



**Bharat Heavy Electricals Limited**  
**ELECTRONICS DIVISION**  
**Mysore Road, Bangalore – 560026**

Ph. 080-26989632  
SC&PV – PVEngg- DEPT.

**NOTICE INVITING TENDERS**

- 1 TENDER NUMBER(RFQ) : EDN: PV-ENGG: SANTALDHI: 10 MW: ROAD&DRAIN & BALANCE BUILDING /01 ; Dt: 24.06.2019
- 2 NAME OF WORK : CONSTRUCTION OF BITUMINOUS/WBM ROAD, BRICK WALL DRAIN, CULVERTS, FENCING OVER EXISTING BOUNDARY WALL, AND BALANCE WORK OF CONTROL ROOM (1NOS), INVERTER ROOM BUILDING (2NOS), SECURITY ROOM FOUNDATION(2NOS) AND OTHER ASSOCIATED WORKS AT FOR 10 MW Solar Photovoltaic Power Plant at Santaldih, Purulia, West Bengal, (WBSEDCL): West Bengal State Electricity Distribution Company Limited
- 3 ESTIMATED COST : **Rs.122.30 lakhs (Approx.) Plus applicable GST.**
- 4 EARNEST MONEY DEPOSIT : **Rs.2.50 Lakhs (Mandatory for MSME also)**  
(a) Bidders can submit Rs.2.50 Lakhs EMD through DD/SBI Collect (Please refer point no.: 21 of "Instructions to tenderer" for guideline for payment through SBI Collect)  
(b) Alternatively bidders can submit Rs.2.0 Lakhs EMD through DD/SBI collect and balance Rs.0.50 Lakhs in the form of Bank Guarantee from the scheduled bank.
- 5 SECURITY DEPOSIT : 50% of SD shall be submitted before start of work; Balance will be recovered from running Bills at a rate of 10%. (SD= 5% of the work order amount); 50% of SD will be released after completion of all the works and remaining 50% after 6 months from the date of completion of all the works.
- 6 COMPLETION TIME : 3 MONTHS (From the date of placement of Order/handing over of the site.)
- 7 LAST DATE AND TIME FOR THE SUBMISSION OF DULY FILLED IN TENDER DOCUMENT : 10.07.2019 Before 01:00 P.M
- 8 PLACE OF SUBMISSION OF TENDER DOCUMENT : Mr. VIVEK YADAV, DGM (SC&PV- Engg.)  
5th Floor, New Engineering Building,  
BHEL- Electronics Division  
Mysore Road, Bangalore -560 026.
- 9 ADDRESS TO BE SUPERSCRIBED ON TENDER ENVELOPE : Mr. VIVEK YADAV, DGM (SC&PV- Engg.)  
5th Floor, New Engineering Building,  
BHEL- Electronics Division  
Mysore Road, Bangalore -560 026.
- 10 DATE AND TIME OF TECHNICAL BID OPENING : 10.07.2019 Before 01:30 P.M

NOTE: The tenderer shall return the dully filled in tender document after affixing signature on all pages and submit.

NIT Issued By  
MR. PHALGUNI SAHOO  
SR.ENGINEER(SCPV-ENGG)

CONTACTOR (SIGN & SEAL)



Bharat Heavy Electricals Ltd  
Electronics Division  
Mysore Road, Bangalore – 560026

**Tender Document for**

**CONSTRUCTION OF BITUMINOUS/WBM ROAD, BRICK WALL DRAIN, CULVERTS, FENCING OVER EXISTING BOUNDARY WALL, AND BALANCE WORK OF CONTROL ROOM (1NOS), INVERTER ROOM BUILDING (2NOS), SECURITY ROOM FOUNDATION(2NOS) AND OTHER ASSOCIATED WORKS AT FOR 10 MW Solar Photovoltaic Power Plant at Santaldih, Purulia, West Bengal, (WBSSEDCL): West Bengal State Electricity Distribution Company Limited.**

**TENDER NUMBER RFQ**

EDN: PV-ENGG: SANTALDHI: 10 MW: ROAD&DRAIN & BALANCE BUILDING /01 ; Dt:24.06.2019

**TECHNICAL BID DATE OF OPENING: 10-07-2019 (Price bid opening date intimation will be given separately)**

Part – I	Technical cum Commercial Bid	.....	41 Pages
	Unpriced Price Bid	.....	16 Pages
	Technical and General Specification	.....	05 Pages
	BHEL General Conditions of Contract 2019	.....	33 Pages
	Tentative Tender Drawing	.....	10 Page
	Bank Guarantee format for EMD	.....	02 Pages
Part – II	Price Bid	.....	16 Pages

**Note:**

1. Part – I: To be submitted in a separate sealed cover.
2. Part – II: To be submitted in a separate sealed cover.
3. Earnest Money Deposit of Rupees 2.50 Lakhs shall be submitted as per point No. 4 of page No. 1 of this tender document.
4. Tenders will be liable for rejection if the above mentioned EMD is not submitted along with the tender.
5. Part-I, Part-II, Tender EMD sealed covers should be put in outer envelope and super scribing the Name of work and Name & Address of the Tenderer.
6. **Firms banned by BHEL are not eligible to participate in the tender. The tender envelope submitted by such a firms will not be opened for evaluation and no communication in this regard will be entertained.**

NIT Issued By  
MR. PHALGUNI SAHOO  
SR.ENGINEER(SCPV-ENGG)

CONTACTOR (SIGN & SEAL)



**BHARAT HEAVY ELECTRICALS LTD, ELECTRONICS DIVISION, BANGALORE-26**

TENDER NUMBER RFQ:

EDN: PV-ENGG: SANTALDHI: 10 MW: ROAD&DRAIN & BALANCE BUILDING /01 ; Dt:24.06.2019

**PART-I TECHNICAL-CUM-COMMERCIAL BID**

(To be furnished by the Bidders)

01. NAME OF THE WORK : CONSTRUCTION OF BITUMINOUS/WBM ROAD, BRICK WALL DRAIN, CULVERTS, FENCING OVER EXISTING BOUNDARY WALL, AND BALANCE WORK OF CONTROL ROOM (1NOS), INVERTER ROOM BUILDING (2NOS), SECURITY ROOM FOUNDATION (2NOS) AND OTHER ASSOCIATED WORKS AT FOR 10 MW Solar Photovoltaic Power Plant at Santaldih, Purulia, West Bengal, (WBSEDCL): West Bengal State Electricity Distribution Company Limited  
(All listed works shall be Undertaken and executed)
02. APPROXIMATE ESTT.COST RS. : Rs.122.3 Lakhs (APPROX.) plus applicable GST.
03. COMPLETION PERIOD : 3 MONTHS  
(From the date of placement of Order/handing over of the site.)
04. NAME OF THE CONTRACTOR :  
(WITH CONTACT PERSON)
05. ADDRESS  
(A) OFFICE :  
  
E-mail :  
TEL. PH. NO. :  
  
(B)RESIDENCE :  
  
TEL.PH NO :  
  
06. PAN NO :  
  
07. GST NO :  
  
08. STAFF STRENGTH :  
  
09. PLANT/EQUIPMENTS : List enclosed/not enclosed  
  
10. a) SCOPE OF WORK : UNDERSTOOD/ NOT UNDERSTOOD  
(As per schedule of items)  
b) Accept to execute in total : YES/ NO  
c) Bar chart to be submitted : YES/ NO

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CONTACTOR (SIGN & SEAL)



Individually for each work for L1 Scope

- d) In order to complete the project in the specified months schedule, vendor to deploy separate Four gangs/teams (or) more as per site requirement for each individual activities along with tools and machineries, Undertaking should be submitted along with offer : YES/ NO
11. a) EMD PARTICULARS (DEMAND DRAFT/ SBI COLLECT REF NO. / BG DETAIL) :
- b) Electronic Funds Transfer (EFT) form enclosed : Please fill up the form in ANNEXURE-II
12. Penalty as per BHEL General conditions of contract 2019 clause No. 2.7.9 : Accepted / Not accepted
13. Constitution of Firm : Individual / Sole Proprietorship Concern / Partnership Firm / Public Ltd. Company/ Private Ltd. Company.
14. BHEL reserves right to conduct reverse auction : Accepted / Not accepted
15. Accept to pay statutory payments like ESI, PF, BOCW, etc., as per terms and conditions of BHEL and Govt. guideline's : Accepted / Not accepted
16. BHEL Payment terms acceptance (Cl. no. 21, 22.1 & 22.2 of "Special Conditions of Contract") : Accepted / Not accepted
17. The bidder should encourage to use local labor that has the necessary skills as per the requirement of work. : Accepted / Not accepted

**Note:**

**1. Bidders are advised to quote their best prices (% above/below the total estimate +/- (or) at par) as no further price bids will be accepted in case BHEL decides to open price bids instead of reverse auction.**

**2. Reverse auction seal bid opening price should not be more than the manual quoted (hand written) price bid**



## **PRE QUALIFICATION CRITERIA**

- 1) Pre-Qualification criteria for bidder (i.e. past experience/ performance, financial soundness, technical competence),
- (I) Experience of having successfully completed Road & Drain work (or) any infrastructure works (or) similar nature of works during last 7 years from the date of tender notice.
- a) Three similar completed Road & Drain work (or) any infrastructure works (or) similar nature of works each costing not less than an amount equal to 40% of NIT displayed value mentioned against each work in the tender notice (i.e., 40% of Rs.122.3 Lakhs = Rs.48.92 Lakhs, say Rs.49 Lakhs).
- OR
- b) Two similar Road & Drain work (or) any infrastructure works (or) similar nature of works each costing not less than an amount equal to 50% estimated value mentioned against each work in the tender notice (i.e., 50% of Rs.122.3 Lakhs = Rs.61.15 Lakhs, say Rs. 61 Lakhs).
- OR
- c) One similar Road & Drain work (or) any infrastructure works (or) similar nature of works each costing not less than an amount equal to 80% estimated value mentioned against each work in the tender notice (i.e., 80% of Rs.122.3 Lakhs = Rs.97.84 Lakhs, say Rs.98.00 Lakh).
- (II) Average annual financial turn over during the last 3 years, ending 31st March of the previous financial year, should be 30% of the NIT displayed value mentioned against each work in the tender notice (i.e., 30% of Rs.122.3 Lakhs = Rs.36.69 Lakhs, say Rs. 37.00 Lakhs)

**Note: Offers of the Tenderers not meeting the above requirements are liable to be rejected.**

### **Documents required to be submitted**

1. Registration Certificate with ESI and PF Authority/Declaration.
2. Income Tax Returns for last Three years
3. Balance Sheet and Profit & Loss Account for the last 03 years by auditor.
4. Availability of Technical personnel in letter head.
5. Registration with BHEL/CPWD/other Govt. organization/PSU if any.
6. Declaration for full filling the BOCW requirements.
7. List of equipment to be mobilized at site.
8. GST Registration details or Declaration.

**All the supporting documents to be signed and sealed by the bidder (BHEL have the rights to verify the original documents if required)**

**INFORMATION TO THE TENDERER:**

- (i) Successful Bidder should establish their Site office at Construction site, including common facilities such as toilet, water, electricity etc. in consultation with BHEL. Contractor has to arrange water and power as required for completing the job in the stipulated time frame at their own cost.
- (ii) The bidders should furnish "Site Inspection Certificate" in Annexure-III enclosed herewith.
- (iii) Bidders should study the prevailing Market trend of Construction materials/laborers/other relevant requirement before quote and submit the competitive price.
- (iv) The bidder should encourage to use local labor that has the necessary skills as per the requirement of work.
- (v) Before engaging the labour in to work, Contractor should get the NOC from labours' native police station as well as NOC from local police station (If applicable).
- (vi) The bidders should carry out preliminary survey at proposed construction site before submission of offer to ensure that the rate quoted for the relevant schedule of items are correct.
- (vii) Contractor to note BHEL reserves the right to get any part of the work done through other agency or deploy BHEL's own/hired/otherwise arranged resources, at the risk and cost of the contractor after due notice of a period of two weeks by BHEL, in the event of:-
  - a) Contractors continued poor progress
  - b) Withdrawal from or abandonment of the work before completion of the work.
  - c) Contractor's inability to progress the work for completion as stipulated in the contract
  - d) Poor quality of work
  - e) Corrupt act of Contractor
  - f) Insolvency of the contractor
  - g) Persistent disregard to the instructions of BHEL
  - h) Assignment, transfer, sub-letting of contract without BHEL's written permission
  - i) Non fulfillment of any contractual obligations
  - j) In the opinion of BHEL, the contractor is overloaded and is not in a position to execute job as per required schedule.
- (viii) The liquidated damages/penalties arising out of Risk and Cost as explained under Sl.no (vii). BHEL shall recover the amount from any money due from Contractor, or from any money due to the contractor including security deposit, or by forfeiting any T & P or material of the contractor under this contract or any other contract of BHEL or by any other means or any combination thereof.



(ix) **Documents to be submitted on award of work (as applicable):**

- a) Security deposit in the form of Cash/DD/ NSC's / Kisan Vikas Patra / FDR / Bank Guarantee in favour of BHEL
- (b) Electronic Fund Transfer Form duly signed & sealed by banker along with cancelled cheque copy
- (c) Labour license of the workmen engaged valid for contract period (If applicable)
- (d) Workmen Compensation Insurance Policy for the workmen engaged valid for contract period
- (e) Deduction of statutory taxes (as applicable) at source would be enforced from the running bills at the rates prescribed unless exemption certificate is produced from the concerned authorities.

The following documents are to be submitted along with the Running Account Bills for process of payment

- a) Tax Invoice with details of GST number of BHEL and contractor.
- b) Measurement books duly filled and signed by officials of BHEL and contractor
- c) Provident PF Remittance challan for the bill duration.
- d) ESI Remittance challan for the bill duration.
- e) Invoice submitted along with running bills to indicate the GST amount charged and bear GST NUMBER etc. as per prevailing taxes.

Bill submitted subsequently to be accompanied with a declaration that GST liability on the earlier bill has been discharged.

- i) by paying money to the Government (along with Tax paid Challan Copy)
- ii) by utilization of Input GST Credit
- f) BOCW Registration and payment proof.
- g) Field quality assurance documents (as applicable) as per instruction of Engineer In-charge.
- h) List of supplier/supplier's (material and manpower).
- i) After completion of work, bidders should mandatorily furnish NOC from all declared suppliers along with the running/Final Bill.

**Mobilization at site:**

- 1) Requisite Material (all construction materials like cement, sand, coarse aggregate, reinforcement steel, etc.), men (mason, carpenter, bar binder, fabricator, etc.) and machinery (Concrete mixer machine/RMC/AJAX with printing facility, Power chain saw, JCB/excavator/dozer, grader, tipper, etc., Total station) should be arranged in order to complete the project within stipulated time period.
- 2) The contractor shall carry the work as per the approved Field Quality Plan issued by BHEL
- 3) Calibration of equipment's should be done by NABL accredited laboratories.
- 4) Contractor shall submit the design mix report (from NABL/Govt. approved labs) and shall carry the work as per the approved design mix report, approved by BHEL.



**Bharat Heavy Electricals Limited**  
**ELECTRONICS DIVISION**  
MYSORE ROAD- BANGALORE-26  
**INSTRUCTIONS TO TENDERER**

1. Sealed Tender for the above noted work is hereby invited from Contractors experienced in similar civil works like RCC building works (such as Industrial, commercial and Residential).
2. Scope of work for , “CONSTRUCTION OF BITUMINOUS/WBM ROAD, BRICK WALL DRAIN, CULVERTS, FENCING OVER EXISTING BOUNDARY WALL, AND BALANCE WORK OF CONTROL ROOM (1NOS), INVERTER ROOM BUILDING (2NOS), SECURITY ROOM FOUNDATION(2NOS) AND OTHER ASSOCIATED WORKS AT FOR 10 MW Solar Photovoltaic Power Plant at Santaldih, Purulia, West Bengal, (WBSEDCL): West Bengal State Electricity Distribution Company Limited” at location as specified under Sl. No. 3 “Project scope, detail and location” as per Tender/approved construction drawing, works as per instruction of Engineer in charge, terms and condition of contract. However Depending on site conditions minor modification in works may be necessary.
3. Project Scope, detail and Location:

Site Detail	Project detail	Location	Scope of Work
Project Site	10MWp (AC) SPV Power plant for WBSEDCL	PURULIA Dist.: WEST BENGAL state	10MWp (AC)

4. Tenders should be addressed to: Mr. VIVEK KUMAR YADAV., DGM (SC&PV- ENGG, NEB 5<sup>th</sup> Floor, Electronics Division, Bharat Heavy Electricals Limited, Mysore road, Bangalore – 560 026. In three separate sealed cover for “Technical cum Commercial Bid”, Price Bid and DD for Tender document Cost (if applicable) & EMD duly super scribed and put in an outer envelope, super scribing the Name of work, Tender no. and Name and address of the Tenderer.
5. The local address of the Contractors, the name of the person to whom all the Correspondence are to be addressed should be indicated, with telephone number (both office and residence).
6. All entries in tender documents should be in one ink (preferably blue ink). Erasing and overwriting is not permitted. All corrections should be duly signed by tenderer concerned.
7. Tenderers shall fill in all the required particular in the blank space provided for this purpose in the tender documents and also sign in each and every page of the tender document including the drawings attached there to before submitting tender.



8. Unit rate/percentage above or below estimate should be quoted in figures as well as in words in Indian Currency only i.e. Rupees and Paisa with reference to each item and for the items shown in the attached schedule. These rates shall be for the finished work at site. The rate shall include all taxes and duties payable on account of Octroi, Sales Tax, tax on work contract etc., and also expenses towards PF and ESI contributions (see clauses 8, 40 and Enclosure 'C') but excluding
9. In case the rate quoted in figures differs from those quoted in words, the lower of the rates quoted will be taken as the tendered rate and shall be binding on the tenderer.
10. The rate to be quoted by the tenderer shall be firm and shall cover and include all statutory levies such as "Octroi, sales tax, excise duty etc., arising from Act passed by Parliament or State Legislature and rules framed there under. The rates shall further be deemed to include statutory levies arising from such Acts, Central or State, which may come into force, subsequent to submission of tenders.
11. (a) The rate quoted in the tender shall remain valid for a period of 'THREE MONTHS' from the date of opening tender.  
(b) Tenderer shall not increase quoted rates, once the tenderer has submitted offers/quotation/price and during execution of contract in case tender is accepted.  
(c) Successful bidder should execute the work strictly in accordance with Tender schedule quoted rates as accepted by BHEL.  
(d) **PRICE VARIATION clause not applicable.**
12. The rates quoted should be inclusive of all taxes arising on the transaction. If BHEL is required to discharge the liability of any taxes on the transaction like TDS(IT), TDS(WCT), TDS(GST) (as applicable) under reverse charge mechanism or any other similar taxes, which is or becomes payable by BHEL, the same shall be deducted from the bills of the contractor. **The rate/Percentage quoted by bidder shall be including all taxes but excluding GST which shall be shown separately in price bid.**
13. Quantities shown in the schedule are only approximate and are liable to variation without entitling the Contractors to any compensation.



14. Before tendering, the tenderer are advised to inspect the site of work and its environments and be well acquainted with the actual working and other prevailing conditions, position of material and labour. They should be well versed with BHEL General Conditions of Contract instruction to the tenderers, drawing and specification and all other documents which form part of the agreement to be entered into subsequent to award of work. The tenderer should be specially note that it is tenderers responsibility to provide any items which is not specifically mentioned in the specifications and drawing, but which is necessary to complete the work.
15. Details and quantities of each item of work shown in the bill of quantities attached here to only approximate. They are given as a guide for the purpose of tendering only and are liable for variation and alteration at the discretion of the competent authority. The work under each item as executed shall be measured and price at the corresponding rates to be quoted by the Contractor in the bill of quantities attached hereto.
16. Should a tenderer find discrepancies or omission in the drawing attached to the tender documents or should be in doubt as to their meaning he should at once address to the authority inviting the tender for clarifications. Every endeavor is made to avoid any error which can materially affect the basis of the tender but successful tenderer shall take upon himself to provide for the risk of any error which may be subsequently discovered and shall make no subsequent claim on account thereof.
17. In the event of the tender being submitted by a firm the tender must be signed separately and legibly by each partner or member of the firm or in their absence, by the person holding the power of Attorney on behalf of firm concerned. In the latter case, a copy of the power of Attorney duly attested by a Gazette Officer must accompany the tender.
18. If in any case, the date of Tender Opening falls on holiday, the Tender will be opened on the next working day.
19. Every tender must be accompanied by Earnest Money Deposit. This earnest money will be refunded to the unsuccessful tenderer after finalization of the award of work. In the case of successful tenderer, the earnest money will be retained as a part of Security Deposit for satisfactory completion of the work in accordance with Clause-16 of BHEL General Conditions of the Contract. Tenders without Earnest Money Deposit receipt are liable to reject. No interest will be paid on the earnest money deposit.
20. **The Earnest money deposit may be furnished**
  - a) **Demand Draft in favour of BHEL EDN, Bangalore – 560026.**
  - b) **The Earnest money deposit may be furnished through online from SBI Collect.**
  - c) **Bank Guarantee in BHEL format as per note 22 as below**



## Guidelines for payment of EMD Fee

Step-1: Please enter the following link in your internet address browser or click on the following link.  
<https://www.onlinesbi.com/sbicollect/icollecthome.htm>

Please click on "proceed" after Clicking "Check Box" to proceed for payment

Step-2: Now the SBI's SB-Collect site gets opened. Please select State of Corporation as "Karnataka" and type of Corporation as "PSU-PUBLIC SECTOR UNDERTAKING" and then click on "Go" appearing on the screen.


Step-3: Now select "Bharat Heavy Electricals LTD" from the dropdown table appearing against "Industry Name" and click Submit

Step-4: Now select "Others" from the dropdown table appearing against "Category" and click Submit

Step-5: The below screen (similar) will appear. Please select sub category "EMD" and fill up other details and transfer money.

State Bank Collect / State Bank Collect

State Bank Collect

 BHARAT HEAVY ELECTRICALS LTD  
BHEL HOUSE, SIRI FORT, NEW DELHI-110003

Provide details of payment

Select Payment Category \* OTHERS

SUB CATEGORY \* --Select SUB CATEGORY--

NAME \*

VENDOR CODE

AMOUNT \*

Remarks

Please enter your Name, Date of Birth (For Personal Banking) / Incorporation (For Corporate Banking) & Mobile Number. This is required to reprint your e-receipt / remittance(PAP) form, if the need arises.

Name \*

Date of Birth / Incorporation \*

Mobile Number \*

Enter the text as shown in the image \* 87E21

21. For reimbursement of Earnest Money Deposit, the tenderer should fill the enclosed EFT form, obtain the Banker's signature and also enclose a photocopy of cancelled cheque leaf.
22. EMD may be submitted in Bank guarantee as per Sl. No. 4 (b), page No. 1, in BHEL format in Non-judicial stamp paper amounting Rs.200 (or) applicable rate at bidder's state, whichever is higher. **Bank guarantee from any Co-operative banks are not acceptable in any circumstances.**
23. Unless the bidder whose tender is accepted signs contract agreement within fifteen days (15 days) of the date of the order directing to do so, the amount of Earnest Money already deposited by bidder will be forfeited and acceptance of the tender withdrawn.

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CONTACTOR (SIGN & SEAL)



24. If after opening of tenders a tenderer revokes the tender or increase of earlier quoted rates or after acceptance of his tender does not commence the work in accordance with the instruction of Engineer-in-charge, the Earnest Money Deposited by bidder will be forfeited and acceptance of bidder's tender withdrawn.
- If only a part of work included in the tender had been awarded to the tenderer, the amount of Earnest Money to be retained will be based on value of the contract so awarded.
25. The BHARAT HEAVY ELECTRICALS LIMITED reserve the right to reject any or all the tenders received or accept any tender or part thereof without assigning reason thereof. In the case of acceptance of a part of tender, the time for completion may also be reduced to the extent considered necessary by the accepting authority.
26. Conditional and Unsigned tenders, tenders which are incomplete or otherwise considered defective, tenders which are not in accordance with the tender conditions laid down by the accepting officer and tenders not submitted in the prescribed forms are liable to be rejected.
27. Tenderer shall submit Solvency Certificate for the value specified from a Bank of standing regarding the tenderer's financial position (as applicable).
28. The tenderers should enclose relevant documents regarding constitution of firm i.e. Individual / Sole Proprietorship Concern / Partnership Firm / Public Limited Company / Private Limited.
29. The tenders should be enclosed with a list of contracts already held by the tenderer at the time of submitting the tender and giving the following particulars:
- Name of the work, value and address.
  - The balance work remaining to be done on the same.
30. a) The filled in tender sealed cover shall be handed over/couriered/speed post to at office of "MR. VIVEK KUMAR YADAV., DGM (SC&PV- ENGG, NEB 5<sup>th</sup> Floor, Electronics Division, Bharat Heavy Electricals Limited, Mysore road, Bangalore – 560 026)" before the time fixed for submission of tender.
- b) Tenders received after the due date & time of opening of tenders will be rejected.
31. The Contractors responsibility under this contract shall commence from date of receipt of the order or acceptance of tender.
32. Tenders submitted by speed post or courier service shall be posted with due consideration of any delay in postal delivery. Tenders received after the due date of opening tenders are liable to be rejected.



33. If proprietor or partner of a firm expires after the submission of tender or after the acceptance of tender, BHEL reserves the right to cancel the contract if the character of the firm undergoes a substantial change.
34. THE BHARAT HEAVY ELECTRICALS LIMITED will not be bound by any power of Attorney granted by the tenderer or changes in the composition of firm made subsequent to signing of the contract. They may however recognize such power of Attorney and changes after obtaining proper legal advice.
35. If the tenderer deliberately gives wrong information on tender regarding past unsatisfactory performance with BHEL sister units, BHEL reserves the right to reject such tender at any stage including contract execution period.
36. Words imparting the singular number shall also be deemed to include the plural number and vice-versa where the context so require.
37. The General and Special Conditions are complementary to each other and where they are in conflict, the special condition shall prevail.
38. The expenses for completing the stamping agreement shall be paid by the contractor.
39. Unless or otherwise stated above tendered work includes men, material, machine and commissioning of equipment as agreed to in the contract.
40. After completing of the job, the contractor has to furnish actual drawings of work done in consultation with Engineer-in-charge.
41. Any covering letter and comments of the tenderer should be submitted along with the offer.
42. Cement and steel for carrying out Civil Works will have to be procured by the Contractor. Materials shall be accompanied with Test certificates and connected dispatch documents for proof of source from approved manufacturer's works or stockyard. The Contractor shall provide all the materials needed for trial run, testing including chemicals, consumables etc. In quoting their rates, the Contractors are advised to take into account the cost of the above materials. All the construction materials should be approved by BHEL before commencement of work.
43. Contractor are required to follow Field Quality Plan (FQP) for Civil construction as approved by BHEL/customer in respect of Tests to be carried out and reports and documents to be furnished.
44. Should a tenderer or a contractor has a relative or in the case of firm or company, any of its shareholders relative is employed in Bharat Heavy Electricals Limited, the authority inviting tenders shall be informed of this fact at the time of submission of the tender, failing which tender may be disqualified or if such fact subsequently comes to light.
45. These 'INSTRUCTIONS TO TENDERER' & GENERAL CONDITIONS OF CONTRACT OF BHEL' shall be deemed to form an integral part of the Contract agreement for the work to be entered into. The

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CONTACTOR (SIGN & SEAL)



Contractor has to scrutinize the same, and when submitting his tender, indicate his acceptance of both. In cases of variation between the two in any matter, the conditions in the 'THE INSTRUCTIONS TO TENDERER' shall prevail. (Extracts of important clauses of BHEL GCC are enclosed).

46. All operations to be carried out by the Contractor during the execution of the contract such as drilling, welding etc., shall be done with proper equipment to be brought by the tenderer. Contractor shall make his own power and water supply.
47. The Contractor shall comply with the provision of Employees Provident Fund's and miscellaneous Provisions Act 1952 and rules, regulations and other orders issued there under. He as an employer shall be liable to pay employer's contribution/deductions towards PF under the PF Act in respect of all labour employed by him for the execution of the contract in accordance with the provisions of the Employees' Provident Funds and Miscellaneous Provisions Act, 1952 as amended from time to time. For this purpose he shall indicate the code number obtained from the Regional Provident Fund Commissioner or he should obtain a code number if he has not and produce the Photostat copy of the challan receipt of monthly remittance of the contribution made by him to the Commissioner. He shall also furnish such returns such returns as are due, under the Act, to be sent to the appropriate authorities through the Principal Employer".
48. The Contractor should get himself registered with the E.S.I Authorities as an independent Employer, obtain a separate code number and remit the dues in respect of the Labour employed by him for the work and produce the challan/Receipts of remittance of the ESI contributions due under the E.S.I Act to the Company authorities. He shall also furnish such returns, as are due, under the Act, to be sent to the appropriate authorities' through the Principal Employer. The contractor can remit their ESI & PF through a sub-agent who processes the ESI & PF code and agrees to enter an MOU with the contractor.
45. If any action is brought in by P.F. Commissioner/ESI authorities on BHEL for the work done by the Contractor for his labourers regarding PF/ESI amount due, short remittances, non-remittances etc., the Contractor shall defend the case on behalf of BHEL and / or reimburse BHEL the expenses so incurred.
46. The Contractor shall apply and obtain license under Contract labour (R&A) Act 1970 and comply the relevant provisions of this Act in respect of the labour employed by him for executing this contract. The contractor shall furnish necessary returns to the authority through the Principal Employer.
47. Contractor shall insure all his labourers and material. Any claim by his Employees for damages shall be settled by the Contractor even if action is against BHEL or to reimburse the legal expenses incurred by BHEL.



