrowed or hired by him for carrying out the said works, the amount of Security Deposit will be released to the contractor after deducting all costs, expenses and other amounts that are to be paid to BHEL under this or

other contracts entered into with the Contractor and upon receipt of performance bank guarantee for 10% value of the contract with validity up to the guarantee period. It may be noted that in no case the Security Deposit shall be refunded / released prior to the payment of final bill.

NOTE : All the BGs are to be submitted as per BHEL, PEM performa.

17 No interest shall be payable by BHEL on Earnest Money Deposit, Security Deposit or on any moneys due to the contractor.

18 REJECTION OF TENDER AND OTHER CONDITIONS :

18.1 The acceptance of Tender will rest with BHEL which does not bind itself to accept the lowest tender or any tender and reserves to itself full rights for the following without assigning any reasons whatsoever.

(a) To reject any or all of the tenders.

(b) To split up the work amongst two or more Tenderers.

(c) To award the work in part.

(d) In either of the contingencies stated in (b) and (c) above to modify the time for completion suitably.

18.2 Conditional and un-witnessed tenders, tenders containing absurd or unworkable rates and amounts, tenders which are incomplete or otherwise considered defective and tenders not in accordance with the tender conditions, specifications, etc., are liable to be rejected.

18.3 If a tenderer expires after the submission of his tender or after the acceptance of his tender, BHEL may at its discretion, cancel such tender. If a partner of a firm expires after the submission of the tender or after the acceptance of the tender, BHEL may cancel such tender at its discretion unless the firm retains its character.

18.4 BHEL will not be bound by any Power of Attorney granted by the tenderer or by changes in the composition of the firm made subsequent to the execution of the contract. BHEL may, however, recognise such Power of Attorney and changes after obtaining proper legal advice, the cost of which will be chargeable to the contractor concerned.

18.5 If the tenderer deliberately gives wrong information in his tender, BHEL reserves the right to reject such tender at any stage or to cancel the contract, if awarded and forfeit the Earnest Money/ Security Deposit/ any other moneys due.

18.6 Canvassing in any form in connection with the tender is strictly prohibited and the tenders submitted by the contractor who resorts to canvassing are liable to be rejected.

18.7 Should a tenderer or contractor or in the case of a firm or Company of

contractors/ one or more of its Partners/ share holders / Directors have a relation or relations employed in BHEL, the authority inviting tender shall be informed to the fact alongwith the offer, failing this BHEL may, at its sole discretion reject the tender or cancel the contract and forfeit the Earnest Money/ Security Deposit.

18.8 The successful tender should not sub-contract the part or complete work detailed in the tender specification without written permission of BHEL. The tenderer is solely responsible to BHEL for the work awarded to him.

18.9 NO DEVIATIONS to the tender conditions will normally be accepted. however, if the tenderer insists for certain deviations to the conditions, financial implication thereof shall be loaded to the quoted price for evaluating the tenderer's offer.

GENERAL TERMS AND CONDITIONS
SECTION - II

19 The following terms and expressions shall have the meaning hereby assigned to them except where the context otherwise requires.

19.1 BHEL (or B.H.E.Ltd.) shall mean Bharat Heavy Electricals Limited, a Company registered under the Indian Companies Act, 1956, with its Registered Office at BHEL HOUSE, SIRI FORT, NEW DELHI-110049 or its authorised officers or its Engineer or other employees authorised to deal with any matters with which these persons are concerned, on its behalf.

19.2 `GENERAL MANAGER' shall mean the Officer in Administrative charge of the contracting Unit of BHEL.

19.3 `ENGINEER' or`ENGINEER-IN-CHARGE' shall mean Engineer deputed by BHEL. The term includes Deputy General Manager, Sr. Manager, Manager, Dy. Manager, Sr. Engineer, Engineer of BHEL PEM, Noida-.

19.4 `SITE' shall mean the place or places at which the plants/ equipment are to be erected and services are to be performed as per the specifications of this Tender.

19.5 `CLIENTS OF BHEL' or `CUSTOMER' shall mean the project authorities to whom BHEL is supplying the equipment.

19.6 "CONTRACTOR' shall mean the individual, firm or company who enters into contract with BHEL and shall include their executors, administrators, successors and permitted assigns.

19.7 `CONTRACT' or `CONTRACT DOCUMENT' shall mean and include the agreement, the work order, the accepted appendices of rates, Schedules of Quantities, if any, General Conditions of Contract, Special Conditions of Contract, Instructions to Tenderers, the drawings, the technical specifications, the special specifications, if any, the tender documents and the Letter of Intent/ Acceptance letter issued by BHEL. Any conditions or terms stipulated by the tenderer in the tender documents or subsequent letters shall not form part of the Contract unless specifically accepted in writing by BHEL in the Letter of Intent and incorporated in the Agreement.

19.8 `GENERAL CONDITIONS OF CONTRACT' shall mean the `Instructions to Tenderers' and `General Conditions of Contract' pertaining to the work detailed.

19.9 `TENDER SPECIFICATIONS' shall mean the Special Conditions, Technical Specifications, appendices, Site information and drawings pertaining to the work for which the tenderers are required to submit their offer. Individual Specifications Number will be assigned to each tender specifications.

19.10 `TENDER DOCUMENTS' shall mean the General Conditions of Contract (19.8) and Tender Specifications (19.9).

19.11 `LETTER OF INTENT' shall mean the intimation by a letter / e-mail/ telegram / telex / fax to the tenderer that the tender has been accepted in accordance with provisions contained in the letter. The responsibility of the contractor commences from the date of issue of this letter and all the terms and conditions of contract are applicable from this date.

19.12 `COMPLETION TIME' shall mean the period by date specified in the Letter of Intent or

date mutually agreed upon for handing over the erected equipment / plant which are found acceptable by the Engineer being of required standard and conforming to the specifications of the Contract.

19.13 `PLANT' shall mean and connote the entire assembly of the plant and equipment covered by the Contract.

19.14 `EQUIPMENT' shall mean all equipment, machineries, materials, structurals, electricals and other components of the plant covered by the Contract.

19.15 `TESTS' shall mean and include such test or tests to be carried out by the contractor as are prescribed in the Contract or considered necessary by BHEL in order to ascertain the quality, workmanship, performance and efficiency of the contracted work or part there of.

19.16 ”APPROVED', `DIRECTED' or `INSTRUCTED' shall mean approved, directed or instructed by BHEL.

19.17 `WORK' or `CONTRACT WORK' shall mean and include supply of all categories of labour, specified consumables, tools and tackles required for complete and satisfactory site transportation, handling, stacking, storing, erecting, testing and commissioning of the equipment to the entire satisfaction of BHEL.

19.18 ”SINGULAR' and `PLURAL' etc. Words carrying singular number shall also include plural and vice versa where the context so requires. Words importing masculine gender any Company or Association or Body of Individuals, whether incorporated or not.

19.19 `HEADINGS' The headings in these General Conditions are solely for the purpose of facilitating reference and shall not be deemed to be part thereof or be taken into consideration in the interpretation or construction thereof or the contract.

19.20 `MONTH' shall mean calendar month.

19.21 ”WRITING' shall include any manuscript, type written or printed statement under the signature or seal as the case may be.

20 LAW GOVERNING THE CONTRACT AND COURT JURISDICTION: The Contract shall be governed by the Law for the time being in force in the Republic of India. The Civil Court at Delhi/ New Delhi, having ordinary Original Civil Jurisdiction shall alone have exclusive jurisdiction in regard to all claims in respect of this Contract.

21 ISSUE OF NOTICE The Contractor shall furnish to the Engineer, the name, designation and address of his authorised agent and all complaints, notices, communications and references shall be deemed to have been duly given to the Contractor, if delivered to the Contractor or his authorised agent or left at or posted to the address either of the contractor or his authorised agent and shall be deemed to have been so given in the case of posting on the day on which they would have reached such address in the ordinary course of post or at which they were so delivered or left.

22 USE OF LAND No land belonging to BHEL shall be occupied by the Contractor without the written permission of BHEL.

23 COMMENCEMENT AND COMPLETION OF WORK:

23.1 The contractor shall commence the work within the time indicated in the Letter of Intent and shall proceed with the same with due expedition

without delay.

23.2 If the successful tenderer fails to commence the work within the stipulated time, BHEL, at its sole discretion, will have the right to cancel the contract. His Earnest Money and/ or Security Deposit will stand forfeited without any further reference to him without prejudice to any and all of BHEL's other rights and remedies in this regard.

23.3 All the works shall be carried out under the direction and to the satisfaction of BHEL.

23.4 The transported equipment, erected /constructed plant or work performed under the Contract, as the case may be, shall be taken over when it has been completed in all respects and/or satisfactorily put into operation at site.

24 MEASUREMENT OF WORK AND MODE OF PAYMENT

24.1 All payments due to the contractor shall be made by `Account Payee' Cheques.

24.2 For progress/ running bill payments, the contractor shall present detailed measurement sheets in triplicate duly indicating all relevant details based on technical documents and connected drawings for the work done during the month/ period under different categories in line with terms of payment as per Letter of Intent. The basis of arriving at the quantities/ weights shall be the relevant documents and drawings released by BHEL. These measurement sheets shall be prepared jointly with Engineer and signed by both the parties.

24.3 These measurement sheets will be checked by the Engineer and quantities and percentages eligible for payment under different groups shall be decided by him. The abstract of quantities and percentages so arrived at based on the terms of payment shall be entered in the Measurement Book and signed by both the parties.

24.4 Based on the above quantities, contractor shall prepare the bills in the prescribed proforma and work out the financial value. These will be entered in the Measurement Book and signed by both the parties. Payment shall be made by BHEL after effecting the recoveries due from the contractor.

24.5 All recoveries due from the contractor for the month / period shall be effected in full from corresponding running bills unless specific approval from Competent authority is obtained to the contrary.

24.6 Measurement shall be restricted to that quantity for which it is required to ascertain the financial liability of BHEL under this contract.

24.7 Measurement shall be taken jointly by persons duly authorised by BHEL and the Contractor.

24.8 The Contractor shall bear the expenditure involved, if any, in making the measurements and testing of materials to be used/ used in the work. The Contractor shall, without extra cost to BHEL, provide all the assistance with appliances and other things necessary for measurement.

24.9 If, at any time due to any reason whatsoever, it becomes necessary to

remeasure the work done, in full or in part, the expenses towards such remeasurement shall be borne by the Contractor.

24.10 Passing of bills covered by such measurements does not amount to acceptance by BHEL of the completion of the work measured. Any left out work has to be completed by the Contractor, as directed.

24.11 Final measurement bill shall be prepared in the proforma prescribed for the purpose, based on the certificate issued by the Engineer that the entire work as stipulated in the tender specifications has been completed in all respects to the entire satisfaction of BHEL.The Contractor shall give unqualified `No Claim' and `No Demand' certificates. All the tools and tackles loaned to him should be returned in condition satisfactory to BHEL. The abstract of final quantities and financial values shall also be entered in the Measurement Book and signed by both the parties. The final bill shall be paid within a reasonable time after completion of the work. After the payment of final bill, only the guarantee obligation percentage value shall remain unpaid which shall be released in accordance with clause 32.

25 RIGHTS OF BHEL

BHEL reserves to itself the following rights in respect of this contract without entitling the contractor to any compensation.

25.1 To get the work done through another agency at the risk and cost of the contractor, in the event of poor progress or the contractor's inability to progress the work for completion as stipulated in the contract, poor quality of work, persistent disregard of instructions of BHEL, assignment, transfer, subletting of the contracted work without written permission of BHEL, non-fulfillment of any contractual obligations etc. and to claim / recover compensation for such losses from the contractor including BHEL's supervision charges and overheads from Security Deposit/ other dues.

25.2 To withdraw any portion of work and / or to restrict / alter quantum of work as indicated in the contract during the progress of work and get it done through another agency and/ or by the departmental labour to suit BHEL's requirements or in case BHEL decides to advance the completion due to other emergent reasons.

25.3 To terminate the contract after due notice and forfeit the Security Deposit and recover the loss sustained in getting the balance work done through other agencies in addition to liquidated damages in the event of :

(a) Contractor's continued poor progress.

(b) Withdrawal from or abandonment of the work before completion of the work.

(c) Any act of the contractor, contrary to the provisions of any law of the land.

(d) Insolvency of the contractor.

(e) Persistent disregard of the instructions of BHEL.

(f) Assignment, transfer, subletting of the contract work without BHEL's written permission.

(g) Non-fulfillment of any contractual obligations.

25.4 To recover any moneys due from the Contractor from out of any moneys due to the Contractor under this or any other Contract or from the Security Deposit.

25.5 To claim compensation for losses sustained including BHEL's supervision charges and overheads in case of termination of contract and to levy liquidated damages for delay in completion of work, at the rate of 1/2% of the contract value per week of delay or part thereof subject to a ceiling of 10% of the contract value.

25.6 To determine the Contract or to restrict the quantum of work and pay for the portion of work done in case BHEL's contract with its customer is terminated for any reason.

25.7 To effect recoveries from any amounts due to the contractor under this or any other contract or in any other form the moneys which BHEL is forced to pay to anybody due to contractor's failure to fulfil any of his obligations.

25.8 To restrict or increase the quantity and nature of work to suit site requirements, since the tender specification is based on preliminary documents and quantities furnished therein are indicative and approximate and the rates quoted shall not be subject to revision.

25.9 To deploy BHEL's skilled and semiskilled workmen in case of emergency / poor progress/ deficiency in skill on the part of the employees of the contractor and to recover the expenditure on account of the same from the moneys due to the contractor.

25.10 While every endeavor will be made by BHEL to this end, BHEL can not guarantee uninterrupted work due to conditions beyond its control. The Contractor will not be entitled to any compensation/ extra payment on this account.

25.11 In the event of any dispute of technical nature, the decision of BHEL shall be final and binding on the Contractor.

26 RESPONSIBILITIES OF CONTRACTOR IN RESPECT OF LOCAL LAWS, EMPLOYMENT OF WORKERS, ETC.

The following are the responsibilities of the Contractor in respect of observance of local laws,

employment of personnel, payment of taxes etc.:

26.1 As far as possible, skilled and unskilled workers shall be engaged from the local areas in which the work is being executed.

26.2 The contractor at all times during the continuance of this contract, shall in all his dealings with the local labour for the time being employed on or in connection with the work, have due regard to all local festivals, religious and other customs.

26.3 The Contractor shall comply with all State and Central Laws, Statutory Rules, Regulations, etc., such as The payment of wages Act, The Minimum Wages Act, The workmen's Compensation Act, The Employer's Liability Act, The industrial Disputes Act, The Employees' Provident Fund Act, Employees' State Insurance Scheme, the Contract Labour (Regulations and Abolition Act, 1970)and other Acts, Rules and Regulations for labour as may be enacted by the Government during the tenure of the Contract and having force or jurisdiction at site. The contractor shall give to the local Governing Body, Police and other concerned Authorities all such notice as may be required under law.

26.4 The Contractor, in the event of his engaging 20 or more workmen, will obtain independent license under the Contract Labour (Regulations and Abolition Act, 1970) from the concerned authorities based on the certificate (Form-V) issued by the principal employer/ customer.

26.5 The contractor shall pay all taxes, fees, license charges, deposits, duties, tolls, royalty, commissions or other charges which may be leviable on account of any of his operations connected with this contract. In case BHEL is forced to make any such payment, BHEL shall recover the same from the contractor either from moneys due to him or otherwise as deemed fit.

26.6 While BHEL will pay the inspection fees of the Electrical Inspectorate, all other arrangements for the periodical visits of Electrical Inspector to site, inspection certificates etc. will have to be made by the contractor at his cost. The contractor will also meet all expenses in connection with his welder's qualification/ requalification tests etc.

26.7 The contractor shall be responsible for the provision of health and sanitary arrangements more particularly described in the Contract Labour (Regulations and Abolition Act, 1970) and safety precautions as may be required for safe and satisfactory execution of the contract.

26.8 The contractor shall be responsible for proper accommodation including adequate medical facilities for the personnel employed by him.

26.9 The contractor shall be responsible for the proper behavior and observance of all regulations by the staff employed by him.

26.10 The contractor shall ensure that no damage is caused to any person / property of other parties working at site. If any such damage is caused, it shall be the responsibility of the contractor to make good the losses and compensate them.

26.11 All the properties/ equipment/ components of BHEL loaned with or

without deposit, to the contractor shall remain the properties of BHEL. The contractor shall use such properties for the purpose of execution of this contract. All such properties /equipment / components shall be taken to be in good condition unless notified to the contrary by the contractor within 48 hours. The contractor shall return them in good condition as and when required by BHEL. In case of non-return, loss, damage,repairs etc., the cost thereof, as may be fixed by the Engineer, will be recovered from the contractor.

26.12 It shall not be obligatory on the part of BHEL to supply any tools and tackles or materials other than those specifically agreed to be given by BHEL. However, depending upon availability / possibility, BHEL equipment and other materials may be made available to the contractor on payment of hire charges as fixed by them , subject to the conditions laid down by BHEL from time to time. Unless paid in advance, such hire and other charges shall be recovered from out of dues to the contractor or security deposit in one installment.

26.13 The contractor shall fully indemnify and keep indemnified BHEL/ its customer against all claims of whatever nature arising during the course of execution of this contract.

26.14 In case the contractor is required to undertake any work outside the scope of this contract, the amount payable shall be as may be mutually agreed upon.

26.15 Any delay in completion of works or non-achievement of periodical targets, due to reasons attributable to the contractor, will have to be compensated by the contractor either by increased manpower and resources or by working extra hours or more than one shift at no extra cost to BHEL.