48. Any action brought in by anybody on BHEL regarding patent, right etc., used by Contractor in execution of work shall be defended by the Contractor and / or reimburse BHEL the cost of the same.
49. Contractor shall produce necessary records, documents; explanation whenever he is called upon to do by any Government Agencies.
50. Contractor should obtain "Workmen Compensation Policy" for their Employees.
51. LEAD, LIFT, DEWATERING ETC.,
- Unless otherwise specified in the tender schedule, the rates for all items will be deemed to include all leads, lifts and descents involved in the work.
  - No separate payment will be made for dewatering (including seepage, surface drainage and monsoon water) desludging and allied operations at any stage of the work, and the cost of such operations will be deemed to be included in the contract rates.
  - No separate payment will be made for curing including pumping of curing water where ever necessary.

52. EXTRA ITEMS

No extra items of work shall be carried out by the contractor other than those authorized to do so in writing by the Engineer-in-charge. For any such items of work executed as per instructions of Engineer-in-charge, the rates will be fixed on the basis indicated under clause 50 of BHEL GCC/as per terms and conditions of BHEL. The schedule of rates to be followed in this case will be CPWD schedule of rates.



**BHARAT HEAVY ELECTRICALS LIMITED**

(ELECTRONICS DIVISION)

MYSORE ROAD- BANGALORE-26

GENERAL CONDITIONS OF CONTRACT/TECHNICAL SPECIFICATION

It is hereby agreed by me/us that the BHEL General Conditions of Contract including subsequent amendments/ additions/deletions to clauses if any, and conditions pertaining the settlement of disputes by Arbitration form an integral part of the tender documents and that the tender submitted by me/ us is subject to the aforesaid BHEL General Conditions of Contract/ Technical Specification for Civil works which has been read and accepted by me/us.

NIT Issued By  
MR. PHALGUNI SAHOO  
SR.ENGINEER(SCPV-ENGG)

CONTACTOR (SIGN & SEAL)

**CLAUSE 20 OF GENERAL CONDITIONS OF CONTRACT**

**LABOUR**

The Contractor shall employ labour in sufficient numbers either directly or through sub-contractors to maintain the required date of progress and of quality to ensure workmanship of the degree specified in the contract and to the satisfaction of the Engineer-in-charge. The contractor shall not employ in connection with the works any person who has not completed his eighteen years of age.

The contractor shall furnish to the Engineer-in-charge at the intervals specified by him. A distribution return of the number and description by trades of the work people employed on the works. The Contractor shall also submit on the 4th and 19th or every month to the Engineer-in-charge a true statement showing in respect of the second half of the preceding month and the first half of the current month (i) the accidents that occurred during the said fortnight showing the circumstances under which they happened and the extent of damage and injury caused by them and (ii) the number of female workers who have been allowed maternity benefits as provided in the maternity benefit Act, 1961 or Rules made there under and the amount paid to them.

The contractor shall pay to labour employed by him either directly or through sub-contractors wages not less than fair wages as defined in the contractors Labour Regulations.

The Contractor shall in respect of labour employed by him either directly or through sub- contractors comply with or cause to be complied by with sub-contractors, labour Regulations in regard to all matters provided therein.

The Contractors shall comply with the provisions of the payment of wages Act, 1936, Minimum Wages Act, 1948, Workmen's Compensation Act 1923, Industrial Disputes Act, 1947, Maternity Benefit Act 1961 or any modifications there of or any other law relating thereto and rules made there under from time to time.

The Contractors shall be liable to pay his contribution and the employees' contribution of the State Insurance Scheme in respect of all labour employed by him for the execution of the contract, in accordance with the provision of "The Employees', State Insurance Act, 1948", as amended from time to time. The Contractors shall apply to the ESI Authorities, get himself registered with them and obtain a code Number. He shall pay the remittances under his code Number only. The Contractor shall be liable to pay his contribution and the Employees' contribution towards PF as per Provident Fund Rules and Regulations in respect of all labour employed by him for the execution of the contract.



The contractor shall apply to the PF Authorities, get himself registered and obtain a code number from them. He shall pay the remittances towards PF under his code Number only. The Engineer-in-charge shall on a report having been made by an Inspecting Officer as defined in the Contractors Labour Regulations have the power to deduct from the moneys due to the Contractor any sum required or estimated to be required for making good the loss suffered by a worker or workers by reason of non-fulfillment of the conditions of the contract for the benefit of workers, non - payment of wages or of deductions made from him or their wages which are not justified by the terms of the contract of non-observance of the said contractor's Labour Regulations.

The Contractors shall indemnify the BHEL against any payment to be made under and for observance of the regulation aforesaid without prejudice to his right to claim indemnity from these sub-contractors.

#### **MODEL RULES FOR LABOUR WELFARE**

The Contractor shall at his own expense comply with or cause to be complied with model Rules for Labour Welfare as appended to these conditions or rules framed by Government from time to time for the protection of health and for making sanitary arrangements for workers employed directly or indirectly on the works, In case the Contractors fails to make arrangements as aforesaid the Engineer-in-charge shall be entitled do so and recover the cost thereof from the contractor.



**SAFETY CODE**  
**RESPONSIBILITIES OF THE CONTRACTOR IN RESPECT OF SAFETY OF MEN, EQUIPMENT, MATERIAL AND ENVIRONMENT**

1. Before commencing the work, contractor shall submit a "SAFETY PLAN" to the authorized BHEL Official. The 'SAFETY PLAN' shall indicate in detail the measure that would be taken by the contractor to ensure safety of men, equipment, material and environment during execution of the work. The plan shall take care to satisfy all requirements specified hereunder. The contractor shall submit Safety Plan along with his offer. During negotiations before placing of work order and during execution of the contract BHEL shall have right to review and suggest modification in the Safety Plan. Contractor shall abide by BHEL decision in this respect.
2. The contractor shall take all necessary safety precautions and arrange for appropriate appliances as per direction of BHEL or its authorized officials to prevent loss of human lives, injuries to personnel engaged, and damage to property and environment.
3. The contractor shall provide to its work force and ensure the use of the following personal protective equipment as found necessary and as directed by the authorized BHEL Officer:-Safety Helmets conforming to IS-2925: 1984.
  - (i) Safety Belts conforming to IS-3521: 1983.
  - (ii) Safety Shoes conforming to IS-1989: 1978.
  - (iii) Eye and Face protection devices conforming to IS-8520: 1977 and IS-8940: 1978.
  - (iv) Hand and body protection devices conforming to:
    - IS-2573: 1975
    - IS-6994: 1973
    - IS-8807: 1978
    - IS-8519: 1977

All tools, tackles, lifting appliances, material handling equipment scaffolds, cradles, safety nets, ladders, equipment's 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.

All electrical equipment's, connections and wiring for constructions power, its distribution and use shall conform to the requirement of the 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 the contractor shall have safe plugging system to source of power and be appropriately earthed. The contractor shall not use any hand lamp energized by electric power with supply voltage of more than 24 volts. For work in confined space lighting shall be arranged with power sources of not more than 24 volts.

The Contractor shall adopt all fire safety measures as laid down in the "Code for fire Safety at Construction Sites" issued by the Safety Department of the Construction Management (HQ) of BHEL and as per directions of the authorized BHEL Official. A copy of the above referred "Code of Fire Safety at the Construction Sites" shall be made available by BHEL to the contractor for reference, on demand by the contractor, during tendering stage itself.

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 provisions 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, Govt. of India. etc., prior approval to the authorized BHEL Official at the site shall also be taken by the contractor in all such matters.

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.

The contractor shall be held responsible for any violation of statutory regulations local, state or central and BHEL instructions that may endanger safety of men, equipment, material and environment in his scope of work or another contractor or agencies. Cost of damages if any, to life and property arising out of such violation of statutory regulations and BHEL instructions shall be borne by the contractor.

In case of a fatal or disabling injury accident to any person at construction sites due to the 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.

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

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

NIT Issued By  
MR. PHALGUNI SAHOO  
SR.ENGINEER(SCPV-ENGG)

CONTACTOR (SIGN & SEAL)



If the contractor fails to improve the standards of safety in its operation to the satisfaction of BHEL after being given a 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 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.

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

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.

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 the job



## SPECIAL CONDITONS OF CONTRACT

### **1. GENERAL**

The special conditions of contract and other contract documents are complimentary to each other and shall be read in conjunction with each other. In case of any conflict of meanings between the special conditions of contract and the BHEL General Conditions of Contract the provisions of the special conditions of contract shall override the corresponding provisions of the BHEL General Conditions of Contract.

### **2. SCOPE OF WORK**

The scope of work includes for the full, final and entire completion **CONSTRUCTION OF BITUMINOUS/WBM ROAD, BRICK WALL DRAIN, CULVERTS, FENCING OVER EXISTING BOUNDARY WALL, AND BALANCE WORK OF CONTROL ROOM (1NOS), INVERTER ROOM BUILDING (2NOS), SECURITY ROOM FOUNDATION(2NOS) AND OTHER ASSOCIATED WORKS AT FOR 10 MW Solar Photovoltaic Power Plant at Santaldih, Purulia, West Bengal, (WBSEDCL): West Bengal State Electricity Distribution Company Limited** as detailed in specifications and drawings, which forms part of this Contract. The scope of work also includes cleaning/removing all debris in line with bill of quantity as directed by Engineer In-charge. The scope of work under this contract shall cover supply of all materials, labour, tools, and plants etc., unless otherwise specified in the specifications, descriptions of items or in foregoing clauses.

### **3. SITE CONDITIONS**

a) Before tendering the Contractor shall get themselves acquainted with site conditions such as the nature of soil likely to be encountered during the course of the work etc,. The rates quoted by the contractor shall be deemed to have been quoted after getting acquainted with the prevailing site conditions. Initial jungle clearance, stripping of top soil etc., shall also be included in the quoted rates. No claims on the pretext of ignorance of site conditions shall be entertained.

b) The site of work is as mentioned in the Tender document.

### **4. SITE FACILITES**

#### **A. LAND**

The Employer will allot land as available free of cost to the contractor for his office stores. He must maintain the areas allotted to him in a neat and clean conditions as required by the Employer. The contractor shall provide adequate storage and office facilities with approval from the Engineer. The rate quoted by the contractor shall be deemed to include for these and no separate payment will be made towards these. On completion of work, the site shall be cleaned by the contractor of all materials, temporary debris, rubbish plants and equipment's, belonging to the contractor at no extra cost. The



site and surroundings shall be handed over in a neat and clean condition. In case of any failure by the contractor, the employer will get inside cleared at risk and cost of the Contractor.

#### **B. POWER AND WATER SUPPLY**

Facilities for drawing Power and water required at site for execution of the works shall be arranged by the contractor at his expense and risk. The necessary source for power & water supply has to be organized by vendor. Necessary distribution box, extension board points duly earthed, and with armoured safe power cables to be laid across the field provided point shall be in the scope of the tenderer. Further, laying of water intake and distribution pipes across the Site to various points of work from Electricity source provided water source point shall be in the scope of the tenderer. If required D.G generation sets shall be provided for Power arrangement by the contractor at his own cost. The tenderer shall make provision for temporary storage of water at suitable locations with pump if required to reach the water supply to work areas. The contractor will have to make his own arrangements for the same, without claiming any extra charge for the power and water drawal and distribution equipment.

#### **5. MACHINERY**

The Contractor shall at his own expense, supply all tools, plant and equipment (hereinafter referred to as T & P) required for execution of contract, as specified in the tender documents. whole of the works shall be executed in perfect conformity with the specifications and drawings. If contractor perform any works in a manner contrary to the specifications and drawings and without reference to the Engineer-in-charge, he shall bear all the costs arising or ensuring there from.

- a) All technical documents regarding the construction of works are given in the metric system and work should be carried out according to metric system.
- b) The work shall be carried out as per detailed drawings supplied by the employer. The working drawings shall be emailed progressively to the contractor free of cost. The contractor shall keep one set of drawings (duly protected from dust and wear and tear) at his own expenses always available at site for reference of Engineer-in-charge and other representatives.
- d) The works shall be carried out as per detailed specifications enclosed with the tender. For items for which there is no mention in the drawings, detailed specification relevant IS specification (latest edition) shall be followed.
- e) The contractor shall submit to the Employer for their approval complete drawings, of all temporary works and staging which he may require for carrying out the works shown in the drawings.

He shall at the same time if so required by the Employer submit his calculations relating to strength and anticipated deflection in respect of any aforesaid temporary works. He shall also submit for the approval of Employer drawings showing the methods he proposes to adopt for the erection of the various parts of the temporary works. Any modification to the drawings that may be required by the Employer shall be made by the contractor at his own cost. However, notwithstanding the approval of modification required for temporary works, the contractor shall be fully responsible for their efficiency, security and maintenance and for all obligations and risks in regard to such works, specified or implied in this contract and he shall reinstate the same at his own cost, should any mishap or accident occur causing damage or injury there from, subject however, to such clauses of the General conditions as may be applicable in such cases.

#### **6. BENCH MARKS AND REFERENCE POINTS**

The contractor shall construct and maintain proper benchmarks and reference points of the inter section of all main walls, no separate payment shall be made for this and rates quoted deemed to include this cost. Surveying where ever required is in contractor scope.

#### **7. SAFETY PRECAUTIONS**

The contractor shall at times observe the safety code and make necessary action as required in the tender. In default thereof, the employer may get this done departmentally or through other agencies and recover the cost from the contractor.

The Contractors shall also abide by all the security regulations promulgated from time to time by employer.

#### **8. RATES**

The rates to be quoted are intended to provide for works duly and properly completed in accordance with the general and special conditions of contract and specifications and drawings together with such alteration and/or conditions as may be required / ordered without prejudice to the generality thereof shall include for detail of construction which are obviously and fairly intended and which may not have been specifically referred in these documents and working drawings and but are essential for execution and satisfactory completion of work including those of minor nature and shall be deemed to include and cover internal the followings.

- a) Arrangements for obtaining the clearance wherever required from statutory bodies, regarding license for construction, permanent electricity, water supply, and sanitary connections including payment of necessary fees, inspection charges and obtaining financial certificates for using these services.

The various items rates quoted in the schedule as applicable shall be deemed to include the above services and no separate payments shall be made towards these.

- b) The cost of all superintendence and labour materials, tools, plants, equipment's, mobilizing and demobilizing equipment fuel lubricants, fixture, transport charges, temporary and permanent works and quarrying charges, testing, screening, washing, handling of materials, stacking and removal charges, of any rejected materials and water and power arrangements and satisfactory maintenance of the same satisfactory completion of the work intended.
- c) All fees, duties, royalties, rent and compensation to owner for surface damage or taxes and impositions payable to local authorities, in respect of land an structure, for all materials supplied for the work or any other duties/expenses for which the contractor may become liable or may be put to under any provision of the law for the purpose of in connection with the execution of the contract including levies payable on the transactions.
- d) Settings out of works profiles etc., and of construction repair and up-keep of all centre lines, bench marks and levels and page there of including provisions of masonry/concrete pillars showing the centre line of structure/gridlines and levels and maintenance and protection of the some including providing fencing etc., throughout the period of contract.
- e) Breaking, maintenance and removal of temporary works and buildings.
- f) Supply of complete, Moulds, cost of testing of materials etc.
- g) Working in all conditions including in/under water liquid, conditions etc., and shall also include bailing or pumping out water from the foundations, basements or any other sources of whatsoever de-sludging and allied operation at any stage of work including all suspension period and delays whatsoever. Cost of curing including pumping and cost of water whatever necessary.
- h) In the interest of completion of work within the stipulated time, certain works are to be carried out during the monsoon period also. No separate payment will be made to the contractor for such works and it will be deemed to be included in the contract rates.
- i) Diversion and draining works, protection works, temporary facilities, bridges, gangway.
- j) Work at all depth in foundation below the ground level and in superstructure up to all height above ground level including all lifts and distances involved at any other place of work and disposed/barrow areas.
- k) Unless otherwise specified in the specification schedule cost of all leads/lifts etc.
- l) Provision of centering, scaffolding, strutting props etc.,



- m) All materials and labour required for fencing in a protection against risk of accidents and for providing necessary/planking strutting with hand rails, gumboots, helmets, safety belts etc., during the progress of work.
- n) Prevention on trespassing by providing barrier arrangements for the safety of the public or employees during the provision of works.
- o) Works in all shapes include and curved all sizes as shown are as required.
- p) Cleaning the site after the completion of work all debris, left out construction materials machine equipment's, temporary offices, stores, works shop etc., including dressing the area neat and clean shape.
- q) Such other incidental charges or contingencies as may have been provided for in the specifications.

#### **9. LABOUR COLONIES**

Labour camp will not permitted within the project premises.

#### **10. ESCALATION**

The rates to be quoted by the tenderer shall be firm and shall cover and include all statutory levies, arising from, acts passed by parliament or by state legislature, the rates shall further be deemed to include statutory levies arising from such Acts, Central or State, which may come in to force subsequent to submission of tenders. The tenderer shall note that no claim for enhancement of rates, on the ground that existing statutory levies have been increased, or that new statutory levies have come in to effect after tender, or on any other ground, will be entertained on any account.

#### **11. QUANTITY**

The probable quantities of the several items of work are furnished in the schedule of quantities. It must be clearly understood that neither the probable quantities nor the value of individual items nor the aggregate value of the entire work shall be binding on the Employer/Engineer does not in any way assure the contractor or Guarantee that the said probable quantities are correct or that the work will correspond to these. The Employer/Engineer reserve the right to omit, vary or add to the item/work described in the schedule, of quantities and no claim for compensation will be entertaining on this account.

#### **12. VARIATION/DEVIATION IN QUANTITIES**

The contractor shall not make any alteration in addition to or omission from the work as described in the tender document except in pursuance of the written instructions of the Engineer-in-charge. 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 accepting officer in writing and incorporated in the contract. The rates quoted are firm.

#### **13. MATERIALS**

NIT Issued By  
MR. PHALGUNI SAHOO  
SR.ENGINEER(SCPV-ENGG)

CONTACTOR (SIGN & SEAL)



BHEL will not supply any materials unless otherwise specified.

**14. SUPPLY OF CEMENT, STEEL , PAINT AND OTHER CONSTRUCTION MATERIALS, IS TO BE MADE BY CONTRACTOR**

**Makes / Source of supply of cement, steel, paint and other construction materials shall be as per approval of BHEL/WBSEDCL.**

**15. SUPPLY BY CONTRACTOR**

The work is for a completed job including labour and supply of all materials except those otherwise specified in the bid document.

The material and works shall be subject to inspection and test as per field quality plan (FQP) duly approved by BHEL/ WBSEDCL.

All materials supplied by the contractor according to the contract conditions shall be subject to inspection and passing by the Engineer-in-charge or his representatives from time to time, the contractor providing all facilities for such instruction free of cost.

BHEL officers connected with the contract shall have the power at any time to inspect and examine any stores or materials intended to be used in or on the work, whether on the site or at any factory or workshop or other place where such stores or materials are being fabricated or manufactured or at any place the same are lying and the contractor shall give necessary facilities for such inspection and examination.

The Engineer-in-charge shall be entitled to have tests made of any stores or materials supplied by the contractor shall provide at his own expense all facilities which the Engineer-in-charge may require for this purpose. If at the discretion of the Engineer-in-charge an independent expert is employed to make any such tests his charges shall be borne by the contractor only if the tests disclosed that the said stores or materials are not in accordance with the provision of the contract.

Should the Engineer-in-charge/Civil Engineer consider at any time during the construction or reconstruction on prior to the expiry of the Maintenance Period that the stores or materials provided by the contractor are unsound or of quality inferior to that contracted for, or otherwise not in accordance with the contract (in respect where the decision of the Engineer-in-charge/Civil Engineer shall be final and conclusive) the contractor shall on demand, in writing from the Engineer-in-charge specifying the stores or materials complained of, not with-standing that the same may have been inadvertently passed, certified that and paid forth with remove the stores or materials so specified and provide other and suitable stores or materials at his own expense, to the entire satisfaction of the Engineer-in-charge/Civil Engineer and in the event of his failing to do so within a period to be specified by the Engineer-in-charge/Civil Engineer, in his demand aforesaid, the Engineer-in-charge/Civil Engineer may replace within the other stores or materials complained of at the risk and expense in all respect of the contractor.

The liability of the contractor under this conditions, shall not extend beyond the maintenance period aforesaid except as regards stores or materials which the Engineer-in-charge/Civil Engineer shall have previously given notice to the contractor to replace (Maintenance period for any work under this organization will be six months from the date of actual completion of the particular work and handing over to BHEL).

## **16. INTERRUPTION TO THE WORKS**

While quoting the rates/prices the Contractor should take in to account the fact that due to the design or other stipulations at site, or the necessity to follow a particular sequence of overall construction operation, or non-supply of particular drawings, or the connected work or other reasons, interruptions are likely to be encountered in a work of this nature and magnitude. No claims for such interruptions will be entertained on any account.

## **17. EXTENSION OF TIME OR PENALTY/LIQUIDATED DAMAGES**

Extension of time or penalty/liquidated damages as the case may be will be determined as stipulated in clause No. 2.7.9 of BHEL General Conditions of Contract 2019.

## **18. COMPLETION OF WORK AND MEASUREMENT**

- a) All work shall be carried out according to authorized dimensions and measurement will be restricted to those authorized dimension even though the Contractor may for convenience of this work exceed the authorized dimensions.
- b) All work shall be measured in accordance with the applicable standard method of measurements prescribed by the Indian Standard Institution (1200 latest edition) unless otherwise specified.
- c) The Contractor shall admit for technical inspection, works which are likely to be embedded or covered by other works and have the necessary measurement books and certificates to this effect duly signed by the Engineer before the works are covered.
- d) On completion of the work, the Contractor must submit to the Engineer the following documents for passing of works.
  - i) A copy of the working drawing showing there on all addition and alterations in the process of execution.
  - ii) A certificate for embedded and covered up works as in sub-para (C) above
- e) The authorized Contractors representative and a representative of the Employer shall jointly sign a certificate of handing over any completed work and date of signature of that certificate will be that the date from which the maintenance period of that unit will reckoned.
- f) Notwithstanding the above, insurance cover has to be taken by the contractor for the full value of work as also for the duration of the contract period. 50% of the Security Deposit shall be released only on the total completion of the building and handing over to BHEL to their satisfaction. Remaining 50% of Security Deposit shall be released subject to the stipulation in BHEL's GCC after 6 months from the date of completion of the building.



## **19. MAINTENANCE OF WORK**

The contractor will be responsible for the maintenance of works during the period of construction until the various items are taken over, and for a further period of six months, from the date of taking over.

If the contractor fails to maintain the building satisfactorily, it will be got done by other agency and cost towards such maintenance together with departmental charges will be recovered from his bills/dues.

## **20. SECURITY DEPOSIT**

Upon acceptance of the tender, the successful tenderer shall remit the security deposit with Bharat Heavy Electricals Ltd within the time as specified in the Letter of Intent.

The rate of Security Deposit will be 5% of work order value.

The contractor should submit the Security Deposit before the start of the work by

- i) Cash (as permissible under the income Tax Act).
- ii) Pay order, demand draft in favour of BHEL.
- iii) Local cheques of scheduled banks, subject to realization.
- iv) Securities available from Post Offices such as National Saving Certificates, Kisan Vikas Patras etc.,(Certificate should be held in the name of contractor furnishing the security and duly pledged in favour of BHEL and discharged on the back).
- v) 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.
- vi) 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.
- vii) 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 Deposit should be collected before start of the work and balance 50% may be recovered from the running bills.
- viii) EMD of the successful tenderer shall be converted and adjusted against the Security Deposit. The Security Deposit shall not carry any interest.

**NOTE:** Accepting of Security Deposit against Sl. No. (iv) and (vi) above will be subject to hypothecation or endorsement on the documents in favour on 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.

For extra items of work and deviated quantities, security deposit will be recovered at 10% of the value of deviated amount. The security deposit will be released as stipulated under relevant clause of GCC 2019.

## **21. RUNNING ACCOUNT PAYMENTS**

NIT Issued By  
MR. PHALGUNI SAHOO  
SR.ENGINEER(SCPV-ENGG)

CONTACTOR (SIGN & SEAL)

During execution of work, monthly payments of all works in place will be made on the basic measurements recorded in measurement sheet/book in respect of items executed but no claim on the account will be entertained, if for any reason payments are not so made. PRICE VARIATION clause not applicable.

**22.1 MOBILIZATION ADVANCE/ADVANCE PAYMENT - NOT APPLICABLE**

**22.2 INTEREST & RECOVERY - NOT APPLICABLE**

**23. Statutory Deduction towards Income Tax will be made as per rules.**

24. In respect of all labour directly or indirectly employed on the work by the Contractor, the Contractor shall comply with the provisions of the contract labour (Regulation and Abolition) Act 1970 or any amendment thereof and all legislations and rules of the State and or Central Government or other Authority, framed from time to time governing the protection of health, sanitary arrangements, wages, welfare and safety for labour employed on building and construction works. The rules and other statutory obligations with regard to fair wages, welfare and safety measures, maintenance of the register etc., will be deemed to be part of the contract.

25. The Contractor is required to take insurance for all workers employed on works towards payment for workmen compensation. The insurance has to be taken out within 15 days of the award of work and has to be produced at the time of signing agreement. Half (1/2%) shall be deducted for every bill if the contractor fails to produce a proof of having taken such an insurance to cover his workmen. However the contractor shall be fully responsible for all the consequences arising out of such default. This may also be read with relevant clauses of BHEL GCC 2019.

**25. TIME OF COMPLETION**

The date of commencement of work shall be counted from the date of handing over the site to the contractor. It may be clearly understood that time is the essence of the contract and the entire work should be completed within the time imposed in the tender document letter of intent.

26. The Contractor has to pay the Works Contract Tax (Under relevant section of the State Government Act) of their own on Monthly basis.

27. The management of BHEL shall be at liberty to terminate the contract by issuing a month's notice to the contractor without assigning any reason what so ever. As regards unsatisfactory performance or noncompliance with any of the terms & conditions of the contract by the contractor. The management of BHEL shall have the right to terminate the contractor forthwith without notice & rearrange the balance work through other agencies at the risk & cost of the contractor & under such circumstances, the Earnest Money Deposit/Security Deposit paid by the contractor shall stand forfeited.

**28. SPECIAL CONDITIONS OF TENDER**



- i) The successful bidder should open local office for Technical staff/Administrative group at Bangalore City for easy interactions/ monitoring of work at site./ Attend meetings at Bangalore city/site as and when instructed by BHEL.
- ii) Tenderers should not disclose any price bid details/discounts in the technical bids.
- iii) The successful bidder should construct site office / toilets for their workmen at site in consultation with Engineer-in-charge.

#### **29. WORKMEN COMPENSATION POLICY**

The contractor is required to take Insurance for all the workers employed on the works towards payments for workmen compensation. The Insurance has to be taken out within 15 days of the award of work and has to be provided at the time of signing the agreement. Half percent (0.5%) of the amount shall be deducted from every bill if the contractor fails to produce a proof of having taken such an insurance to cover his workmen. However the contractor shall be fully responsible for the consequences arising out of such default.

#### **LIST OF INDIAN STANDARD**

NIT Issued By  
MR. PHALGUNI SAHOO  
SR.ENGINEER(SCPV-ENGG)

CONTACTOR (SIGN & SEAL)



Following is the list of various Indian Standards,  
Relevant to the Civil Engg., work

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**1. EARTH WORK**

- i) IS 1200-1992, Method Part I Earthwork, Measurement of Building, and Civil Engineering works, and chapter No.2 of CPWD/specification 1977.

**2. MORTAR (PLASTERING)**

- 1) IS 2394-1984: Code of practice for application of lime plasters finish.  
2) IS 1661-1972: Code of practice for application of cement lime plasters finish.  
3) IS 2402-1963: Code of practice for external rendered finishes.

**3. CONCRETE WORK & RCC WORK**

- 1) IS 456-2000: Code of practice for plain and reinforced concrete.  
2) IS 432(part 1) –1982( Third Revision): Mild steel and medium tensile steel bars  
3) IS 1766-1998: Cold twisted steel bars for concrete reinforcement.

**4. BRICK WORK**

- 1) IS 2212-1991: Code of practice for brick work.

**5. STONE WORK**

- 1) IS 1597-1992 (Part – I & II): Code of practice for construction of stone masonry.

**6. MARBLE WORK**

- 1) IS 1124-1974: Methods of test for water absorption of natural building works.

**7. STEEL WORK**

- 1) IS 800-2007(Third Revision): Code of practice for use of structural steel in general building construction.  
2) IS 1308-1984: Steels doors, windows and ventilators  
3) IS 1081-1960: Code of practice for fixing glazing of metal (steel & aluminium doors, windows & ventilators)  
4) IS 1161-1998: Steel tubes for structural purposes.  
5) IS 4351-2003: Steel doorframes.  
6) IS-6245-5245-1971: Metal rolling shutters and rolling grills.

**8. FLOORING**

- 1) IS 2114-1984: Code of practice for laying in situ terrazzo floor finish.  
2) IS 2571-1970: Code of practice for in situ cement concrete flooring.  
3) IS 5318-1969: Code of practice of lying of flexible P.V.C. sheet & tiles flooring.

## 9. ROOFING

- 1) IS 3007(pt-I)-1999: Code of practice of lying of corrugated cement sheets.