26.16 The contractor shall execute the work under the conditions usual to such power plant construction and in conjunction with numerous other operations at site. The contractor and his personnel shall cooperate and coordinate with other agencies at project site and proceed in a manner that shall help in the progress of work at site as a whole.

26.17 The contractor will be directly responsible for payment of wages to his workmen. A pay-roll sheet giving details of all payments made to the workmen duly signed by the contractor's representative should be furnished to BHEL, if called for.

26.18 In case of any class of work for which there is no specification laid down in the contract, such work shall be carried out in accordance with the instructions and requirements of the Engineer.

26.19 No levy, payment or charges made or imposed shall be impeached by reason of any clerical error or by reason of any mistake in the amount levied, demanded or charged.

26.20 No idle labour charges will be admissible in the event of any stoppage of work resulting in the contractor's workmen being rendered idle due to any reason at any time.

26.21 The contractor shall take all reasonable care to protect the materials and

the work till such time the plant / equipment has been taken over by BHEL.

26.22 Contractor shall not stop work or abandon the site for whatsoever reason or dispute, excepting for force majeure conditions. All problems / disputes shall be separately discussed and settled without effecting the progress of work. Stoppage or abandonment of work, other than under force majeure conditions, shall be treated as breach of work of contract and dealt with accordingly.

26.23 The contractor shall keep the area of work clean and shall remove the debris etc. while executing day-to-day work. Upon completion of work, the contractor shall remove from the vicinity of work, all scrap, packing materials, rubbish, unused and other materials and deposit them in places specified by the Engineer. The contractor will also demolish all the hutments, sheds, offices, etc. constructed and used by him and shall clean the debris. In the event of his failure to do so, the same will be arranged to be done by the Engineer and the expenses recovered from the contractor.

26.24 The contractor shall execute the work in the most substantial and workman like manner in the stipulated time. Accuracy of work and timely execution shall be the essence of this contract. The contractor shall be responsible to ensure that the quality, assembly and workmanship conform to the dimensions and clearance given in the drawings and/ or as per the instructions of the Engineer.

26.25 The contractor shall furnish fortnightly labour deployment report indicating the classification and number of workmen engaged, date wise and category wise. Besides, the contractor shall also furnish progress reports on work at regular intervals as required by the Engineer.

27 RESPONSIBILITIES OF CONTRACTOR IN RESPECT OF SAFETY OF MEN, EQUIPMENT, MATERIAL AND ENVIRONMENT. ‘

27.1 All safety rules and codes applied by BHEL and its customer at site shall be observed by the contractor and his workmen without exception. The contractor shall be responsible for the safety of the equipment / material and work to be performed by him and shall maintain all lights, fencing guards, signs etc. or other protections necessary for the purpose. Contractor shall also take such additional precautions as may be indicated from time to time by the Engineer, with a view to prevent pilferage, accidents, fire hazards etc. Suitable number of clerical staff, watch and ward, store keepers to take care of equipment, materials, construction tools and tackles shall be posted at site by the contractor till the completion of the work under this contract. The contractor shall arrange for such safety devices as are necessary for this type of work and carry out the requisite site tests of handling equipment, lifting tools, tackles etc. as per usual standards and practices.

27.2 The contractor shall provide to it's work force and ensure the use of the

following personal protective equipment as found necessary and as directed by the authorized BHEL officials.

(a) Safety Helmets conforming to IS-2925
(b) Safety Belts conforming to IS-3521
(c) Safety shoes conforming to IS-1989
(d) Eye & Face Protection devices conforming to IS-8520 and IS-8940
(e) Hand & body protection devices conforming to IS-2573, IS-6994, IS-8807 & IS-8519.

27.3 All tools, tackles, lifting appliances, material handling equipment, scaffolds, cradles, safety nets, ladders, equipment etc. used by the contractor shall be of safe design and construction. These shall be tested and certificate of fitness obtained before putting them to use and from time to time as instructed by authorized BHEL official who shall have the right to ban the use of any item.

27.4 All electrical equipment, connections and wiring for construction power, it's distribution and use shall conform to the requirements of Indian Electricity Act and Rules. Only electricians licensed by the appropriate statutory authority shall be employed by the contractor to carry out all types of electrical works. All electrical appliances including portable electric tools used by contractor shall have safe plugging system to source of power and be appropriately earthed.

27.5 The contractor shall not use any hand lamp energised by electric power with supply voltage of more than 24 volts. For work in confined spaces, lighting shall be arranged with power source of not more than 24 volts.

27.6 Where it becomes necessary to provide and / or store petroleum products, explosives, chemicals and liquid or gaseous fuel or any other substance that may cause fire or explosion, the contractor shall be responsible for carrying out such provision and/or storage in accordance with the rules and regulations laid down in the relevant Government Acts, such as Petroleum Act, Explosives Act, petroleum and Carbides of Calcium Manual of the Chief Controller of Explosives, Government of India etc. Prior approval of the authorised BHEL official at the site shall also be taken by the contractor in all such matters.

27.7 The contractor shall arrange at his cost (wherever not specified) appropriate illumination at all work spots for safe working, when natural daylight may not be adequate for clear visibility.

27.8 In case of a fatal or disabling injury / accident to any person at construction sites due to lapses by the contractor, the victim and / or his / her dependents shall be compensated by the contractor as per statutory requirements. However, if considered necessary, BHEL shall have the right to impose appropriate financial penalty on the contractor and recover the same from payments due to the contractor for suitably compensating the victim and / or his / her dependents. Before imposing

any such penalty, appropriate enquiry shall be held by BHEL giving opportunity to the contractor to present his case.

27.9 In case of any damage to property due to lapses by the contractor, BHEL shall have the right to recover the cost of such damages from the payments due to the contractor after holding an appropriate enquiry.

27.10 In case of any delay in the completion of a job due to mishaps attributable to lapses by the contractor, BHEL shall have the right to recover cost of such delay from the payments due to the contractor, after notifying the contractor suitably and giving him opportunity to present his case.

27.11 If the contractor fails to improve the standards of safety in its operation to the satisfaction of BHEL after being given reasonable opportunity to do so and / or if the contractor fails to take appropriate safety precautions or to provide necessary safety devices and equipment or to carry out instructions regarding safety issued by the authorized BHEL official, BHEL shall have the right to take the corrective steps at the risk and cost of the contractor after giving a notice of not less than seven days indicating the steps that would be taken by BHEL.

27.12 The contractor shall submit report of all accidents, fires, property damage and dangerous occurrences to the authorized BHEL official immediately after such occurrence, but in any case not later than 12 hours of the occurrence. Such reports shall be furnished in the manner prescribed by BHEL. In addition, periodic reports on safety shall also be submitted by contractor to the authorized BHEL official from time to time as prescribed.

27.13 During the course of construction, alteration or repairs scrap lumbers with protruding nails, sharp edges etc., and all other debris including combustible scrap shall be kept cleared from working areas, passage ways and stairs in and around site.

27.14 Cylinders shall be moved by tilting and rolling them on their bottom edges. They shall not be intentionally dropped, struck or permitted to strike each other violently. When cylinders are transported by powered vehicles, they shall be secured in a vertical position.

27.15 The contractor shall be responsible for the safe storage of his radioactive sources.

27.16 All the contractor's supervisory personnel and sufficient number of workers shall be trained for fire fighting and shall be assigned specific fire protection duties. Enough number of such trained personnel must be available during the tenure of the contract.

27.17 Contractor shall provide enough fire protecting equipment of the types and numbers at his office, stores, erection site, other temporary structures, labour colony area etc. Access to such fire protection equipment shall be easy and kept open at all times. Compliance of the above requirement under fire protection shall in no way relieve the contractor of any of his responsibility and liabilities to fire accident occurring. In the event fire safety measures are not to BHEL's

satisfaction, BHEL shall have option to provide the same and recover the cost plus incidentals from contractor's bills and / or impose penalty as deemed fit by the Engineer.

27.18 Before commencing the work, the contractor shall appoint /nominate a responsible officer to supervise implementation of all safety measures and liaison with his counterpart of BHEL.

27.19 If safety record of the contractor in execution of the awarded job is to the satisfaction of Safety Department of BHEL, issue of an appropriate certificate to recognize the safety performance of the contractor may be considered by BHEL after completion of the job.

28 CONSEQUENCES OF CANCELLATION

28.1 Whenever BHEL exercises its authority to terminate the contract / withdraw a portion of work under clause 25, the work may be got completed by any other means at the contractor's risk and cost provided that in the event of the cost of completion (as certified by the Engineer which shall be final and binding on the contractor) being less than the contract value, the advantage shall accrue to BHEL. If the cost of completion exceeds the moneys due to the contractor under the contract, the contractor shall either pay the excess amount demanded by BHEL or the same shall be recovered from the contractor. This will be in addition to the forfeiture of Security Deposit and recovery of liquidated damages as per relevant clauses.

28.2 In case BHEL completes the work under the provisions of this clause, the cost of such completion to be taken into account for determining the excess cost to be charged to the contractor shall consist of cost of materials purchased and / or labour provided by BHEL with an addition of such percentage to cover supervision and establishment charges as may be decided by BHEL.

29 INSURANCE

29.1 BHEL shall arrange for insuring the materials / property of BHEL covering the risks during transit, storage, erection and commissioning.

29.2 It shall be the sole responsibility of the contractor to insure his workmen against risks of accidents and injury while at work as required by the relevant Rules and to pay compensation, if any, to them as per Workmen's Compensation Act. The contractor shall also insure his staff against accidents. The work will be carried out in a protected area and all the Rules and Regulations of BHEL in the Project Area which are in force from time to time will be followed by the contractor.

29.3 If due to negligence and/or non-observance of safety and other precautions, any accident / injury occurs to any other persons/ public, the contractor shall pay necessary compensation and other expenses, if so decided by the appropriate authority.

29.4 The contractor will take necessary precautions and due care to protect the material, while in his custody from any damage/ loss till the same is taken over by BHEL. For lodging / processing of insurance claim the contractor will submit necessary documents. BHEL will reserve the right to recover the loss from the contractor, in case the damage / loss is due to carelessness / negligence on the part of the contractor. In case of any theft of material under contractor's custody , matter shall be reported to police by the contractor immediately and copy of FIR and subsequently police investigation report shall be submitted to BHEL for taking up with insurance.

29.5 If due to negligence/ carelessness on the part of the contractor, any material/ equipment gets damaged, the contractor shall submit necessary documents for lodging insurance claims as required by BHEL Engineer. BHEL shall however reserves the right to recover deductible franchise and also unsettled portion of insurance claim amount from the contractor.

29.6 If due to negligence/ carelessness on the part of the contractor, any surrounding properties also gets damaged, the contractor shall submit necessary documents for lodging insurance claims as required by BHEL Engineer. BHEL shall however reserves the right to recover deductible franchise and to unsettled portion of insurance claim amount from the contractor.

29.7 The contractor may note that BHEL T&Ps / IMTEs are not insured. The Contractor will take necessary precautions and due care to protect the same while in his custody from any damage/ loss till the same is handed over back to BHEL. In case the damage / loss is due to carelessness/ negligence on the part of the contractor, the Contractor is liable to get them repair/ replaced immediately and in case of his failure to do so within a reasonable time , BHEL will reserve the right to recover the loss from the contractor.

30 STRIKES AND LOCKOUTS

30.1 The contractor will be solely responsible for all disputes and other issues connected with his workmen. In the event of contractor's workmen resorting to strike or the contractor resorting to lockout and if the strike or lockout so declared is not settled within a period of one month, BHEL shall have the right to get the erection work executed by employing its own men or through other agencies or both. The cost incurred by BHEL in this regard shall be recovered from the contractor.

30.2 For any purpose whatsoever, the employees of the contractor shall not be deemed to be in the employment of BHEL

31 FORCE MAJEURE

31.1 The following shall amount to force majeure conditions. Acts of God,

Act of any Government, War, Sabotage, Riots, Civil Commotion, Police Action, Revolution, Flood, Fire, Cyclone, Earthquake and Epidemic and other similar causes over which the contractor has no control.

31.2 If the contractor suffers delay in the due execution of the contract, due to delays caused by force majeure conditions, as defined above, the agreed time for completion of the work covered by this contract shall be extended by a period of time equal to the period of delay, provided that on the occurrence of any such contingency, the contractor immediately reports to BHEL in writing the causes for the delay but the Contractor shall not be eligible for any compensation on this account.

32 GUARANTEE Even though the work will be carried out under the supervision of the Engineer, the contractor will be responsible for the quality of the workmanship and shall guarantee the work done for a period of twelve months from the date of completion of work as certified by the Engineer, and shall rectify, free of cost to BHEL, all defects arising out of faulty erection during the guarantee period starting from the date of completion of rectification. In the event of the contractor failing to repair the defective works within the time specified by the Engineer, BHEL may proceed to undertake the repairs of such defective works at the contractor's risk and cost, without prejudice to any other rights and recover the same from out of any moneys payable to the contractor or by other legal means.

33 ARBITRATION : All disputes between the parties to the contract arising out of or in relation to the contract, other than those for which the decision of the Engineer or any other person is by the contract expressed to be final and conclusive, shall after written notice by either party to the contract to the other party, be referred to sole arbitration of the General Manager or his nominee. The arbitration shall be conducted in accordance with the provisions of the Arbitration and Reconciliation Act, 1996. The parties to the contract understand and agree that it will be no objection that the General Manager or the person nominated as Arbitrator had earlier in his official capacity to deal directly or indirectly with the matters to which the contract relates or that in the course of his official duties had expressed views on all or any of the matters in dispute or difference. The award of the Arbitrator shall be final and binding on the parties to this contract. In the event of the Arbitrator dying, neglecting or refusing to act or resigning or being unable to act for any reason or his award being set aside by the Court for any reason, it shall be lawful for the General Manager or his successor, as the case may be, either to act himself as the Arbitrator or to appoint another Arbitrator in place of the outgoing Arbitrator in the manner aforesaid. The Arbitrator may, from time to time, with the consent of both the parties to the contract, enlarge the time for making the award. Work under the contract shall be continued during the arbitration proceedings. The venue of the arbitration shall be the place from which the contract is issued or such other place as the Arbitrator at his discretion may determine.

ANNEXURE-A

FINANCIAL VIABILITY

1. Owner's capital in the business (incase of Partnership, please mention percentage shares and amounts).

2. Quantum of business done during last three financial years, as per audited accounts.

i) Year 2003-04 - Rs.

ii)Year 2004-05 - Rs

iii)Year 2005-06 - Rs.

3. Value of fixed Assets of the business in last three years, as per audited accounts.

i) Year 2003-04 - Rs.

ii)Year 2004-05 - Rs

iii)Year 2005-06 - Rs

4. Guarantee limits (if any) enjoyed by the firm.

5. Over draft limits (if any enjoyed by the firm.

6. Please enclose audited profit and loss account and balance sheet for last 3 years (indicate no. of sheets).

7. Certificate from Scheduled Bank to prove Contractor's financial capacity to undertake the work duly indicating the financial limits the tenderer enjoys.

(Signature of tenderer)
With Stamp

NOTE:

All the above documents should be duly certified by auditors/ Bank as may be applicable.

BHEL PEM, NOIDA

ANNEXURE - B

DETAILS OF SIMILAR JOBS EXECUTED / IN PROGRESS

S.No.	Agency By whom of Contract Awarded	Description of Work	Contract value	Status of Completion (Indicate % Completion of jobs in progress)
1	2	3	4	5

(SIGNATURE OF TENDERER)
WITH STAMP

ANNEXURE - C

MONTHWISE & CATEGORYWISE MANPOWER DEPLOYMENT PLAN

S.No.	Catetory	No. of Person available on roll of the Orga-nasation	Month (Indicate No. of persons to be deployed in each month)			
			Ist	**2nd**	**3rd**	**4th**
1.	Engineer					
2.	Supervisors					
3.	Skilled Worker					
4.	Unskilled/Helper					
	Total					

(SIGNATURE OF TENDERER)
WITH STAMP

BHEL PEM, NOIDA

ANNEXURE - D

(A) STATUS OF TOOLS & PLANTS

S.No.	Name of Equipment owned	Quantity	Registration no. wherever Applicable	Present Qty proposed to be deployed for this job

(B) MONTHWISE T&P DEPLOYMENT PLAN

S.No.	Description of T & P	Month (Indicate No. to be deployed in each month)			
		Ist	2nd	3rd	4th

(SIGNATURE OF TENDERER)
WITH STAMP

BHEL PEM, NOIDA

ANNEXURE - E

ANALYSIS OF UNIT RATE QUOTED

S.NO.	DESCRIPTION	PERCENTAGE OF THE UNIT RATE QUOTED	REMARKS
1.	Salary & wages for staff & workers		
2.	Consumables		
	(a) Gases		
	(b) Welding Electrodes		
	(c) P.O.L.		
	(d) Others		
3.	Depreciation & maintenance for T&P		
4.	Depreciation & Maintenance for other items		
5.	Establishment and Administration expenses of site		
6.	Overheads		
7.	Profit		

(SIGNATURE OF TENDERER)
WITH STAMP

ANNEXURE - F

DECLARATION SHEET

I, ----------hereby certify that, all the information and data furnished by me with regard to this Tender Specification No.---------- are true and complete to the best of my knowledge. I have gone through the specification, conditions and stipulations in detail and agree to comply with the requirements and intent of specification.

I, further certify that I am the duly authorised representative of the under mentioned tenderer and a valid power of attorney to this effect is also enclosed.

Tenderer's Name & Address

Authorised representative's signature with name and address.

ANNEXURE - `G'

CHECKLIST AND SCHEDULE OF GENERAL PARTICULARS

NOTE : Tenderers are requested to fill in the following details and no column should be left blank

1. Name and address of the tenderer

2. E-mail Address

3. Phone No. (Office)/ Fax No.

4. Name & designation of the official of the tenderer to whom all the references shall be made.

5. Tenderer's proposal No. & date

6. Whether EMD submitted (By cash/Pay order / bank draft) by...

7. Validity of offer/ rates quoted for three months from the date of opening of tender Yes/No

8. Financial Status as per Clause 11.1 (in the format as per Annexure-A) Yes/No

9. Income tax Clearance certificate as per Clause 11.2 Yes/No

10. Details of experience as per clause 11.3 (in the format as per Annexure-B) Yes/No

11. Monthwise & Categorywise manpower deployment plan as per Clause 11.4 (in the format as perAnnexure-C) Yes/No

12. Attested copy of power of attorney as per clause 11.5 Yes/No

13. Details about type of the firm as per clause 11.6 Yes/No

14. Status of T&P and monthwise deployment plan as per clause11.7 (in the format as per Annexure-D) Yes/No

15. Analysis of unit rate quoted as per Clause 11.8 (in the format as per Annexure-E) Yes/No

16. Declaration sheet as per clause 11. 09 (in the format as per Annexure-F) Yes/No

17. Service Tax Registration Certificate enclosed Yes/No

18. ESI Registration Certificate enclosed Yes/No

19. PF Registration Certificate enclosed Yes/No

Date _____ (SIGNATURE OF TENDERER)
WITH STAMP

WITNESS
(SIGNATURES WITH FULL PARTICULARS)

1.

2.

ANNEXURE - H

BANK GUARANTEE FOR SECURITY DEPOSIT

B.G. NO. Date

This deed of Guarantee made this ---------- day of ----------two thousand six by ---------- (Bank) hereinafter called the "The Guarantor" (which expression shall unless repugnant to the context or meaning thereof be deemed to include its successors and assigns) in favour of M/s Bharat Heavy Electrical Limited (A Govt. of India Undertaking) a company incorporated under the Companies Act, 1956, having its registered office at BHEL House, Siri Fort, Asiad, New Delhi - 110049 through its unit at Power Sector - Northern Region, Noida, Distt. Gautam Budh Nagar, (UP) hereinafter called "The Company" (which expression shall unless repugnant to the context or meaning thereof by deemed to include its successors and assigns)

WHEREAS ----------(hereinafter referred to as the Contractor) have entered into a contract arising out of Letter of Intent no.---------- dt.----------(hereinafter referred to as "the contract") for the construction of ---------- with the company.

AND WHEREAS the contract inter-alia provides that the contractor shall furnish to the company a sum of Rs.---------- (Rupees----------) towards security deposit for due and faithful performance of the contract in the form and manner specified therein.

AND WHEREAS the contractor has approached the Guarantor and in consideration of the arrangement arrived at between the contractor and the Guarantor, the Guarantor has agreed to give the Guarantee as hereinafter mentioned in favour of the company.

The Guarantor do hereby guarantee to the company the due and faithful performance, observance or discharge of the Contract by the contractor and further unconditionally and irrevocably undertake to pay to the Company without demur and merely on a demand, to the extent of Rs.----------(Rupees----------) against any claim by the company on them for any loss, damage, costs, charges and expenses caused to or suffered by the company by reasons of the contractor making any default in the performance, observance or discharge of the terms, conditions, stipulations or undertakings or any of them as contained in the contract.

The decision of the company whether any default has occurred or has been committed by the contractor in the performance, observance or discharge of any of the terms, conditions, stipulations or undertakings or any one of them as contained in the

contract and / or as to the extent of loss, damage, costs, charges and expenses caused to or suffered by the company by reason of the contractor making any default in the performance, observance or discharge of any of the terms, conditions, stipulations or undertakings or any one of them shall be conclusive and binding on the Guarantor irrespective of the fact whether the contractor admits or denies the default or questions the correctness of any demand made by the company in any Court, Tribunal or Arbitration proceedings or before any other Authority.

The company shall have the fullest liberty without affecting in any way the liability of the Guarantor under this Guarantee, from time to time to vary any of the terms and conditions of the contract or extend time of performance by the contractor or to postpone for any time and from time to time any of the powers exercisable by it against the contractor and either enforce or forebear from enforcing any of the terms and conditions governing the contract or securities available to the company and the Guarantor shall not be released from its liability under these presents by any exercise by the company of the liberty with reference to the matters aforesaid or by reasons of time being given to the contractor or any other forbearance, act or commission on the part of the company or any indulgence by the company to the contractor or any other matter or thing whatsoever which under the law relating to sureties would, but for this provision have the effect of so releasing the Guarantor from its liability under this guarantee.

The Guarantor further agrees that the Guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the contract and its claim satisfied or discharged and till the company certifies that the terms and conditions of the contract have been fully and properly carried out by the contractor and accordingly discharges this Guarantee, subject however, that the company shall have no claim under this Guarantee after ---------- i.e. (the present date of validity of Bank Guarantee unless the date of validity of this Bank Guarantee is further extended from time to time, as the case may be) unless a notice of the claim under this Guarantee has been served on the Guarantor before the expiry of the said period in which case the same shall be enforceable against the Guarantor not withstanding the fact that the same is enforced after the expiry of the said period.

The Guarantor undertakes not to revoke this Guarantee during the period it is in force except with the previous consent of the Company in writing and agrees that any liquidation or winding up or insolvency or dissolution or any change in the constitution of the contractor or the Guarantor shall not discharge the Guarantor's liability hereunder.

It shall not be necessary for the company to proceed against the contractor before proceeding against the Guarantor and the Guarantee herein contained shall be enforceable against them notwithstanding any security which the Company may have obtained or obtain from the Contractor shall at the time when proceedings are taken against the Guarantor hereunder be outstanding or unrealized.

Notwithstanding anything contained herein before, our liability under the Guarantee is restricted to Rs.---------- (Rupees----------).

BHEL PEM, NOIDA

Our guarantee shall remain inforce until ----------, i.e. (the present date of validity of Bank Guarantee unless the date of validity of this Bank Guarantee is further extended from time to time) unless a claim or demand under this guarantee is made against us on or before ---------- we shall be discharged from our liabilities under this Guarantee thereafter.

Any claim or dispute arising under the terms of this documents shall only be enforced or settled in the courts of at New Delhi / Delhi only.

The Guarantor hereby declares that it has power to execute this guarantee and the executant has full powers to do so on behalf of the Guarantor.

IN WITNESS whereof the ---------- (Bank) has hereunto set and subscribed its hand the day, month and year first, above written.

Signed for and on behalf of the Bank

(Signatory No.----------)

WITNESSES

1. Name & Address

2. Name & Address

Notes :

1. The above BG shall be executed on the non-judicial stamp papers of adequate value procured in the name of the bank in the state where the bank is located.

2. The above BG is required to be sent by the executing bank directly to BHEL at the address where tender is submitted / accepted under seal cover.

ANNEXURE - I

AGREEMENT

Agreement No. and Date
Name of the Work

Name of the Contractor with
full address

Value of work awarded

Letter of Intent No. and Date

Scheduled Commencement Date
Scheduled Completion Date

THIS AGREEMENT MADE THIS _____DAY OF_____2006, between BHARAT HEAVY ELECTRICALS LIMITED (A Government of India Enterprise) a Company incorporated under the Companies Act, 1956, having its Registered Office at BHEL House, Siri Fort New Delhi- 110049 (herein after called BHEL) of the ONE PART.
AND M/S _____
_____ (hereinafter called the `Contractor') of the SECOND PART. WHEREAS M/s ----------state that they have acquired and possess extensive experience in the field of ----------And Whereas in response to an Invitation to Tender No. ---------- issued by BHEL for execution of ---------- the contractor submitted their offer No.----------dated ----------And whereas BHEL has accepted the offer of the Contractor on terms and conditions specified in the Letter of Intent No.----------dated ----------read with the references cited therein.

THIS AGREEMENT WITNESSES AND it is hereby agreed by and between the parties as follows:

1. That the contractor shall execute the work of ----------and more particularly described in Tender Specification No ----------including Drawings and Specifications (hereinafter called the said works) in accordance with and subject to terms and conditions contained in these presents, instructions to Tenderers, General Conditions of Contract, Special Conditions, Annexures, Letter of Intent dated ----------and such other instructions, Drawings, Specifications given to him from time to time by BHEL.

2. The Contractor is required to furnish to BHEL Security deposit in the form of cash/ approved securities/ Bank Guarantee valid upto ---------- for a sum of Rs.----------

towards satisfactory performance and completion of the Contract.

3. The Contractor has furnished a Bank Guarantee bearing no.----------dated ----------for a sum of Rs.----------executed by ---------- in favour of BHEL towards Security Deposit valid upto ---------

OR

The Contractor has furnished to BHEL an initial Security Deposit of Rs.----------in the form of cash / approved Securities/ B.G No.---------- dated ---------- for Rs.----------executed by ---------- in favour of BHEL valid upto ---------- and has agreed for recovery of the balance security deposit by BHEL @ 10% of the value of work done from each running bill till the entire Security Deposit is recovered.

OR

The contractor has furnished to BHEL an initial Security Deposit of Rs.-----(Rs.---------- vide Bank draft No.----------dated ----------and by adjusting EMD of Rs.---------- submitted vide Bank draft No.---------- dt.---------) and has agreed for recovery of balance Security Deposit by BHEL @ 10% of the value of work done from each running bill till the entire security deposit is recovered.

4. The Contractor hereby agrees to extend the validity of the Bank Guarantee for such further period or periods as may be required by BHEL and if the Contractor fails to obtain such extension(s) from the Bank, the Contractor, shall pay forthwith or accept recovery of Rs.---------- from the bills in one installment and the contractor further agrees that failure to extend the validity of the Bank Guarantee or failure to pay the aforesaid amount in the manner specified above shall constitute breach of contract. In addition to above, BHEL shall be entitled to take such action as deemed fit and proper for recovering the said sum of Rs.----------.

OR

In case the contractor furnishes the bank guarantee at a later date the contractor hereby agrees to extend the validity of bank guarantee for such further period or periods as may be required by BHEL and if the contractor fails to obtain such extension(s) from the bank, the contractor shall pay forthwith or accept recovery of the amount of bank guarantee given in lieu of security deposit from the bills in one installment and the contractor further agrees that failure to extend the validity of bank guarantee or failure to pay the aforesaid amount in the manner specified above shall constitute breach of contract. In addition to above, BHEL shall be entitled to take such action as deemed fit and proper for recovering the said sum.

5. That in consideration of the payments to be made to the Contractor by BHEL in accordance with this Agreement the Contractor hereby covenants and undertakes with BHEL that they shall execute, construct, complete the works in conformity, in all respects, with the terms

and conditions specified in this Agreement and the documents governing the same.

6. That the Contractor shall be deemed to have carefully examined this Agreement and the documents governing the same and also to have satisfied himself as to the nature and character of the Works to be executed by him.

7. That the Contractor shall carry out and complete the execution of the said works to the entire satisfaction of the Engineer or such other officer authorised by BHEL, within the agreed time schedule, the time of completion being the essence of the Contract.

8. That BHEL shall, after proper scrutiny of the bills submitted by the Contractor, pay to him during the progress of the said works such sum as determined by BHEL in accordance with this Agreement.

9. That this Agreement shall be deemed to have come into force from -------- the date on which the letter of intent has been issued to the Contractor.

10. That whenever under this contract or otherwise, any sum of money shall be recoverable from or payable by the Contractor, the same may be deducted in the manner as set out in the General Conditions of Contract or other conditions governing this Agreement.

11. That all charges on account of Octroi, Terminal and other taxes including sales tax or other duties on material obtained for execution of the said works shall be borne and paid by the Contractor.

12. That BHEL shall be entitled to deduct from the Contractor's running bills or otherwise Income Tax under Section 194 (C) of the Income Tax Act, 1961.

13. That BHEL shall be further entitled to recover from the running bills of the Contractor or otherwise such sum as may be determined by BHEL from time to time in respect of consumables supplied by BHEL, hire charges for tools and plants issued (Where applicable) and any other dues owed by the Contractor.

14. That it is hereby agreed by and between the parties that non- exercise, forbearance or omission of any of the powers conferred on BHEL and /or any of its authorities will not in any manner constitute waiver of the conditions hereto contained in these presents and the liability of the Contractor with respect to compensation payable to BHEL or Contractor's obligations shall remain unaffected.

15. It is clearly understood by and between the parties that in the event of any conflict between the Letter of Intent and other documents governing this Agreement, the provisions in the Letter of Intent shall prevail.

16. The following documents

1. Invitation to Tender No----------
   and the documents specified therein.
2. Contractor's Offer No----------
   dated----------.
3.
4.
5.
6. Letter of Intent No_____
   dated_____.
7.

shall also form part of and govern this Agreement.

IN WITNESS HEREOF, the parties hereto have respectively set their signatures in the presence of

WITNESS (CONTRACTOR)
(to be signed by a person holding a valid Power of Attorney)

1.

2.

WITNESS (For and on behalf of BHEL)

1.

2.

SPECIAL CONDITION OF CONTRACT

INDEX

Clause NO	DESCRIPTION	PAGE NO
34.0	General Scope of Work	44-45
35.0	Instruction to Tenderer	45-46
36.0	Contractor's Supervision	46
37.0	Supervisory Staff & workmen	47-48
38.0	Tools & Plants / IMTEs	48-49
39.0	Material	49-51
40.0	Execution of the work	51-61
41.0	Methods of measurement	61
42.0	Deviation	61
43.0	Valuation of deviation	61-62
44.0	Compliance to regulation & bylaws	62
45.0	Facilities to be provided by BHEL/ Contractor	62-63
46.0	Progress reporting	64
47.0	Drawing & documents	64-65
48.0	Delay & Extension of Time	65-66
49.0	Price Escalation and over run	66
50.0	Income tax , Sales Tax/ Trade Tax & Service Tax	66
51.0	Time Schedule	66-67
52.0	Terms of payment	67-68
53.0	Insurance	68-69
54.0	Workman’s Compensation	69
55.0	Rate schedule cum BOQ /Variation	69-71
56.0	Certificate of Completion	71
57.0	Handing over the Building on Completion.	71
58.0	Rectification of Defects	71-72
59.0	Certificate of Declaration for confirming Knowledge of site conditions	72

SPECIAL CONDITIONS of CONTRACTS

34.0 GENERAL SCOPE OF WORK

34.1 **SCOPE OF TEMPORARY SHED:** This tender specification covers the construction of all the civil & structural works related to Temporary shed for which includes earth work, fabrication & erection of structural steel, plain & reinforced cement concrete, reinforcement, scaffolding, formwork, masonry work, floor finishes including dado & skirting, plastering, painting, roof finishes by providing and fixing of transparent sheet & asbestos sheet in expansion bay, Provision of cable trenches, lightening arrestor, earthing arrangement for machines as well as for lightening arrestor separately, doors / windows / ventilators, internal & external plumbing, water supply, water proofing, all sanitary work, drainage & sewerage, electrical works, etc. as well as including supply of all materials consumables, labour, Tools and plants, transportation and storage, sample testing etc. all complete as per BOQ, specifications and drawings for proper and successful execution of the job at BHEL.

34.2 The scope of work will also include such other related works although they may not be specifically mentioned in the above paragraph and all such incidental items not specified but reasonably implied and necessary for completion of the job as a whole all as desired and as directed by the engineer.

The detail scope of work covered above is not a comprehensive list of items of work involved. The detail scope of work may vary considerably depending on the actual construction requirements.

34.3 **ALSO INCLUDED IN THE SCOPE**

Unless otherwise specified, the work to be provided by the contractor for the items mentioned in the “Bill of Quantities”, shall include but not be limited to the following.

a) Furnishing all labour, materials, supervision, construction plans, equipment, supplies, transport, to and from the site, fuel, electricity, compressed air, water, transit and storage insurance and all other incidental items and temporary works not shown on specified but reasonably implied or necessary for the proper completion, maintenance and handling over the works, except in accordance with the stipulations laid down in the contract documents and additional stipulations as may be provide by the engineer during the course of works.

b) Furnishing samples of all materials required by the engineers for testing / inspection and approval for use in the works. The samples may be retained by the engineer for final incorporation in the works.

c) Furnishing test reports for the products used or intended to be used, if called for the specifications or if so desired by the engineer.

d) Giving all notices, paying all fees, taxes etc., in accordance with the general conditions of contract, that are required for all works including temporary works.

e) Arranging manufacturer's supervision for items of work done as per manufacturer's specifications when so specified.

f) Providing all incidental items not shown or specified but reasonably implied or necessary for the successful completion of the work in accordance with contract.

34.4 **RESPONSIBILITY FOR LAYOUT, ALIGNMENT ETC.:**

The Contractor shall be fully responsible for the proper and accuracy layout, alignment, orientation of all elements of the construction work which shall be carried out by him accurately in accordance with drawings and obtaining clarifications from BHEL/Architects if required by him, including for any discrepancy if any, before the work is executed by him. The setting out and the construction work shall be carried out by suitable precession instruments and checked from time to time and got approved. The Contractor shall provide all equipment and instruments as required at the site at his own cost.

34.5 **BHEL, PEM NOIDA Quality of work, to customer's satisfaction and system requirements is the essence of these certifications. The contractor in all respects will organize his work, systems, environment, process control documentation, tools, plant, inspection, measuring and testing equipments etc. as per instructions of BHEL engineer**.