## 10. FINISHING

- 1) IS 133-2004: Enamel, Interior (a) under coating (b) Finishing colour as required.
- 2) IS 348-1968: French Polish.
- 3) IS 427-2005: Distemper, dry colour as required.
- 4) IS 425-1969: Distemper, oil emulsion as required.
- 5) IS 5410-1992: Cement paint, Colour as required.
- 6) IS 5411 (pt.1)-1974: Plastic emulsion paint for interior use.
- 7) IS 6278-1971: Code of practice for white washing & color washing.

## 11. DEMOLISION AND DISMANTILING

- 1) IS 1200 (pt. 18)-1974: Method of measurements of demolition and dismantling.

## 12. SAFETY CODE

- 1) IS 5916-1970: Safety code for construction including use of hot bituminous materials.
- 2) IS 4130-1991: Safety code for demolition of building.
- 3) IS 3754-1966: Safety code for excavation works.
- 4) IS 3696(Pt-1)-1987: Safety code for Scaffolds.

### A) DISTEMPERING ON NEW SURFACE. (OILBOUND)

1. COAT OF PRIMER	....	0.07 Litre/Sq.m (one coat)
2. COAT OF DISTEMPER	.....	0.10 Kg/Sq.m (2 coats)

### DISTEMPERING WITHOUT PRIMER

FOR 1 COAT	.....	0.10 Kg/Sq.m (For 1 coat)
FOR 2 COATS	.....	0.15 Kg/Sq.m (For 2 coats)

### B) SYNTHETIC ENAMEL PAINT.

a) ON NEW SURFACE	... PRIMER	....	0.09 Litre/Sq.m (For1 coat)
ENAMEL PAINT	(2 COATS)	....	0.15 Litre/Sq.m (For 2 coats)
b) ON OLD SURFACE			
2 COATS WITHOUT PRIMER		...	0.20 Litre/Sq.m
1 COAT		...	0.10 Litre/Sq.m
c) WATER PROOF CEMENT PAINT			
1 COAT		...	0.18 Kg/Sq.m
2 COAT		...	0.30 Kg/Sq.m



d) PLASTING EMULSION PAINT:

2 COATS OF PLASTIC EMULSION	....	0.09 Litre/Sq.m
1 COAT OF PLASTIC EMULSION	....	0.073 Litre/Sq.m

ON NEW SURFACE

1 COAT PLASTIC FIX PRIMER	...	0.081 Litre/Sq.m
2 COATS PLASTIC EMULSION	...	0.09 Litre/Sq.m

These standards are indicative, any additional IS standard/specification required to be followed shall be adhered to by the contractor.



## FORM OF TENDER

Having examined the invitation to bid, Instructions to Bidder, General conditions of contract, Special conditions, Specifications tender schedule, Contract drawings and other documents for the above work, we the undersigned, offer to construct, erect complete and maintain the whole of the said in conformity with the said bid documents on the terms and conditions and under the provisions set out or called for in the contract documents at the rates listed in the schedule of unit prices or elsewhere in the contract documents.

We undertake if our bid is accepted, to commence the works within 7 days from the date of issue of award and to complete and delivery the whole of the works comprised in the contract as per the time schedule agreed to the contract document.

We agree to abide by this bid for the period of three months from the date fixed for receiving the same and it shall remain binding upon us and may be accepted at any time before expiry of the period.

Until and unless a formal agreement is prepared and executed this bid, together with your award thereof shall constitute a binding contract between us.

NIT Issued By  
MR. PHALGUNI SAHOO  
SR.ENGINEER(SCPV-ENGG)

CONTACTOR (SIGN & SEAL)



ENCLOSURE: C

**CLAUSE 58 OF GENERAL CONDITIONS OF CONTRACT**

**ARBITRATION:**

Except where otherwise provided for in the contract all questions and disputes relating to the meaning of the specifications, designs, drawings and instructions herein before mentioned and as to the quality of workmanship or materials used on the work or has been other as to any other questions, claim, right, matter or thing whatsoever in any way arising out of or relating to the contract, designs, drawings, specifications, estimates, instructions, orders or these conditions or otherwise concerning the works, of or the execution or failure to execute the same whether arising during the program progress of the work or after the completion or abandonment thereof shall be referred to the sole arbitration of the Executive Director/General Manager of BHEL and if the Managing Executive Director/General Manager Chief Engineer is unable or unwilling to act, to a as the sole arbitration of some other person appointed by the Executive Director / General Manager, willing to act as such Arbitrator. There will be no objection if the arbitrator so appointed is an employee of BHEL EDN or an employee of any other unit of BHEL and that he had to deal with the matters to which the contract relates and that in the course of its his duties as such he had expressed views on all or any of the matters in dispute or difference. The Arbitrator to whom the to matter is originally referred being transferred or by vacating his office or being unable to act for any reason, such Executive Director / General Manager as aforesaid at the time of such transfer, vacation of office or inability to act, shall appoint account another person to act as arbitrator in accordance with the terms of the contract, such person shall be entitled to proceed with the reference from the stage at which it was left by his predecessor. It is also a term of this contract that no person other than a person appointed by such Executive Director/General Manager or an employee appointed as arbitrator as aforesaid should act as arbitrator and the arbitrator shall give reasons for the award.

Subject as aforesaid the provision of the Arbitration Act, 1940 or any statutory modification or re-enactment thereof and the rules made there under and for the time being in force shall apply to the arbitration proceeding under this clause.

It is a term of a contract that the party involving invoking arbitration shall specify the dispute or disputes to be referred to arbitration under this clause together with the amount or amounts claimed in respect of each such dispute.

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CONTACTOR (SIGN & SEAL)



The arbitrator(s) may from time to time with consent of the parties enlarge extend the time, for making the publishing the awards.

The work under the contract shall, if reasonably possible, continue during the arbitration proceeding and no payment due to or payable to the contractor shall be withheld on account of such proceedings.

The arbitrator shall be deemed to have entered on the reference on the date he issued notice to both the parties fixing the date of the hearing.

The arbitrator shall give a separate speaking award in respect of each dispute or difference referred to him.

The venue of arbitration shall be such place as may be fixed by the arbitrator in his sole discretion.

The award of the arbitrator shall be final, conclusive and binding on all parties to this contract.

**Certificate by Chartered Accountant on letter head**

This is to Certify that M/S .....  
(hereinafter referred to as 'company') having its registered office at  
..... is registered under MSMED Act 2006, (Entrepreneur  
Memorandum No (Part-II) ..... dtd:.....  
Category: ..... (Micro/Small). (Copy enclosed).

Further verified from the Books of Accounts that the investment of the company as per the latest audited financial year ..... as per MSMED Act 2006 is as follows:

1. **For Manufacturing Enterprises:** Investment in plant and machinery (i.e. original cost excluding land and building and the items specified by the Ministry of Small Scale Industries vide its notification No.S.O.1722(E) dated October 5, 2006 :  
Rs.....Lacs
2. **For Service Enterprises:** Investment in equipment (original cost excluding land and building and furniture, fittings and other items not directly related to the service rendered or as may be notified under the MSMED Act, 2006:  
Rs.....Lacs

**(Strike off whichever is not applicable)**

The above investment of Rs.....Lacs is within permissible limit of Rs.....Lacs for .....Micro / Small (Strike off which is not applicable) Category under MSMED Act 2006.

Or

The company has been graduated from its original category (Micro/ Small) (Strike off which is not applicable) and the date of graduation of such enterprise from its original category is ..... (dd/mm/yyyy) which is within the period of 3 years from the date of graduation of such enterprise from its original category as notified vide S.O. No. 3322(E) dated 01.11.2013 published in the gazette notification dated 04.11.2013 by Ministry of MSME.

Date:

(Signature)

Name -

Membership number -

Seal of Chartered Accountant

ANNEXURE II

NIT Issued By  
MR. PHALGUNI SAHOO  
SR.ENGINEER(SCPV-ENGG)



CONTACTOR (SIGN & SEAL)



**Electronic Funds Transfer (EFT) OR  
Paylink Direct Credit Form**

Please Fill up the form in **CAPITAL LETTERS** only.  
TYPE OF REQUEST(Tick one): \_\_\_\_\_ CREATE \_\_\_\_\_ CHANGE

BHEL Vendor / Supplier Code:	
Company Name :	
Permanent Account Number(PAN):	
Address	

City:	PINCODE	STATE
-------	---------	-------

Contact Person(s)	
Telephone No:	
Fax No:	
e-mail id:	

1 Bank Name:	
2 Bank Address:	
3 Bank Telephone No:	
4 Bank Account No:	
5 Account Type: Savings/Cash Credit	
6 9 Digit Code Number of Bank and branch appearing on MICR cheque issued by Bank	
7 Bank swift Code(applicable for EFT only)	
8 Bank IFSC code(applicable for RTGS)	
9 Bank IFSC code(applicable for NEFT)	

- A I hereby certify that the particulars given above are true, correct and complete and that I, as a representative for the above named Company, hereby authorise BHEL, EDN, Bangalore to electronically deposit payments to the designated bank account.
- B If the transaction is delayed or not effected at all for reasons of incomplete or incorrect information, I would not hold BHEL / transferring Bank responsible.
- C This authority remains in full force until BHEL, EDN, Bangalore receives written notification requesting a change or cancellation.
- D I have read the contents of the covering letter and agree to discharge the responsibility expected of me as a participant under ECS / EFT.

Date:

Authorised Signatory:

Designation:

Telephone NO. with STD Code

Company Seal

**Bank Certificate**

We certify that \_\_\_\_\_ has an Account No \_\_\_\_\_ with us and we confirm that the bank details given above are correct as per our records.

Date:

(.....)

Place:

Signature

Please return completed form along with a blank cancelled cheque or photocopy thereof to:

Bharath Heavy Electricals Ltd,

Attn:

Electronics Division, Mysore Road,

BANGALORE - 560 026

In case of any Query, please call : 080-26998xxx / 2674xxxx or fax no. 080-2674xxxx

ANNEXURE-III

Ref.

CONTACTOR (SIGN & SEAL)

NIT Issued By  
MR. PHALGUNI SAHOO  
SR.ENGINEER(SCPV-ENGG)



Date:

**SITE INSPECTION CERTIFICATE**

This is to Certify that, I / We.....  
..... had inspected the proposed  
Construction site thoroughly and understood the scope of works to be carried out in  
line with construction drawings/designs/data/Bill of quantities/schedule of items /  
Specifications as brought out in the Tender as desired by BHEL.

Agreeable to all Terms & Conditions of Contract and assure to complete the work  
Within the stipulation time frame.

Signature of the contractor

Name:  
Seal

NIT Issued By  
MR. PHALGUNI SAHOO  
SR.ENGINEER(SCPV-ENGG)

CONTACTOR (SIGN & SEAL)



### Additional Clauses for GST:

1. BHEL GST Number of Nodal Agency:

Nodal Unit Registered as Supplier of Goods/Services in GST: Telangana  
GSTIN of Nodal Unit: Will be intimated later after award of work.

2. HSN (Harmonized System of Nomenclature) / SAC (Services Accounting Code) to be mandatorily mentioned in all quotations & invoices submitted.
3. Invoice submitted should be in the format as specified under GST Laws viz. all details as mentioned in Invoice Rules like GSTN registration number, invoice number, quantity, rate, value, taxes with nomenclature – CGST, SGST, IGST mentioned separately, HSN Code / SAC Code etc.
4. Payment of GST to vendors as applicable will be made only if it is matching with data uploaded by Vendors
5. Vendors to give undertaking that GST as mentioned in the Invoice has been paid/will be paid either through cash or admissible input credit and also file the returns
6. For invoices paid on Reverse charge basis – that it is “payable on reverse charge basis” to be mentioned on the invoice.
7. With respect to supplies, vendor should intimate BHEL immediately on dispatch for parallel billing on customer
8. Vendor should get GST registration, if not available, in the state of Telangana immediately after placement of order.

**UNPRICED PRICE BID**

**CONSTRUCTION OF BITUMINOUS/WBM ROAD, BRICK WALL DRAIN, CULVERTS, FENCING OVER EXISTING BOUNDARY WALL, AND OTHER ASSOCIATED WORKS AT FOR 10 MW Solar Photovoltaic Power Plant at Santaldih, Purulia, West Bengal, (WBSEDCL): West Bengal State Electricity Distribution Company Limited**

S.NO	DESCRIPTION	UNIT	QUANTITY	ITEM RATE EXCLUDING GST	Amount in Rs.
	<b>A. 3.75M BITUMINOUS ROAD WITH 500 MM EARTHEN SHOULDER BOTH SIDE</b>				
A1	Earth work in excavation by mechanical means (Hydraulic excavator) /manual means over areas (exceeding 30cm in depth. 1.5 m in width as well as 10 sqm on plan) as per required level/camber/gradient including, rolling and compacting the cut surface <b>to achieve 95% or more of standard proctor's MDD</b> , disposal of excavated earth, lead upto 1500m and lift upto 1.5m, disposed earth to be levelled and neatly dressed.( <b>All kinds of soil</b> )				
		cum	510.30	119.294	60875.524
A2	Banking excavated earth in layers not exceeding 20 cm in depth, breaking clods, watering, rolling each layer with ½ tonne roller, or wooden or steel rammers, and rolling every 3rd and top-most layer with power roller of minimum 8tonne <b>to achieve 95% or more of standard proctor's MDD</b> tonnes and dressing up, in embankments for roads, flood banks, marginal banks, and guide banks etc.,as per required level/camber/gradient, lead upto 1500 m and lift upto 1.5 m ( <b>All kinds of soil</b> )				
		cum	199.5	308.681	61581.820
A3	Supplying, stacking and Spreading MOPORUM, watering and rolling complete including preparation of the surface and rolling With road roller to achieve 95% or more of standard proctor's MDD				
		cum	567.00	1033.233	585842.998
A4	Supplying and stacking at site.63 mm to 45 mm size stone aggregate				
		cum	252.00	1007.386	253861.373
A5	Supplying and stacking at site. 53 mm to 22.4 mm size stone aggregate				
		cum	252.00	1147.836	289254.672
A6	Supplying and stacking at site. Stone screening 11.2 mm nominal size (Type B)				
		cum	118.13	1297.896	153313.965
A7	Supplying and stacking at site.Moorum (binding material)				
		cum	70.88	529.917	37557.853
A8	Laying, spreading and compacting stone aggregate of specified sizes to WBM specifications in uniform thickness, hand picking, rolling with 3 wheeled road / vibratory roller 8-10 tonne capacity in stages to proper grade and camber, applying and brooming requisite type of screening / binding material to fill up interstices of coarse aggregate, watering and compacting to the required densityy .				
		cum	393.750	503.316	198180.675

**CONSTRUCTION OF BITUMINOUS/WBM ROAD, BRICK WALL DRAIN, CULVERTS, FENCING OVER EXISTING BOUNDARY WALL, AND OTHER ASSOCIATED WORKS AT FOR 10 MW Solar Photovoltaic Power Plant at Santaldih, Purulia, West Bengal, (WBSEDCL): West Bengal State Electricity Distribution Company Limited**

S.NO	DESCRIPTION	UNIT	QUANTITY	ITEM RATE EXCLUDING GST	Amount in Rs.
A9	Providing and applying tack coat using hot straight run bitumen of grade VG - 10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and preparing the existing road surface as per specifications : On W.B.M. @ 0.75 Kg I sqm	SQM	2625.000	27.585	72410.100
A10	Providing and applying tack coat using hot straight run bitumen of grade VG - 10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and preparing the existing road surface as per specifications : On bituminous surface @ 0.50 Kg I sqm	SQM	2625.000	22.074	57945.300
A11	2 cm premix carpet surfacing with 1.8 cum and 0.90 cum of stone chippings of 13.2 mm size and 11.2 mm size respectively per 100 sqm and 52 kg and 56 kg of hot bitumen per cum of stone chippings of 13.2 mm and 11.2 mm size espectively, including a tack coat with hot straight run bitumen, including consolidation with road roller of 6 to 9 tonne capacity etc. complete (tack coat to be paid for separately). With paving Asphalt grade VG - 10 heated and then mixed with solvent at the rate of 70 grams per kg of asphalt	SQM	2625.000	113.521	297992.100
A12	Providing and laying seal coat of premixed fine aggregate ( passing 2.36 mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG - 10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface, including rolling and finishing with road roller all complete.	SQM	2625.000	48.347	126911.400
		<b>TOTAL AMOUNT A -3.75M BITUMINOUS ROAD WITH 500 MM EARTHEN SHOULDER BOTH SIDE (Rs) EXCLUDING GST</b>			<b>2195727.779</b>
	<b>B. 1.20 M WBM ROAD WITH 500 MM EARTHEN SHOULDER BOTH SIDE</b>				
B1	Earth work in excavation by mechanical means (Hydraulic excavator) /manual means over areas (exceeding 30cm in depth. 1.5 m in width as well as 10 sqm on plan) as per required level/camber/gradient including, rolling and compacting the cut surface <b>to achieve 95% or more of standard proctor's MDD</b> , disposal of excavated earth, lead upto 1500m and lift upto 1.5m, disposed earth to be levelled and neatly dressed.( <b>All kinds of soil</b> )	cum	283.500	119.294	33819.736

**CONSTRUCTION OF BITUMINOUS/WBM ROAD, BRICK WALL DRAIN, CULVERTS, FENCING OVER EXISTING BOUNDARY WALL, AND OTHER ASSOCIATED WORKS AT FOR 10 MW Solar Photovoltaic Power Plant at Santaldih, Purulia, West Bengal, (WBSEDCL): West Bengal State Electricity Distribution Company Limited**

S.NO	DESCRIPTION	UNIT	QUANTITY	ITEM RATE EXCLUDING GST	Amount in Rs.
B2	Banking excavated earth in layers not exceeding 20 cm in depth, breaking clods, watering, rolling each layer with ½ tonne roller, or wooden or steel rammers, and rolling every 3rd and top-most layer with power roller of minimum 8tonne to achieve 95% or more of standard proctor's MDDtonnes and dressing up, in embankments for roads, flood banks, marginal banks, and guide banks etc.,as per required level/camber/gradient, lead upto 1500 m and lift upto 1.5 m (All kinds of soil)				
	<b>TOTAL</b>	cum	245.700	308.681	75842.873
B3	Supplying, stacking and Spreading MOPORUM, watering and rolling complete including preparation of the surface and rolling With road roller to achieve 95% or more of standard proctor's MDD				
		cum	315.00	1033.233	325468.332
B4	Supplying and stacking at site.63 mm to 45 mm size stone aggregate	cum	120.96	1007.386	121853.4589
B5	Supplying and stacking at site. 53 mm to 22.4 mm size stone aggregate	cum	120.960	1147.836	138842.2426
B6	Supplying and stacking at site. Stone screening 11.2 mm nominal size (Type B)	cum	56.700	1297.896	73590.7032
B7	Supplying and stacking at site.Moorum (binding material)	cum	34.0200	529.917	18027.76954
B8	Laying, spreading and compacting stone aggregate of specified sizes to WBM specifications in uniform thickness, hand picking, rolling with 3 wheeled road / vibratory roller 8-10 tonne capacity in stages to proper grade and camber, applying and brooming requisite type of screening / binding material to fill up interstices of coarse aggregate, watering and compacting to the required densityy .				
		cum	189.000	503.316	95126.724
		<b>TOTAL AMOUNT B -1.20 M WBM ROAD WITH 500 MM EARTHEN SHOULDER BOTH SIDE (Rs) EXCLUDING GST</b>			<b>882571.838</b>
	<b>C. BRICK WALL DRAIN &amp; CULVERT</b>				
C1	Earth work in excavation by mechanical means(Hydraulic excavator) / manual means in foundation trenches or drains , including dressing of sides and ramming of bottoms, lift upto 1.5 m,including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 1500 m. All kinds of soil.				
	<b>TOTAL</b>	cum	2127	165.509	352037.2176

**CONSTRUCTION OF BITUMINOUS/WBM ROAD, BRICK WALL DRAIN, CULVERTS, FENCING OVER EXISTING BOUNDARY WALL, AND OTHER ASSOCIATED WORKS AT FOR 10 MW Solar Photovoltaic Power Plant at Santaldih, Purulia, West Bengal, (WBSEDCL): West Bengal State Electricity Distribution Company Limited**

S.NO	DESCRIPTION	UNIT	QUANTITY	ITEM RATE EXCLUDING GST	Amount in Rs.
C2	Excavation work by mechanical means (Hydraulic excavator)/ manual means in foundation trenches or drains (not exceeding 1.5m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soils as directed, within a lead of 1500 m. Ordinary rock	cum	100	293.986	29398.64
C3	Filling available excavated earth (excluding rock) in trenches, plinth sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	cum	1796.00	144.090	258786.3584
C4	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level : 1:3:6 (1 Cement : 3 coarse sand (zone-III): 6 graded stone aggregate 40/20 mm nominal size).	cum	227.50	4018.820	914281.55
C5	Providing and laying in position cement concrete of specified grade excluding - All work up to plinth level the cost of centering and shutterin "1:2:4 (1 cement : 2 coarse sand (zone-III) : 4 graded stone aggregate 20/10 mm nominal size).	cum	30.7	4453.322	136716.9731
C6	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level : 1:1.5:3 (1 cement : 1.5 coarse sand (zone-III): 3 graded stone aggregate 20 mm nominal size).	cum	35	5063.172	177211.02
C7	Centering and shuttering including strutting, propping etc. and removal of form for all heights Foundations, footings, bases of columns, etc. for mass concrete	sqm	1311.111	186.862	244996.32
C8	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level. Thermo-Mechanically Treated bars of grade Fe-500D or more.	kg	3500.000	54.776	191716

**CONSTRUCTION OF BITUMINOUS/WBM ROAD, BRICK WALL DRAIN, CULVERTS, FENCING OVER EXISTING BOUNDARY WALL, AND OTHER ASSOCIATED WORKS AT FOR 10 MW Solar Photovoltaic Power Plant at Santaldih, Purulia, West Bengal, (WBSEDCL): West Bengal State Electricity Distribution Company Limited**

S.NO	DESCRIPTION	UNIT	QUANTITY	ITEM RATE EXCLUDING GST	Amount in Rs.
C9	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth in: Cement mortar 1:4 (1 cement : 4 coarse sand)				
		cum	464.000	4182.820	1940828.48
C10	15 mm cement plaster of mix 1:4 (1 cement: 4 fine sand)				
		sqm	2612.000	201.982	527578.0288
C11	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete : 300 mm dia. R.C.C. pipe				
		meter	60.000	566.554	33993.264
C12	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete : 600 mm dia. R.C.C. pipe				
		meter	20.000	1278.118	25562.352
C13	Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) upto plinth level with : Cement mortar 1:6 (1 cement : 6 coarse sand)				
		cum	50	4015.245	200762.24
C14	Structural steel work riveted, bolted or 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. (FOR GRATING ETC)	KG	500	66.748	33374
C15	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade Two or more coats on new work	SQM	100	79.737	7973.68
C16	Providing and fixing unplasticised Rigid PVC pipes conforming to IS : 13592 Type A, including all conforming to IS : 5382, leaving 10 mm gap for thermal expansion, (i) Single socketed pipes for WEEP HOLE 110 mm diameter in drain				
		meter	230	200.113	46025.944

*Handwritten signature*

**CONSTRUCTION OF BITUMINOUS/WBM ROAD, BRICK WALL DRAIN, CULVERTS, FENCING OVER EXISTING BOUNDARY WALL, AND OTHER ASSOCIATED WORKS AT FOR 10 MW Solar Photovoltaic Power Plant at Santaldih, Purulia, West Bengal, (WBSEDCL): West Bengal State Electricity Distribution Company Limited**

S.NO	DESCRIPTION	UNIT	QUANTITY	ITEM RATE EXCLUDING GST	Amount in Rs.
		<b>TOTAL AMOUNT C -BRICK WALL DRAIN &amp; CULVERT (Rs) EXCLUDING GST</b>			<b>5121242.068</b>
	<b>D. FENCING OVER EXISTING BRICK WORK BOUNDARY WALL WITH BARBED WIRE AND STRUCTURAL STEEL</b>				
D1	Demolishing brick work manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge. In cement mortar	CUM	15.12	964.254	14579.527
D2	Demolishing R.C.C. work manually/ by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer - in-charge.	CUM	6.48	1662.763	10774.706
D3	Structural steel work riveted, bolted or 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.	KG	2160	66.748	144175.680
D4	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level : 1:2:4 (1 cement : 2 coarse sand (zone-III) : 4 graded stone aggregate 20 mm nominal size)	CUM	21.6	4453.322	96191.747
D5	Centering and shuttering including strutting, propping etc. and removal of form for : Foundations, footings, bases of columns, etc. for mass concrete	SQM	144	186.862	26908.070
D6	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade :Two or more coats on new work	SQM	73.60	79.737	5868.628
D7	Fencing with angle iron post placed at required distance embedded in cement concrete blocks, every 15th post, last but one end post and corner post shall be strutted on both sides and end post on one side only and provided with horizontal lines and two diagonals interwoven with horizontal wires, of barbed wire weighing 9.38 kg per 100 m (minimum), between the two posts fitted and fixed with G.I. staples, turn buckles etc. complete. (Cost of posts, struts, earth work and concrete work to be paid for separately). Payment to be made per metre cost of total length of barbed wire used. With G.I. barbed wire	METER	6000.00	12.497	74980.800

**CONSTRUCTION OF BITUMINOUS/WBM ROAD, BRICK WALL DRAIN, CULVERTS, FENCING OVER EXISTING BOUNDARY WALL, AND OTHER ASSOCIATED WORKS AT FOR 10 MW Solar Photovoltaic Power Plant at Santaldih, Purulia, West Bengal, (WBSEDCL): West Bengal State Electricity Distribution Company Limited**

S.NO	DESCRIPTION	UNIT	QUANTITY	ITEM RATE EXCLUDING GST	Amount in Rs.
		<b>TOTAL AMOUNT D -FENCING OVER EXISTING BRICK WORK BOUNDARY WALL WITH BARBED WIRE AND STRUCTURAL STEEL</b>			<b>373479.158</b>
	<b>TOTAL AMOUNT EXCLUDING GST</b>				<b>8573021.000</b>
QUOTE PERCENTAGE (%) ABOVE/BELOW (+/-) (OR) AT PAR TO TOTAL AMOUNT					<b>XXXXX</b>
QUOTED PERCENTAGE (%) IN WORDS ABOVE/BELOW (OR) AT PAR TO TOTAL AMOUNT					<b>XXXXX</b>
PLUS APPLICABLE GST					

**NOTE:**

1. CONTRACTOR SHOULD QUOTE PERCENTAGE (%) ABOVE/BELOW (OR) AT PAR TO TOTAL AMOUNT
2. CONTRACTOR SHOULD QUOTE SAME PERCENTAGE FOR BOTH THE WORKS THAT IS BALANCE BUILDING WORKS AND ROAD & DRAIN WORKS
3. QUOTED PERCENTAGE (%) IS APPLICABLE ON ALL ITEM RATES UNIFORMLY.