The contractor shall also comply with applicable legislation and regulations with regards to Health, safety and environmental aspects for minimizing risk arising from occupational health, safety hazards, controlling pollution and wastage.

35.0 **INSTRUCTIONS TO TENDERERS**

35.1 The Tenderer are advised to physically visit the site and fully acquaint themselves with site conditions, transportation routes, various distances and the fact that it is situated inside the premises of HRDI COMPLEX Sector 16A Noida U.P where training, office work and production activities are going on. The material brought and stacked for construction should not make hindrance to any of these activities. Necessary precaution and arrangements including sprinkling of water during work as acceptable to BHEL for safety & security for the above have to be made by the contractor. No claim will be entertained by BHEL on ground of lack of knowledge and the contractor's rates shall be deemed to have taken this into account.

35.2 The contractor, in the event of this work awarded to him, shall establish a office at site and keep posted an authorized, responsible officer with valid Power of Attorney for the purpose of the contract. Any order or instructions of the `Engineer' or his duly

authorized representative, communicated to the contractor's representative at site office will be deemed to have been communicated to the contractor at his legal address.

36.0 CONTRACTOR'S SUPERVISION

36.1 The Contractor shall either himself supervise the execution of the Contract or shall appoint a competent Engineer duly approved by the Engineer to act in his stead.

a) For supervision of work so as to conform to required specifications and drawings the Contractor shall employ and post at site an adequate qualified Engineers which will include a Senior Engineer who is a graduate have adequate project experience and supported with other Engineers.

b) For supervision of electrification, Contractor shall employ at least one graduate Electrical Engineer having adequate project experience for the supervision of electrification work.

c) If the Contractor fails to appoint qualified Engineers, BHEL shall have full power to employ Engineers at the risk and cost of Contractor.

36.2 The employment of an Engineer as aforesaid shall not be necessary if the Contractor himself is in possession of a recognized technical qualification and is in the opinion of the Engineer capable of receiving instructions of the Engineer and of executing the work to the satisfaction of the Engineer.

36.3 If the Contractor fails to appoint a suitable Engineer as aforesaid, the Engineer shall have full powers to suspend the execution of work and stop payment of any money that may have become due until such date as a suitable Engineer / Agent is appointed and the Contractor shall be held responsible for the delay caused to the work and no extension of time on this account shall be given to him.

36.4 Orders given to the Contractor's Engineer shall be considered to have the same force as if they had been given to the Contractor himself.

36.5 The Contractor shall be in attendance at the site during all working hours and shall superintend the execution of work with such additional assistance in each grade, as the Engineer may consider necessary.

36.6 The Contractor shall attend, when required and without making any claim for doing so, either the office of the Engineer or the work site to receive instructions.

36.7 The Engineer shall have full powers, and without assigning any reason, to require the Contractor immediately to cease to employ in connection with this contract any Agent, servant or employee whose continued employment is, in his opinion, undesirable.

37.0 SUPERVISORY STAFF AND WORKMEN

37.1 The contractor shall deploy all the experienced skilled, semiskilled and unskilled workmen required for all the works under these specification. BHEL reserves the right to decide on the suitability of the workers and other personnel who will be deployed by the contractor. BHEL reserves the right to insist on removal of any employee of the contractor at any time, if they find him unsuitable and the contractor shall forth with remove him.

37.2 The supervisory staff including qualified Engineers deployed by the contractor shall ensure proper out-turn of work and discipline on the part of the labour put on the job by the contractor and in general see that the works are carried out in a safe and proper manner and in coordination with other labour and staff deployed directly by BHEL or other contractors of BHEL / BHEL's Client / other agency.

37.3 The work shall be executed under the usual conditions like rain, sufficient space, improper approach roads etc., effecting major construction work and in conjunction with numerous other operations at site. The contractor and his personnel shall cooperate with other personnel / contractor, coordinating his work with others and proceed in a manner that shall not delay or hinder the progress of work as a whole.

37.4 The contractor's supervisory staff shall execute the work in the most substantial and workman like manner in the stipulated time. Accuracy of work and aesthetic finish are essential part of this contract. The contractor shall be responsible to ensure that assembly and workmanship conform to the dimensions and tolerances given in the drawings / documents / instructions given by BHEL Engineer from time to time.

37.5 It is the responsibility of the contractor to engage his workmen in shifts or on overtime basis for achieving the targets set by BHEL. The contractor's finally accepted rates shall include all these contingencies.

37.6 During the course of construction, if the progress is found unsatisfactory, or in the opinion of BHEL, if it is found that the skilled workmen like masons, carpenter, bar binder, welder, piling rig operators, fitters, technicians etc. deployed are not sufficient, BHEL after giving reasonable opportunity to the contractor, will induct on the work the required workmen in addition to contractor's workmen to improve the progress and recover from the contractor's bills

37.7 If the contractor or his workmen or employees shall break, deface, injure or destroy any part of a building, road kerb, fence, enclosure, water pipes, cables, drains, electric or telephone posts or wire, trees or any other property or to any part of erected components etc., the contractor shall make the same good at his own expense or in default, BHEL may cause the same to be made good by other workmen or by other means and deduct the expenses (of which BHEL's decision will be final) from any money due to the contractor.

37.8 The month wise manpower deployment plan to be submitted as per format (at Annexure-C) to general conditions of contract) is only to assess the capability as well as understanding of the contractor to execute the work. It shall be the contractor's responsibility to deploy the required manpower, for timely and successful completion

of the job, to any extent over and above those indicated in the above deployment plan (including those which are not covered in the plan submitted) without any compensation on this account.

38.0 **TOOLS AND PLANTS / IMTEs**

38.1 All T&Ps and IMTEs which are required for successful and timely execution of the work covered within the scope of this tender, shall be arranged and provided by the contractor at his own cost in working condition. In the event of the failure of contractor to bring necessary and sufficient T&Ps/ and IMTEs, BHEL will be at liberty to arrange the same at the risk and cost of contractor including transportation cost of same from any of BHEL site/place and hire charges as applicable shall be deducted from contractor's bill. Decision of BHEL in this regard shall be final and binding on contractor.

38.2 All distribution boards, connecting cables / welding cables, wire ropes, hoses etc. including temporary air/water / electrical connections etc. shall have to be arranged by the contractor at his own cost.

38.3 Consolidation of ground and arrangement of sleepers / sand bag filling etc. for safe operation / movement of equipment including cranes / trailers etc. shall be the responsibility of the contractor at his cost.

38.4 Contractor shall ensure deployment of serviced and healthy T&Ps including cranes, lifting tackles, wire ropes, Manila ropes, winches and slings etc. History card and maintenance records for major T&Ps will be maintained by the contractor and will be made available to BHEL Engineer for inspection as and when required. Identification for such T&Ps will be done as per BHEL Engineer's advice.

38.5 Contractor shall ensure deployment of reliable and calibrated IMTEs (**Inspection measuring and Test equipment**). The IMTEs shall have test/ calibration certificates from authorised / Govt. approved / accredited agencies traceable to National / International standards. Each IMTE shall have a label indicating calibration status i.e. date of calibration, calibration agency and due date for calibration. A list of such instruments deployed by contractor at site with its calibration status is to be submitted to BHEL Engineer for control.

38.6 Retesting / re-calibration shall also be arranged at regular intervals during the period of use as advised by BHEL Engineer with in the contract price. The contractor will also have alternate arrangements for such IMTE so that work does not suffer when the particular instrument is sent for calibration. Also if any IMTEs not found fit for use, BHEL shall have the right to stop the use of such item and instruct the contractor to deploy proper item and recall i.e. repeat the readings taken by that instrument, failing which BHEL may deploy IMTEs and retake the readings at contractor's cost.

38.7 **BHEL shall have lien on all T&P, IMTEs & other equipment of the Contractor brought to the site for the purpose of erection, testing and commissioning. BHEL shall continue to hold the lien on all such items throughout the period of contract. No material brought to the Site shall be removed from the Site by the**

Contractor and/or his Sub-contractors without the prior written approval of the Engineer.

38.8 The month wise T&P deployment plan to be submitted as per format (at Annexure-D to general conditions of contract) is only to assess the capability as well as understanding of the contractor to execute the work. It shall be the contractor's responsibility to deploy the required T&P, for timely and successful completion of the job, to any extent over and above those indicated in the above deployment plan (including those which are not covered in the plan submitted) without any compensation on this account.

39.0 **MATERIALS**

39.1 The contractor shall at his own expenses, provide all materials required for the work except structural steel, reinforcement steel and Cement only which will be supplied by BHEL free of charge. However, contractor has to furnish account of the utilization of the free issue material and will handover balance quantity to the Engineer incharge before final bill is settled.

39.2 All materials to be provided by the Contractor shall be of the best kind in conformity with the specifications laid down in the contract or as per relevant Indian standard and the Contractor shall, if requested by the Engineer, furnish proof to the satisfaction of Engineer that the materials so comply.

39.3 The Contractor shall, at his own expense and without delay, supply to the Engineer samples of materials proposed to be used in the works. The Engineer shall within seven days of supply of samples or within such further period as he may require will intimate to the Contractor in writing, whether samples are approved by him or not. If samples are not approved, the Contractor shall forthwith arrange to supply to the Engineer for his approval fresh samples complying with the specifications laid down in the Contract. Any delay in approval of samples (original or fresh ones) shall not make the contractor eligible for any compensation.

39.4 The Engineer shall have full powers to require removal of any or all of the materials brought to site by the Contractor which are not in accordance with the Contract specifications or do not conform in character or quality to samples approved by him. In case of default on the part of the Contractor in removing rejected materials, the Engineer shall be at liberty to have them removed by other means. The Engineer shall have full powers to procure other proper material to be substituted for rejected materials and in the event of the Contractor refusing to comply; he may cause the same to be supplied by other means. All costs, which may attend upon such removal and / or substitution, shall be borne by the Contractor.

39.5 The Contractor shall indemnify BHEL, its representatives or employees against any action, claim or proceeding relating to infringement or use of any patent or design or any alleged patent or design rights and shall pay any royalties or other charges which may be payable in respect of any article or material or part thereof included in the Contract. In the event of any claim being made or action being brought against BHEL

or any agent, servant or employee of BHEL in respect of any such matters as aforesaid, the Contractor shall immediately be notified thereof, provided that such indemnity shall not apply when such infringement has taken place in complying with the specific directions issued by BHEL but the Contractor shall pay any royalties or other charges payable in respect of any such use, the amount so paid being reimbursed to the Contractor only if the use was the result of any drawings and / or specifications issued after submission of the tender.

39.6 The Engineer shall be entitled to have tests carried out as specified in the Contract for any materials supplied by the Contractor other than those for which, as stated above, satisfactory proof has already been furnished, at the cost of the Contractor and the Contractor shall provide at his expense all facilities which the Engineer may require for the purpose. If no tests are specified in the Contract, and such tests are required by the Engineer, the Contractor shall provide all facilities required for the purpose and the charges for these tests shall be borne by the Contractor only. The cost of materials consumed in tests shall be borne by the Contractor in all cases except when otherwise provided.

39.7 In addition the Contractor shall perform / submit at his own cost such tests / samples as may be required by the Engineer out of the materials used by the company except for the costs of materials used in such tests / samples.

39.8 After acceptance of the Contract, if Contractor desires BHEL to supply any other materials, such material may be supplied by BHEL, if available, at rates to be fixed by the Engineer along with prevailing departmental charges (current rate of 30%). BHEL reserve the right not to issue any material. The non issue of such material will not entitle the Contractor for any compensation whatsoever either in time or in cost.

39.9 Material required for the works, brought by the Contractor, shall be stored by the Contractor only at places approved by the Engineer. Storage and safe custody of material shall be the responsibility of the contractor.

39.10 BHEL's officials concerned with the Contract shall be entitled at any time to inspect and examine any materials intended to be used in or on the works, either on the Site or at factory or workshop or other place(s) where such materials are assembled, fabricated, manufactured or at any place (s) where these are lying or from which these are being obtained and the Contractor shall give such facilities as may be required for such inspection and examination.

39.11 All materials brought to the Site shall become and remain the property of BHEL and shall not be removed off the Site without the prior written approval of the Engineer. But whenever the Works are finally completed and advance, if any, in respect of any such material is fully recovered, the Contractor shall at his own expense forthwith remove from the Site all surplus material originally supplied by him and upon such removal, the same shall re-vest in and become the property of the Contractor.

39.12 It shall be the responsibility of the contractor to obtain prior approval of BHEL, regarding suppliers before start of work. On receipt of material at site, these shall be subjected to inspection and approval by BHEL.

39.13 All charges on account of Octroi, terminal or sales tax and other duties on material obtained for the works from any source shall be borne by the contractor.

39.14 The Contractor will have to submit their design mix for different grades of Concrete keeping in view the requirements stipulated in IS:456, for the materials being used.
For other than above designated mix Concrete items, the coefficients for consumption of cement shall be adopted as per CPWD practice. The theoretical consumption of cement thus worked out shall be binding upon the Contractor, though, permissible wastage specified shall be considered.

39.15 The Contractor to have tie up for ready mix concrete (RMC) manufacturer to provide RMC as per requirement.

40.0 EXECUTION OF WORK

40.1 The work shall be executed in a workman like manner and to the entire satisfaction of the Engineer and as per technical specification issued with tender, IS codes, CPWD specifications as applicable and best Engineering practice followed. In case of conflict, the decision of the Engineer shall be final & binding.

40.2 The Engineer will communicate or confirm his instructions to the Contractor in respect of the execution of the work in a "Work Site Order Book" maintained at his office and the Contractor shall visit this office daily and shall confirm receipt of such instructions by signing the relevant entries in this book. Such entries will rank as order or notices in writing within the intent and meaning of these conditions.

40.3 SETTING OUT

40.3.1 All the works shall be set out to the true lines, grades and elevation indicated on the drawing. The contractor shall be responsible to locate and set out the works. Only one grid reference line and bench mark all be made available for setting out the works under the contract. This reference lines shall be used as datum for the works under the contract and the contractor has to establish for his work area at available points horizontal and vertical control points. The contractor shall inform BHEL well in advance of the times & places at which he wishes to do work in the area allotted to him so that suitable datum points established by him are checked by BHEL / Customer to enable the contractor to proceed with the works. Any work done without being properly located may be removed and / or dismantled by BHEL / Customer at contractors expense.

40.3.2 The contractor shall at his own expense take all proper and responsible precautions to preserve and maintain these datum marks to its true position. In the event of these marks being disturbed or obliterated by accident or due to any other cause

whatsoever, the same may be deemed necessary placed by BHEL / Customer at contractor's expenses.

40.4 **WORK SITE ORDER BOOK:**

A work site order book shall be maintained in which all the instructions issued to the Contractor or his authorized agent in respect of the execution of work shall be recorded by the Architects or their authorized representatives/Engineer.

The Contractor or his authorized agent shall be bound to carry out the instruction under intimation to Architect/Engineer and sign the relevant entries in this book without delay.

40.5 **PLACES FOR STORING MATERIALS:**

The Contractor shall store materials, T&P etc. at project site only at places approved by BHEL. The Contractor shall clear the places within such time as may be instructed by BHEL. In case of default, the same be got cleared by BHEL at the risk and cost of the Contractor.

40.6 **FENCING OF SITE:**

Without prejudice to the safety requirements as per relevant labour and other applicable enactments, the Contractor shall provide at his own cost a 6'-6" high New GI sheet fencing as directed by the BHEL to separate existing HERP building & new construction zone to ensure safety of the public. The said fencing thus erected shall be maintained by the Contractor in good condition till the completion of the works, or otherwise earlier as may be decided by BHEL.

40.7 **LIGHTING, BARRICADING, SIGNAL ETC. AT THE SITE:**

The Contractor shall provide at his own cost adequate arrangements/facilities to light the entire site, keep the interior and exterior of the construction adequately lighted barriers, signal and all other safety measures, as required to the satisfaction of BHEL.

The Contractor shall also indemnify BHEL against any claim for compensation arising out of negligence in this respect. No extra payment shall be made for the above provisions.

40.8 **I.S.I. CODES AT THE SITE OFFICE:**

All latest relevant/latest ISI Codes shall be kept by the Contractor in his office at the site for the use of Architects/BHEL.

40.9 **WORK OF SPECIALIZED DISCIPLINE:**

The works of specialized nature shall be got carried out by the Contractor from Specialist Contractors, who have experience and resources of similar works.

Contractor at the time of submission of tender, will indicate the Specialist Contractor proposed by him for the work. The specialist Contractor shall be subject to approval of Architect/BHEL.

The Contractor shall be fully responsible and liable to Architects / BHEL for all work executed /supplies made, either directly by him or on his behalf by any other agency including approved Contractors of Specialized discipline.

40.10 **WORK TO BE COMPLETED INCLUSIVE OF ALL ITEMS AS REQUIRED:**

The quoted amounts/rates shall be for complete items inclusive of all such accessories, fixtures and fixing arrangements etc. as are a standard/necessary part of the particular work as decided by BHEL/Architect unless specifically mentioned otherwise and nothing extra shall be paid on this account.

40.11 **BAILING/PUMPING OUT OF WATER:**

The Contractor shall arrange for bailing out/pumping out of water from any source from the work site and keep site dry at all times at his own cost for carrying out the work and continued safety of executed work as required by the BHEL/Architects during the currency of the contract and all amounts/rates quoted by him shall deem to have included for bailing and pumping out water and its disposal from the site during the currency of the contract. The Contractor will ensure that the natural drainage at the site and surrounding area is maintained and not in any way interfered with. No extra payment shall be made for carrying out any item of work “in or under water” and amounts/rates quoted shall be deemed to have catered for this aspect. The amounts/rates quoted shall be considered to be complete in all respects for carrying out the work, including necessary timbering, shoring, propping, dewatering lifting and disposal of water etc.

40.12 **AS BUILT DRAWINGS:**

On completion of the work the Contractor shall provide to the BHEL duly certified by the Architects three sets of “As built” drawings of all buildings, works and utilities etc. as actually executed by him duly certified by the Architects.

All corrections, deviations and changes made on the site during execution shall be shown in these relevant drawings for final incorporation in the completion drawings. All changes to be made shall be initialed by the Engineer.

40.13 The work will be carried out under full supervision of BHEL Engineers and the General supervisions of the Architect.

40.14 **VARIATION IN SCHEDULE OF QUANTITIES:**

The Contractor shall rationally work out and quote rates of each and every item of the Schedule of Quantities taking into consideration the Special/General conditions and specifications of the contract. The quantities indicated in the Schedule of Quantities (Item rates only) are tentative. BHEL shall have the right on advise of Architects, to

totally omit any item or increase/decrease any item of Schedule of Quantities. The rate quoted shall not be subject to revision for variations in the tender item.

40.15 **CONTRACTOR TO PROVIDE:**

On completion of work the Contractor shall obtain at his own cost from the local Statutory Authorities, the completion certificates with respect to work covered by his contract with BHEL as required for completion/occupation of the building.

40.16 **RECTIFICATION OF DEFECTIVE WORK / MATERIALS:**

Any defect in executed work or material supplied to be used in the work pointed out by BHEL/Architect shall be rectified within a week's time or such extended time as may be allowed in this regard by the BHEL Engineer/ Architect failing which the said defects may be got rectified by Engineer Architect/Engineer at the risk and cost the Contractor.

(a) If any of the Engineers proceed on leave or absent himself for a period of more than 7 days, the Contractor shall provide suitable replacement for the same.

(b) If the contractor fails to appoint the additional qualified Engineer, the Architects or the BHEL shall have full power to employ additional Engineer at the risk and cost of Contractor.

40.17 The following works will be got carried out by the Contractor through Specialized agencies approved by BHEL and Architects.

i) Aluminum work/Glazing work.

ii) Water proofing.

iii) Anti-termite treatment.

iv) Interiors

v) Fire detection work

vi) Electrical Work

40.18 In the false ceilings/partitions provisions will be made for suspension of equipment / fittings like electrical fittings, diffusers, cutouts, inserts etc. with additional frame work at no extra cost.

40.19 No extra payments in the items of work shall be made due to curved/inclined surfaces/planes.

40.20 '**ARCHITECT' s**hall mean the said M/s Achitect Harish Tripathi & Associates, D-987, New Friends Colony, New Delhi-65 and shall include his authorized representative.

40.21 Payments recommended by Architect of work will not automatically amount to acceptance of the completion of the work.

40.22 The accepted matter will relate to matters concerning designs, specifications, instructions, orders and quality of work of materials, Plants & equipment, work as executed or materials supplied and defects, lapses, defaults by the Contractor thereof and for which the Architect's decision will be final and these matters cannot be Arbitrated upon.

40.23 <u>ADDITIONAL CONSTRUCTION WORK OF BUILDINGS</u>:

In the event of the BHEL deciding to take up additional construction/additional buildings during the currency of this contract in the same plot, the Contractor will be required to carry out the work as per drawings prepared by the ARCHITECTS and issued by BHEL at the same rates as that of the PERI Building.

40.24 **APPROVAL FROM COMPETENT AUTHORITIES**:

The Contractor will get all the approvals/sanctions and completion from all the relevant Statutory Authorities for the PERI Building. All payments as required by the relevant Authorities for license/submission fees/deposit will be paid by the BHEL.

40.25 Contractor shall clean up the site of the proposed building and barricade the site with new GI sheets.

40.26 The Contractor shall be permitted to use Ready-mix concrete subject to approval of BHEL and Architects of the source of RMC and its transportation system to the site.

40.27 The List of approved suppliers/Manufacturers makes etc. is given. However the Contractor will engage specialist sub-contractors for Plumbing and Fire fighting, electrical, Interiors and give their names of Specialist Contractors, who have carried out such prestigious works. However, they will be subject to approval of BHEL and Architect.

40.28 Basic standard/design of important items is provided to illustrate the type of work envisaged so that Bidder can quote the rate accordingly.

40.29 **INSPECTION AND STAGE APPROVAL OF THE WORK**

40.29.1 The owner or his duly authorised representative shall have at all reasonable times access to the contractor's premises or works and shall have the power to inspect drawings or any portion of the work, examine the materials and workmanship and shall have the authority to reject any work. This would be implemented through joint

inspection by the representative of the owner and BHEL and in the form of joint protocols without any extra claims and loss of time and amount.

40.29.2 All work embracing more than one process shall be subject to examination and approval at each stage thereof and the Contractor shall give due notice in writing to the Engineer when each stage is ready. In default of such notice being received, the Engineer shall be entitled to approve the quality and extent thereof at any time he may choose and in the event of any dispute, the decision of the Engineer thereon shall be final and conclusive.

40.29.3 The Architects/BHEL or his authorized representatives shall be entitled at any time to inspect and examine any materials intended to be used in or on the works either on the side or at factory or work shop or other places where such materials are assembled, fabricated, manufactured or at any places where these are laying or from which these are being obtained and the Contractor shall give such facilities as may be required for such inspection and examination.

40.30 UNCOVERING AND MAKING GOOD

40.30.1 The Contractor shall uncover any part of the Works and/or make openings in or through the same as the Engineer may from time to time direct for his verification and shall reinstate and make good such part to the satisfaction of the Engineer. If any such part has been covered up or put out of view after being approved by the Engineer and is subsequently found on uncovering to be executed in accordance with the Contract, the expenses of uncovering and / or making opening in or through, reinstating and making good the same shall be borne by BHEL. In any other case all such expenses shall be borne by the Contractor.

40.31 DISCREPANCIES AND ADJUSTMENT OF ERRORS

40.31.1 The several documents forming the Contract are to be taken as mutually explanatory of one another, detailed drawings being followed in preference to small scale drawings and figures dimensions in preference to scale and special conditions in preference to general conditions.

40.31.2 Incase of discrepancies between schedule of quantities, the specification and / or the drawings, the following order of preference shall be observed.

(a) Description in schedule of quantities.

(b) ISI Codes/latest CPWD specifications/BSS/American standards/DIN or International standards.'

(c) Special condition of contract.

(d) Drawings

(e) Technical Specifications

(f) General Conditions of contract.

(g) Sound Engineering Practice.

If there are varying or conflicting provisions made in any one document forming part of the contract, the Engineer shall be the deciding authority with regard to the document.

40.31.3 Any error in description, quantity in schedule of quantities or any omission there from shall not vitiate the contract or release the contractor from the execution of the whole or any part of the works comprised therein according to the drawings and specifications or from any of his obligations under the contract.

40.31.4 If on check there are found to be differences between the rates given by the contractor in words and figures or in the amount worked out by him in the schedule of quantities and general summary, the same shall be adjusted in accordance with the following rules:

(a) In the event of discrepancies between description in words and figures quoted by a tenderer, the lesser of the two will be treated as valid rate.

(b) In the event of an error occurring in the amount column of schedule of quantities as a result of wrong extension of the unit rate and quantity, the unit rate shall be regarded as firm and extension shall be amended on the basis of the rate.

(c) All errors in totaling in the amount column and in carrying forward totals shall be corrected.

(d) The totals of various sections of bill of quantities amended shall be carried over to the general summary and the tendered sum amended accordingly. The tendered sum so altered shall, for the purpose of tender, be substituted for the sum originally tendered and considered for acceptance instead of the original sum quoted by the tenderer. Any rounding of quantities or in sections of bill of quantities or in general summary, by the tenderer, shall be ignored.

40.31.5 If neither drawing nor specification contain any mention of minor details of construction which in the opinion of the Engineer whose decision shall be final and conclusive, are reasonable and obviously and fairly intended for satisfactory completion of work, such details shall be provided by the contractor without any extra cost, as if they were specially mentioned and shall be deemed to be included in the

40.32 SAFETY CODE

40.32.1 Besides provision with regard to SAFETY under Clause 27, Contractor shall note that Explosives shall not be used on the work by contractor except with permission in writing of the ENGINEER and in manner and to the extent to which he has prescribed. Where explosives are used, the same shall be stored in a special magazine to be provided by and at the cost of the contractor who shall be liable for

all damages, losses and injury to any person or property and shall be responsible for complying with all statutory obligations in these respect.

40.32.2 The contractor will be responsible for Health, Safety & Environment management at site for the construction activities to be carried out by them in accordance with requirements given in tender specifications

40.32.3 Contractor shall arrange for following provisions of HSE

Contractor has to maintain contact with local hospital having scanning & other ultra modern medical facilities required during emergency.

Contractor has to ensure pre employment medical check for all staff & workers.

40.32.4 Contractor has to ensure that adequate First Aid facilities are available at work site for emergency purpose.

40.33 NUISANCE

40.33.1The Contractor shall not at any time do, cause or permit any NUISANCE on Site or do anything which shall cause unnecessary disturbance or inconvenience to owners, tenants or occupiers of other properties near the Site and to the public generally.

40.34 MATERIAL OBTAINED FROM EXCAVATION

40.34.1 Materials of any kind obtained from EXCAVATION on the Site shall remain the property of BHEL and shall be disposed of as the Engineer may direct, at no extra cost.

40.35 TREASURE , TROVE , FOSSILS etc.

40.35.1 All fossils, coins, articles of value or antiquity and structures and other remains or things of geological or archaeological interest discovered on the site shall be the absolute property of BHEL and the Contractor shall take reasonable precautions to prevent his workmen or any other person from removing or damaging any such article or thing, shall immediately upon discovery thereof and before removal acquaint the Engineer with such discovery and carryout the Engineer's directions as to the disposal of the same.

40.36 PROTECTION OF WORKS

40.36.1 Trees designated by the Engineer shall be protected from damage during the course of the Works and earth level within 1 meter of each such tree shall not be charged. Where necessary, such trees shall be protected by providing temporary fencing.

40.36.2 The contractor shall provide and maintain at his own expense all lights, guards, fencing and watching when and where necessary or required by the Engineer for the protection of the Works or for the safety and convenience of those employed on the Works or the public.

40.36.3 The contractor shall have total responsibility for protecting his works till it is finally taken over by the Engineer. No claim will be entertained by the Engineer for any damage or loss to the contractor's works and the contractor shall be responsible for the complete restoration of the damaged works to its original condition to comply with the specifications and drawings. Should any such damage to the contractor's works occur because of other party not under his supervision or control, the contractor shall make his claim directly with the party concerned. The contractor shall not cause any delay in the repair of such damaged works because of any delay in the resolution of such disputes. The contractor shall proceed to repair the work immediately and no cause thereof will be assigned pending resolution of such disputes.

40.37 RECORD FOR MATERIALS CONSUMED

40.37.1 The contractor shall maintain and furnish to the Engineer the RECORD OF MATERIALS consumed in the works for each activity. The statement showing the theoretical vis-à-vis actual consumption of specified materials, such as structural /reinforcement steel, cement, bitumen, lead, paint etc., shall be enclosed along with the running bills submitted by the contractor. Contractor has to also furnish the test results of the concrete cubes, bricks, stone aggregates and other materials used in the work as per IS specifications.

40.38 PROTECTION OF EMBEDMENTS, BOLTS ETC.

40.38.1 The contractor shall ensure proper protection to the satisfaction of the Engineer, of all bolts, inserts, embedments etc. from weather etc/ by greasing, rapping them with gunny bags or canvas or by any other means as directed by Engineer. Cost of such protections shall be deemed to be included in the rates quoted for the item.

40.39 QUALITY ASSURANCE

40.39.1 The contractor has to establish / arrange at site the field testing facilities for testing of civil construction materials and concrete cubes for ensuring the proper quality, grade and strength of the materials used in the construction in line with approved field quality check list of BHEL . Contractor has to submit detailed report for testing of all material used etc. All testing shall be done as per IS code specifications/ BHEL's quality plan. If further test is required by the engineer to be carried from outside laboratory, the cost of the same shall be borne by the contractor.

40.40 COMPLETION OF WORK

40.40.1 The works shall be completed to the entire satisfaction of the Engineer and in accordance with the completion schedule as specified in the Contract, and all unused stores and materials, tools, plant, equipment, temporary buildings, site office, labour hutments and other things shall be removed and the site and work cleared of rubbish and all waste materials and delivered up clean and tidy to the satisfaction of the Engineer at the Contractor's expenses.

40.40.2 BHEL shall have power to take over from the Contractor from time to time such sections of the work as have been completed to the satisfaction of the Engineer. Such work however shall not be treated as have been completed until the extra works are executed to the satisfaction of Engineer. The Guarantee period shall commence only after handing over of the entire works.

40.40.3 The Engineer shall certify to the contractor the date on which the work is completed and the date thereof.

40.41 RECORDS AND MEASUREMENTS

40.41.1 All items having a financial value shall be entered in BHEL measurement Book so that a complete record is obtained of all works performed under the Contract.

40.41.2 Lump sum omissions will be entered for deduction. Measurement shall be restricted to that required to ascertain the financial liability of BHEL under the contract.

40.41.3 Work which fails to be measured in details shall be measured physically without reference to any local custom that may obtain excepting where it may otherwise be directed in the tender documents. The measurements shall be taken jointly by any person duly authorised on the part of BHEL and by the Contractor.

40.41.4 The Engineer shall give reasonable notice in writing to the Contractor of appointment for measurement.

40.41.5 The Contractor shall, without extra charge, provide assistance with appliances and other things necessary for measurement and shall bear all the cost of measurement of his work.

40.41.6 Measurement shall be entered in BHEL Measurement Book and signed and dated by both parties each day at the site on completion of measurement. If the Contractor objects to any of the measurements recorded on the behalf of BHEL, a note to that effect will be made in BHEL Measurement Book or against the item or items objected to and such note shall be signed and dated by both the parties engaged in taking the measurement.

40.41.7 If, as a result of such objection, it becomes necessary to re-measure the work wholly or in part the expense of such re-measurement shall be borne by the contractor.

40.41.8 If the Contractor's representative fails to attend when required, the Engineer shall have power to proceed by himself to take measurements and in that case these measurements shall be accepted by the Contractor as final.

40.41.9 The Contractor shall, once in every month, submit to the Engineer details of his claims for the work done by him upto and including the previous month which are not covered by this Contract Agreement in any of the following respects:

(a) Deviation from the items and Specifications provided in the Contract documents.

(b) Extra items/new items of work.

(c) Quantities in excess of those provided in the Contract Schedule.

(d) Items in respect of which rates have not been settled.

41.0 METHOD OF MEASUREMENT

41.1 Measurement of item rates works shall be based on the stipulations laid down in the agreement. In case, mode of measurement of a particular item is not available in any of the above documents, and in CPWD, DSR, the decision of the Architect with concurrence of BHEL in respect of mode of measurement shall be adopted.

42.0 DEVIATION

42.1 The Contractor shall not make any alteration in, addition to or omission from the work as described in the tender documents except in pursuance of the written instructions of the Engineer. No such deviation from the work described in the tender documents shall be valid unless the same has been specifically confirmed and accepted by the Engineer in writing and incorporated in the Contract.

42.2 The Engineer may deviate, either by way of addition or deduction, from the work so described, provided that the Contract sum be not thereby varied on the whole by more than the percentage set out in the tender documents. The value of all additions and deductions shall be added to or deducted from the Contract sum. (Whenever the Engineer intends to exercise such a right his intentions shall specify the deviations which are to be made, the lumpsum assessment or the proposed basis of payment, the extra time allowed, if any, and the date for completion of the entire contract). Any objection by the contractor to any matter concerning the order shall be notified by him in writing to the Engineer within seven days from the date of such order, but under no circumstances shall the work be stopped (unless so ordered by the Engineer) owing to differences or controversy that may arise from such an objection. In the absence of such a notification of objection by the Contractor, he will be deemed to have accepted the order and the conditions stated therein.

43.0 VALUATION OF DEVIATIONS

Rates for deviated items or new items of work shall be as follows :

43.1 If the rates for the additional, altered or substituted work are specified in the Contract for the work, the Contractor is bound to carry out the additional, altered or substituted work at the same rates as are specified in the Contract for the work.

43.2 If the rates for the additional, altered or substituted work are not specifically provided in the Contract for the work, the rates will be derived from the rates for a similar class of work as are specified in the Contract for the work.

43.3 If the rates for the altered, additional or substituted work cannot be determined in the manner specified in above clauses the rate for such part or parts will be determined and got approved from the competent authority by the Engineer on the basis of prevailing market rates when the work was done and the decision given in this behalf shall be final and binding on the Contractor. Rate analysis will be worked on CPWD manual of rate analysis as guidance.

43.4 If the rates for the altered, additional or substituted work cannot be determined in the manner specified in above clauses , then the contractor shall within 7 days of the date of receipt of order to carry out the work inform the Engineer of the rate at which it is his intention or charge for such class of work, supported by analysis of the rate or rates claimed, and the Engineer shall determine the rate or rates and got approved from the competent authority on the basis of prevailing market rates and pay the Contractor accordingly. However, the Engineer, by notice in writing, will be at liberty to cancel his order to carryout such class of work and arrange to carry it out in such manner as he may consider advisable. But under no circumstance the Contractor shall suspend the work on the plea of non-settlement of rates falling under the clause or claim any compensation on that account. Elements of profit, overheads, supervision and establishment charges will be taken as 10% over direct cost.