**UNPRICED PRICE BID**

**Construction of balanced work of Control Room building (CMCS) (1 no), Inverter Room (2nos.), & Security room foundation (2nos.) and other associated works FOR 10 MW Solar Photovoltaic Power Plant at Santaldih, Purulia, West Bengal, (WBSSEDCL: West Bengal State Electricity Distribution Company Limited**

S.NO.	DESCRIPTION	UNIT	QUANTITY	ITEM RATE EXCLUDING GST	Amount in Rs.
<b>A</b>	<b>CIVIL WORKS</b>				
1	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm in depth, 1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50m and lift upto 1.5m, disposed earth to be levelled and neatly dressed. <b>All kinds of soil</b>	Cum	502.94	119.2936	59997.52318
2	.Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30 cm in depth, 1.5m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50 m and lift upto 1.5 m, disposed earth to be levelled and neatly dressed earth work in hard rock (blasting prohibited) <b>Ordinary rock</b>	Cum	20.00	231.2072	4624.144
3	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50 m and lift upto 1.5 m, disposed earth to be levelled and neatly dressed. Hard rock (blasting prohibited)	Cum	10.00	666.6272	6666.272
4	Banking excavated earth in layers not exceeding 20 cm in depth, breaking clods, watering, rolling each layer with ½ tonne roller, or wooden or steel rammers, and rolling every 3rd and top-most layer with power roller of minimum 8 tonnes and dressing up, in embankments for roads, flood banks, marginal banks, and guide banks etc., lead upto 50 m and lift upto 1.5 m <b>All kinds of soil</b>	cum	126.00	308.6808	38893.7808
5	Diluting and injecting chemical emulsion for POSTCONSTRUCTIONAL anti-termite treatment (excluding the cost of chemical emulsion) : Treatment of soil under existing floors using chemical emulsion @ one litre per hole, 300 mm apart including drilling 12 mm diameter holes and plugging with cement mortar 1 :2 (1 cement : 2 Coarse sand) to match the existing floor:With Chlorpyrifos/Lindane E.C. 20% with 1% concentration	Sqm	507	148.9448	75515.0136
6	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 20 mm/40mm nominal size)	Cum	22.95	4018.82	92231.919
7	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including admixtures 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. All works upto any height and level	CUM	100.19	5246.2288	525619.6635
8	Centering and shuttering including strutting, propping etc. and removal of form for : Foundations, footings, bases of columns, etc. for mass concrete at all height and level	SQM	143.49	186.8616	26812.77098
9	Centering and shuttering including strutting, propping etc. and removal of form for : Walls (any thickness) including attached pilasters, buttersesses, plinth and string courses etc. at all height and level	Sqm	510.00	399.7008	203847.408
10	Centering and shuttering including strutting, propping etc. and removal of form for :Columns, pillars, piers, abutments, posts and struts etc., at all height and level	Sqm	55.58	481.3072	26751.05418
11	Centering and shuttering including strutting, propping etc. and removal of form for :Lintels, Beams, plinth beams, girders, bressumers and cantilevers etc., at all height and levels	sqm	139.84	362.1448	50642.32883
12	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position, binding with GI wire, welding if required all complete at all height and levels. Thermo-Mechanically Treated bars	Kg	13924.82	54.776	762745.9403
13	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 , First class brick- all shapes and sizes in Cement mortar 1:6 (1 cement : 6 coarse sand) at all height and level	Cum	22.73	4039.2872	91812.99806

**Construction of balanced work of Control Room building (CMCS) (1 no), Inverter Room (2nos.), & Security room foundation (2nos.) and other associated works FOR 10 MW Solar Photovoltaic Power Plant at Santaldih, Purulia, West Bengal, (WBSSEDCL: West Bengal State Electricity Distribution Company Limited**

S.NO.	DESCRIPTION	UNIT	QUANTITY	ITEM RATE EXCLUDING GST	Amount in Rs.
14	Half brick masonry with common burnt clay F.P.S. (non modular) bricks of class designation 7.5, First class brick in . Cement mortar 1:4 (1 cement :4 coarse sand) at all height and level	Sqm	52.88	507.58	26840.8304
15	Providing and laying damp-proof course 40 mm thick with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5 mm nominal size). With mixing water proofing material in doses by weight of cement as per manufacturer's specification and Applying a coat of residual petroleum bitumen of grade of VG-10 of approved quality using 1.7 kg per square metre on damp proof course after cleaning the surface with brushes and finally with a piece of cloth lightly soaked in kerosene oil	Sqm	44.01	300.3824	13219.82942
16	Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) upto plinth level with : Cement mortar 1:6 (1 cement : 6 coarse sand)	Cum	50.34	4015.2448	202127.4232
17	12 mm cement plaster of mix : 1:4 (1 cement: 4 sand)at all height and levels (INTERNAL PLASTER)	Sqm	174.01	175.0536	30461.07694
18	15mm cement plaster of mix : 1:6 (1 cement: 6 sand)at all height and levels (EXTERNAL PLASTER)	Sqm	648.12	192.1096	124510.074
19	6mm cement plaster of mix : 1:3 (1 cement:3 sand)at all height and levels (CEILING PLASTER)	sqm	115.43	149.1416	17215.41489
20	Making plinth protection 50 mm thick of cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) over 75mm thick bed of dry brick ballast 40 mm nominal size, well rammed and consolidated and grouted with fine sand, including finishing the top smooth.	Sqm	212	402.8168	85397.1616
21	Applying one or more coat of water thinnable cement primer of approved brand and manufacture on wall surface Water thinnable cement primer internal walls at all height and levels	Sqm	315.91	39.36	12434.2176
22	Distemping with 1st quality acrylic distemper (ready mixed) of approved manufacturer, of required shade and colour complete, as per manufacturer's specification. Two or more coats on new work internal walls at all heights and levels	Sqm	315.91	57.1704	18060.70106
23	Painting with Heat reflective synthetic enamel paint of approved brand and manufactureof required colour to give an even shadeTwo or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture external wall at all height and levels	Sqm	642	116.2104	74607.0768
24	Providing and laying Ceramic glazed floor tiles of size 300x300 mm (thickness minimum 8mm) of 1st quality conforming to IS : 15622 of approved make in all colours, laid on 20 mm thick cement mortar 1:4 (1 Cement : 4 Coarse sand), including pointing the joints with white cement and matching pigment etc, complete. toilet floor	Sqm	14	608.0464	8512.6496

**Construction of balanced work of Control Room building (CMCS) (1 no), Inverter Room (2nos.), & Security room foundation (2nos.) and other associated works FOR 10 MW Solar Photovoltaic Power Plant at Santaldih, Purulia, West Bengal, (WBSEDCL: West Bengal State Electricity Distribution Company Limited**

S.NO.	DESCRIPTION	UNIT	QUANTITY	ITEM RATE EXCLUDING GST	Amount in Rs.
25	Providing and fixing Ist quality ceramic glazed wall tiles conforming to IS: 15622 (thickness minimum 6mm), of approved make, in all colours, shades 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. toilet dado	Sqm	71	675.8768	47987.2528
26	Cement concrete flooring 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate) finished with a floating coat of neat cement, including cement slurry, but excluding the cost of nosing of steps etc. complete 40 mm thick with 20 mm /10mm nominal size stone aggregate	Sqm	40	326.9176	13076.704
27	Cement plaster skirting up to 30 cm height, with cement mortar 1:3 (1 cement : 3 coarse sand), finished with a floating coat of neat cement. 18 mm thick	Sqm	7	341.8744	2393.1208
28	Providing and fixing stone slab with table rubbed, edges rounded and polished, of size 75x50 cm deep and 1.8 cm thick, fixed in urinal partitions by cutting a chase of appropriate width with chase cutter and embedding the stone in the chase with epoxy grout or with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 6 mm nominal size) as per direction of Engineer-in-charge and finished smooth.	Sqm	3	2110.2864	6330.8592
29	Providing and fixing 18mm thick gang saw cut mirror polished premoulded and prepolished) machine cut <b>Granite Slabs</b> for kitchen platforms, vanity counters, window sills , facias and similar locations of required size of approved shade, colour and texture laid over 20mm thick base cement mortar 1:4 (1 cement : 4 coarse sand) with joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish etc. complete at all levels. as per direction of Engineer-in-charge	Sqm	2	2629.0184	5258.0368
30	Providing and laying vitrified floor tiles in different sizes (thickness minimum 8mm) with water absorption's less than 0.08% and conforming to IS : 15622 of approved make in all colours and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand) including grouting the joints with white cement and matching pigments etc., complete. Size of Tile 600x600 mm	SQM	95.52	984.3608	94026.14362
31	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling and dash fasteners to be paid for separately) : For fixed portion Anodised aluminium (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 20)	KG	234.04	278.1112	65089.14525

**Construction of balanced work of Control Room building (CMCS) (1 no), Inverter Room (2nos.), & Security room foundation (2nos.) and other associated works FOR 10 MW Solar Photovoltaic Power Plant at Santaldih, Purulia, West Bengal, (WBSSEDCL: West Bengal State Electricity Distribution Company Limited**

S.NO.	DESCRIPTION	UNIT	QUANTITY	ITEM RATE EXCLUDING GST	Amount in Rs.
32	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling and dash fasteners to be paid for separately) : For shutters of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber / neoprene gasket required and including all fittings like lock etc Anodised aluminium (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 20)	Kg	126.56	336.7904	42624.19302
33	Providing and fixing anodised aluminium grill (anodised transparent or dyed to required shade according to IS: 1868 with minimum anodic coating of grade AC 20) of approved design/pattern, with approved standard section and fixed to the existing window frame with C.P. brass/ stainless steel screws @ 200mm centre to centre, including cutting the grill to proper opening size for fixing and operation of handles and fixing approved anodised aluminium standard section around the opening, all complete as per requirement and direction of Engineer-in-charge. (Only weight of grill to be measured for payment).	Kg	56.2	341.0216	19165.41392
34	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with EPDM rubber / neoprene gasket etc. complete as per the architectural drawings and the directions of engineer-in-charge . (Cost of aluminium snap beading shall be paid in basic item): With float glass PLAIN/ TINTED panes of 4.0 mm thickness	SQM	15.96	655.7376	10465.5721
35	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with EPDM rubber / neoprene gasket etc. complete as per the architectural drawings and the directions of engineer-in-charge . (Cost of aluminium snap beading shall be paid in basic item): With float glass panes of 5.50/6 mm thickness	Sqm	10.48	850.4384	8912.594432
36	Providing and fixing flat pressed 3 layer particle board medium density exterior grade (Grade I) or graded wood particle board IS : 3087 marked, to frame, backing or studding with screws etc. complete (Frames, backing or studding to be paid separately) 12 mm thick	Sqm	10.48	422.136	4423.98528
37	35 mm thick factory made Solid panel PVC Door shutter, made out of single piece extruded solid PVC profiles, 5 mm ( $\pm 0.2$ mm) thick, having styles & rails (except lock rail) of size 95 mm x 35 mm x 5 mm, out of which 75 mm shall be flat and 20 mm shall be tapered (on both side), having one side thickness of 15 mm integrally extruded on the hinge side of the profile for better screw holding power, including reinforcing with MS tube of size 40 mm X 20 mm x 1 mm, joints of styles & rails to be mitred cut & joint with the help of PVC solvent cement, self driven self tapping screws & M.S. rectangular pipes bracket of size 190 mm X 100 mm of cross section size 35 mm x 17 mm x 1 mm at each corner. Single piece extruded 5 mm thick solid PVC Lock rail of size 115 mm x 35 mm, out of which 75 mm to be flat and 20 mm to be tapered at both ends, having 15 mm solid core in middle of rail section integrally extruded, fixing the styles & rails with the help of solvent and self driven self tapping screws of 125 mm x 11 mm, including providing 5 mm Single piece solid PVC extruded sheet inserted in the door as panel, all complete as per manufacturer's specification and direction of Engineer-in-charge. Non decorative finish (matt finish)	Sqm	3.5	2125.9648	7440.8768

**Construction of balanced work of Control Room building (CMCS) (1 no), Inverter Room (2nos.), & Security room foundation (2nos.) and other associated works FOR 10 MW Solar Photovoltaic Power Plant at Santaldih, Purulia, West Bengal, (WBSEDCL: West Bengal State Electricity Distribution Company Limited**

S.NO.	DESCRIPTION	UNIT	QUANTITY	ITEM RATE EXCLUDING GST	Amount in Rs.
38	Providing and Fixing factory made uPVC door frame, made of uPVC extruded sections , of size 65 mm x 55 mm with wall thickness 2.0 mm (± 0.2 mm) , corners of the door frame to be mitred cut and jointed with plastic brackets and stainless steel screws, reinforcing hinge side vertical of the frames with PVC profile of Size 28 mm x 30 mm having wall thickness 2 mm (±0.2 mm), including providing & fixing 3 nos of 125 mm long stainless steel hinges to the frame, fixing the frame with jamb with required number & size of anchor dash fastners, all complete as per manufacturer's specification and direction of Engineer-in-charge.	Meter	10	346.5976	3465.976
39	Providing and fixing aluminium extruded section body tubular type universal hydraulic door closer (having brand logo with ISI, IS : 3564, embossed on the body, door weight upto 36 kg to 80 kg and door width from 701 mm to1000 mm), with double speed adjustment with necessary accessories and screws etc. complete.	EACH	8	558.6496	4469.1968
40	Providing and fixing aluminium tower bolts, ISI marked, anodised (anodic coating not less than grade AC 10 as per IS : 1868 ) transparent or dyed to required colour or shade, with necessary screws etc. complete :	EACH	10	67.9288	679.288
41	Providing and fixing aluminium handles, ISI marked, anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade, with necessary screws etc. complete : 125 mm	EACH	10	39.1304	391.304
42	Providing and fixing aluminium hanging floor door stopper, ISI marked, anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade, with necessary screws etc. complete. Single rubber stopper.	EACH	8	22.2712	178.1696
43	Providing and fixing aluminium sliding door bolts, ISI marked anodised anodic coating not less than grade AC 10 as per IS : 1868), transparent or dyed to required colour or shade, with nuts and screws etc. complete 250x16 mm	EACH	10	151.9952	1519.952
44	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer ( TWO COATS OF YELLOW ZINC CHROMATE PRIMER) all complete, (STRUCTURAL STEEL INCLUDING CHEQURED PLATE ETC)	Kg	2093.44	66.748	139732.9331
45	Painting with EPOXY BASED synthetic enamel paint of approved brand and manufacture to give an even shade Two or more coats on new work SHADE: SIEMENS GREY RAL 7032/ OR AS APPROVED	Sqm	109.92	79.7368	8764.669056
46	Supplying and fixing rolling shutters of approved make, made of required size M.S. laths, interlocked together through their entire length and jointed together at the end by end locks, mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete, including the cost of providing and fixing necessary 27.5 cm long wire springs manufactured from high tensile steel wire of adequate strength conforming to IS: 4454 - part 1 and M.S. top cover of required thickness for rolling shutters. 80x1.20 mm M.S. laths with 1.20 mm thick top cover COMPLETE ALL INCLUDING PRIMER ( TWO COATS OF YELLOW ZINC CHROMATE PRIMER)	Sqm	9	1839.1944	16552.7496

**Construction of balanced work of Control Room building (CMCS) (1 no), Inverter Room (2nos.), & Security room foundation (2nos.) and other associated works FOR 10 MW Solar Photovoltaic Power Plant at Santaldih, Purulia, West Bengal, (WBSSEDCL: West Bengal State Electricity Distribution Company Limited**

S.NO.	DESCRIPTION	UNIT	QUANTITY	ITEM RATE EXCLUDING GST	Amount in Rs.
47	Providing and laying in situ five course water proofing treatment with APP (Atactic Polypropylene) modified Polymeric memberane over roof consisting of first coat of bitumen primer @ 0.40Kg per sqm, 2nd & 4th courses of bonding material @ 1.20 kg/sqm, which shall consist of blown type bitumen of grade 85/25 conforming to IS : 702, 3rd layer of roofing membrane APP modified Polymeric membrane 2.0 mm thick of 3.00 Kg/ sqm weight consisting of five layers prefabricated with centre core as 100 micron HMHDPE film sandwiched on both sides with polymeric mix and the polymeric mix is protected on both side with 20 micron HMHDPE film. 5th, the top most layer shall be finished with brick tiles of class designation 10 grouted with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 2% integral water proofing compound by weight of cement over a 12 mm layer of cement mortar 1:3 (1 cement : 3 fine sand) and finished neat (item of laying brick tiles shall be paid for separately).	Sqm	509	268.14	136483.26
48	Providing and laying brick tiles over mumty roofs, grouted with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 2% of integral water proofing compound by weight of cement, over 12 mm layer of cement mortar 1:3 (1 cement : 3 fine sand) and finished neat With common burnt clay F.P.S. (non modular) brick tiles of class designation 10	Sqm	509	337.4464	171760.2176
49	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, (i) Single socketed pipes.110 mm diameter	Meter	52	200.1128	10405.8656
50	Providing and fixing G.I. Pipes complete with G.I. fittings and clamps i/c making good the walls etc. concealed pipe including painting with anti corrosive bitumastic paint, cutting chases and making good the wall 15 mm dia nominal bore	RM	10	293.6256	2936.256
51	Providing and fixing G.I. Pipes complete with G.I. fittings and clamps i/c making good the walls etc. concealed pipe including painting with anti corrosive bitumastic paint, cutting chases and making good the wall 20 mm dia nominal bore	RM	30	324.1296	9723.888
52	Providing and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc. 20 mm dia. nominal bore	RM	30	186.1728	5585.184
53	Providing and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc. 25 mm dia. nominal bore	RM	50	239.1448	11957.24
54	Providing and fixing G.I. pipes complete with G.I. fittings and clamps, i/c cutting and making good the walls etc. Internal work – Exposed on wall. 20 mm dia. nominal bore	RM	10	225.7296	2257.296
55	Providing and fixing G.I. pipes complete with G.I. fittings and clamps, i/c cutting and making good the walls etc. Internal work – Exposed on wall. 25 mm dia. nominal bore	RM	20	287.328	5746.56
56	Providing and fixing square-mouth S.W. gully trap class SP-1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design: 100x100 mm size P type With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	4	1513.392	6053.568
57	Providing and fixing brass bib cock of approved quality : 15 mm nominal bore	each	3	198.4728	595.4184
58	Providing and fixing brass bib cock of approved quality : 20mm nominal bore	each	3	214.1512	642.4536
59	Providing and fixing brass stop cock of approved design, quality and make 15 mm NB	Each	3	198.4728	595.4184
60	Providing and fixing brass stop cock of approved design, quality and make 20 mm NB	Each	3	214.1512	642.4536
61	Providing and fixing brass ball valve with C I wheel of approved quality ( screwed end ) for 25 mm dia nominal bore with reducer if necessary at all heights & levels	Each	5	326.1304	1630.652
62	Providing and fixing PVC Nahani Traps of ISI Make of 100 x 100 mm at all heights and levels size and all complete as directed by the Engineer-in-charge..	Each	10	370.184	3701.84

**Construction of balanced work of Control Room building (CMCS) (1 no), Inverter Room (2nos.), & Security room foundation (2nos.) and other associated works FOR 10 MW Solar Photovoltaic Power Plant at Santaldih, Purulia, West Bengal, (WBSSEDCL: West Bengal State Electricity Distribution Company Limited**

S.NO.	DESCRIPTION	UNIT	QUANTITY	ITEM RATE EXCLUDING GST	Amount in Rs.
63	Providing and fixing PTMT towel rail complete with brackets fixed to wooden cleats with CP brass screws with concealed fitting arrangement of approved quality and colour. 600mm long towel rail with total length of 645mm, width 78mm and effective height of 88mm, weighing not less than 190gms all complete as directed by the Engineer-in-charge..	Each	3	390.648	1171.944
64	Providing and fixing PVC, soil waste and vent pipes conforming to IS 4985 of SWR quality 6 Kg / Sq cm, pressure. The rate shall include cost of all fittings like plain elbow, plain tee, plain Y, 4 way tee and all required necessary specials etc., complete. jointing with rubber ring and solvent joints providing MS brackets grouted in the wall and fasteners cutting and making good the walls and floors (pipes running expose in sanitary ducts) supreme or prince/approved quality pipes. 75 mm dia	meter	25	444.2208	11105.52
65	Providing and fixing PVC, soil waste and vent pipes conforming to IS 4985 of SWR quality 6 Kg / Sq cm, pressure. The rate shall include cost of all fittings like plain elbow, plain tee, plain Y, 4 way tee and all required necessary specials etc., complete. jointing with rubber ring and solvent joints providing MS brackets grouted in the wall and fasteners cutting and making good the walls and floors (pipes running expose in sanitary ducts) supreme or prince/approved quality pipes. 110 mm dia	meter	50	444.2208	22211.04
66	Providing and fixing PVC, soil waste and vent pipes conforming to IS 4985 of SWR quality 6 Kg / Sq cm, pressure. The rate shall include cost of all fittings like plain elbow, plain tee, plain Y, 4 way tee and all required necessary specials etc., complete. jointing with rubber ring and solvent joints providing MS brackets grouted in the wall and fasteners cutting and making good the walls and floors (pipes running expose in sanitary ducts) supreme or prince/approved quality pipes. 150 mm dia	meter	15	481.2392	7218.588
67	Providing and fixing Stainless Steel A ISI 304 (18/8) kitchen sink as per IS 13983 with C.I. brackets and stainless steel plug 40 mm including painting of fittings and brackets, cutting and making good the walls wherever required, 510x1040 mm bowl depth 200mm	Nos	1	3663.1696	3663.1696
68	Providing and fixing wash basin above platform with C.I. brackets, 15 mm C.P. brass pillar taps, 32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require :White Vitreous China Flat back wash basin size 550x400 mm with single 15 mm C.P. brass pillar tap. all complete as directed by the Engineer-in-charge..	Each	2	1646.8552	3293.7104
69	Providing and fixing 600x450 mm beveled edge mirror of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers all complete as directed by the Engineer-in-charge..	Each	2	841.6808	1683.3616
70	Providing and fixing white vitreous china pedestal type/ wall mounted water closet ( european/Western type ) with seat & lid, 10 litre low level flushing cistern with fittings and CI / MS brackets, 40 mm flush bend, over flow arrangement with specials of standard make and mosquito proof coupling of approved municipal design complete including painting of fittings and brackets, cutting and making good the walls and floors where ever required WC pan with ISI marked coloured solid plastic and lid with coloured vitreous china flushing cistern and CP flush bend (low level cistern), toilet paper roll holder and all fittings all complete as directed by the Engineer-in-charge..	Each	2	3451.1832	6902.3664

**Construction of balanced work of Control Room building (CMCS) (1 no), Inverter Room (2nos.), & Security room foundation (2nos.) and other associated works FOR 10 MW Solar Photovoltaic Power Plant at Santaldih, Purulia, West Bengal, (WBSSEDCL: West Bengal State Electricity Distribution Company Limited**

S.NO.	DESCRIPTION	UNIT	QUANTITY	ITEM RATE EXCLUDING GST	Amount in Rs.
71	Providing and fixing white vitreous china flat back half stall urinal / wall mounted of 430*260*350mm parryware/Hindware/seabird/orient (coral) with fittings size C.P. Brass , spreaders with unions and clamps (all in C.P.Brass) with waste fitting as per I.S.2556, C. I. trap with outlet grating and other coupling in C.P. brass including painting of fittings and brackets, cutting and making good the walls and floors wherever required: all CP fittings are jaquar or yes yes brand. flush pipe: Single half stall urinal with 5 litre P.V.C. automatic flushing cistern.all complete as directed by the Engineer-in-charge..	Each	1	3268.356	3268.356
72	Providing and fixing toilet paper holder : C.P. brass	Each	2	382.94	765.88
73	Providing and fixing liquid soap dispenser and holder as per approved design.	Each	2	370.184	740.368
74	Providing and fixing fancy CP brass fittings and flange of approved brand and manufacture( oriental series of MARC or pearl/jade series of Parryware or Continental clasion series of JAGUAR or crystal series of MARC) 15 mm nominal health faucet	Each	2	1480.736	2961.472
75	Providing and placing on terrace (at all floor levels) polyethylene water storage tank ISI : 12701 marked with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank. (Syntax or equivalent)	Ltr	1500	7.40368	11105.52
76	Constructing brick masonry manhole in cement mortar 1:4 ( 1 cement : 4 coarse sand ) with R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40mm nominal size), inside plastering 12mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement complete as per standard design : Inside size 90x80 cm and 45 cm deep including C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover and frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg) : With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	1	7153.7128	7153.7128
77	Constructing brick masonry manhole in cement mortar 1:4 ( 1 cement : 4 coarse sand ) with R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40mm nominal size), inside plastering 12mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement complete as per standard design :Inside size 120x90 cm and 90 cm deep including C.I. cover with frame (medium duty) 500 mm internal diameter, total weight of cover and frame to be not less than 116 kg (weight of cover 58 kg and weight of frame 58 kg) :With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	1	15048.4104	15048.4104
<b>TOTAL AMOUNT FOR CIVIL WORKS (excluding GST)</b>					<b>3551506.399</b>
<b>B</b>	<b>Electrical Works (supply and Erection)</b>				
1	LED office luminaire Office room, 42W, 240V, Philips make Sereno type SP 824	no.	4.000	13326.624	53306.496

**Construction of balanced work of Control Room building (CMCS) (1 no), Inverter Room (2nos.), & Security room foundation (2nos.) and other associated works FOR 10 MW Solar Photovoltaic Power Plant at Santaldih, Purulia, West Bengal, (WBSEDCL: West Bengal State Electricity Distribution Company Limited**

S.NO.	DESCRIPTION	UNIT	QUANTITY	ITEM RATE EXCLUDING GST	Amount in Rs.
2	LED recessed mounted luminaire, SCADA room, 40W, 240V, Philips make MIDFLUX Fullglow High efficiency Lumio diffuser	no.	4.000	11845.888	47383.552
3	Surface mounted luminaire with CFL lamps, Pantry room, Portico, 2x18W, 240V, Philips make Lotus FCS518 2xPL-L18W HF	no.	1.000	1776.8832	1776.8832
4	Surface mounted luminaire with CFL lamps, Toilets, 2x11W,240V, Philips make Lotus FCS518 2xPL-S11W, Philips make Lotus FCS518 2xPL-S11W	no.	3.000	1628.8096	4886.4288
<b>TOTAL AMOUNT FOR ELETRICAL WORKS (excluding GST)</b>					<b>107353.36</b>
<b>TOTAL AMOUNT FOR CIVIL &amp; ELECTRICAL WORKS (excluding GST)</b>					<b>3658859.759</b>
<b>QUOTE PERCENTAGE (%) ABOVE/BELOW (+/-) (OR) AT PAR TO TOTAL AMOUNT</b>					<b>XXXXX</b>
<b>QUOTED PERCENTAGE (%) IN WORDS ABOVE/BELOW (OR) AT PAR TO TOTAL AMOUNT</b>					<b>XXXXX</b>
GST as applicable					
<p>NOTE:            1. CONTRACTOR SHOULD QUOTE PERCENTAGE (%) ABOVE/BELOW (OR) AT PAR TO TOTAL AMOUNT            2.CONTRACTOR SHOULD QUOTE SAME PERCENTAGE FOR BOTH THE WORKS THAT IS BALANCE BUILDING WORKS AND ROAD &amp; DRAIN WORKS            3. QUOTED PERCENTAGE (%) IS APPLICABLE ON ALL ITEM RATES UNIFORMLY.</p>					

## **TECHNICAL SPECIFICATION**

### **RCC Works**

All RCC works shall be as per IS 456 and the materials used viz. Cement, reinforcement steel etc. shall be as per relevant standards.

### **Brick Works**

Brick works in cement mortar (CM) 1:6 for 9" thick and 4½" thick wall respectively. All brick works shall be using 1st class bricks of approved quality as per IS 3102.

### **Plastering**

Plastering in cement mortar 1:5, 1:6 and 1:3 shall be applied to all internal, external walls and ceiling of slab respectively as per IS 1542.

### **WHITE WASHING & COLOUR WASHING**

White washing and colour washing work shall be conforming to IS 6278

- Internal walls - Acrylic distempering as per IS 427.
- External walls – Heat reflective synthetic enamel as per IS 428.
- For cement painting IS 5410 shall be followed.
- For painting of steel doors, ventilators IS 2338, IS 1477 (Part I & II) shall be followed.

### **Painting & Finish**

All metal surfaces and support structures shall be thoroughly cleaned of rust, scale, oil, grease, dirt etc. Fabricated structures shall be pickled and then rinsed to remove any trace of acid. The under surface shall be made free from all imperfections before undertaking the finishing coat. After Phosphate treatment, two (2) coats of yellow zinc chromate primer shall be applied followed by two (2) coats of epoxy based synthetic enameled paint. Shade shall be Siemens Grey RAL-7032. Thickness of paint shall be not less than 75 micron. All unpainted steel parts shall be cadmium plated or suitably treated to prevent rust formation. If these parts are moving elements then they shall be greased.

### **FENCING**

The periphery of the project area shall be protected by means of fencing /wall to avoid any unauthorized access to the plant. The contractor shall provide razor clipped diamond mesh fencing OR as approved with Zinc-Aluminum Concertina at top and Pre-cast RCC/Galvanized Steel post at every 2.5 m c/c. Fence should be of total 2.4 m height above the finished ground level of which bottom 0.6m would be 1ST Class brick wall with necessary foundation, finish and colour/paint. The boundary wall must be provided with rugged main entry gate. The construction of peripheral wall and the main entry gate must conform to relevant IS standards and practice.

### **Roads within Solar Power Plant**

Suitable approach road and internal Solar Photovoltaic roads to carry safe and easy transportation of equipment and material at the project site shall be made. The road should provide easy and fast approach to each location of the plant. These roads are to be designed optimally to carry the crane load with all necessary chambers, gradients, super elevation, and radius of curvatures for the easy movement of cranes, trucks and public transport. Roads are to be constructed with sufficient width (minimum 3.75m) followed by 0.5m well compacted shoulders on each side. The road must be well compacted as per the relevant IS standards and MORTH updated till date. All peripheral roads and pathways from central road to Inverter room road shall be WBM road. Also, all cable crossings and other crossings shall be provided with GI/ Hume pipes

### **Buildings**

Buildings are required to be constructed for housing the electrical equipment/ panel and local control room, central control room with conference room, office cum store building for the operation & maintenance of Solar Photovoltaic Power Plant. Security houses/ cabins shall also be required at strategic locations to secure the plant from any theft. The building shall be constructed with conventional RCC framed structure with brick partition walls. Equipment room shall be designed as per the OEM recommendations to ensure desired life of equipment. Bidder shall furnish the drawing of the proposed buildings to the Employer for approval, prior to construction. The construction of the same shall be as under-

### **RCC Works**

All RCC works shall be as per IS 456 and the materials used viz. Cement, reinforcement steel etc. shall be as per relevant standards.

### **Brick Works**

Brick works in cement mortar (CM) 1:6 for 9" thick and 4½" thick wall respectively. All brick works shall be using 1st class bricks of approved quality as per IS 3102.

### **Doors & Windows**

Steel framed doors, Windows and ventilators shall conform to IS – 1081 with necessary glass panels including of all fixtures and painting etc. complete. Doors and windows shall be made of aluminum sections. All sections shall be 20 microns anodized. Sections of door frame and window frame shall be adopted as per industrial standards. Door shutters shall be made of aluminum sections and combination of compact sheet and clear float/ wired glass. The control room shall require a number of windows/ louvers to provide ventilation/ fresh air circulations.

### **Plastering**

Plastering in cement mortar 1:5, 1:6 and 1:3 shall be applied to all internal, external walls and ceiling of slab respectively as per IS 1542.

### **Flooring**

Flooring for stores shall be of cement flooring in concrete mix 1:2:4 using 10 mm aggregates as per IS 2571. Flooring for control building, equipment room and other places, if needed, shall be of vitrified tiles 8 mm. For toilet area, the floor shall be of ceramic tiles 8 mm thicknesses. The floor finishing must include skirting up to a suitable height. The wall tiles, if proposed, shall be glazed tiles of 6 mm thickness and provided up to lintel level.