44.0 COMPLIANCE TO REGULATIONS AND BYELAWS

44.1 The Contractor shall conform to the provisions of any statute relating to the work and regulations and bylaws of any local authority and of any water and lighting Companies or Undertaking with whose system the work is proposed to be connected. He shall, before making any variation from the drawings or the specifications that may be necessitated for such connections give the Engineer, notice specifying the variation proposed to be made and the reasons therefore and shall not carryout any such variation until he has received instructions from the Engineer in respect thereof. The Contractor shall be bound to give all notices required by statute, regulations or bye-laws as aforesaid and to pay all fees and taxes payable to any authority in respect thereof.

45.0 FACILITIES TO BE PROVIDED BY BHEL / CONTRACTOR

45.1 BHEL shall provide free of charge limited open space, for office & storage shed, as and where made available. It is the responsibility of the contractor to construct sheds, provide all utilities and dismantle and clear the site after completion of work or as and when required , as a part of his scope of work.

45.2 Contractor shall be responsible for providing all necessary facilities like residential accommodation transport , electricity , water , medical facilities etc. as required under various labour laws and statutory rules and regulations framed there under to the personnel employed by him.

45.3 Construction power for construction purposes as well as office use will be provided on free of charges basis and at one point. Further distribution of power shall be done by contractor at his cost. All wiring must comply with local regulations and will be subject to Engineer's inspection and approval before connecting supply. Required calibrated

energy meter for measurement of power consumed has to be arranged / installed by Contractor at his cost. DG sets for Emergency Power, if required, shall be arranged by Contractor at his own cost.

45.4 Provision of distribution lines of power from the central points to the required place with proper distribution boards observing the safety rules laid down by the authorities of the state shall be done by the contractor, supplying all the materials like cables, distribution board, switch boards, TPN, CBS, ELCBS/ MCCBS / Copper / Brass clamps, copper conductor, change over switches pipes etc. at his own cost. If any failure is caused in supply of the power and water, it is the responsibility of the contractor to make alternate arrangements at his cost. The contractor shall adjust his working shift / hours accordingly and deploy additional manpower if necessary so as to achieve the targets.

45.5 In case of power cuts / load shedding no compensation for idle labour or extension of time for completion of work will be given to contractor.

45.6 Adequate lighting facilities such as flood lamps, hand lamps and area lighting shall be arranged by the contractor at the site of construction, contractor's material storage area etc. within finally accepted rates.

45.7 CONSTRUCTION WATER shall be provided by BHEL free of cost at one point. Contractor shall make his arrangements at his own cost to use water at points required by him and necessary for the works. Bore well, if required, shall be arranged by Contractor at his own cost.

45.8 No claim for damages will be entertained by the Company on account of interruptions of water supply or limitation of quantity of water as aforesaid or on account of the water so taken being not fit for construction purposes or on any other account in connection with such water supply.

45.9 The Contractor should make arrangements for storage of sufficient quantity of water required for work.

45.10 The Contractor shall during the progress of the work, provide, erect and maintain at his own expenses all necessary temporary workshops, stores, consumables, offices, etc. required for the proper and efficient execution of the work. The planning, setting and erection of these buildings shall have the approval of the Engineer and the Contractor shall at all times keep them tidy and in a clean and sanitary condition to the entire satisfaction of the Engineer.

45.11 On completion of work or as and when required by BHEL, all the temporary buildings, structures, pipe lines, cables etc. shall be dismantled and leveled and debris shall be removed as per instruction of BHEL by the contractor at his cost. In the event of his failure to do so, same will be got done by the Engineer and expanses incurred shall be recovered from the contractor along with prevailing overhead. The decision of BHEL Engineer in this regard shall be final.

46.0 **PROGRESS REPORTING**

46.1 Contractor is required to draw mutually agreed monthly programme in consultation with BHEL well in advance. Contractor shall ensure achievement of agreed programme and shall also timely arrange additional resources considered necessary at no extra cost to BHEL.

46.2 Weekly progress review meetings will be held at site during which actual progress during the week vis-a-vis scheduled programme shall be discussed for actions to be taken for achieving targets. The programme for subsequent week shall also be presented by contractor for discussions. The contractor shall constantly update / revise his work programme to meet the overall requirement. All quality problems shall be discussed during above review meetings. Necessary preventive and corrective action, shall be discussed and decided upon in such review meetings and shall be implemented by the contractor in time bound manner so as to eliminate the cause of non-conformities.

46.3 The contractor shall submit weekly and monthly progress reports, materials reports, consumables (gases / electrodes) report and other reports as per proforma considered necessary by the Engineer.

46.4 The progress report shall indicate the progress achieved against planned , with reasons indicating delays , if any, and shall give the remedial actions which the contractor intends to take to make good the slippage or lost time , so that further works again proceed as per the original programme and the slippages do not accumulate and effect the overall programme.

46.5 The daily manpower reports shall clearly indicate the manpower deployed, category wise specifying also the activities in which they are engaged.

46.6 **SUBMISSION OF PERIODICAL PHOTOGRAPHS**:

The Contractor shall submit professional video with digital photographs, every month showing progress and record of all important elements of constructions as per instructions of Architect free of cost. One copy shall be supplied to BHEL, and one to the Architects for their record.

47.0 DRAWING AND DOCUMENTS

47.1 The detailed drawings, specifications available with BHEL engineers will form part of this tender specification. These documents will be made available to the contractor during execution of work at site. The contractor will also ensure availability of all drawings / documents at work place.

47.2 Necessary drawings / documents to carry out the construction work will be furnished to the contractor by BHEL on loan which shall be returned to BHEL Engineer

at site after completion of work . Contractor shall ensure safe storage and quick retrieval of these documents.

47.3 The contractor shall maintain a record of all drawings and documents available with him in a register as per format given by BHEL Engineer. Contractor shall ensure use of pertinent drawings / data / documents and removal of obsolete ones from work place and return to BHEL.

47.4 The data furnished in various annexures enclosed with this tender specification are only approximate and for guidance. However, the change in the design and in the quantity may occur as is usual in any such large scale of work.

47.5 Should any error or ambiguity be discovered in the specification or information the contractor shall forthwith bring the same to the notice of BHEL before commencement of work. BHEL's interpretation in such cases shall be final and binding on the contractor.

47.6 Deviation from design dimensions should not exceed permissible limit. The contractor shall not correct or alter any dimension / details, without specific approval of BHEL.

48.0 DELAY AND EXTENSION OF TIME

48.1 If, in the opinion of the Engineer, the work is delayed

(a) by reason of abnormally bad weather, OR

(b) by reason of serious loss or damage by fire, OR

(c) by reason of civil commotion, local combination of workmen, strike or lockout, affecting any of the trades employed on the work, OR

(d) by delay on the part of the agency or tradesmen engaged by the BHEL in executing work not forming part of the Contract, OR

(e) by reason of any other cause which in the absolute discretion of the Engineer is beyond the Contractor's control, then in any such case, the Engineer (or higher authority) may make fair and reasonable extension in the completion dates of the individual items of work or the Contract as a whole. Such extension which will be communicated to the Contractor by the Engineer in writing shall be final and binding on the Contractor. No other claim in this respect for compensation or otherwise howsoever is admissible. Upon the happening of any such event causing delay, the Contractor shall immediately give notice thereof in writing to the Engineer but shall nevertheless use constantly his best endeavor to prevent or make good the delay and shall do all that may reasonably be required to the satisfaction of the Engineer to proceed with the work.

48.2 **EXTENSION OF CONTRACT PERIOD -NO CLAIM ON ACCOUNT OF:**

(a) In case the contract period is extended the Contractor shall not be entitled to any claim whatsoever on this account or damages on such extensions.

(b) The stipulated period for completion of the work includes the rainy season and other natural climatic conditions etc. and no extra time period on this account will be allowed separately.

49.0 PRICE ESCALATION

49.1 No escalation shall be paid during construction period including extended time.

50.0 INCOME TAX, WORKS TAX/SALES TAX/ TRADE TAX AND SERVICE TAX

50.1 **INCOME TAX** at the prevailing rate on gross value of work done and applicable surcharge shall be deducted from the running bills unless exempted by the Income Tax Authorities.

50.2 **Works / Sales Tax/Trade Tax** , if applicable, on turnover shall be deducted at source at prevailing rates from all bills as per sales tax rules & notification of UP Govt. issued from time to time. **Service Tax**, wherever applicable, will be paid by BHEL upon furnishing the document regarding service tax registration from the contractor.

50.3 Contractor shall get his organisation registered with concerned sales tax authorities within 15 days of award of this contract. The delay on this account and delay in bringing the material shall be to contractor's account and no extension of time shall be allowed on this account. The sales tax registration for this contract shall be forwarded to BHEL within 30 days from the date of LOI. In case the contractor is already registered for sales tax with Govt. Authorities he must quote his registration no. while submitting the tender.

50.4 Contractor has to make his own arrangement at his cost for completing the formalities, if required, with Sales Tax Authorities, for bringing their materials, plants, equipment at site for the execution of the work under this contract.

51.0 TIME SCHEDULE

51.1 The contractor is required to commence the work within 15 days from the date of issue of letter of intent unless BHEL decides to fix any other later date. However, the actual date of start of work will be certified by BHEL Engineer after adequate mobilisation of materials, manpower and T&P by the contractor.

51.2 Entire work under this contract is required to be completed, in all respect including handing over, within the period mentioned bellow:

Above period is counted from the schedule date of start of work as per the programme indicated by BHEL that is from the 16th day of the placement of LOI/ Contract. In case of delay of work due to reasons not attributable to the contractor, time extension will be granted by BHEL but in **no case over run compensation** will be payable. Contractor has to mobilise adequate resources to meet BHEL requirement as indicated from time to time.

51.3 The work under the scope of this contract is deemed to be completed in all respects, only when all the works have been carried out to the satisfaction of BHEL. The decision of BHEL on completion date shall be final and binding on the contractor.

52.0 TERMS OF PAYMENT

52.1 The 'Engineer' will certify regarding the actual work executed in the measurement books and bills, which shall be accepted by the contractor in measurement book. "Based on the Quantities given in the Abstract duly signed and checked by the Engineer and Contractor and entered into the Measurement Book as per Clause-24.3 of General Conditions. The Contractor shall prepare the bills in the prescribed proforma and work out the financial value. These will be checked and entered in the Measurement Book and signed by both parties (As per Clause-24.4 of General Conditions). The Bills will be submitted to BHEL. BHEL shall make payments after affecting the recoveries due from the Contractor. The format for billing shall be approved by BHEL before raising invoices.

52.2 The Contractor shall be paid monthly running bill to a maximum of 95% of the value of the work actually executed on site provided the work has been executed to the satisfaction of the Engineer. The Engineer may after a measured bill allow & certify payment to the contractor on the basis of abstract measurement bill submitted by the contractor. From this amount recoveries such as advances , security deposit taxes etc. would be made. The certificate of the Engineer regarding such approval and passing of sums so payable shall be final and conclusive against the contractor.

52.3 The 2.5% of contract value shall be payable on completion of all pending work, rework wherever required, site clearing and reconciliation and rendering account of the free issue material.

NOTE: Above payment shall be released after working out the contract value based on actual work carried out.

52.4 The balance 2.5% of contract value will be payable on submission and passing of Final bill. The certificate of Engineer regarding such approval and passing of sums shall be final and conclusive against the contractor.

52.5 Any certificate relating to the work done may be modified by any subsequent interim certificates or by the final certificates and no certificate of the Engineer supporting an advance payment shall of itself be conclusive evidence that any work or materials to which it relates are in accordance with the contract.

52.6 The contractor may also be paid a maximum of 60% or lesser percentage of the item rate agreed upon for finished work against fabricated materials which are not incorporated in works at the discretion of the Engineer provided he satisfies him and obtains certificates in respect of actual availability of material at site, protected storage and actual requirement of the quantity for work. Similar part payment may be made for placement of structures during erection if alignment is getting delayed due to no fault of contractor.

53.0 INSURANCE

Besides provisions under clause no. 29.0 of GCC regarding insurance, the following shall also will be applicable . The contractor shall also take care of the same while submitting their offer.

53.1 Contractor shall arrange for insuring all his materials covering the risks during transit, storage, erection and commissioning.

53.2 INSURANCE IN RESPECT OF DAMAGE TO PERSONS AND PROPERTY:

The contractor shall be responsible for all injury to persons, animals or things, and for all structural and decorative damage to property which may arise from the operation or neglect of himself or of any nominated Sub-Contractor's, BHEL, Architect's, their staff and Associated Consultant whether such injury or damage arise from carelessness, accident or any other cause whatever in any way connected with the carrying out of this contract. This clause shall be held to include total value of internal and external work any damage to buildings, whether immediate adjacent or otherwise, and any damage to roads, streets, footpaths, bridges or ways as well as all damages caused to the building and works forming the subject of this contract by forest or other inclemency of weather. The Contractor shall indemnify BHEL and Architects their staff and Associated Consultants and hold him harmless in respect of all and any expenses arising from any such injury or damage to persons or property as aforesaid and also in respect of any claim made in respect of injury or damage under any acts or Government or otherwise and also in respect of any award of compensation or damages consequent upon such claim.

The Contractor shall reinstate all damages of every sort mentioned in this clause, so as to deliver up the whole of the contract works complete and perfect in every respect and so as to make good or otherwise satisfy all claims for damage to the property of third parties. The Contractor shall indemnify BHEL against all claims which may be made against BHEL by any member of the Public or other third party in respect of the works, injury/death to persons and damage to property or in consequence thereof and shall at his own expense arrange to effect and maintain, until the virtual completion of the work, a public liability policy of Insurance in the joint names of BHEL and the Contractor for Rs.25.0 (twenty five lacs) against such risks and deposit such policy or policies with BHEL from time to time during the currency of this contract.

53.3 If due to negligence/ carelessness on the part of the contractor, any surrounding properties also gets damaged, the contractor shall submit necessary documents for

lodging insurance claims. BHEL shall however reserves the right to recover deductible franchise and to unsettled portion of insurance claim amount from the contractor.

54.0 **WORKMAN'S COMPENSATION POLICY:**

The contractor shall indemnify BHEL against all claims or demand for compensation which may be made upon BHEL whether under the Workman's Compensation Act or any other statute in force during the currency of this contract or at common law in respect of any Employee of the Contractor or any Sub-contractor due to injury or death shall at his own expense effect and maintain, approved office a Workman's Compensation Insurance Policy in the joint names of BHEL and the Contractor against such risks and deposit such policy or policies with BHEL from time to time during the currency of the contract.

The Contractor shall be responsible for anything which may be excluded from the Insurance Policies referred in this contract for all other damages to any property arising out of and incidental to the negligent or defective carrying out of this contract. BHEL on the recommendation of the Architects shall be at liberty and is hereby empowered to deduct the amount of any damage, compensation, costs, charges and expenses arising or accruing from or in respect of any such claim or damage from any sum or sums due to or become due to the Contractor including the security deposit/retention money.

If the Contractor fails to comply with above terms and conditions, BHEL may insure the works and may deduct the amount of the premiums paid from any moneys that may be or become payable to the Contractor or may at the option, not release interim payment to the Contractor until the Contractor shall have complied with the terms of this clause. Such Insurance, whether effected by BHEL or the Contractor, is to be no limit or bar the liability and obligation of the Contractor to deliver the work to the Employer completed in all respects according to the contract. In case of loss damage due to any of the aforesaid causes, the money payable under any such insurance shall be received and retained by BHEL until the works are finally completed shall then be credited to the Contractor in final settlement of accounts in the event of this contract not having been previous cancelled under these conditions.

55.0 **RATE SCHEDULE CUM BOQ/VARIATION**

55.1 Contractor shall fully understand description and scope of work before quoting. The scope of work and responsibility of the contractor as mentioned under these specification shall be covered within the quoted / finally accepted rates.

55.2 AMOUNTS/RATES TO BE ALL INCLUSIVE:

The contract rate for construction of all buildings including all material services complete as per drawings and specifications and is an Item Rate Contract. The

quoted amounts, rates, unless otherwise provided in the description of various items of works shall be for completed items of works covering all materials, labour, carriage, royalties, fees, rent, sales tax, octroi, wages, tools, plants, equipments, transport, temporary construction, overhead charges and profits, as well as general liabilities/obligations and risks arising out of the conditions of the contract and carrying out the work in part under/across/along pipes, cables, drains etc. and shall apply to all heights, floors, depths, leads and lifts unless otherwise specified in the nomenclature of the item. No extra charges whatsoever consequent on any misunderstanding or otherwise shall be allowed. No revision of rates due to changes/closure of sources of materials of/quarry would be admissible. The amounts/rates of the various items of works shall hold good irrespective of the quarry or sources from which materials are brought, so long as they are required under the specifications and directions by the Architects and BHEL. The amount/rates shall also include:

(a) Erection, maintenance and removal of all temporary works and buildings.

(b) All watching, lighting, pumping and draining unless otherwise provide for.

(c) All provisions or compensations for tress-pass.

(d) All sanitary and medical arrangements for labour camps as may be prescribed.

(e) All barriers and arrangements for the safety of the public or of the Employees during the execution of work.

(f) The setting out of all works of construction, repairs and upkeep of all center lines, bench marks, reference points, brackets, rails etc., site clearance and deposit of all malba etc. out side BHEL plot.

(g) All fees, duties, royalties, loss and compensation to owner for services surface damage or taxes impositions payable to local authorities in respect of land, structure (excluding permanent structures) and all materials supplied for the work or other duties or expenses for which the Contractor may become liable or may put up under any provision of law for the purpose of or in connection with the execution of the contract, and all such other incidental charges contingencies as may be specified in the special conditions of contract or in specification of work.

55.3 The Tenderer shall quote the prices/rates for entire scope of work as per the rate schedule only, in part II price bid (Original). Conditional price bids or price bids with any deviation / clarification etc. are liable to be rejected. No cutting / erasing / over writing shall be done.

55.4 Quantities mentioned in the rate schedules are approximate only and liable for variation due to change of scope of work / variation in schedule of quantities, changes in design etc. However, in case the finally executed contract value below 30% only as compared to awarded Contract Value, the contractor will be eligible for compensation as per following provisions:

"The actual executed value shall be raised by 10% subject to the condition that the total value of work executed plus increase as above shall be limited to 70% of the awarded Contract value. "

55.5 Contractor's total quoted price as per rate schedule will be taken as tentative only. The contractor undertakes to erect /commission actual quantities against each item as per project requirement and accordingly the final contract price shall be adjusted on the basis of quantities actually erected at site and payments will also be regulated for the same. The contractor confirms that unit rates quoted above takes care of such variation during execution stage.

56.0 **CERTIFICATE OF COMPLETION:**

Such certificate of completion shall not be issued until the Contractor shall have completed all items of works ordered and have cleared the site of all malba, scaffolding, surplus materials, huts and sanitary arrangements thereof removed all dirt and dust from the wood work and floors and cleaned all doors, windows, ventilators etc. of all splashes of white wash, colour wash, paint dust etc. Immediately after completion of the whole work or a part of the work for which a separate period of completion has been mentioned in the contract, the Contractor shall give notice thereof to the Architect with a copy to the Engineer and BHEL. The work shall be completed to the entire satisfaction of the Architects and BHEL. If satisfied. The Architects shall issue a certificate indicating the date on which the work has been completed. This certificate shall be countersigned by the Engineer. The completion certificate shall be issued for each phase of work or the contract as a whole as the case may be.

57.0 **HANDING OVER THE BUILDING ON COMPLETION:**

The Contractor shall be responsible for handing over the building/ or portion as required for use complete in all respects and in proper finished condition, on completion of the work. If there is any damage or disfiguration/stains on the finished surfaces including on wall, floors, ceiling, columns, beams etc. due to use, rain weather effects or any other reason during the period of construction, the same shall be rectified suitably by the Contractor without any extra payment.

58.0 **RECTIFICATION OF DEFECTS DURING THE DEFECT LIABILITY PERIOD:**

58.1 During the defect liabilities period, the Contractor shall be responsible for any defects in material/workmanship in the work and shall rectify the same at his own cost to the entire satisfaction of the Architects and BHEL. The final security deposit shall not be released to the Contractor till it is so certified by the Architect and accepted by BHEL.

58.2 Virtual completion shall mean when the work has been completed to the satisfaction of the Architect and BHEL. The Defects Liability Period shall be 12 months from the date of virtual completion.
Security deposit shall be released after virtual completion on the recommendation of the Architect & BHEL.

59.0 CERTIFICATE OF DECLARATION FOR CONFIRMING THE KNOWLEDGE OF SITE CONDITIONS:

We, ……
Hereby declare and confirm that we have visited the project site under the subject namely, …… And acquired full knowledge and information about the site conditions and work involved. We further confirm that the above information is true and correct and we will not raise any claim of any nature due to lack of knowledge of site conditions.

Tenderer's name and address:

Place:

Signature of the Tenderers
with stamp

Date:

BILL OF QUANTITY

FOR

PART -II

PRICE BID

BHEL PEM, NOIDA

ESTIMATE INTERIOR WORKS & CIVIL BHEL
NOIDA SEC 16A

ABSTRACT OF COST

ITEM	NAME OF SUB-HEAD			TOTAL AMOUNT
1.0	EARTH WORK			
0.0	CONCRETE WORK			
0.0		0.00		
0.0	REINFORCED CEMENT CONCRETE			
0.0	BRICK WORK			
0.0	STEEL WORK			
0.0	FLOORING			
0.0	FINISHING			
0.0	0.00			
0.0	0.00			
0.0	0			
0.0	FALSE CEILING			
0.0	WOOD WORK			
0.0	ALUMINIUM WORK			
0.0	ROAD WORK			
0.0	0			
17.0	ELECTRICAL WORK			
	GRAND TOTAL			

ESTIMATE INTERIOR WORKS & CIVIL BHEL
NOIDA SEC 16A
PRICE SCHEDULE

ITEM NO.	DESCRIPTION OF ITEM	QUANTITY	UNIT	RATE (RS)	AMOUNT (RS)	Remarks
1.0	**2**	**3**	**4**	**5**	**6.00**	**7**
1.0	Earth work in excavation in foundation trenches or drains (not exceeding 1.5 m in width as well as 10 sqm on plan) including dressing of sides and ramming of bottoms, lift upto 1.5m including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50m	154.20	Cum			
1.1	Filling from available excavated earth, excluding rock/boulder in trenches, plinth, sides of foundation etc. in layers not exceeding 20cm in depth and consolidating each deposited layer by ramming and watering, lead upto 50m and lift upto 1.5m.	107.10	Cum			
1.2	Supplying and filling in plinth with Jamuna sand under floors including, watering, ramming consolidating and dressing complete.					
	Under floor	40.00	Cum			
2.0						
2.1	Providing and laying in position cement concrete of specified grade excluding cost of centering and shuttering - all work upto plinth level.					
a	1:4:8 (1 Cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size)	16.40	Cum			
b	1:5:10 (1 Cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size)	60.00	Cum			
2.2	Providing and laying Damp proof course, 40mm thick with cement concrete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 12.5 nominal size)	5.94	Sqm			

2.3	Providing and laying cement concrete in retaining walls, return walls, walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window sills, fillets etc. upto floor five level, excluding the cost of centring, shuttering and finishing: 1:2:4 (1 Cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	0.41	Cum
2.4	Supplying chemicl emulsion in sealed containers including delivery as specified.		
a	Chlorpyriphos/Lindane emulsifiable concrentrate of 20%	48.00	Ltr
2.5	Diluting and injecting chemical emulsion (to be supplied free of cost at site of work) for pre-constructional anti-termite treatment ano creating a continuous chemical arrier under and around the columns pits wall trenches top surface of plinth filling, junction of wall and floor along the external perimeters of building, surrounding of pipes and conduits etc. Complete as per specification. (Plinth area of the building at Ground floor will be measured)		
a	Chlorophyriphos (20% E.C.)	400.00	Sqm

3.0 CIVIL WORK (DISMANTILING WORK)

3.1	Dismantiling of plaster raking out joints and cleaning te surface for plaster including disposal of rubbish to te dumping groud within 50 meter lead.	927.41	**Sqm**
3.2	Dismatiling door window and (steel or wood shutter including chowkhats architrave,holefasts etc. Complete and within 50 meter lead.	26.00	**Each**
3.3	Desmantiling cement concrete including disposal of material within 50 meter lead:	60.00	**Cum**

4.0 Reinforcement work

4.1	Providing and laying in position machine batched, machine mixed and machine vibrated design mix cement concrete of specified grade for reinforced cement concrete structural elements, excluding the cost of centring, shuttering, finishing and reinforcement including Admixture in recommended proportions (as per IS 9103) to accelerate, retard setting of concrete improve workability without impairing strength and durability as per direction of Engineer-in-charge - M-20 grade reinforced cement concrete.	77.74	Cum
4.2	Centring and shuttering including strutting, propping etc. and removal of form for :	225.58	Sqm
4.3	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete . Thermo-Mechanically Treated bars.	10883.26	Kg.

5.0 Brick Work

5.1	Brick work with bricks of class designation 75 in foundation and plinth in : Cement mortar 1:6 (1 cement: 6 coarse sand)	20.18	Cum
5.2	Extra for brick work in superstructure above plinth level upto floor V level.	20.18	Cum
5.3	Half brick masonry with bricks of class designation 75 in foundation and plinth in: Cement mortar 1:4 (1 cement: 4 coarse sand)	11.33	Sqm
5.4	Extra for half brick work in superstructure above plinth level upto floor V level.	11.33	Sqm
5.5	Extra for providing and placing in position 2 Nos. 6mm dia. M.S. bars at every third course of half brick masonry (with F.P.S. bricks)	11.33	Sqm

6.0 **Steel work**

6.1	Structural steel work welded in built up sections, trusses and framed work including cutting hoisting, fixing in position and applying a priming coat of approved steel primer all complete:	
a	75mmx75mmx6mm	1946.32 Kg.
b	50mmx40mmx6mm	1934.40 Kg.
c	50mmx6mm	248.06 Kg.
d	16 mm Dia	505.60 Kg.
e	25mm Dia	70.53 Kg.
6.2	Providing and fixing bolts upto 300 mm in length including nuts and washers complete. For errection and permanets bolts	235.25 Kg.

7.0 Flooring

7.1	Providing and laying vitrified floor tiles in different size (thikness as specified by the manufacturer) with water absorptions less than 1% and flexural strength not less than 30M/mm2,in all colours and shades,laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand) including grouting the joints of upto 6 mm widht with Grouting compound of approved color., complete Size of Tile 900x900 cm Vetrified Tile Skirting	812.00 Sqm
7.2	Providing and fixing Ist quality ceramic glazed tiles conforming to IS : 13753 of minimum thickness 5 mm of approved make like NITCO, ORIENT, SOMANY KAJARIA, or equivalent make in all colours, shades except begundy, bottle green, black of any size as approved by Engineer-in-Charge in skirting, risers of steps and dados over 12 mm thick bed of Cement Mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm including pointing in white cement mixed with pigment of matching shade complete.	
a	Tile Size 300mmx300mm	107.25 Sqm
7.3	Granite Pantry Slab	2.25 Sqm

8.0	**FINISHING**		
a	12mm cement plaster of mix : 1:6 (1 cement : 6 course sand)	1022.42	Sqm
b	15mm cement plaster on rough side of single or half brick wall of mix 1:6 (1 cement : 6 course sand)	230.59	Sqm
8.1	Providing 10 mm (average)Thick Plaster of Paris punning on wall plastered/ceiling including hacking of existing surface and to make the finished surface in proper line and level as directed	1253.01	Sqm
8.2	Wall painting with plestic emulsion paint of approved brand and manufacture to give an even shade In Side (Two or more coats on new work	781.46	Sqm
8.3	Finishing wall with waterproofing Apex exter paint of required shade		
a	Out Side (Two more coats on new work)	626.73	Sqm
8.4	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade:		
a	Two or more coats on new work (TRUSS)	1289.44	Sqm
9.0	**ROOFING WORK**		
9.1	Providing asbestos cement 6mm thick corrugated sheet roofing and fixing with polymer voated J, or L hooks, bolts and nuts 8mm dia. G.I. plain and bitumen washers complete excluding the cost of purlins, rafters and trusses: corrugated sheets Upto 60 degrees pitch	613.20	Sqm
9.2	Providing and fixing on wall face unplasticised - Rigid PVC rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion.		
a	110 mm diameter	100.00	M

9.3	Providing and fixing on wall face unplasticised - PVC moulded fittings/accessories for unplasticised - Rigid PVC rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion.		
a	Coupler		
i	110 mm	10.00	Each
b	Single tee with door		
i	110 mm	10.00	Each
c	Bend 87.5°		
i	110 mm	10.00	Each
d	Shoe (Plain)		
i	110 mm	10.00	Each
9.4	Providing and fixing unplasticised -PVC pipe clips of approved design to unplasticised - PVC rain water pipes by means of 50x50x50mm hard wood plugs, screwed with M.S. screws of required length including cutting brick work and fixing in cement mortar 1:4 (1cement:4 coarse sand) and making good the walls etc. complete.		
a	110 mm	40.00	Each
9.5	Providing and filling sinders in sunken slabs including light ramming.	19.01	Cum

10.0 MISCELLANEOUS CIVIL WORKS

10.1	Providing and fixing stone slab table rubbed and polished of size 105cmx60cm deep and 1.8cm thick fixed in urinal partitions with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 stone aggregate 6mm nominal size) and finished smooth.		
a	Granite Stone of approved shade	2.00	**Sqm**

11.0 SANITARY FITTINFGS

11.1	Providing and fixing water closet squatting pan (Indian type W.C. pan) with 100mm sand cast Iron P or S trap, 10 litre low level white P.V.C. flushing cistern with manually controlled device (handle lever) conforming to IS : 7231, Parryware / Hindware / Seabird / Orient (Coral) with all fittings and fixtures complete including cutting and making good the wall and floors wherever required.		
a	White Vitreous china Long pan pattern W.C. pan of size 580 mm	3.00	Each
11.2	Providing and fixing wash basin with C.I./M.S. brackets, 15 mm C.P. brass pillar taps, Kingston/Gem/Techno/Parko, 32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require :		
a	Flat back wash basin size 550x400 mm with single 15 mm C.P. brass pillar tap	4.00	Each
11.3	Add for		
a	Providing 32 mm dia. C.P. brass trap	4.00	Each
b	Providing 32 mm dia. C.P. brass union.	4.00	Each
11.4	Providing and fixing a pair of white vitreous china foot rests of standard pattern for squatting pan water closet:		
a	250x130x30 mm	4.00	Each
11.5	Providing and fixing P.V.C. waste pipe for sink or wash basin including P.V.C. waste fittings complete.		
a	Semi rigid pipe		
i	32 mm dia	4.00	Each
11.6	Providing and fixing 600x450mm bevelled edge mirror of superior glass (of approved quality) complete with 6mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers complete.	4.00	Each
11.7	Providing and fixing soil, waste and vent pipes :		
a	100 mm dia.		
i	Centrifugally cast (spun) iron S&S pipe	120.00	M

12.0 **False ceiling**

12.1	Armstrong false ceiling disposal of unserviceable material and stacking of serviceable material with in 50 meters lead as directed by Engineer-in-charge Size 600x600mm	800.00	Sqm
12.2	Providing and fixing thermal insulation of ceiling (under deck insulation) with Resin Bonded Fibre glass wool conforming to IS :8193(Twiga insul 1500/50mm or equivalent) density 24 Kg/m3 , 50 mm thick, wrapped in 200 G Virgin polythene bags fixed to Ceiling with metallic cleats (50x50x3 mm) @ 60cm and wire mesh of 12.5 mm x 24g wire and mesh, for top most ceiling of building.	800.00	Sqm

13.0 **Wood Work**

13.1	Providing and fixing 75 thk partition made of 55 x 25 frame of kailwood section of 600x600 spacing and covered by 6 mm commercial ply on both sides and 4 mm veneer as per slection and patern including glazed portion of upto 12 mm thick etched glass and steam beach 75x 50 thk frame work complete as per drawing and design icluding malamine polish as per shade and finish	366.13	Sqm
13.2	M & F 37 thk wooden door shutters with steam beach wood frame and veneered /Glazed with etched glass panels with with all necessary hardware as / detail all complete in all respect including malamine polish as per approved shade and finish.	53.36	Sqm
13.3	M & Fixing 3"x1.5" Steam beach choukhat with malimine polish as per approved shade and finish	100.63	Rm
13.4	Providing and fixing Consealed type Hydrolic door closer set into the shutters by cutting to keep the shutter fully concealed etc. complete	18.00	nos

14.0	**Aluminium work**		
14.1	Providing and fixing aluminium glazing in door, window, ventilator shutters and partitions etc with PVC/neoprene gasket etc. complete in all respect as per the architectural drawings and the directions of engineer-in-charge. (Color anodised Reflective)		
a	With mirrored toughened glass panes of 6.00mm thickness.	76.99	Sqm
15.0	**Road work**		
15.1	Providing and laying design mix cement concrete in roads taxi .1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 40mm nominal size) in pavements laid to required slope and camber in panels as required including consolidation finishing and tamping complete.	68.25	Cum
16.0	**WATER SUPPLY**		
16.1	Providing and fixing G.I. pipes complete with G.I. fittings and clamps,including cutting and making good the walls etc. (internal work)		
a	Exposed on wall		
i	20mm dia. nominal bore	110.00	M
ii	25mm dia. nominal bore	110.00	M
b	Concealed pipe including painting with anti corrosive bitumastic paint, cutting chases and making good the wall		
i	15 mm dia nominal bore	85.00	M
ii	20 mm dia nomina bore	70.00	M
16.2	Providing and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc. (external work)		
a	40mm dia. nominal bore	300.00	M
16.3	Making connection of G.I. distribution branch with G.I.main of following sizes by providing and fixing tee,including cutting and threading the pipe etc. complete.		
a	25 to 40 mm nominal bore	1	Each

16.4	Providing and fixing brass bib cock of approved quality.		
a	15 mm nominal bore	8	Each
16.5	Providing and fixing brass stop cock of approved quality		
a	15 mm nominal bore	24	Each
16.6	Providing and fixing gun metal gate valve with C.I. wheel of approved quality(screwed end)		
a	25 mm nominal bore	5	Each
b	40 mm nominal bore	5	Each
16.7	Providing and fixing ball valve (brass) of approved quality complete		
a	High or low pressure with plastic floats		
i	15 mm nominal bore	5	Each
16.8	Painting G.I. pipes and fittings with synthetic enamel white paint over a ready mixed priming coat, both of approved quality for new work.		
a	20 mm diameter pipe.	110.00	M
b	25 mm diameter pipe.	110.00	M
16.9	Providing and filling sand of grading zone V or coarser grade alround the G.I. pipes in external work.		
a	40 mm dia. pipe.	300.00	M
16.10	Providing and fixing G.I. Union in existing G.I. pipe line, cutting and threading the pipe and making long screws including excavation, refilling the earth or cutting of wall and making good the same complete wherever required.		
a	15 mm nominal bore.	10	Each
b	20 mm nominal bore.	10	Each
c	25 mm nominal bore.	5	Each
d	40 mm nominal bore.	2	Each

16.11 Providing and placing on terrace (at all floors level) polyethylene waterstorage tank ISI : 12701 marked indicating the BIS License No. with cover and suitable locking arrangement and making necessary hole for inlet, outlet and overflow pipes but without fittings and the base support for tank [Sintex, Electroplast, Star, Lotus or equivalent having valid ISI license].