**Roofing**

The roof of the building shall be insulated and waterproofing shall be done as per relevant IS standard.

**Plinth Protection**

Plinth protection 1000mm wide shall be provided around all the buildings.

White washing & colour washing

White washing and colour washing work shall be conforming to IS 6278.

- Internal walls - Acrylic distemping as per IS 427.
- External walls – Heat reflective synthetic enamel as per IS 428.
- For cement painting IS 5410 shall be followed.
- For painting of steel doors, ventilators IS 2338, IS 1477 (Part I & II) shall be followed.

**Rolling Shutters**

Rolling shutters made of cold rolled strips shall conforming to IS 4030 with approved gauge thickness shall be provided with all fixtures, accessories, painting all etc. complete.

**Water supply**

GI pipes of Medium quality conforming to IS 1239 (Part I) and IS 1795 for Mild Steel pipes shall be used for all water supply and plumbing works.

**Plumbing and Sanitary**

Sanitary fittings, which include water closet (EWC/IWC), wash basins, sink, urinal fitting including flushing tank, and necessary plumbing lines shall be provided for office cum stores building and Security house.

**Electrification of Building**

Electrification of buildings shall be carried out as per IS 732 and other relevant standards. The lighting design of the buildings shall be carried out as per IS 3646. The building shall be provided with adequate quantity of light fittings, 5A/ 15A 1 phase sockets; fans etc., controlled by required ratings of MCBs and MCB, DBs. Supervisor room must be fitted with suitably sized HVAC system. It is encouraged that bidder shall use the latest energy efficient equipment for the electrification and illumination.

**Toilet**

Toilet shall be designed for 15 persons; and constructed with following finish

- Floor: Vitrified tiles/ ceramic tiles
- Door window: made out of aluminium sections, 6mm float glass
- Ventilators: Mechanical exhaust facility
- Plumbing fixtures: Repute make
- Sanitary ware: Repute make
- EWC: 390 mm high with health facet, toilet paper roll holder and all fittings
- Urinal (430 x 260 x 350 mm size) with all fittings.
- Wash basin (550 x 400 mm) with all fittings.

- □ Bathroom mirror (600 x 450 x 6 mm thick) hard board backing
- □ CP brass towel rail (600 x 20 mm) with C.P. brass brackets
- □ Soap holder and liquid soap dispenser.
- □ GI pipes (B class) of reputed makes
- □ Overhead water tank equivalent of 1,000 litre capacity

### **Drainage for Toilets**

Drainage pipes shall be of PVC (6 kg/cm<sup>2</sup>) Supreme, Prince or equivalent make. Gully trap, inspection chambers, septic tank for 15 person and soak well to be constructed for above mentioned requirement.

### **Water supply & Cleaning**

Suitable arrangement of water shall be ensured to cater the day-to-day requirement of drinking water and needs of Solar Photovoltaic during entire O&M period. The Bidder shall estimate the water requirements for cleaning the photovoltaic modules at least once in every week in order to operate the plant at its guaranteed plant performance. All necessary arrangement for wet cleaning of the solar panels shall be in the scope of the bidders and accordingly the agency has to provide suitable water source along with all the necessary equipment, accessories, tool & tackles, pumps, tankers, tractors and water storage, piping arrangement which as may be required for the same.

### **Painting & Finish**

All metal surfaces and support structures shall be thoroughly cleaned of rust, scale, oil, grease, dirt etc. Fabricated structures shall be pickled and then rinsed to remove any trace of acid. The under surface shall be made free from all imperfections before undertaking the finishing coat. After Phosphate treatment, two (2) coats of yellow zinc chromate primer shall be applied followed by two (2) coats of epoxy based synthetic enameled paint. Shade shall be Siemens Grey RAL-7032. Thickness of paint shall be not less than 75 micron. All unpainted steel parts shall be cadmium plated or suitably treated to prevent rust formation. If these parts are moving elements then they shall be greased.

### **Security Cabin**

The Prefabricated Security Cabin of size 3 meter x 3 meter at the main entrance gate. RCC foundation shall be constructed by the Successful.

## **QUALITY ASSURANCE AND INSPECTION FOR CIVIL WORKS**

### **LABORATORY AND FIELD TESTING**

The field laboratory for QA and QC activities shall be constructed and set-up by the contractor in line with the approved Field Quality Plan with minimum testing facilities like Cube testing etc. For other testing for which facilities are not available at field laboratory shall be conducted at third party laboratory approved by BHEL.

### **FIELD QUALITY PLAN (FQP)**

The Field Quality Plan (FQP) may be submitted by Contractor for BHEL approval or BHEL will provide approved Field Quality Plan. All the testing / submission of quality documents etc. shall be done as per approved Field Quality Plan (FQP). Bidder shall make a note if any test which is not mentioned in FQP but required, has to be carried out by bidder without any claim.

### **Design Mix**

Design mix of concrete (WHEREVER APPLICABLE) shall be carried out by contractor in third party laboratory approved by BHEL and Design mix report shall be approved by BHEL, before commencement of work

**All the construction materials (like cement, steel reinforcement, structural steel, fencing, concertina wire, aggregate, sand, water, etc.) shall be approved by BHEL. Contractor shall obtained the approval from BHEL before commencement of work.**

**Royalty certificates to be furnished by the contractor as applicable.**



# GENERAL CONDITIONS OF CONTRACT

2019

*ಭಾರತ್ ಹೆವಿ ಎಲೆಕ್ಟ್ರಿಕಲ್ಸ್ ಲಿಮಿಟೆಡ್, ವಿದ್ಯುನ್ಮಾನ ವಿಭಾಗ, ಬೆಂಗಳೂರು  
भारत हेवी इलेक्ट्रिकल्स लिमिटेड, इलेक्ट्रॉनिक्स डिवीज़न, बेंगलुरु  
Bharat Heavy Electricals Limited, Electronics Division, Bengaluru*

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## **CHAPTER -1**

### **1. GENERAL INSTRUCTION TO TENDERERS**

#### **1.1. DESPATCH INSTRUCTION**

*i) The General Conditions of Contract form part of the Tender specifications. All pages of the tender documents shall be duly signed, stamped and submitted along with the offer in token of complete acceptance thereof. The information furnished shall be complete by itself. The tenderer is required to furnish all the details and other documents as required in the following pages*

*ii) Tenderers are advised to study all the tender documents carefully. Any submission of tender by the tenderer shall be deemed to have been done after careful study and examination of the tender documents and with the full understanding of the implications thereof. Should the tenderers have any doubt about the meaning of any portion of the Tender Specification or find discrepancies or omissions in the drawings or the tender documents issued are incomplete or shall require clarification on any aspects, the scope of work etc., he shall contact the authority inviting the tender well in time (so as not to affect last date of submission) for clarification before the submission of the tender. Tenderer's request for clarifications shall be with reference to Sections and Clause numbers given in the tender documents. The tender specifications and terms and conditions shall be deemed to have been accepted by the tenderer in the offer. Pre requirements and conditions shall be liable for rejection.*

*iii) Integrity pact (IP): If NIT calls for Integrity Pact, the same shall be duly signed & stamped by the authorised signatory & submitted along with tender document.*

#### **1.2. SUBMISSION OF TENDERS**

*1.2.1 The tenderers must submit their tenders as per instructions in the NIT*

*1.2.2 BHEL takes no responsibility for delay, loss or non-receipt of tenders sent by post/courier. The tenders received after the specified time of their submission are treated as 'Late Tenders' and shall not be considered under any circumstances. Offers received by Fax/Email/Internet shall be considered as per terms of NIT.*

*1.2.3 Tenders shall be opened by authorised Officer of BHEL at his office at the time and date as specified in the NIT, in the presence of such of those tenderers or their authorised representatives who may be present*

*1.2.4 Tenderers whose bids are found techno commercially qualified shall be informed the date and time of opening of the Price Bids and such Tenderers may depute their representatives to witness the opening of the price bids. BHEL's decision in this regard shall be final and binding.*

*1.2.5 Before submission of Offer, the tenderers are advised to inspect the site of work and the environments and be well acquainted with the actual working and other prevalent conditions, facilities available, position of material and labour, means of transport and access to Site, accommodation, etc. No claim will be entertained later on the grounds of lack of knowledge of any of these conditions.*

### **1.3. LANGUAGE**

*1.3.1 The tenderer shall quote the rates in English language and international numerals. These rates shall be entered in figures as well as in words. For the purpose of the tenders, the metric system of units shall be used.*

*1.3.2 All entries in the tender shall either be typed or written legibly in ink. Erasing and over-writing is not permitted and may render such tenders liable for rejection. All cancellations and insertions shall be duly attested by the tenderer.*

### **1.4 PRICE DISCREPANCY:**

#### **1.4.1 Conventional (Manual) Price Bid opening:**

*i) If, in the price structure quoted for the required goods/services/works, there is discrepancy between the unit price and the total price (which is obtained by multiplying the unit price by the quantity), the unit price shall prevail and the total price corrected accordingly, unless in the opinion of BHEL there is obvious misplacement of decimal point in the unit price, in which case the total price as quoted shall govern and the unit price corrected accordingly*

*ii) If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected;*

*iii) If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject of (i) and (ii) above.*

*iv) If there is such discrepancy in an offer, the same shall be conveyed to the bidder with target date up to which the bidder has to send his acceptance on the above lines and if the bidder does not agree to the decision of BHEL, the bid is liable to be ignored.*

*v) In case of lump sum price, if there is any difference between the amount in figures and in words, the amount quoted by the bidder in words shall be taken as correct.*

vi) *In case of omission in quoting any rate for one or more items, the evaluation shall be done considering the highest quoted rate obtained against the respective items by other tenderers for the subject tender. If the tenderer becomes L-1, the notional rates for the omission items shall be the lowest rates quoted for the respective items by the other tenderers against the respective omission items for the subject job and the 'Total quoted price (loaded for omissions)' shall be arrived at. However the overall price remaining the same as quoted originally, the rates for all the items in the 'Total quoted price (loaded for omissions)' shall be reduced item wise in proportion to the ratio of 'Original' total price and the 'Total quoted price (loaded for omissions)'.*

**1.4.2 Reverse Auction:** *In case of Reverse Auction, the successful bidder shall undertake to execute the work as per overall price offered by him during the Reverse Auction process. In case of omission of rates, the procedure shall be as per 'Guidelines for Reverse Auction' enclosed.*

i) *Offers from tenderers who are under suspension (banned) by any Unit/Region/Division of BHEL shall not be considered.*

ii) *Offers from tenderers who do not comply with the latest guidelines of Ministry/Commissions of Govt of India shall not be considered.*

### **1.5. EVALUATION OF BIDS**

i) *Technical Bids submitted by the tenderer will be opened first and evaluated for fulfilling the Pre-Qualification criteria and other conditions in NIT/Tender documents, based on documentary evidences submitted along with the offer, BHEL reserves the right to ask for proofs/documents, clarification in relation to Technical/commercial data during tender evaluation*

ii) *Price Bids of shortlisted bidders shall only be opened either through the conventional price bid opening or through electronic Reverse Auction, at the discretion of BHEL*

iii) *Price Bids of unqualified bidders shall not be opened. Reasons for rejection shall be intimated to the vendor before the opening of Price bid.*

### **1.6. DATA TO BE ENCLOSED**

*The following information in full shall be furnished by the tenderer. Non-submission of this information may lead to rejection of the offer.*

i) *INCOME TAX PERMANENT ACCOUNT NUMBER, GSTIN, SAC, HSN Certified copies of PAN, GSTIN shall be furnished along with tender. The names, addresses and contact information of the Directors/Partners shall be furnished along with the offer.*

ii) *An attested copy of the Power of Attorney, in case the tender is signed by an individual other than the sole proprietor.*

*iii) IN CASE OF INDIVIDUAL TENDERER:*

*His / her full name, address, PAN, GSTIN and place & nature of business to be furnished.*

*iv) IN CASE OF PARTNERSHIP FIRM*

*The names of all the partners and their addresses, a copy of the partnership deed/instrument of partnership shall be enclosed.*

*v) IN CASE OF COMPANIES:*

*Date and place of registration including date of commencement certificate in case of Public Companies (certified copies of Memorandum and articles of Association are also to be furnished). Nature of business carried on by the Company and the provisions of the Memorandum relating thereof.*

**1.7. AUTHORISATION AND ATTESTATION**

*Tenders shall be signed by a person duly authorised/empowered to do so. An attested copy of the Power of Attorney, in case the tender is signed by an individual other than the sole proprietor shall be submitted along with the tenders*

**1.8. EARNEST MONEY DEPOSIT**

*1.8.1 Every tender must be accompanied by the prescribed amount of Earnest Money Deposit (EMD) in the manner described herein.*

*The EMD may be accepted only in the following forms:*

- (i) Electronic Fund Transfer credited in BHEL account (before tender opening)*
- (ii) Banker's cheque/ Pay order/ Demand draft, in favor of BHEL (along with offer) In case total EMD amount is more than Rs 20 Lakh, the amount in excess of Rs 20 lakh maybe accepted in the form of Bank Guarantee from scheduled bank. The Bank Guarantee in such cases shall be valid for at-least six months.*
- (iii) Through SBI collect (before tender opening)*
- (iv) No other form of EMD remittance shall be acceptable to BHEL*

*1.8.2 EMD by the bidder will be forfeited as per Tender Documents if*

- i) After opening the tender and within the offer validity period, the tenderer revokes his/her tender or makes any modification in his tender which is not acceptable to BHEL.*
- ii) The Contractor fails to deposit the required Security deposit or commence the work within the period as per LOI/ Contract.*
- iii) EMD by the tenderer shall be withheld in case any action on the tenderer is envisaged in derailing the tender process by unlawful means*

*1.8.3 EMD shall not carry any interest.*

*1.8.4 In the case of unsuccessful bidders, the Earnest Money will be refunded to them within a reasonable time after acceptance of award by successful tenderer.*

*1.8.5 EMD of successful tenderer will be converted as part of Security Deposit*

### **1.9. SECURITY DEPOSIT**

*The total amount of Security Deposit will be 5% of the contract value (including all applicable taxes) EMD of the successful tenderer shall be converted and adjusted towards the required amount of Security Deposit.*

#### **1.9.1 Modes of Security deposit:**

*The balance amount to make up the required Security Deposit of 5% of the contract value may be accepted in the following forms:*

- i) Cash (as permissible under the extant Income Tax Act)*
- ii) Local cheques of Scheduled Banks (subject to realization)/ Pay Order/ Demand Draft/ Electronic Fund Transfer in favour of BHEL*
- iii) Bank Guarantee from Scheduled Banks/ Public Financial Institutions as defined in the Companies Act. The Bank Guarantee format should have the approval of BHEL*
- iv) Fixed Deposit Receipt issued by Scheduled Banks/ Public Financial Institutions as defined in the Companies Act (FDR should be in the name of the Contractor, a/c BHEL)*
- v) Securities available from Indian Post offices such as National Savings Certificates, Kisan Vikas Patras etc. (held in the name of Contractor furnishing the security and duly endorsed/ hypothecated/ pledged, as applicable, in favour of BHEL) (Note: 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)*
- vi) 50% of the required Security Deposit, including the EMD, should be paid before start of the work. Balance of the Security Deposit can be collected by deducting 10% of the gross amount progressively from each of the running bills of the Contractor till the total amount of the required Security Deposit is collected. If the value of work done at any time exceeds the contract value, the amount of Security Deposit shall be correspondingly enhanced and the additional Security Deposit shall be immediately deposited by the Contractor or recovered from payment/s due to the Contractor. Security Deposit shall be released to the Contractor upon fulfilment of contractual obligations as per terms of the contract.*

*1.9.2 The Security Deposit shall not carry any interest.*

*1.9.3 The validity of Bank Guarantees towards Security Deposit shall be initially up to the completion period as stipulated in the Letter of Intent/Award ( plus maintenance period if applicable), and 03 months claim period. The same shall be kept valid by proper renewal till the acceptance of Final Bills of the Contractor, by BHEL*

*1.9.4 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 fulfill 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 other contracts with BHEL.*

### **1.10. REFUND OF SECURITY DEPOSIT**

*50% of the security deposit may be refunded on completion of the work after payment of the final bill and the balance 50% of the security deposit is refunded only after the expiry of the maintenance period from date of completion of work as stipulated in the contract concerned.*

#### **1.10.1 DEFECTS LIABILITY PERIOD:**

*The contractor shall be responsible to make good and remedy at his own expenses within such period as may be stipulated by the Engineer-in-charge, any defect which may develop or may be noticed before the expiry of the maintenance period of six months or as stipulated in NIT hereto from the certified date of completion and intimation of which has been sent to the contractor within seven days of the expiry of the said period by a letter sent by hand delivery or by registered post or Email. If contractor fails to attend to the above, defect will be rectified at contractor's risk & cost and same will be deducted from the security deposit/payable amounts available with BHEL.*

### **1.11. BANK GUARANTEES**

*Where ever Bank Guarantees are to be furnished/submitted by the contractor, the following shall be complied with*

- i) Bank Guarantees shall be from Scheduled Banks / Public Financial Institutions as defined in the Companies Act.*
- ii) The Bank Guarantees shall be as per prescribed BHEL formats.*
- iii) It is the responsibility of the bidder to get the Bank Guarantees revalidated/extended for the required period (subject to a minimum period of six months), as per the advice of BHEL. BHEL shall not be liable for issue of any reminders regarding expiry of the Bank Guarantees.*
- iv) In case extension/further extensions of any Bank Guarantees are not required, the bidders shall ensure that the same is explicitly endorsed by BHEL*
- v) In case the Bank Guarantees are not extended before the expiry date, BHEL reserves the right to invoke the same by informing the concerned Bank in writing, without any advance notice/communication to the concerned bidder.*
- vi) Bidders to note that any corrections to Bank Guarantees shall be done by the issuing Bank, only through an amendment in an appropriate non judicial stamp paper.*
- vii) The Original Bank Guarantee shall be sent directly by the Bank to BHEL under Registered Post (Acknowledgement Due).*

### **1.12. VALIDITY OF OFFER**

*The rates in the Tender shall be kept open for acceptance for a minimum period of Ninety (90) DAYS from latest due date of offer submission (including extension, if any). In case BHEL calls for negotiations, such negotiations shall not amount to cancellation or withdrawal of the original offer which shall be binding on the tenderers.*

### **1.13 EXECUTION OF CONTRACT AGREEMENT**

*The successful tenderer's responsibility under this contract commences from the date of issue of the Letter of Intent by BHEL. The Tenderer shall submit an unqualified acceptance to the Letter of Intent/Award within the period stipulated therein.*

*The successful tenderer shall be required to execute an agreement in the prescribed form, with BHEL, within fifteen days (15 days) after the acceptance of the Letter of Intent/Award, and in any case before releasing the first running bill. The contract agreement shall be signed by a person duly authorized/empowered by the tenderer. The expenses for preparation of agreement document shall be borne by Tenderer.*

### **1.14. REJECTION OF TENDER AND OTHER CONDITIONS**

*1.14.1 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 as per NIT*
- c. To award the work in part if specified in NIT*
- d. In case of either of the contingencies stated in (b) and (c) above, the time for completion as stipulated in the tender shall be applicable.*

*1.14.2 Conditional tenders, unsolicited tenders, tenders which are incomplete or not in the form specified or defective or have been materially altered or not in accordance with the tender conditions, specifications etc., are liable to be rejected.*

*1.14.3 Tenders are liable to be rejected in case of unsatisfactory performance of the tenderer with BHEL, or tenderer under suspension (hold/banning /delisted ) by any unit / region / division of BHEL or tenderers who do not comply with the latest guidelines of Ministry/Commissions of Govt of India. BHEL reserves the right to reject a bidder in case it is observed that they are overloaded and may not be in a position to execute this job. The decision of BHEL will be final in this regard.*

1.14.4 If a tenderer who is a proprietor expires after the submission of his tender or after the acceptance of his tender, BHEL may at their discretion, cancel such tender. If a partner of a firm expires after the submission of tender or after the acceptance of the tender, BHEL may then cancel such tender at their discretion, unless the firm retains its character.

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

1.14.6 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 money due.

1.14.7 Canvassing in any form in connection with the tenders submitted by the Tenderer shall make his offer liable to rejection.

1.14.8 In case the Proprietor, Partner or Director of the Company/Firm submitting the Tender, has any relative or relation employed in BHEL, the authority inviting the Tender shall be informed, along with the Offer. Failing to do so, BHEL may, at its sole discretion, reject the tender or cancel the contract and forfeit the Earnest Money/Security Deposit.

1.14.9 The successful tenderer should not sub-contract part or complete work detailed in the tender specification undertaken by him without written permission of BHEL's Construction Manager/Site Incharge. The tenderer is solely responsible to BHEL for the work awarded to him.

1.14.10 The Tender submitted by a techno commercially qualified tenderer shall become the property of BHEL who shall be under no obligation to return the same to the bidder. However unopened price bids and late tenders shall be returned to the bidders after finalization of contract.

1.14.11 Unsolicited discount received after the due date and time of Bid Submission shall not be considered for evaluation. However, if the party who has submitted the unsolicited discount/rebate becomes the L-I party, then the awarded price i.e contract value shall be worked out after considering the discount so offered.

1.14.12 BHEL shall not be liable for any expenses incurred by the bidder in the preparation of the tender irrespective of whether the tender is accepted or not.

### **1.15 BHEL Fraud Prevention Policy :**

*The bidder along with its associate/ collaborators/sub-contractors/ Sub-Vendors/ Consultants/service providers shall strictly adhere to BHEL Fraud Prevention Policy displayed on BHEL website <http://www.bhel.com> and shall immediately bring to the notice of BHEL Management about any fraud or suspected fraud as soon as it comes to their notice. Fraud prevention policy and list of Nodal officers shall be hosted on BHEL website, vendor portals of Units/Regions Internet.*

## **CHAPTER-2**

*2.1 DEFINITION: The following terms shall have the meaning hereby assigned to them except where the context otherwise requires*

*i) BHEL shall mean Bharat Heavy Electricals Limited, a company registered under Companies Act 1956, with its Registered Office at BHEL HOUSE, SIRI FORT, NEW DELHI – 110 049, or its Authorised Officers or its Site Engineers or other employees authorised to deal with any matters with which these persons are concerned on its behalf.*

*ii) “EXECUTIVE DIRECTOR” or ‘GROUP GENERAL MANAGER’ or “GENERAL MANAGER (Incharge)” or “GENERAL MANAGER” shall mean the Officer in Electronics Division, Mysore road, Bengaluru-560026*

*iii) “COMPETENT AUTHORITY” shall mean Executive Director or Group General Manager or General Manager (In-charge) or General Manager or BHEL Officers who are empowered to act on behalf of the Executive Director or General Manager (In-charge) or General Manager of BHEL.*

*iv) “ENGINEER” or “ENGINEER IN CHARGE” shall mean an Officer of BHEL as may be duly appointed and authorized by BHEL to act as “Engineer” on his behalf for the purpose of the Contract, to perform the duty set forth in this General Conditions of Contract and other Contract documents. The term also includes ‘CONSTRUCTION MANAGER’ or ‘SITE INCHARGE’ as well as Officers*

*v) “SITE” shall mean the places or place at which the plants/equipment are to be erected and services are to be performed as per the specification of this Tender.*

*vi) “CLIENT OF BHEL” or “CUSTOMER” shall mean the project authorities with whom BHEL has entered into a contract for supply of equipment or provision of services.*

*vii) “CONTRACTOR” shall mean the successful Bidder/Tenderer who is awarded the Contract and shall include the Contractor’s successors, heirs, executors, administrators and permitted assigns.*

viii) *“CONTRACT” or “CONTRACT DOCUMENT” shall mean and include the Work Order, Contract Agreement, the accepted appendices of Rates, Schedules, Quantities if any, General Conditions of Contract, Special Conditions of Contract, Instructions to the Tenderers, Drawings, Technical Specifications, the Special Specifications if any, the Tender documents, subsequent amendments mutually agreed upon and the Letter of Intent/Acceptance issued by BHEL. Any conditions or terms stipulated by the contractor 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/Award and incorporated in the agreement.*

ix) *“GENERAL CONDITIONS OF CONTRACT” shall mean the ‘Instructions to Tenderers’ and ‘General Conditions of Contract’ pertaining to the work for which above tenders have been called for.*

x) *“TENDER SPECIFICATION” or “TENDER” or “TENDER DOCUMENTS” shall mean General Conditions, Common Conditions, Special Conditions, Price Bid, Rate Schedule, Technical Specifications, Appendices, Annexures, Corrigendum’s, Amendments, Forms, procedures, Site information, etc and drawings/documents pertaining to the work for which the tenderers are required to submit their offers. Individual specification number will be assigned to each Tender Specification.*

xi) *“LETTER OF INTENT” shall mean the intimation by a Post/Fax/email 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 terms and conditions of the contract are applicable from this date.*

xii) *“COMPLETION TIME” shall mean the period by ‘date/month’ specified in the ‘Letter of Intent/Award’ or date mutually agreed upon for handing over of the intended scope of work, the erected equipment/plant which are found acceptable by the Engineer, being of required standard and conforming to the specifications of the Contract.*

xiii) *“PLANT” shall mean and connote the entire assembly of the plant and equipment’s covered by the contract.*

xiv) *“EQUIPMENT” shall mean equipment, machineries, materials, structural, electrical and other components of the plant covered by the contract.*

xv) *“TESTS” shall mean and include such test or tests to be carried out on the part of 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 contractor or part thereof.*

xvi) *“APPROVED”, “DIRECTED” or “INSTRUCTED” shall mean approved, directed or instructed by BHEL.*

xvii) *“WORK or CONTRACT WORK” shall mean and include supply of all categories of labour, specified consumables, tools and tackles and Plants required for complete and satisfactory site transportation, handling, stacking, storing, erecting, testing and commissioning of the equipment’s to the entire satisfaction of BHEL.*

xviii) *“SINGULAR AND PLURALS ETC” words carrying singular number shall also include plural and vice versa, where the context so requires. Words imparting the masculine Gender shall be taken to include the feminine Gender and words imparting persons shall include any Company or Associations or Body of Individuals, whether incorporated or not.*

xix) *“HEADING” – The heading in these General Conditions are solely for the purpose of facilitating reference and shall not be deemed to be part thereof or be taken as instructions thereof or of the contract.*

xx) *“MONTH” shall mean calendar month unless otherwise specified in the Tender.*

xxi) *Day’ or ‘Days’ unless herein otherwise expressly defined shall mean calendar day or days of twenty four (24) hours each. A week shall mean continuous period of seven (7) days.*

xxii) *“COMMISSIONING” shall mean the synchronization testing and achieving functional operation of the Equipment with associated system after all initial adjustments, trials, cleaning, re-assembly required at site if any, have been completed and Equipment with associated system is ready for taking into service.*

xxiii) *“WRITING” shall include any manuscript type written or hand written or printed statement or electronically transmitted messages, under the signature or seal or transmittal of BHEL.*

xxiv) *“TEMPORARY WORK” shall mean all temporary works for every kind required in or for the execution, completion, maintenance of the work.*

xxv) *‘CONTRACT PRICE’ or ‘CONTRACT VALUE’ shall mean the sum including applicable taxes mentioned in the LOI/LOA/Contract Agreement subject to such additions thereto or deductions there from as may be made under provisions hereinafter contained*

xxvi) *“COMMENCEMENT DATE” or “START DATE” shall mean the commencement/start of work at Site as per terms defined in the Tender*

xxvii) *“SHORT CLOSING” or “FORE CLOSING” of Contract shall mean the premature closing of Contract, for reasons not attributable to the contractor and mutually agreed between BHEL and the contractor*

xxviii) *“TERMINATION” of Contract shall mean the pre mature closing of contract due to reasons as mentioned in the contract*

## **2.2 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 having original Civil Jurisdiction at Bengaluru, shall alone have exclusive jurisdiction in regard to all claims in respect of the Contract. No other Civil Court shall have jurisdiction in case of any dispute, under this contract*

## **2.3 ISSUE OF NOTICE**

*2.3.1 Service of notice on contractor: Any notice to be given to the Contractor under the terms of the contract shall be served by sending the same by Registered Post / Speed Post / FAX / Email to or leaving the same at the Contractor's last known address of the principal place of business (or in the event of the contractor being a company, to or at its Registered Office). In case of change of address, the notice shall be served at changed address as notified in writing by the Contractor to BHEL. Such posting or leaving of the notice shall be deemed to be good service of such notice and the time mentioned to the condition for doing any act after notice shall be reckoned from the date so mentioned in such notice.*

*2.3.2 Service of notice on BHEL Any notice to be given to BHEL in-charge under the terms of the Contract shall be served by sending the same by post or Email or leaving the same at BHEL address or changed address as notified in writing by BHEL to the Contractor.*

## **2.4 USE OF LAND**

*No land belonging to BHEL or their Customer under temporary possession of BHEL shall be occupied by the contractor without written permission of BHEL.*

### **2.4.1 STORES AND MATERIALS:**

*The contractor shall, at his own expense, supply all stores and materials required for the contract, other than those which may be provided by BHEL at the rates detailed therein subject to their availability at the place of issue indicated therein. All stores and materials to be supplied by the Contractor shall be of the best kind as described in the Specifications and the Contractor shall, if required by the Engineer –in- charge furnish him with proof to his satisfaction that the store and materials so comply with the specifications.*

*The contractor shall, at his own expense and without delay, supply samples of stores and materials proposed to be used in the execution of the work for the approval of the Engineer-in charge, who may reject all stores and materials not corresponding either in quality or character to the approved samples.*

*In the case of stores provided by BHEL, the Contractor shall bear the cost of loading, transporting to site, unloading, storing under cover as required, assembling & jointing the several parts together as necessary and incorporating & fixing these stores & materials in the work, including all preparatory work of whatever description that may be required, and closing, preparing, loading and returning empty cases or containers to the place of issue without any extra charges.*

*Contractor is responsible for safe & secure storage of above material.*

#### **2.4.2 PATENT RIGHTS:**

*The contractor shall fully indemnify BHEL, or the agent, servant, or employee of BHEL, against any action, claim or proceeding relating to infringement or the use of any patent or design or any alleged patent or design rights, and shall pay any royalties which may be payable in respect of any article/ or part thereof included in the contract.*

*In the event of any claims being made or action brought against BHEL, or any agent, or servant or employee of BHEL., in respect of any of the matters aforesaid, the contractor shall not apply when such increment has taken place in complying with the specific directions issued by the BHEL but the contractor shall pay any royalties payable in respect of any such use.*

#### **2.4.3 WATER :**

*The contractor shall allow in his tender and provide at his cost all water required for the work or his employees on the work, together with all pipes and fittings or other means that may be necessary or required to ensure a proper and ample supply of water for all purpose connected with the work.*

*In the event of a provision existing in the Tender documents for supply of water on payment by BHEL, water will be supplied from the BHEL supply System, or other sources at any points fixed by the Site Engineer/ Engineer-in-charge on the site of work. The contractor shall make necessary arrangement for lifting, pumping, carrying or conveying the water as required at his own cost. The levy of water charges to be borne by the Contractor in such case shall be specifically mentioned in the Tender documents.*

#### **2.4.4 TEMPORARY WORKSHOPS, STORES ETC :**

*The Contractor shall, during the progress of the work provide, erect and maintain at his own expense all necessary temporary workshops, store, offices, toilets etc., required for the proper and efficient execution of the work. The planning, siting and erection of these building shall have the approval of the Engineer-in-charge and the Contractor shall at all times keep them in a clean and sanitized condition to the entire satisfaction of the Engineer-in-charge.*

*On completion of the work all such temporary buildings shall be cleared and the site restored to its original state in a clean and tidy condition to the entire satisfaction of the Engineer-in-charge.*

#### **2.5 COMMENCEMENT OF WORK**

*2.5.1 Time is essence of contract and is specified in the tender document or in each individual work order.*

*2.5.2 The contractor shall commence the work within seven(07) days from LOI/work order or as intimated by BHEL and shall proceed with the same with due expedition without delay.*

2.5.3 If the contractor fails to start the work within stipulated time as per LOI or as intimated by BHEL, then BHEL at its sole discretion will have the right to cancel the contract. The Earnest Money and/or Security Deposit with BHEL 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.