4000.00 Litre

SUMMARY OF COST ELECTRICAL WORK

BHEL - NOIDA

Sub Head	Description	Amount
I	:-INTERNAL WIRING	Rs.
II	:-LIGHTING FIXTURE & FANS	Rs.
III	:-WIRING FOR TELEPHONE	Rs.
IV	:-DISTRIBUTION BOARD & PANEL	Rs.
V	:-WIRING FOR FIRE ALARM SYSTEM	Rs.
VI	:-EARTHING	Rs.
	:-TOTAL	

SCHEDULE OF QUANTITIES FOR INTERNAL INSTALLATION ELECTRICAL WORKS FOR BHEL NOIDA

S.NO	DESCRIPTION OF ITEM	UNIT	QTY	RATE
	SUB-HEAD I: INTERNAL WIRING			
1	Wiring for light, fan, call bell and 5A plug point with 2x1.5 sq.mm. PVC insulated copper conductor cable in recessed / surface PVC conduit 2mm thick with suitable junction boxes switches and plugs etc. all fitted in concealed 16 SWG zinc passivated embedded in walls with moulded plate switches continuous running of 1.5 sq.mm. PVC insulated copper solid conductor cable earthing the fixtures outlet boxes and wiring of sub circuit & mains circuit with supply and laying of 2x2.5 sq.mm. PVC insulated copper conductor cable ans 1.5 sq.mm. PVC insulated copper soild conductor cable for earthing from the distribution board as required (All wiring items include provision of conduit and all fittings / conduit accessories complete wiring and switches)			
a.	Wiring as above for a light point controlled by a 6A switch.	Point	22	
b.	Wiring as above for a bracket / ceiling fan controlled by a 6A switch.	Point	R.O	
c.	Wiring as above for exhaust fan point controlled by a 6A switch.	Point	2	
d.	Wiring as above for two light points controlled by a 6A switch.	Point	25	
e.	Wiring as above for three light points controlled by a 6A switch.	Point	18	
f.	Wiring as above for four light points controlled by a 6A switch.	Point	14	
g	Supplying & fixing universal 2/3 pin 6A socket without switch outlet point for exhaust fan / Exit light.	Point	2	
h	Wiring as bove for universal 2/3 pin 6A socket with switch outlet point.	Point	10	

S.NO	DESCRIPTION OF ITEM	UNIT	QTY	RATE
2	Wiring for universal 6 pin 16x6A power socket outlet point with 2x4 sq.mm. PVC insulated copper conductor cable in surface / recessed PVC conduit 2mm thick including providing and fixing 6 pin 16x6A socket outlet with moulded switch plates with zinc passivated boxes embedded in walls including continous running of 2.5 sq.mm. PVC insulated copper solid conductor cable and earthing the 3rd pin required (only one power point per circuit will be wired.)	Point	10	
3	Wiring for universal 6 pin 16x6A power socket outlet with 2x6 sq.mm. PVC insulated copper conductor cable in recessed/surface PVC conduit 2mm thick including providing and fixing 6 pin 16x6A socket outlet with moulded switch plates with zinc passivated boxes embedded in walls including continous running of 2.5 sq.mm. PVC insulated copper solid conductor cable and earthing the 3rd pin as required second power plug shall be looped with 2x4 sq.mm. 1x2.5 sq.mm. PVC insulated copper conductor cable from the first one. including switch socket and box (Two power point per circuit shall be wired.)	Set	5	
4	Supplying & wiring for 3 pin 32A power plug point with 2x6 PVC insulated copper conductor cable in surface / concealed PVC conduit including providing a fixing 3 pin 25 A DP MCB in sheet enclosure including earthing the 3rd pin with 2.5 sq.mm. PVC insulated copper solid conductor cable as required. (For A/C)	Nos	20	
5	Supplying and laying of PVC conduit with accessories under floor of the following size complete as required.			
	a. 25mm dia	Meter	100	
	b. 32mm dia	Meter	30	
6	Supplying and fixing of galvanized flexible conduit with coupler of following size complete as required.			
	a. 25mm dia	Meter	100	

S.NO	DESCRIPTION OF ITEM	UNIT	QTY	RATE
7	Wiring for sub main with following sizes in recessed / surface PVC conduit 2mm thick as required.			
	a. 4x25 sq.mm. & 2x10 sq.mm. PVC insulated Coppar conductor cable in 38mm dia conduit	Meter	55	
	b. 2x16 sq.mm. & 1x6 sq.mm. PVC insulated Coppar conductor Cabile in 32mm dia conduit	Meter	65	
8	Supply laying testing & commissioning of 1100V grade armoured XLPE insulated & PVC sheathed Al. conductor cable in existing cable tray/directly on walls including the cost of gap between adjacent cables identification tags etc. complete as per specifications as required & as below			
	a.3.5 core 95 sq mm	Meter	150	
9	Cable termination of XLPE cable as per above including the cost of criping heavy Al. lugs double compression chrome plated brass glands insulated tape & all required material for completion of termination as required.			
	a. 3.5 core 95sq.mm	Each	4	
			SUB-HEAD I TOTAL:	

S.NO	DESCRIPTION OF ITEM	UNIT	QTY	RATE
	SUB-HEAD II:- LIGHTING FIXTURE AND FANS			
1	Supplying and fixing recessed decorative type fluorescent luminaries with mirror optics complete with copper wound choke, starters, capacitor lockable holders with earthing point & CFL fluorescent lamps including connections complete as required.			
	a) 2x36 watt with T5 lamp	Each	159	
2	Supplying, fixing and commissioning of 305mm 1400 RPM exhaust fan complete with louver and bird guard screen with 3 core flexible wire complete as required.			
		Each	2	
3	Supplying & fixing round type fixture with copper chokes, capacitor ceiling light with CFL lamp including connection complete as required.			
	a. 2x18 W	Each	20	
	b. 1x18W	Each	10	
4	Supplying, fixing and commissioning of wall mounting type electric hand drier consisting of strip, heater double centrifugal high speed, blowers, automatic on / of control with photo electric cell suitable for single phase 240 volts 50 c/s supply complete as required.			
		Each	R.O	
5	Supplying and fixing recessed decorative type fluorescent luminaries with mirror optics complete with electronic choke, capacitor, starters, locakable holders with earthing point & flourocent lamps including connections complete as required.			
	a. 2x36 W	Each	R.O	
		SUB-HEAD II TOTAL:		

S.NO	DESCRIPTION OF ITEM	UNIT	QTY	RATE
	SUB-HEAD III:- WIRING FOR TELEPHONE			
1	Supplying and fixing 16 gauge GI box with locking with gas kits hinged cover with necessary bridge with tag blocks (Krone Make) to be recessed in wall / surface with adequate knock outs for conduit / cables as required for terminating suitable sizes of cables.			
	a. suitable for 100 pairs.	No.	1	
	b. suitable for 50 pairs.	No.	R.O	
2	Supplying laying and terminating and colour code identification on either ends 0.6 mm dia annealed tinned screen protected copper conductor PCC sheathed telephone cable in existing conduits as required.			
	a. Two pairs	Meter	950	
	b. Five pairs	Meter	50	
	c. Ten pairs	Meter	50	
	d. Fifty pairs	Meter	R.O	
3	Supplying and fixing moulded type telephone outlet housed in zinc passivated box with suitable connector strip in recessed wall / partitions as required of following sizes:			
	a. 1 pair cord outlet	Nos.	90	
	b. 2 pair cord outlet	Nos.	5	
4	Supplying, fixing & installing of MS floor trunking with cover of size 150 x 32 mm embedded in floor by cutting the existing floor to be in flush to the existing floor finish level and rendering the floor complete with cement concrete as approved layout complete as required. (Telephone / Data)	Meter	150	
5	Supplying, and installing of MS junction box of size 300 x 300 x 40 mm suitable for adopting two run of floor trunking of size 150x32mm embdded in floor by cutting the existing floor to be in flush to the existing floor finish level and rendering the floor complete with cement concrete as approved layout complete as required including providing steel plate top cover and frame as required (LAN and telephone cabling)	Each	10	
			SUB-HEAD III TOTAL:Rs.	

S.NO	DESCRIPTION OF ITEM	UNIT	QTY	RATE
	SUB-HEAD IV:- DISTRIBUTION BOARD & PANELS			
1	Supplying, erection and commissioning of 8 way TPN MCB distribution board comprising of recessed sheet steel enclosure with double door with loose wire box 100A tinned copper bus bars neutral and earth strips interconnections etc. complete with following mountings as required. a) 63A, 4P MCB as incoming - 1 No. b) 40A, 2P ELCB outgoing - 3 Nos. c) 6 SP MCB d) 16A SP MCB e) 20A SP MCB out going - 24 Nos.	Set	2	
2	Supplying, erection and commissioning of 6 way TPN MCB distribution board comprising of recessed sheet steel enclosure with double door with loose wire box 100A tinned copper bus bars neutral and earth strips interconnections etc. complete with following mountings as required. a) 63A, 4P MCB as incoming - 1 No. b) 40A, 2P ELCB outgoing - 3 Nos. c) 6 SP MCB d) 16A SP MCB e) 20A SP MCB out going - 18 Nos.	Set	R.O	
3	Supplying, erection testing & commissioning of cubical type sheet steel clad wall mounted totally enclosed LT switch board suitable for use on 415 V 3 phase 4 wire 50 cycles complete housed with incoming and outgoing, bus bar including interconnection accessories etc. complete as required and with following incoming and outgoing switchgear as per specifications and drawings (Floor Panel) **INCOMING** a) 200A 4P MCCB (25 KA) Ics - 1 No. b) Voltmeter 0-500V with selector switch -1No. c) Ammeter 0-200A with selector switch $ CTs -1Set d) Indicating lamp RYB - 1 Set **OUTGOING** a) 63 Amp 4P MCB - 3 Nos. a) 100 Amp 4P MCCB - 1 Nos.	Set	1	
			SUB-HEAD IV TOTAL:	

S.NO	DESCRIPTION OF ITEM	UNIT	QTY	RATE
	SUB-HEAD V:- WIRING FOR FIRE ALARM SYSTEM			
1	Providing and laying 25mm dia MS conduit complete with required junction boxes in recessed / surface system as required.	Meter	125	
2	Supplying and drawing of PVC insulated copper conductor cable of 2x1.5 sq.mm. in existing conduit as required.	Meter	250	
3	Supplying, installation, testing and commissioning of maintenance free intelligent optical type smoke detector as required.	Each	42	
4	Supplying, installation, testing and commissioning of ROR-MF. intelligent type heat detector as required.	Each	2	
5	Supplying, installation, testing and commissioning of duel tone electronic hooter suitable for wall mounted electronic hooter for complete as required.	Nos.	2	
6	Supplying, installation, testing and commissioning of manual call box in suitable enclosure with arrangement to raise the alarm when the glass is manually broken complete as required.	Nos.	2	
7	Supplying, installation, testing and commissioning of microprocess. base main fire alarm control panel of 4 zone capacity as complete with batteries, battery charger illuminated numeric digram complete as required.	Nos.	1	
8	Providing and fixing of response indictor as required.	Each	R.O	
9	Supplying, installation, testing and commissioning of repeater fire alarm control panels complete as required.	Set	1	
		SUB-HEAD V TOTAL:		

S.NO	DESCRIPTION OF ITEM	UNIT	QTY	RATE
	SUB-HEAD VI:- EARTHING			
1	Earthing with copper plate electrode 600x600x3mm including accessories and providing masonary enclosure with MS cover plate having locking arrangement, watering pipe and excavation in soil as per site etc, including salt and charcoal as required.	Set	6	
2	Supplying, laying and terminating earth connection with 25x6mm copper strip in 40mm dia GI pipe "B" class from earth electrode as required.	Meter	40	
3	Supplying and laying copper strip in the trench / tray wall with GI saddles at 600 mm interval as required.			
	a) 25 x 3 mm Copper strip	Meter	90	
4	Providing and fixing 8 SWG copper wire in recess or surface for loop earthing with sub-main conduit and L.T. cable from panel to DB 's as required.	Meter	300	
			SUB-HEAD VI TOTAL:-	

GUIDE LIST OF APPROVED MAKES OF BUILDING MATERIAL

S.No.	Materials	Brand Name
1.	Alluminium	JINDAL / HINDALCO / BALCO
2.	Glass	MODI / SAINT-GOBAIN
3.	Bricks	'A' QUALITY i.e. CLASS-FIRST
4.	Concrete / Coarse	'A' QUALITY
5.	Chemicals	NOSSEL ISI
6.	Shuttering/ Scaffoldings	STEEL PLATE / PLY BOARD
7.	Flush Door Shutters	ISI AS PER APPROVAL OF ENGINEER INCHARGE
8.	Welding Electrode	ESAB/ MODI / D&H

NOTE:

The above is the list of building material and the names of the approved brand against each item. Where more than one manufacturer is listed, the names are given in the order of preference. The contractor shall quote rates for the various items of work based on the materials of first preference, after ascertaining the availability, delivery schedule etc. of the same. Unless the contractor stipulates to the contrary in his tender, it shall be presumed that rates quoted are for the materials of first preference. In the event the contractor is permitted to use materials of lower preference, because of valid reasons, then the contract rates for the relevant items of work shall be suitably adjusted on the basis of the variation in prices of materials of first preference and those actually used. If the prices of material used are higher than the prices of materials of first preference, the owner shall not be liable to make any enhanced payment for the affected item of work on this account.

GUIDE LIST OF APPROVED MAKES FOR ELEECTRICAL ITEMS

The following list of products and the names of the approved manufactures agianst each product . Where more than one manufacture is listed, names are given in the order of performance. The contractor shall quote rates for the various items of work based on the materials of first performance, after ascertaining the availability,delivery schedule etc of the same. Unless the contractor stipulates to the contrary in his tender, shall be presumed that rates quoted are for the materials offirst preferance. In the event the contract rates for the relevant items of work it shall be presumed that rates quoted are for the materials of first preferance. In the event the contract is permitted to use materials of lower preference, because of valid reasons, than the contract rates for the relevant items of of work shall be suitably adjusted on the basis of the variation in prices of materials of first preference and those actually used. If the prices of materials used are higher than the prices of materials of first preference, the owner shall not to be liable to make any enchanced payment for the affected item of work on this account.

S.No	PARTICULARS	PREFERED MAKE	ALTERNATE MAKE	ALTERNATE MAKE
1	MCCB	LEGRAND	SCHNEIDER M.G	L&T
2	MCB	LEGRAND	SCHNEIDER M.G	HAGER
3	MCB	LEGRAND	SCHNEIDER M.G	HAGER
4	L T PANEL MNFRS	APPROVED BY CONSULTANT		
5	MODULAR SWITCHES	LEGRAND (MOSIAC)	CLIPSAL (OPALE)	SCHNEIDER (FUGA)
6	PIANO SWITCHES	ANCHOR	NOTH WEST	SSK (TOPLINE)
7	PVC CONDUIT	DURALINE		
8	MS CODUIT	BEC	AGL	AKG
9	1.1KV GRADE WIRES	SKYTONE	UNIVERSAL	POLYCAB
10	1.1KV GRADE WIRES	LAPP CABLE	SKYTONE	FINOLEX
11	LIGHTING FIXTURE	PHILIPS INDIA	WIPRO, CGL, BAJAJ	APPROVED BY CONSULTANT
12	TELEPHONE CABLE	DELTON	SKYTONE	KEI
13	TELEPHONE TAG BLOCK	KRONE	HENSEL	ITI
14	CABLE GLANDS	SIEMENS	DOWELL	COMET
15	THIBLES	DOWELLS		
16	CABLE JOINTS	3M	MAHINDRA	REYCHEM
17	CONTROL SWITCHES	G.E	C&S	THAKUR
18	TERMINAL STRIP	CONNECT WELL	ELMEX	
19	BUS BAR SUPPORT	POWERMEX	NOMEX	
20	CHANGE OVER SWITCH	H.H.ELECON	HPL SOCOMEC	C&S
21	FUESES/ FUSE CARRIERS	G.E	L&T	APPROVED BY CONSULTANT
22	PUSH BUTTON	G.E	BCH	SIEMENS
23	CONNECTORS	SIEMENS	L&T	TELE MECHNIC
24	PROTECTION RELAY	ALSTOHM	AVK -SEGC	
25	CONTRACTORS	SCHNEIDER	G.E	SIEMENS
26	METERS (INDICATING)	AE	IMP	MICO
27	INDICATING LAMPS	G.E	SIEMENS	
28	L.T CTS & PTS	KAPPA	AE	SIMENS
29	SELECTOR SWITCHES	G.E	KAYCEE	SIMENS
30	CAPACITOR	NEPTUAN DUCTATI	MEHAR	CROMPTON
31	POWER FACTOR	NEPTUAN DUCTATI	NUTRONICS	SYNTRON
32	OVER LOAD RELAY	ALSTOHM	L&T	TELE MECHNIC
33	LOW VOLTAGE SERVICES AGENCIES	FIRE BALL	DATS	SDB CISCO