2.5.4 All the work shall be carried out under the direction and to the satisfaction of BHEL.

## **2.6 MEASUREMENT OF WORK AND MODE OF PAYMENT:**

2.6.1 All payments due to the contractors shall be made by electronic mode only, unless otherwise found operationally difficult.

2.6.2 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 work done during the month/period under various categories in line with terms of payment as per contract. The basis of arriving at the quantities, weights shall be relevant documents and drawings released by BHEL. These measurement sheets shall be prepared jointly with BHEL Engineers and signed by both the parties.

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

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

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

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

2.6.7 The measurement shall be taken jointly by persons duly authorized on the part of BHEL and by the Contractor.

2.6.8 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 charges, provide all the assistance with appliances and other things necessary for measurement.

2.6.9 If at any time due to any reason whatsoever, it becomes necessary to re-measure the work done in full or in part, the expenses towards such re measurements shall be borne by the contractor unless such re measurements are warranted solely for reasons not attributable to contractor.

2.6.10 Passing of bills covered by such measurements does not amount to acceptance of the completion of the work measured. Any left out work has to be completed, if pointed out at a later date by BHEL.

2.6.11 Final measurement bill shall be prepared in the final bill format prescribed for the purpose based on the certificate issued by BHEL Engineer that entire works as stipulated in tender specification has been completed in all respects to the entire satisfaction of BHEL. Contractor shall give unqualified "No Claim" Certificate. All the tools and tackles loaned to him should be returned in satisfactory condition to BHEL. The abstract of final quantities and financial values shall also be entered in the Measurement Books and signed by both parties to the contract. The Final Bill shall be prepared and paid within a reasonable time after completion of work.

## **2.7 RIGHTS OF BHEL**

BHEL reserves the following rights in respect of this contract during the original contract period or its extensions if any, as per the provisions of the contract, without entitling the contractor for any compensation.

2.7.1 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 other agencies to suit BHEL's commitment to its customer or in case BHEL decides to advance the date of completion due to other emergent reasons/ BHEL's obligation to its customer.

2.7.2 To terminate the contract or get any part of the work done through other agency or deploy BHEL's own/hired/otherwise arranged resources , at the risk and cost of the contractor after due notice of a period of two weeks by BHEL, in the event of:-

- i) Contractor's continued poor progress
- ii) Withdrawal from or abandonment of the work before completion of the work
- iii) Contractor's inability to progress the work for completion as stipulated in the contract
- iv) Poor quality of work
- v) Corrupt act of Contractor
- vi) Insolvency of the Contractor

vii) *Persistent disregard to the instructions of BHEL*

viii) *Assignment, transfer, sub-letting of contract without BHEL's written permission*

ix) *Non fulfillment of any contractual obligations / non-compliance of statutory requirements*

x) *In the opinion of BHEL, the contractor is overloaded and is not in a position to execute the job as per required schedule*

*2.7.3 To meet the expenses including BHEL overheads of 35% & Liquidated damage/penalties arising out of "Risk & Cost" as explained above under Sl.No. 2.7.2. BHEL shall recover the amount from any money due from Contractor, from any money due to the Contractor including Security Deposit or by forfeiting any T&P or material of the contractor under this contract or any other contract of BHEL or by any other means or any combination thereof*

*2.7.4 To terminate the contract or to restrict the quantum of work and pay for the portion of work executed in case BHEL's contract with their customer are terminated for any reason, as per mutual agreement.*

*2.7.5 To effect recovery from any amounts due to the contractor under this or any other contract or in any other form, the moneys BHEL is statutorily forced to pay to anybody, due to contractor's failure to fulfill any of his obligations. BHEL shall levy overheads of 35% on all such payments.*

*2.7.6 While every endeavor will be made by BHEL to this end, they cannot guarantee uninterrupted work due to conditions beyond their control. The Contractor will not be normally entitled for any compensation/extra payment on this account unless otherwise specified elsewhere in the contract.*

*2.7.7 In case the execution of works comes to a complete halt or reaches a stage wherein worthwhile works cannot be executed and there is no possibility of commencement of work for a period of not less than two months, due to reasons not attributable to the contractor and other than Force Majeure conditions, BHEL may consider permitting the contractor to demobilize forthwith and re mobilize at an agreed future date. Cost of such demobilization/remobilization shall be mutually agreed. ORC (Over run Charges) in such cases shall not be applicable for the period between the period of demobilization and re mobilisation. The duration of contract/time extension shall accordingly get modified suitably. In case of any conflict, BHEL decision in this regard shall be final and binding on the contractor.*

*2.7.8 In the unforeseen event of inordinate delay in receipt of materials, drawings, fronts, etc, due to which inordinate discontinuity of work is anticipated, BHEL at its discretion may consider contractor's request to short close the contract, provided that the balance works are minor vis a vis the scope of work envisaged as per the contract. At the point of requesting for*

*short closure, contractor shall establish that he has completed all works possible of completion and he is not able to proceed with the balance works due to constraints beyond his control. In such a case, the estimated value of the unexecuted portion of work as mutually agreed, shall however be reduced from the final contract value-*

#### **2.7.9 LIQUIDATED DAMAGES/PENALTY**

##### **COMPENSATION FOR DELAY:**

*If the contractor fails to maintain the required progress in terms of condition 2.10 or to complete the work and clear the site on or before the contracted or extended the period of completion, he shall, without prejudice to any other right or remedy of the BHEL on account of such breach, pay as agreed compensation an amount calculated as stipulated below*

*For unfinished anticipated value of work where finished portion is fit for use*

*Rate of compensation as follows:*

- *Completion period (as originally stipulated) not exceeding 6 months. ....@ 1 percent per week*
- *Completion period (as originally stipulated) Exceeding 6 months and not exceeding 2 years...@ 0.5 percent per week*
- *Completion period (as originally stipulated) exceeding 2 years..... @ 0.25 percent per week*

*Provided always that the total amount of compensation for delay to be paid under condition shall not exceed the under noted percentage of the anticipated contract value*

- *Completion period (as originally stipulated) not exceeding 6 months. ....@ 10 percent of anticipated value of work*
- *Completion period (as originally stipulated) Exceeding 6 months and not exceeding 2 years...@ 7.5 percent of anticipated value of work*
- *Completion period (as originally stipulated) Exceeding 2 years.....@ 5 percent of anticipated value of work*

*The amount of compensation may be adjusted or set off against any sum payable to the Contractor under this or any other contract with the BHEL.*

**2.7.10 POST TECHNICAL AUDIT OF WORK AND BILLS:** *BHEL reserve the right to carry out a post-payment audit and technical examination of the work and final bill including all supporting vouchers, abstract etc., and to enforce recovery of any sums becoming due as a result thereof in the manner provided in the proceeding sub-paragraph's provided however that no such recovery shall be enforced after three years of passing the final bill*

## **2.8 RESPONSIBILITIES OF THE 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. The subcontractor shall fully indemnify BHEL against any claims of whatsoever nature arising due to the failure of the contractor in discharging any of his responsibilities hereunder:*

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

*2.8.2 The contractor shall comply with all applicable State and Central Laws, Statutory Rules, Maternity act, Regulations etc. such as contract labour(R&A) Act 1970, Minimum wage Act 1948, Payment of wages Act 1936,ESI Act 1948, EPF Act 1952, Employees' compensation Act 1923, Provision of Companies Act 1948 & rules thereof, The interstate Migrant Workmen 1979, The Karnataka Factories Rules 1969, Payment of Bonus Act 1965, Payment of Gratuity Act 1972. Child labour Prohibition act 1986, Karnataka Minimum Wage Act , Prevention of sexual harassment at work place Act 2013, Guidelines/notification related to Safai Karamchari Act , Equal Remuneration Act 1976, The company's instructions as issued from time to time in regard to working hours, wages, leaves, holidays etc. 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 also give to the local Governing Body, Police and other relevant Authorities all such notices as may be required by the Law.*

*The contractor shall produce the following registers and forms:*

- Form XIII- Register of work men employed by contractor(Rule 75)*
- Form XIV- Employment Card issued by contractor( Rule 76)*
- Form XVI- Muster Roll ( Rule 78(1) (a)(i))*
- Form XVII- Register of Wages ( Rule 78(1) (a)(i))*
- Form XVIII- Register of wages cum Muster Roll(in case of weekly payment)*
- Form XIX- Wage slip ( Rule 78(b))*
- Form XX- Register of deduction for damages Or Loss Rule 78(1) (a)(ii)*
- Form XXI- Register of files Rule 78(1) (a)(ii)*
- Form XXII- Register of Advance Rule 78(1) (a)(ii))*
- Form XXIII- Register of Overtime Rule 78(1) (a)(iii))*
- Form XXIV- Return to be sent by the contractor to the Licensing officer (Rule 82(1))*

*2.8.3 The contractor shall obtain independent License under the Contract Labour (Regulations and Abolition Act)as required from the concerned Authorities based on the certificate (Form-V) issued by the Principal Employer/Customer*

2.8.4 The contractor shall pay all taxes, fees, license charges, deposits, duties, tolls, royalties, commission or other charges which may be levied on account of his operations in executing the contract.

2.8.5 While BHEL would pay the inspection fees and Registration fees of Boiler & explosive/Electrical Inspectorate, all other arrangements for site visits periodically by the Inspectorate to site, Inspection certificate etc. will have to be made by contractor. However, BHEL will not make any payment to the Inspectorate in connection with contractor's Welders/Electricians qualification tests etc.

2.8.6 Contractor shall be responsible for provision of Health and Sanitary arrangements (more particularly described in Contract Labour Regulation & Abolition Act), Safety precautions etc. as may be required for safe and satisfactory execution of contract.

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

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

2.8.9 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 is responsibility of the contractor to make good the losses or compensate for the same.

2.8.10 All the properties/equipment/components of BHEL/their Client loaned with or without deposit to the contractor in connection with the contract shall remain properties of BHEL/their Client.

2.8.11 The contractor shall use such properties for the purpose of execution of this contract. All such properties/equipment/components shall be deemed to be in good condition when received by the contractor unless he notifies within 48 hours to the contrary. The contractor shall return them in good condition as and when required by BHEL/their Client. In case of non-return, loss, damage, repairs etc, the cost thereof as may be fixed by BHEL Engineer will be recovered from the contractor

2.8.12 Any delay in completion of works/or non-achievement of periodical targets due to the reasons attributable to the contractor, the same may have to be compensated by the contractor either by increasing manpower and resources or by working extra hours and/or by working more than one shift. All these are to be carried out by the contractor at no extra cost.

2.8.13 The contractor shall arrange, coordinate his work in such a manner as to cause no hindrance to other agencies working in the same premises.

2.8.14 All safety rules and codes applied by the Client/BHEL at site shall be observed by the contractor without exception. The contractor shall be responsible for the safety of the equipment/material and works to be performed by him and shall maintain all light, fencing guards, slings etc. or other protection 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. Due precautions shall be taken against fire hazards and atmospheric conditions. Suitable number of Clerical staff, watch and ward, store keepers to take care of equipment/materials and construction tools and tackles shall be posted at site by the contractor till the completion of work under this contract. The contractor shall arrange for such safety devices as are necessary for such type of work and carry out the requisite site tests of handling equipment, lifting tools, tackles etc. as per prescribed standards and practices. Contractor has to ensure the implementation of Health, Safety and Environment (HSE) requirements as per directions given by BHEL/Customer. The contractor has to assist in HSE audit by BHEL/Customer and submit compliance Report. The contractor has to generate and submit record/reports as per HSE plan/activities as per instruction of BHEL/Customer. All tools, plant and equipment brought to the site shall become the property of BHEL and shall not be removed from the site without the prior written approval from BHEL. When the work is finally completed or the Contractor is determined for reasons other than the defaults of the contract, he shall forthwith remove from the site all tools, plants, equipment etc., (other than those as may have been provided by BHEL) and upon such removal, the same shall revert in, and become the property of the contractor.

2.8.15 The contractor will be directly responsible for payment of wages to his workmen on specified date of respective month declared as per applicable Labour Act. A pay roll sheet giving all the payments given to the workers and duly signed by the contractor's representative should be furnished to BHEL site for record purpose.

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

2.8.17 Also, no idle charges will be admissible in the event of any stoppage caused in the work resulting in contractor's labour and Tools & Plants being rendered idle due to any reason at any time.

2.8.18 The contractor shall take all reasonable care to protect the materials and work till such time the plant/equipment has been taken over by BHEL or their Client whichever is earlier.

2.8.19 The contractor shall not stop the work or abandon the site for whatsoever reason of dispute, excepting force majeure conditions. All such problems/disputes shall be separately discussed and settled without affecting the progress of work. Such stoppage or abandonment shall be treated as breach of contract and dealt with accordingly

2.8.20 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. If the work is executed in Factory premises, no hutment will be allowed.

2.8.21 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.

2.8.22 The Contractor to note that some of BHEL's T&Ps/MMDs may not be 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.

2.8.23 The contractor shall provide all watchmen necessary, for the protection of the site, the work, the materials, the tools , plant, equipment and anything else lying on the site during the progress of the work. He shall solely be responsible for and shall take all reasonable and proper steps for protecting, securing , lighting and watching all places on or about the work and the site which may be dangerous to any person whom so ever.

2.8.24 **SITE DRAINAGE:** All water that may accumulate on the site during the process of the work, or in trenches and excavations shall be removed to the entire satisfaction of the Engineer-in-charge and at Contractors expense.

2.8.25 **INSPECTION OF THE WORK:** BHEL Officers concerned with the Contract shall have power at any time to inspect and examine any part of the work and the contractor shall give such facilities as may be required to given for such inspection and examination.

2.8.26 In case the contractor is required to undertake any work outside the scope of this contract, the rates payable shall be those mutually agreed upon if the item rates are not mentioned in existing contract

- i. For any item of wok required to be carried out after the contract has been awarded and which is not covered by Contractors Schedule but is covered by C.P.W.D. schedule of rates the rate payable for such a fresh item will be derived from updated C.P.W.D. schedule of rates by the method of proportion as follows:

- ii. Rate as per estimated updated C.P.W.D DSR and loading tender excess (plus or minus) on pro-rata basis for nearest analogous items. For other items rate as per estimated C.P.W.D DSR and loading tender excess(plus or minus)
- iii.If rates are not available in C.P.W.D. DSR, deviated item rates will be derived from market rate with 15% profit and overheads.

## **2.9 PROGRESS MONITORING, MONTHLY REVIEW AND PERFORMANCE EVALUATION**

2.9.1 A detailed plan/programme for completion of the contractual scope of work as per the time schedule given in the contract shall be jointly agreed between BHEL and Contractor, before commencement of work . The above programme shall be supported by month wise deployment of resources viz Manpower, T&P, Consumables, etc. Progress will be reviewed periodically (Daily/Weekly/Monthly) vis a vis this jointly agreed programme. The Contractor shall submit periodical progress reports (Daily/Weekly/Monthly) and other reports/information including manpower, consumables, T&P mobilization etc as desired by BHEL.

2.9.2 Monthly progress review between BHEL and Contractor shall be based on the agreed programme as above, availability of inputs/fronts etc, and constraints if any, as per prescribed formats. Manpower, T&P and consumable reports as per prescribed formats shall be submitted by contractor every month. Release of RA Bills shall be contingent upon certification by BHEL Site Engineer of the availability of the above prescribed formats duly filled in and signed.

2.9.3 The burden of proof that the causes leading to any shortfall is not due to any reasons attributable to the contractor is on the contractor himself. The monthly progress review shall record shortfalls attributable to (i) Contractor, (ii) Force Majeure Conditions, and (iii) BHEL

## **2.10 TIME OF COMPLETION**

2.10.1 Time is essence of the contract. The time schedule shall be as prescribed in the Contract. The time for completion shall be reckoned from the date of commencement of work at Site as certified by BHEL Engineers

2.10.2 The entire work shall be completed by the contractor within the time schedule or within such extended periods of time as may be allowed by BHEL under clause 2.11

## **2.11 EXTENSION OF TIME FOR COMPLETION**

2.11.1 If the completion of work as detailed in the scope of work gets delayed beyond the contract period, the contractor shall request for an extension of the contract and BHEL at its discretion may extend the Contract.

2.11.2 Based on the monthly reviews jointly signed, the works balance at the end of original contract period less the backlog attributable to the contractor shall be quantified, and the number of months of 'Time extension' required for completion of the same shall be jointly worked out. Within this period of 'Time extension', the contractor is bound to complete the portion of backlog attributable to the contractor. Any further 'Time extension' or 'Time extensions' at the end of the previous extension shall be worked out similarly.

2.11.3 However if any 'Time extension' is granted to the contractor to facilitate continuation of work and completion of contract, due to backlog attributable to the contractor alone, then it shall be without prejudice to the rights of BHEL to impose penalty/LD for the delays attributable to the contractor, in addition to any other actions BHEL may wish to take at the risk and cost of contractor.

2.11.4 A joint programme shall be drawn for the balance amount of work to be completed during the period of 'Time Extension', along with matching resources (with weightages) to be deployed by the contractor as per specified format. Review of the programme and record of shortfall shall be done every month of the 'Time extension' period in the same manner as is done for the regular contract period.

2.11.5 During the period of 'Time extension', contractor shall maintain their resources as per mutually agreed program

2.11.6 At the end of total work completion as certified by BHEL Engineer, and upon analysis of the total delay, the portion of time extensions attributable to (i) Contractor, (ii) Force majeure conditions, and (iii) BHEL, shall be worked out and shall be considered to be exhausted in the same order. The total period of time extensions shall be the sum of (i), (ii) and (iii) above and shall be equal to period between the scheduled date of completion and the actual date of completion of contract. LD shall be imposed/levied for the portion of time extensions attributable to contractor and recoverable from the dues payable to the contractor.

## **2.12 OVERRUN COMPENSATION (THIS CLAUSE IS NOT APPLICABLE IN BHEL FACTORY & TOWNSHIP PREMISES)**

2.12.1 Over Run Compensation (ORC) is payable by way of rate revisions for periods beyond original, contract period subject to the following terms and conditions.

2.12.2 Rates shall be increased by 10% for the first twelve months of one or more extensions beyond original contract period. For the next twelve months of further extensions if any, rates shall be increased as above by 10% over the previous twelve months, and similarly for each subsequent twelve months extension.

*2.12.3 Should there be any 'Time extension' for reasons attributable only to the contractor, then the work shall be executed by the contractor at the rates applicable for the period the work was planned*

*2.12.4 Payment of ORC shall be regulated as follows:*

*i) Contractor is entitled to Over Run Compensation (ORC) only for the portion of backlog attributable to BHEL.*

*ii) 50% of the compensation is allocated for deployment of resources agreed as per the joint programme drawn vide 2.11.4. Payment shall however be based on the actual deployment of resources for the month as certified by BHEL, as per weightages assigned therein*

*iii) 50% of the compensation, is allocated for achieving of planned progress agreed as per the joint programme drawn vide 2.11.4. Payment shall be on pro rata basis for actual achieved quantities*

*iv) Total Over Run Compensation shall be limited to 10% of the executed contract value as certified in Final Bill. For this purpose executed contract value excludes PVC, ORC, Supplementary/Additional Items and Extra Works done on Man-day rate basis*

*2.12.5 Contractor shall not be entitled for any Over Run Compensation (ORC) for the portion of backlog attributable to the contractor. Such works shall be executed at the rates applicable for the period the work was planned*

### **2.13 QUANTITY VARIATION**

***2.13.1 The quoted rates shall remain firm irrespective of any variations in the individual quantities.***

### **2.14 EXTRA WORKS**

*2.14.1 All rectifications/modifications, revamping, and reworks required for any reasons not attributable to the contractor, or needed due to any change in deviation from drawings and design of equipment, operation/maintenance requirements, mismatching, or due to damages in transit, storage and erection/commissioning, and other allied works which are not very specifically indicated in the drawings, but are found essential for satisfactory completion of the work, will be considered as extra works.*

*2.14.2 Extra works arising on account of the contractor's fault, irrespective of time consumed in rectification of the damage/loss, will have to be carried out by the contractor free of cost. Under such circumstances, any material and consumable required for this purpose will also have to be arranged by the contractor at his cost.*

2.14.3 All the extra work should be carried out by a separately identifiable gang, without affecting routine activities. Daily log sheets in the pro-forma prescribed by BHEL should be maintained and shall be signed by the contractor's representative and BHEL engineer. No claim for extra work will be considered/entertained in the absence of the said supporting documents i.e. daily log sheets. Signing of log sheets by BHEL engineer does not necessarily mean the acceptance of such works as extra works.

2.14.4 BHEL retains the right to award or not to award any of the major repair/rework/modification/rectification/fabrication works to the contractor, at their discretion without assigning any reason for the same

2.14.5 After eligibility of extra works is established and finally accepted by BHEL engineer/designer, payment will be released on competent authority's approval at the following rate.

**MAN-HOUR RATE FOR ELIGIBLE EXTRA WORKS:** Single composite average labour man-hour rate, including overtime if any, supervision, use of tools and tackles and other site expenses and incidentals, consumables for carrying out any major rework/repairs/rectification/modification/fabrication as certified by site as may arise during the course of erection, testing, commissioning or extra works arising out of transit, storage and erection damages, payment, if found due will be as per applicable minimum wage act

2.14.6 The above composite labour man hour rate towards extra works shall remain firm and not subject to any variation during execution of the work. PVC will not be applicable for extra works. Rate revision, Over Run Charges/compensation etc will not be applicable due to extra works.

2.14.7 Extra Works for Civil Packages shall be regulated as follows

i) Rates for Extra Works arising due to (1) non availability of BOQ (Rate Schedule), OR (2) change in Specifications of materials/works (3) rectification/modification/dismantling & re erecting etc due to no fault of Contractor, shall be in the order of the following:

a) Item rates are to be derived from similar nature of items in the BOQ (Rate Schedule) with applicable escalation derived from All India Consumer Price Index for Whole Sale Commodities.

b) As per applicable updated CPWD-DSR (or latest edition) with applicable escalation derived; Notification issued by the office of CPWD for 'Cost Index' in that Region where the project is being executed,

c) Item rates are to be worked out on the basis of prevailing market rates mutually agreed between BHEL and Contractor, plus 15% towards Contractor's overheads and profit.

*ii) PVC and ORC will not applicable be for (i) above.*

## **2.15 SUPPLEMENTARY ITEMS**

### **2.15.1 For NON Civil Works**

*Supplementary items are items/works required for completion of entire work but not specified in the scope of work. Subject to certification of such items/works as supplementary items by BHEL Engineer, rates shall be derived on the basis of any one of the following on mutual agreement:*

*i) Based on percentage breakup/rates indicated for similar/nearby items*

*ii) In case (i) above does not exist, then BHEL/site may derive the percentage breakup/rates to suit the type of work*

### **2.15.2 For Civil Works**

*i) Rates for Supplementary Works/Additional Works arising out due to additions/alterations in the original scope of works as per contract subject to certification of BHEL Engineer shall be worked out as under:*

*a) Item rates which are available in existing BOQ (Rate Schedule) shall be operated with applicable escalation derived from All India Consumer Price Index for Whole Sale Commodities*

*b) Items of works which are not available in existing BOQ shall be operated as an 'Extra Works' and rate shall be derived as per clause no 2.14*

*ii) Execution of Supplementary Works/Additional Works through the Contractor shall be at the sole discretion of BHEL, and shall be considered as part of executed contract value for the purpose of Quantity Variation as per clause 2.13*

*iii) BHEL Engineer's decision regarding fixing the rate as above is final and binding on the contractor.*

*iv) PVC and ORC will not be applicable for (i) above.*

## **2.16 STRIKES & LOCKOUT**

*2.16.1 The contractor will be fully responsible for all disputes and other issues connected with his labour/employee. In the event of the contractor's labour/employee resorting to strike or the Contractor resorting to lockout and if the strike or lockout declared is not settled within a period of 15 days, BHEL shall have the right to get the work executed through any other*

*agencies and the cost so incurred by BHEL along with Overhead charges of 35% shall be deducted from the Contractor's bills along with overhead of 35%*

*2.16.2 For all purposes whatsoever, the employees of the contractor shall not be deemed to be in the employment of BHEL*

## **2.17 FORCE MAJEURE**

*The following shall amount to Force Majeure:-*

*2.17.1 Acts of God, act of any Government, War, Sabotage, Riots, Strike, Civil commotion, Police action, Revolution, Flood, Fire, Cyclones, Earth quake and Epidemic and other similar causes over which the contractor has no control.*

*2.17.2 If the contractor suffers delay in the due execution of the contractual obligation due to delays caused by force majeure as defined above, the agreed time of completion of the job covered by this contract or the obligations of the contractor shall be extended by a period of time equal to period of delay, provided that on the occurrence of any such contingency, the contractor immediately reports to BHEL in writing the causes of delay and the contractor shall not be eligible for any compensation.*

## **2.18 ARBITRATION & RECONCILIATION**

*2.18.1 In case amicable settlement is not reached in the event of any dispute or difference arising out of the execution of the Contract or the respective rights and liabilities of the parties or in relation to interpretation of any provision by the Contractor in any manner touching upon the Contract, such dispute or difference shall (except as to any matters, the decision of which is specifically provided for therein) be referred to the sole arbitration of the arbitrator appointed by BHEL/In charge.*

*The award of the Arbitrator shall be binding upon the parties to the dispute Subject as aforesaid, the provisions of Arbitration and Reconciliation Act 1996 (India) or statutory modifications or reenactments thereof and the rules made there under and for the time being in force shall apply to the arbitration proceedings under this clause. 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*

*2.18.2 In case of Contract with Public Sector Enterprise (PSE) or a Government Department, the following shall be applicable:*

*In the event of any dispute or difference relating to the interpretation and application of the provisions of the Contract, such dispute or difference shall be referred to by either party to the arbitration of one of the arbitrators in the department of public enterprises. The award of the arbitrator shall be binding upon the parties to the dispute, provided, however, any party aggrieved by such award may make further reference for setting aside or revision of the award to the Law Secretary, Department of Legal Affairs, Ministry of Law and Justice, Government of India. Upon such reference the dispute shall be decided by the Law Secretary or the Special Secretary or Additional Secretary when so authorized by the Law Secretary, whose decision shall bind the parties hereto finally and conclusively.*

*2.18.3 The cost of arbitration shall be borne equally by the parties.*

*2.18.4 Work under the contract shall be continued during the arbitration proceedings*

## **2.19 PAYMENTS**

*Payments to Contractors are made in any one of the following forms*

### *2.19.1 Running Account Bills (RA Bills)*

*i) These are for interim payments when the contracts are in progress. The bills for such interim payments are to be prepared by Contractor in prescribed formats (RA Bill forms).*

*ii) Payments shall be made according to the extent of work done as per measurements taken up to the end of the calendar month and in line with the terms of payments described in the Tender documents along with relevant statutory documents applicable for the work.*

*iii) Recoveries on account of electricity, water, statutory deductions, etc are made as per terms of contract*

*iv) Full rates for the work done shall be allowed only if the quantum of work has been done as per the specifications stipulated in the contract. If the work is not executed as per the stipulated specifications, BHEL may ask the contractor to re do the work according to the required specifications, without any extra cost. However, where this is not considered necessary 'OR' where the part work is done due to factors like non-availability of material to be supplied by BHEL 'OR' non availability of fronts 'OR' non availability of drawings, fraction payment against full rate, as is considered reasonable, may be allowed with due regard for the work remaining to be done. BHEL decision in this regard will be final and binding on the contractor.*

v) In order to facilitate part payment, BHEL Site Engineer at his discretion may further split the contracted rates/percentages to suit site conditions, cash flow requirements according to the progress of work

#### **2.19.2 Final Bill**

*Final Bill* is used for final payment on closing of Running Account for works or for single payment after completion of works. *Final Bill* shall be submitted as per prescribed format after completion of works as per scope and upon material reconciliation, along with the following.

i) *No Claim Certificate* by contractor

ii) *Clearance certificates* where ever applicable viz *Clearance Certificates* from Customer, various *Statutory Authorities* like Labour department, PF Authorities, Commercial Tax Department, etc

iii) *Indemnity bond* as per prescribed format BHEL shall settle the final bills after deducting all liabilities of Contractor to BHEL

#### **2.20 PERFORMANCE GUARANTEE FOR WORKMANSHIP**

2.20.1 Even though the work will be carried out under the supervision of BHEL Engineers the Contractor will be responsible for the quality of the workmanship and shall guarantee the work done for a period of as mentioned in the contract/NIT from the date of commencement of guarantee period as defined in Technical Conditions of Contract, for good workmanship and shall rectify free of cost all defects due to faulty erection detected during the guarantee period. 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 the balance security deposit.

2.20.2 BHEL shall release the balance security deposit subject to the following

i) Contractor has submitted *Final Bill*

ii) *Guarantee period* as per contract has expired

iii) Contractor has furnished *No Claim Certificate* in specified format

iv) BHEL Site Engineer/Construction Manager has furnished the *No Demand Certificate* in specified format

v) Contractor has carried out the works required to be carried out by him during the period of Guarantee and all expenses incurred by BHEL on carrying out such works is included for adjustment from the Guarantee money refundable.

## **2.21 CLOSING OF CONTRACTS**

The Contract shall be considered completed and closed upon completion of all contractual obligations and settlement of Final Bill or completion of Guarantee period whichever is later. Upon closing of Contract, BHEL shall issue a completion certificate as per standard format, based on specific request of Contractor.

## **2.22 REVERSE AUCTION/PRICE BID OPENING:**

- BHEL reserves the right to go for reverse auction at any point of time before opening of Price Bid.
- Bids with non-acceptance of reverse auction will be liable for rejection.
- Opening of Price Bid at discretion of BHEL.
- BHEL shall be at liberty to cancel the tender at any time, before ordering, without assigning any reason.

## **2.23 SUSPENSION OF BUSINESS DEALINGS**

BHEL reserves the right to take action against Contractors who either fail to perform or Tenderers/Contractor who indulge in malpractices, by suspending business dealings with them in line with BHEL guidelines issued from time to time.

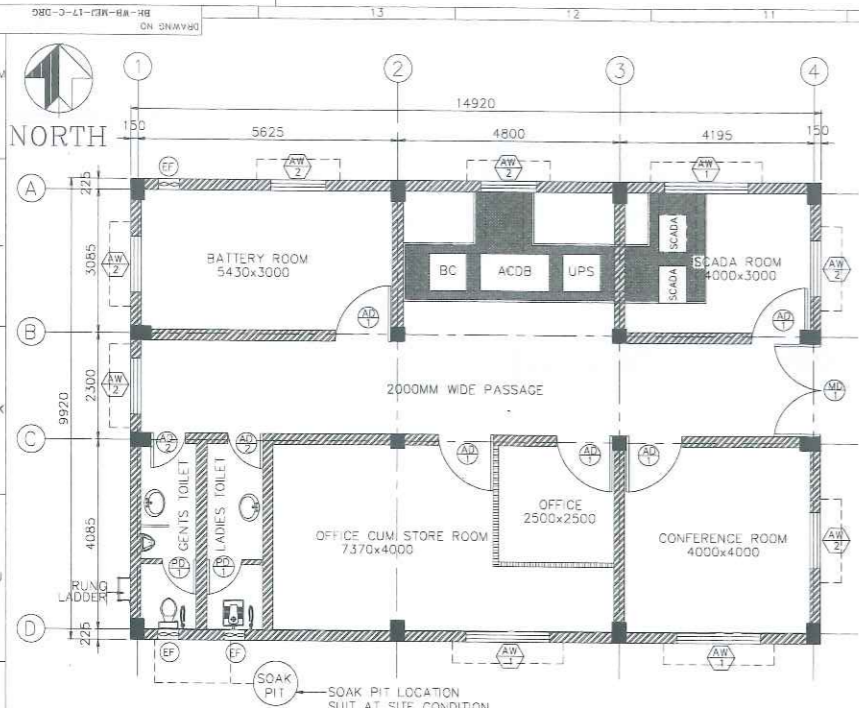
## **2.24 OTHER ISSUES**

2.24.1 Value of Non judicial Stamp Paper for Bank Guarantees and for Contract Agreement shall be not less than Rs 200/- unless otherwise required under relevant statutes.

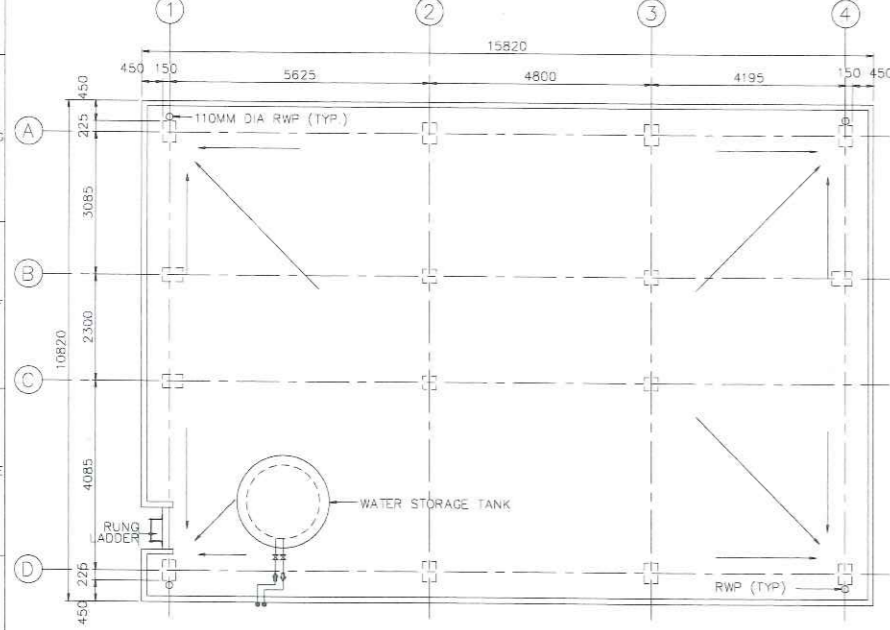
2.24.2 In case of any conflict between the General Conditions of Contract and Special Conditions of Contract, provisions contained in the Special Conditions of Contract shall prevail.

2.24.3 Unless otherwise specified in NIT, offers from consortium /JVs shall not be considered.

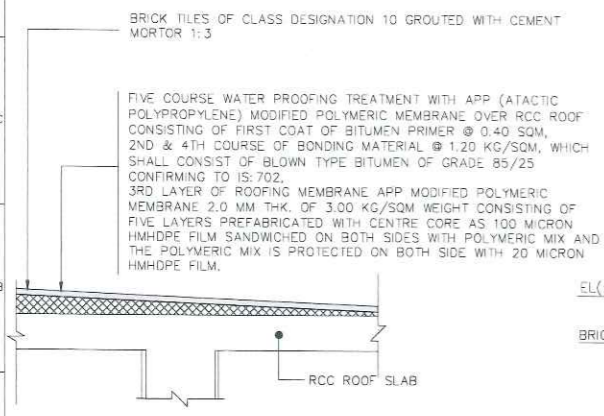
2.24.4 BHEL may not insist for signing of Contract Agreements in respect of low value and short time period contracts



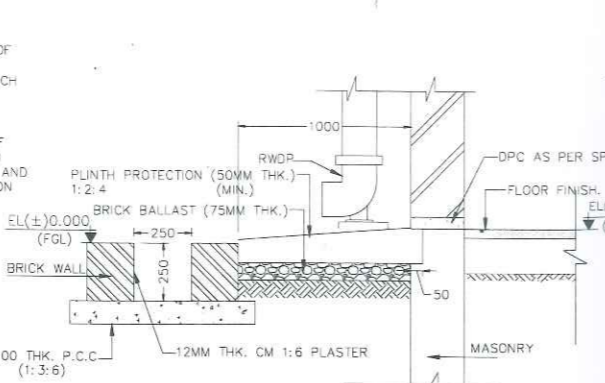
GROUND FLOOR PLAN (SCALE 1:75)



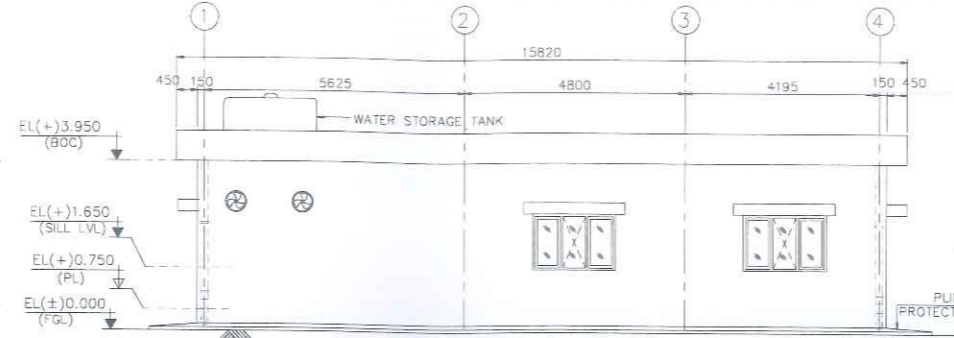
TERRACE FLOOR PLAN (SCALE 1:75)



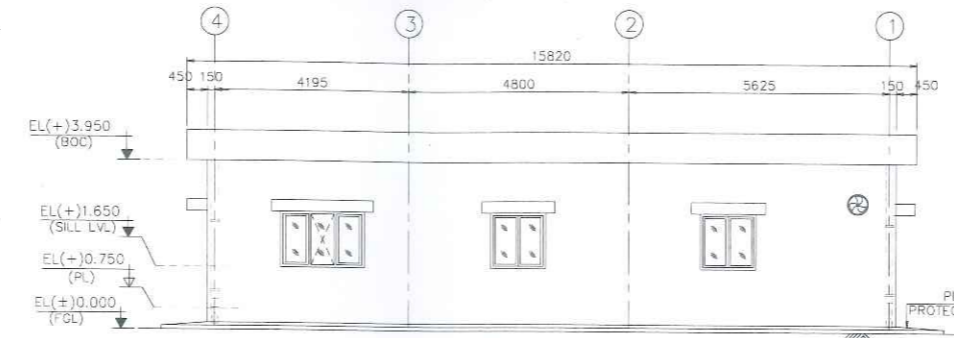
TYP.DETAIL OF ROOF WATER PROOFING TREATMENT (SCALE 1:15)



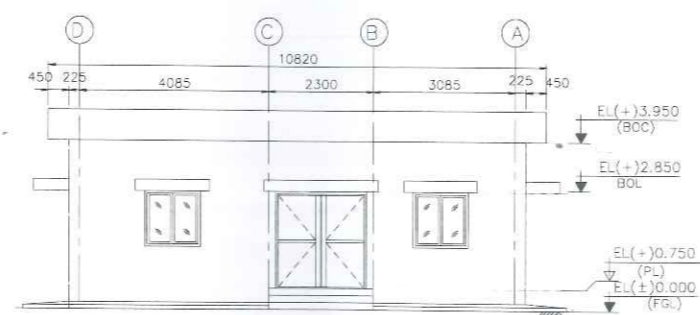
TYP.DETAIL OF PLINTH PROTECTION AND GARLAND DRAIN (SCALE 1:15)



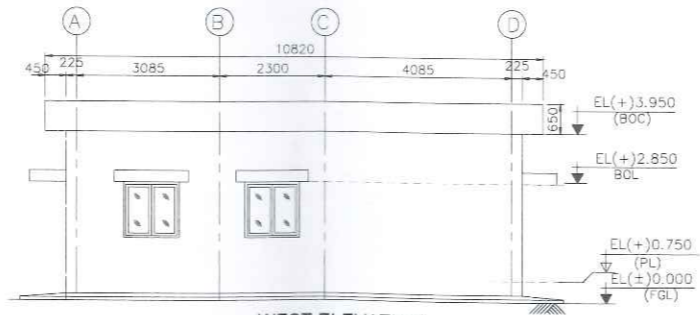
SOUTH ELEVATION (SCALE 1:75)



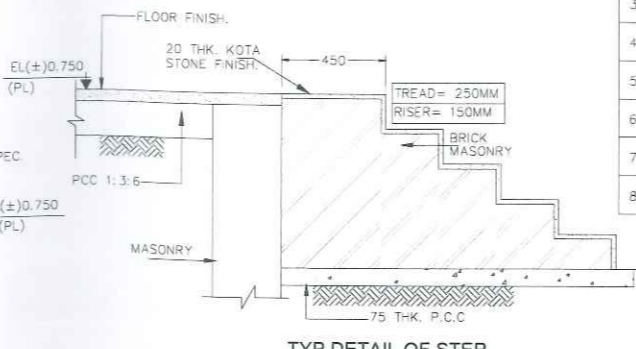
NORTH ELEVATION (SCALE 1:75)



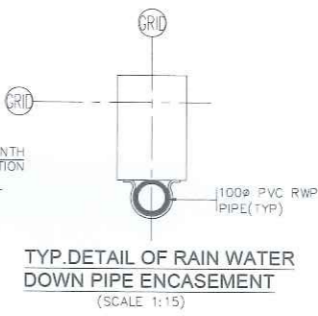
EAST ELEVATION (SCALE 1:75)



WEST ELEVATION (SCALE 1:75)



TYP.DETAIL OF STEP (SCALE 1:15)



TYP.DETAIL OF RAIN WATER DOWN PIPE ENCASEMENT (SCALE 1:15)

NOTES

- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH CONTRACT TERMS AND CONDITIONS, SPECIFICATION AND SCHEDULE OF ITEMS.
- ALL DIMENSIONS ARE IN MILLIMETER AND LEVELS ARE IN METERS, UNO
- FINISHED FLOOR LEVEL CORRESPONDS TO EL(+0.750M WHICH IS 750MM ABOVE FGL.
- FOR WINDOW FLOAT GLASS OF 4MM, FOR DOORS AND PARTITION FLOAT GLASS OF 5.5/6MM.
- ALL ALUMINIUM SECTION SHALL BE ANODIZED WITH MIN 20 MICRONS.
- WINDOWS SHALL BE PROVIDED WITH ALUMINIUM GRILLS OF 2.5MM THK.
- INTERNAL WALL PLASTERING (1:5) 12MM AND EXTERNAL WALL PLASTERING (1:6) 15MM.
- CEILING PLASTERING SHALL BE 6MM THK. IN 1:3 CEMENT SAND MORTAR.
- CABLE TRENCHES SHALL BE OF RCC (150MM THK.) OR BRICK WALL (250MM THK.), CLEAR WIDTH 800MM, CLEAR DEPTH 100MM.
- CHAJJA PROJECTION (i) FOR DOOR = 600MM (ii) FOR WINDOW = 450MM
- FGL SHALL BE MEAN FINISHED GROUND LEVEL AFTER NECESSARY LAND DEVELOPMENT BY FILLING AND/OR CUTTING AS THE CASE MAY BE, IF ANY.
- ROOF TREATMENT SHALL BE DONE AS PER RELEVANT IS STANDARD.
- EXISTING GROUND LEVEL IS ASSUMED TO BE HIGHER THAN HFL.

LEGEND

- 230 THK BRICK WALL / 115 THK BRICK WALL
- ALUMINIUM PARTITION
- CHEQ. PLATE (5MM THK.)
- FGL - FINISHED GROUND LEVEL
- TOC - TOP OF CONCRETE
- TYP - TYPICAL
- TOP - TOP OF PARAPET
- EL - ELEVATION
- FFL - FINISHED FLOOR LEVEL
- BOL - BOTTOM OF CONCRETE
- BOL - BOTTOM OF LINTEL
- LVL - LEVEL

SCHEDULE OF JOINERY

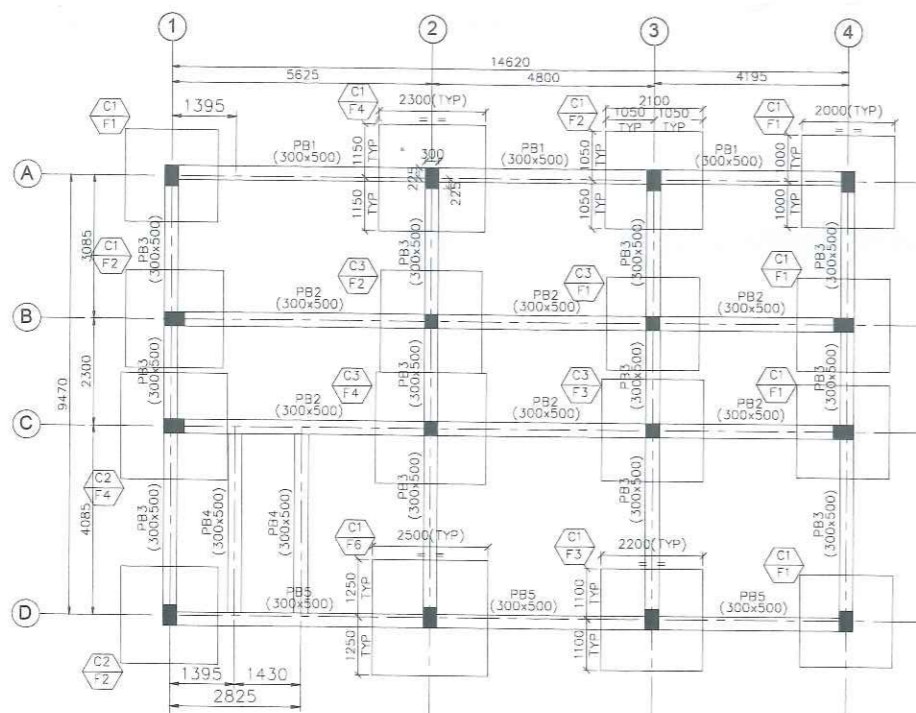
SYMBOL	Nos	SILL LVL AT EL...	MASONRY OPENING WIDTH	HEIGHT	REMARKS
MD	01	+0.750	2000	2100	ALUMINIUM FRAMED WITH GLAZED DOOR - DOUBLE SHUTTER
AD	05	+0.750	1200	2100	ALUMINIUM FRAMED WITH GLAZED DOOR - SINGLE SHUTTER
AD	03	+0.750	750	2100	ALUMINIUM FRAMED WITH GLAZED DOOR - SINGLE SHUTTER
PD	02	+0.750	750	2100	PVC DOOR SHUTTER WITH UPVC DOOR FRAME - SINGLE SHUTTER
AW 1	03	+1.650	1800	1200	ALUMINIUM FRAMED GLAZED WINDOW
AW 2	06	+1.650	1200	1200	ALUMINIUM FRAMED GLAZED WINDOW
EF	03	+2.850	450*		EXHAUST FAN

FINISH SCHEDULE:

SERIAL NUMBER	ROOMS	FLOORS		INTERNAL WALLS & CEILING		EXTERNAL WALL
		40MM THK. CEMENT CONCRETE FLOORING (1:2:4)	20MM THK. HEAVY DUTY VERIFIED TILE FLOORING (TILE 8MM THK.)	SKIRTING	PAINTING	
1	STORE ROOM	•		CEMENT SKIRTING		HEAT REFLECTIVE SYNTHETIC ENAMEL PAINT
2	SCADA ROOM		•	VITRIFIED TILE SKIRTING		
3	CONFERENCE ROOM		•	ACID/ALKALI RESISTANT PAINT		
4	TOILET		•	ACRYLIC DISTEMPER		
5	OFFICE ROOM		•			
6	BATTERY ROOM		•			
7	RECORD ROOM		•			
8	STEPS		•			

APPROVED

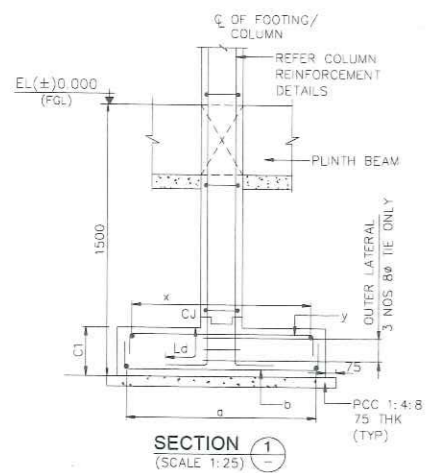
WBS&PV CONTRACT  
 BHARATI ENGINEERING CONSULTANTS LTD  
 ELECTRICALS DIVISION BANGALORE  
 Siddhartha Chattopadhyay  
 Chief Engineer  
 Solar Power Generation Deptt.  
 CONTROL ROOM - ARCHITECTURE PLAN, ELEVATIONS AT SANTALDIH  
 SCALE 1:100 DRAWING NO. BH-WB-S&P-17-C-DWG  
 SHEET 1 OF 1 REV. 00



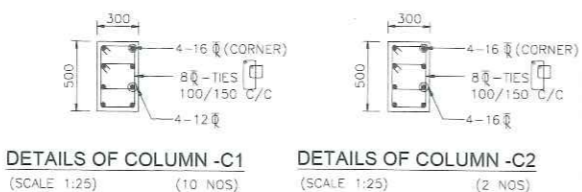
**FOUNDATION LAYOUT**  
(SCALE 1:75)  
(TOC OF PLINTH BEAM AT EL(±)0.000M UNO)

**FOOTING SCHEDULE**

FOOTING MARK	TOTAL NO	FOOTING SIZE			REINFORCEMENT			
		A1 (EW)	B1 (NS)	C1	a	b	x	y
F1	6	2000	2000	300	12 $\phi$ -150	12 $\phi$ -150	10 $\phi$ -150	10 $\phi$ -150
F2	4	2100	2100	300	12 $\phi$ -150	12 $\phi$ -150	10 $\phi$ -150	10 $\phi$ -150
F3	2	2200	2200	300	12 $\phi$ -150	12 $\phi$ -150	10 $\phi$ -150	10 $\phi$ -150
F4	3	2300	2300	300	12 $\phi$ -150	12 $\phi$ -150	10 $\phi$ -150	10 $\phi$ -150
F5	1	2500	2500	350	12 $\phi$ -150	12 $\phi$ -150	10 $\phi$ -150	10 $\phi$ -150

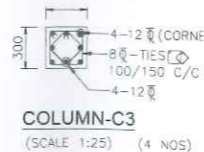


**SECTION 1**  
(SCALE 1:25)

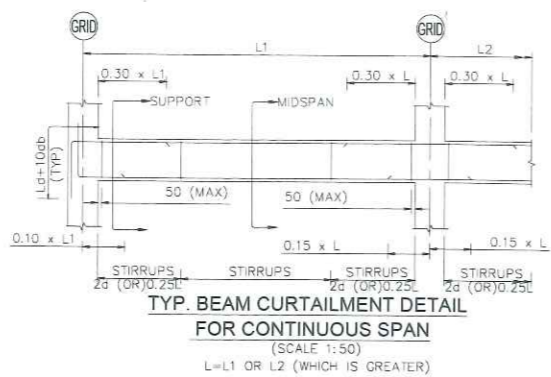


**DETAILS OF COLUMN -C1**  
(SCALE 1:25) (10 NOS)

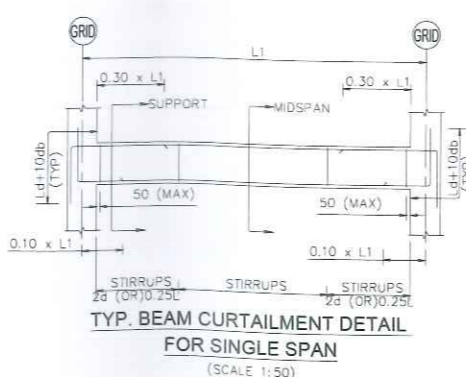
**DETAILS OF COLUMN -C2**  
(SCALE 1:25) (2 NOS)



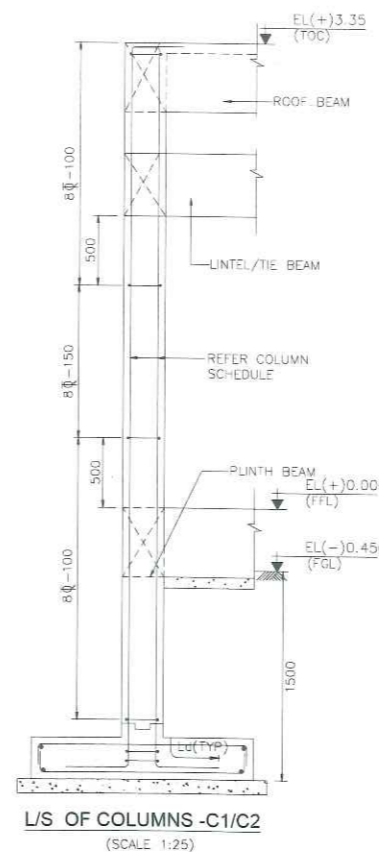
**COLUMN-C3**  
(SCALE 1:25) (4 NOS)



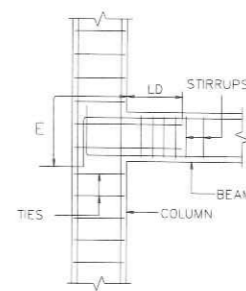
**TYP. BEAM CURTAILMENT DETAIL FOR CONTINUOUS SPAN**  
(SCALE 1:50)  
L=L1 OR L2 (WHICH IS GREATER)



**TYP. BEAM CURTAILMENT DETAIL FOR SINGLE SPAN**  
(SCALE 1:50)



**LS OF COLUMNS -C1/C2**  
(SCALE 1:25)



**TYP COLUMN-BEAM CONNECTION DETAIL**

**EMBEDDED LENGTH OF MAIN REINFORCEMENT "E" OF BEAM IN END COLUMN (TOP & BOTTOM)**

DIA OF BAR (MM)	EMBEDDED LENGTH "E" (MM)
12	800
16	1100
20	1350
25	1675

**SCHEDULE OF PLINTH BEAMS (SCALE 1:25)**

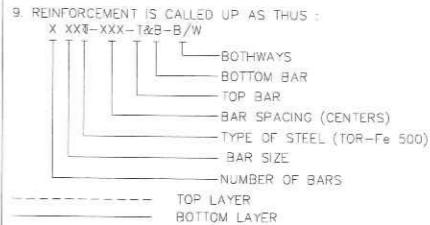
BEAM MARK	SUPPORT	MID SPAN
PB1	EL(±)0.000 (TOC) (FGL) 300 3-16 $\phi$ 500 8 $\phi$ -100 3-16 $\phi$	2-16 $\phi$ 8 $\phi$ -150 3-16 $\phi$
PB2	EL(±)0.000 (TOC) (FGL) 300 3-20 $\phi$ 500 8 $\phi$ -100 3-20 $\phi$	2-20 $\phi$ 8 $\phi$ -100 3-20 $\phi$
PB3	EL(±)0.000 (TOC) (FGL) 300 3-16 $\phi$ 500 8 $\phi$ -100 3-16 $\phi$	2-16 $\phi$ 8 $\phi$ -150 3-16 $\phi$
PB4	EL(±)0.000 (TOC) (FGL) 300 3-12 $\phi$ 500 8 $\phi$ -100 3-16 $\phi$	3-12 $\phi$ 8 $\phi$ -150 3-16 $\phi$
PB5	EL(±)0.000 (TOC) (FGL) 300 2-20 $\phi$ 500 8 $\phi$ -100 3-20 $\phi$	2-20 $\phi$ 8 $\phi$ -100 3-20 $\phi$

**NOTES**

- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE TERMS CONDITIONS, AND SPECIFICATIONS OF THE CONTRACT.
- EL(±)0.000M. CORRESPONDS TO THE FGL OF THE BUILDING
- ALL DIMENSIONS ARE IN MILLIMETER AND LEVELS ARE IN METERS, UNO.
- FGL SHALL BE FINISHED GROUND LEVEL. AFTER NECESSARY LAND DEVELOPMENT BY FILLING/CUTTINGS AS THE CASE MAY BE, IF ANY.
- GRADE OF CONCRETE SHALL BE OF M25 WITH 20MM DOWN AGGREGATES.
- REINFORCEMENT STEEL SHALL BE OF Fe 500 GRADE, CONFORMING TO IS 1786.
- CLEAR COVER TO REINFORCEMENT SHALL BE AS FOLLOWS:

DESCRIPTION	TOP	BOTTOM	SIDES
PLINTH BEAM	40	50	40
COLUMN	-	-	50
FOOTING	50	75	50

- LAP LENGTH (Ld) FOR REINFORCEMENT SHALL BE 50 DIA OF SMALLEST BAR BEING LAPPED.
- REINFORCEMENT IS CALLED UP AS THIS :  
X XXX-XXX-1&B-B/W



- NET SAFE BEARING CAPACITY CONSIDERED AT FOUNDING LEVEL IS 240KN/SQ.M AT 1.500M BELOW FGL. BASED ON THE GEOTECHNICAL INVESTIGATION REPORT OF M/s TECHPRO ENGINEERS PVT. LTD. FOR SANTALDIH

**LEGEND**

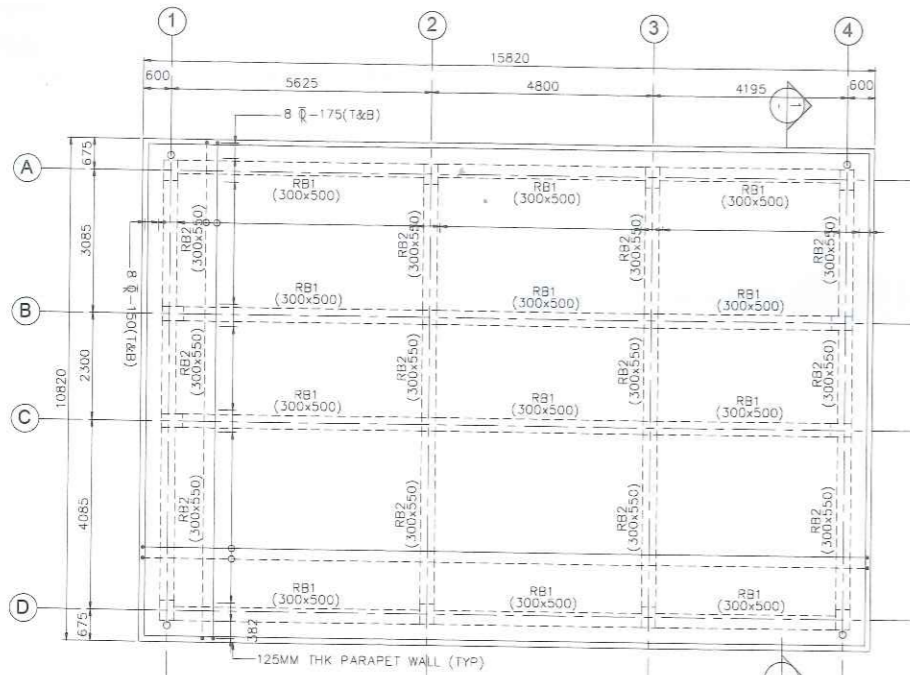
- B/C - BOTTOM OF CONCRETE
- C - CENTER LINE
- C/J - CONSTRUCTION JOINT
- EL - ELEVATION
- LVL - LEVEL
- Ld - DEVELOPMENT LENGTH
- PB - PLINTH BEAM
- THK - THICKNESS
- TOC - TOP OF CONCRETE
- TYP - TYPICAL
- UNO - UNLESS NOTED OTHERWISE
- Cx - COLUMN MARK
- Fx - FOOTING MARK

**REFERENCE DRAWING**

- BH-WB-SAN-17-C-DRG - CONTROL ROOM - ARCHITECTURE PLAN, ELEVATIONS AT SANTALDIH.

**APPROVED**  
Siddhartha Chattopadhyay  
Chief Engineer  
Solar Power Generation Deptt.

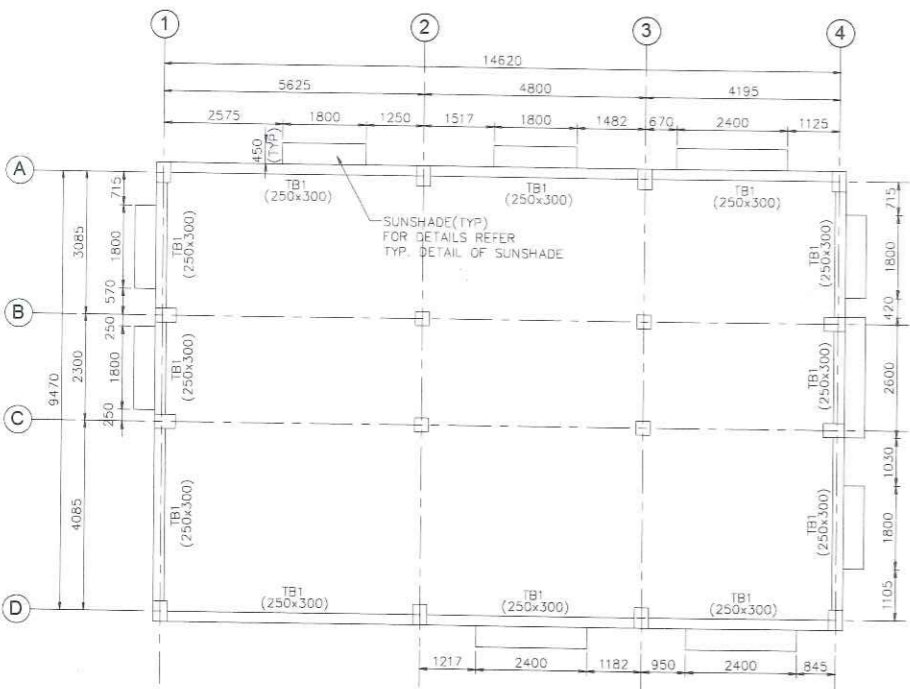
DEPT: SC&PV	PROJECT: WBSEDC 3x10MW PV POWER PLANT AT WEST BENGAL								
STATUS: CONTRACT									
DISTRIBUTION									
REV. NO.	DATE	BY	CHKD.	APPD.	REV. NO.	DATE	BY	CHKD.	APPD.
01	07.08.17	...	...	...	01	07.08.17	...	...	...
TITLE: CONTROL ROOM - LAYOUT AND DETAILS OF FOUNDATIONS, COLUMNS & PLINTH BEAMS AT SANTALDIH		SCALE: 1:100		DRAWING NO: BE-WB-SAN-CR-STR-DRG-COL		SHEET: 1 OF 1		REV. 00	



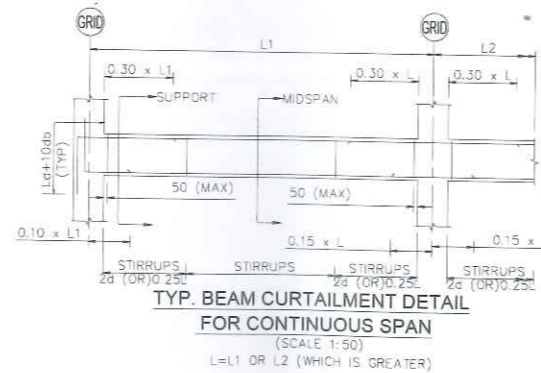
**ROOF BEAM & SLAB LAYOUT@ EL(+4.100M(TOC) LVL**  
(SCALE 1:75)  
(SLAB THICKNESS 150 MM UNO)

SCHEDULE OF ROOF BEAMS (SCALE 1:25)		
BEAM MARK	SUPPORT	MID SPAN
RB1		
RB2		

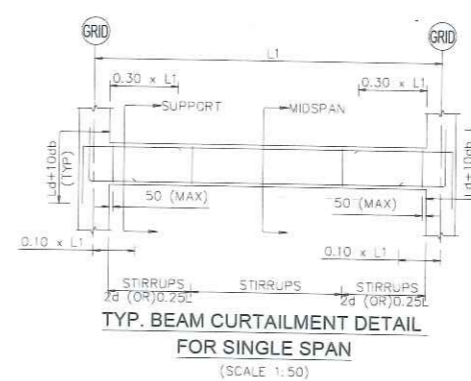
SCHEDULE OF TIE/LINTEL BEAMS (SCALE 1:25)		
BEAM MARK	SUPPORT	MID SPAN
TB1		



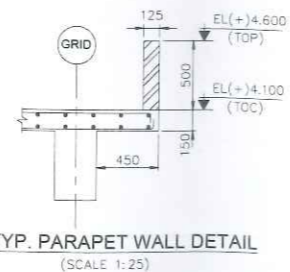
**TIE / LINTEL BEAM LAYOUT@ EL(+2.850M(BOC) LVL**  
(SCALE 1:75)



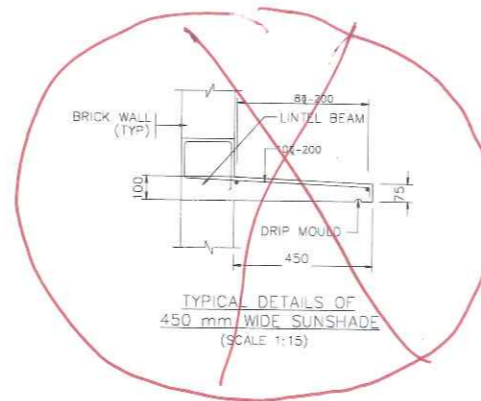
**TYP. BEAM CURTAILMENT DETAIL FOR CONTINUOUS SPAN**  
(SCALE 1:50)  
L=L1 OR L2 (WHICH IS GREATER)



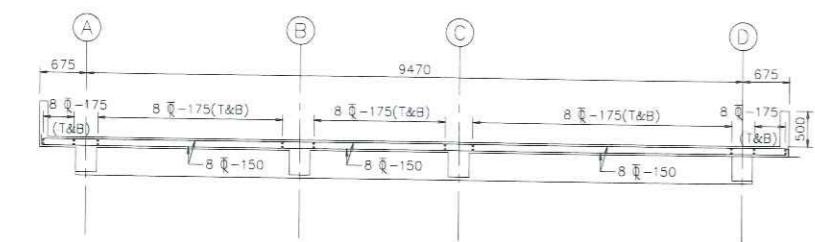
**TYP. BEAM CURTAILMENT DETAIL FOR SINGLE SPAN**  
(SCALE 1:50)



**TYP. PARAPET WALL DETAIL**  
(SCALE 1:25)



**TYPICAL DETAILS OF 450 mm WIDE SUNSHADE**  
(SCALE 1:15)



**SECTION C/S OF ROOF SLAB DETAIL**  
(SCALE 1:50)

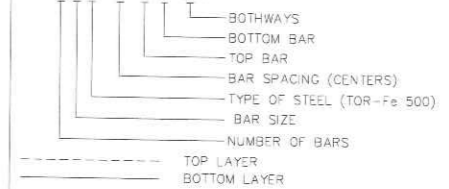
**NOTES**

- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE TERMS CONDITIONS, AND SPECIFICATIONS OF THE CONTRACT.
- EL(+4.00M) CORRESPONDS TO THE FGL OF THE BUILDING
- ALL DIMENSIONS ARE IN MILLIMETER AND LEVELS ARE IN METERS, UNO.
- FGL SHALL BE FINISHED GROUND LEVEL, AFTER NECESSARY LAND DEVELOPMENT BY FILLING/CUTTINGS AS THE CASE MAY BE, IF ANY.
- GRADE OF CONCRETE SHALL BE OF M25 WITH 20MM DOWN AGGREGATES
- REINFORCEMENT STEEL SHALL BE OF Fe 500 GRADE, CONFORMING TO IS 1786
- CLEAR COVER TO REINFORCEMENT SHALL BE AS FOLLOWS:

DESCRIPTION	TOP	BOTTOM	SIDES
ROOF BEAM	25	40	40
ROOF SLABS	30	30	30

8. LAP LENGTH (Ld) FOR REINFORCEMENT SHALL BE 50 DIA OF SMALLEST BAR BEING LAPPED.

9. REINFORCEMENT IS CALLED UP AS THIS :



**LEGEND**

- BOC - BOTTOM OF CONCRETE
- C - CENTER LINE
- C.J - CONSTRUCTION JOINT
- EL - ELEVATION
- LVL - LEVEL
- Ld - DEVELOPMENT LENGTH
- RB - ROOF BEAM
- THK - THICKNESS
- TOC - TOP OF CONCRETE
- TYP - TYPICAL
- UNO - UNLESS NOTED OTHERWISE
- TB - TIE/LINTEL BEAM

**REFERENCE DRAWING**

BH-WB-SAN-17-C-DWG - CONTROL ROOM - ARCHITECTURE PLAN, ELEVATIONS AT SANTALDIH.

*SAME AS INVERTER ROOM*

*APPROVED Subject to incorporation of corrections & corresponding changes will subsequently come up*

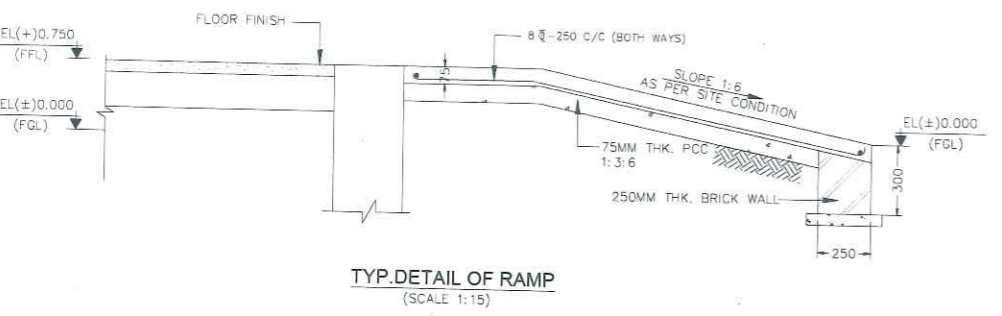
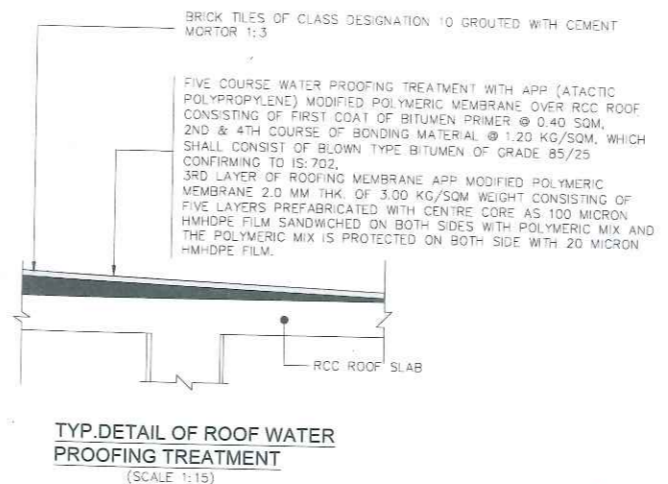
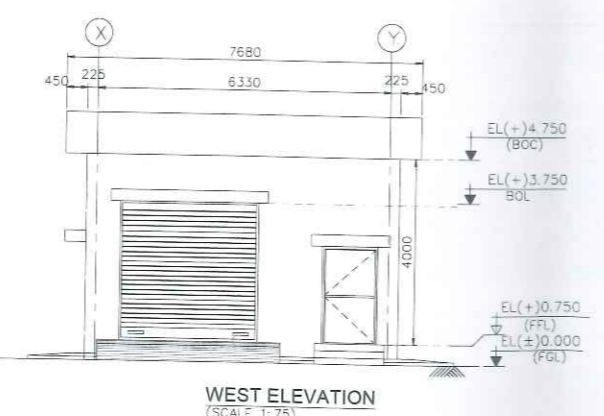
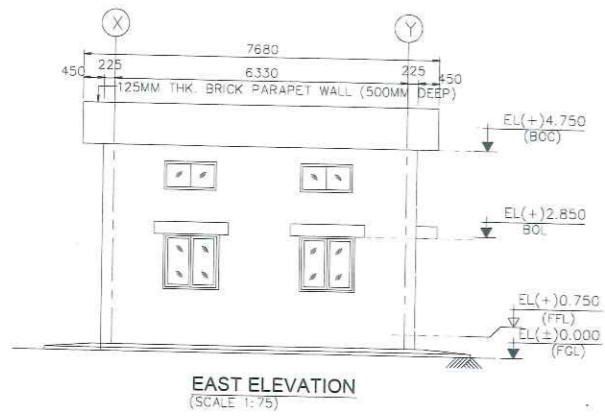
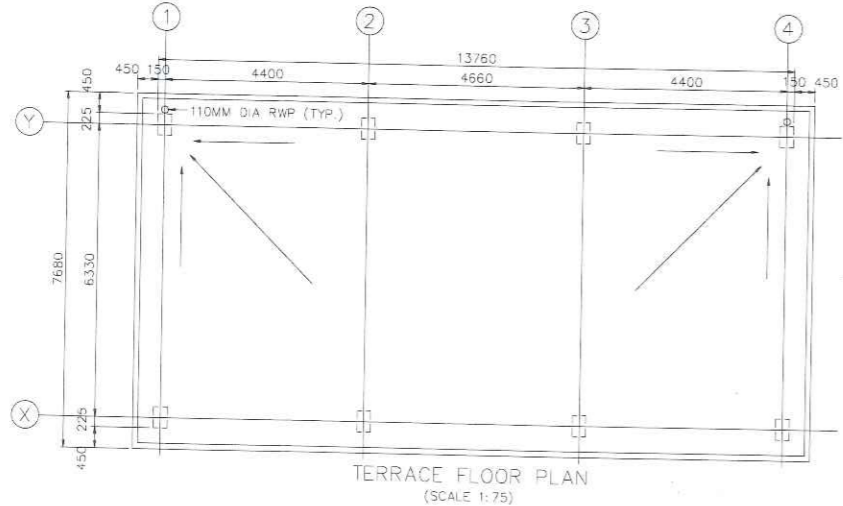
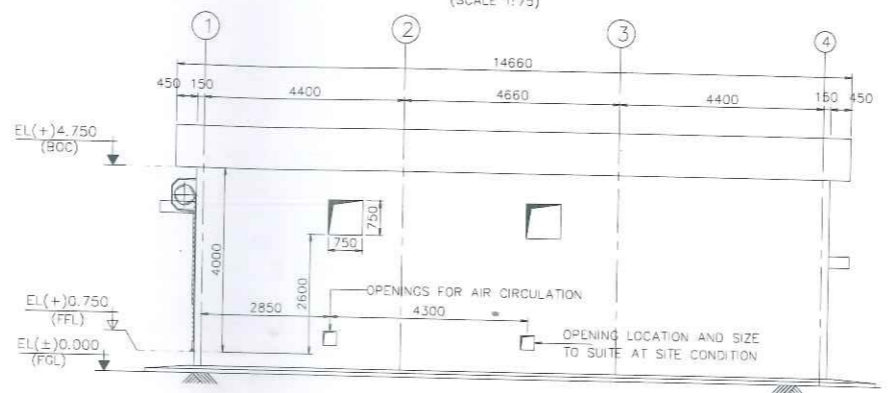
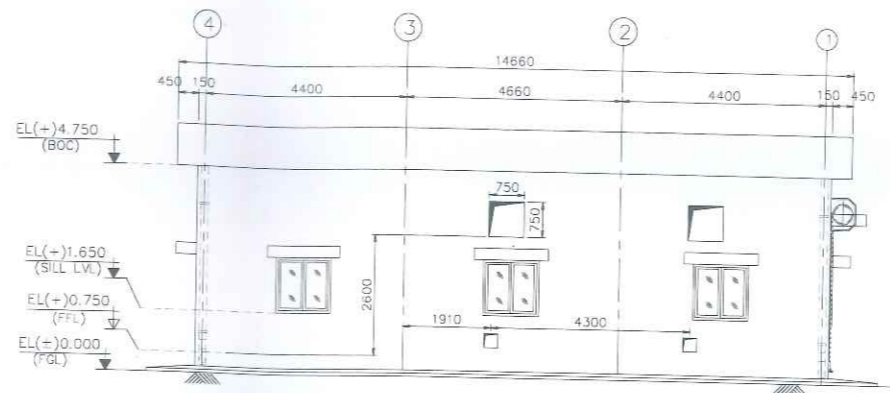
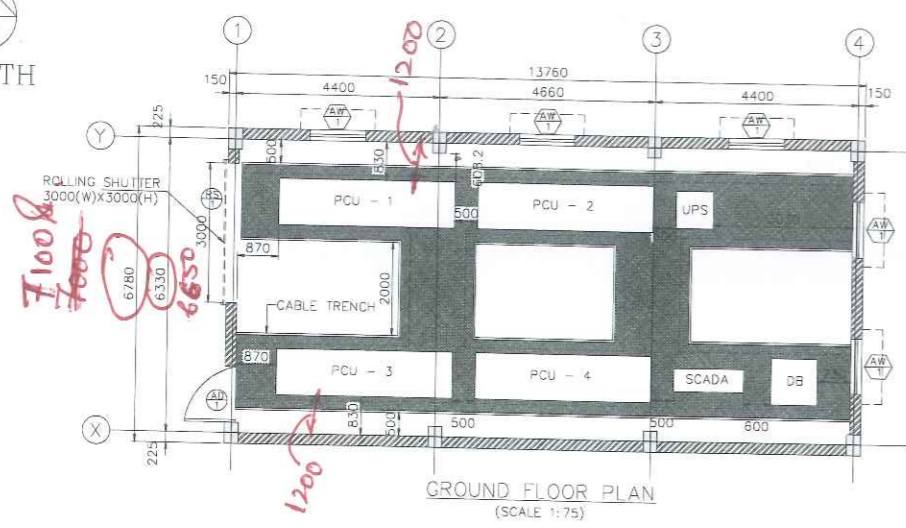
*29/09/17*  
*(S.P. S)*  
*29/09/09*  
*Siddhartha Chattopadhyay*  
*Chief Engineer*  
*Power Generation Deptt.*

DEPT: SC&PV	WBSEDCL 3x10MW POWER PLANT AT WEST BENGAL
STATUS: CONTRACT	
DISTRIBUTION:	
DESIGNER: S.P. S	MAHARISHI ELECTRICALS LTD
DATE: 25.08.2017	ELECTRONICS DIVISION, BANGALORE
SCALE: 1:100	
DRAWING NO.:	BE-WB-SAN-CR-STR-DWG-C02
DATE: 25.08.2017	25.08.2017
DATE: 25.08.2017	25.08.2017
SHEET 1 OF 1	REV. 00





NORTH



NOTES

- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH CONTRACT TERMS AND CONDITIONS, SPECIFICATION AND SCHEDULE OF ITEMS.
- ALL DIMENSIONS ARE IN MILLIMETER AND LEVELS ARE IN METERS, UNO.
- FINISHED GROUND LEVEL CORRESPONDS TO EL(±)0.000M, FGL SHALL BE FINISHED GROUND LEVEL AFTER NECESSARY LAND DEVELOPMENT BY FILLING/CUTTING AS THE CASE MAY BE, IF ANY.
- CABLE TRENCHES SHALL BE OF RCC (150MM THK.) (OR) BRICK WALL (250MM THK.), CLEAR WIDTH=1200MM, CLEAR DEPTH=750MM.
- INTEL FOR WINDOW, DOOR WILL BE 2100MM ABOVE FFL, FOR ROLLING SHUTTER INTEL LVL WILL BE 3000MM ABOVE FFL.
- CHAJJA PROJECTION FOR:  
(i) DOOR = 600MM.  
(ii) WINDOW = 450MM.
- PLINTH PROTECTION SHALL BE 1000MM WIDE ALLAROUND THE BUILDING.
- EXISTING GROUND LEVEL IS ASSUMED TO BE HIGHER THAN FFL.

LEGEND

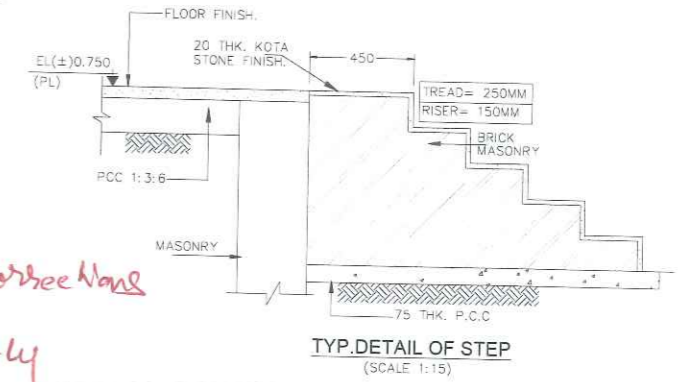
- 250 THK BRICK WALL
- CHEQ. PLATE (6MM THK.)
- ELEVATION
- FINISHED FLOOR LEVEL
- BOTTOM OF INTEL
- LEVEL
- FINISHED GROUND LEVEL
- TOP OF CONCRETE
- TYPICAL
- TOP OF PARAPET
- BOTTOM OF CONCRETE
- UNLESS NOTED OTHERWISE

SCHEDULE OF JOINERY

SYMBOL	Nos	SILL LVL AT EL...	MASONRY OPENING WIDTH	HEIGHT	REMARKS
(RS)	01	+0.750	3000	3000	ROLLING SHUTTER
(AD)	05	+0.750	1200	2100	ALUMINIUM FRAMED WITH GLAZED DOOR - SINGLE SHUTTER
(AW)	03	+1.650	1200	1200	ALUMINIUM FRAMED GLAZED WINDOW

FINISH SCHEDULE:

SERIAL NUMBER	ROOMS	FLOORS	INTERNAL WALLS & CEILING		EXTERNAL WALL
			SKIRTING	PAINTING	
1	INVERTER ROOM		CEMENT SKIRTING	ACRYLIC DISTEMPER	HEAT REFLECTIVE SYNTHETIC ENAMEL PAINT
2	STEPS				



APPROVED Subject to incorporation of corrections & corresponding changes that will subsequently come up.

9/09/17  
Siddhartha Chaitopadhyay  
Chief Engineer  
Solar Power Generation Dept.

WBSEDCL 3X10MW PV POWER PLANT AT WEST BENGAL

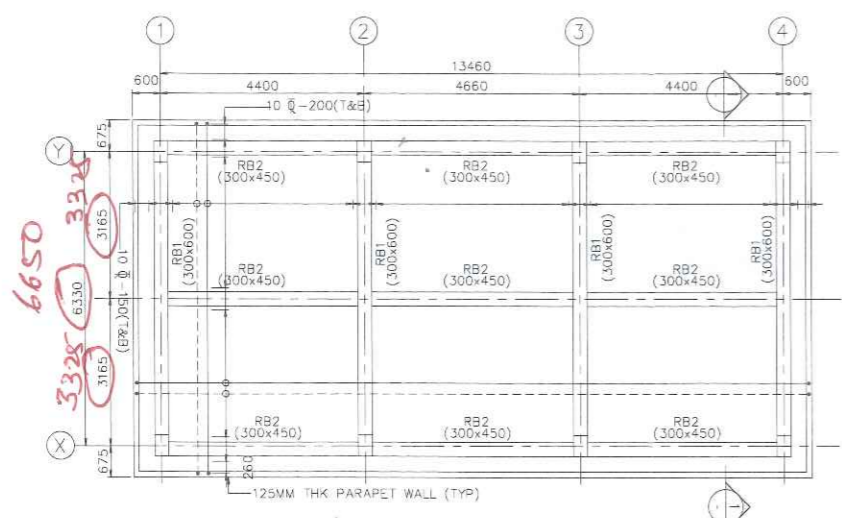
DEPT. SC&PV  
DISTRIBUTION

BHARAT HEAVY ELECTRICALS LTD  
ELECTRONICS DIVISION, BANGALORE

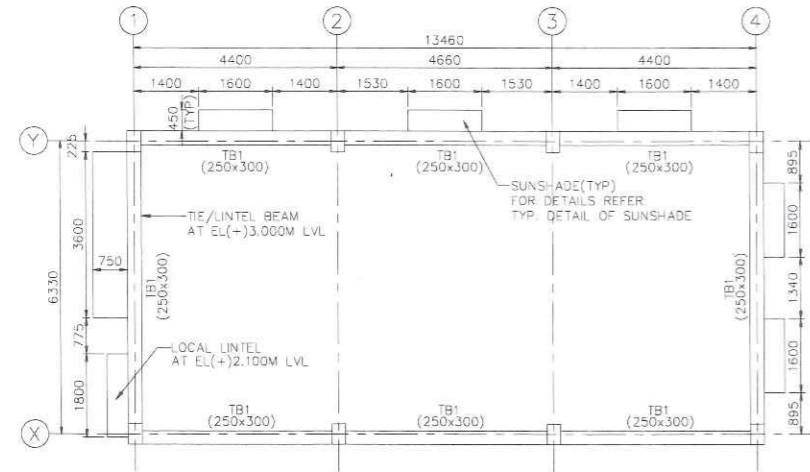
INVERTER ROOM-ARCHITECTURE PLAN & ELEVATIONS AT SANTALDIH

SCALE 1:100 DRAWING NO. BH-WBSEDCL-SAN-IR-DG-001  
SHEET 1 OF 1 REV. 00

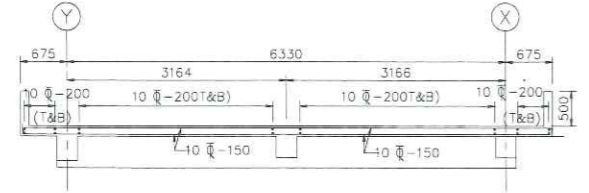




ROOF BEAM & SLAB LAYOUT AT EL(+).4.925M (TOC)  
(SCALE 1:75)  
(SLAB THICKNESS 175MM UNO)



TIE / LINTEL BEAM LAYOUT @ EL(+).2.850M/3.750M (BOC)  
(SCALE 1:75)



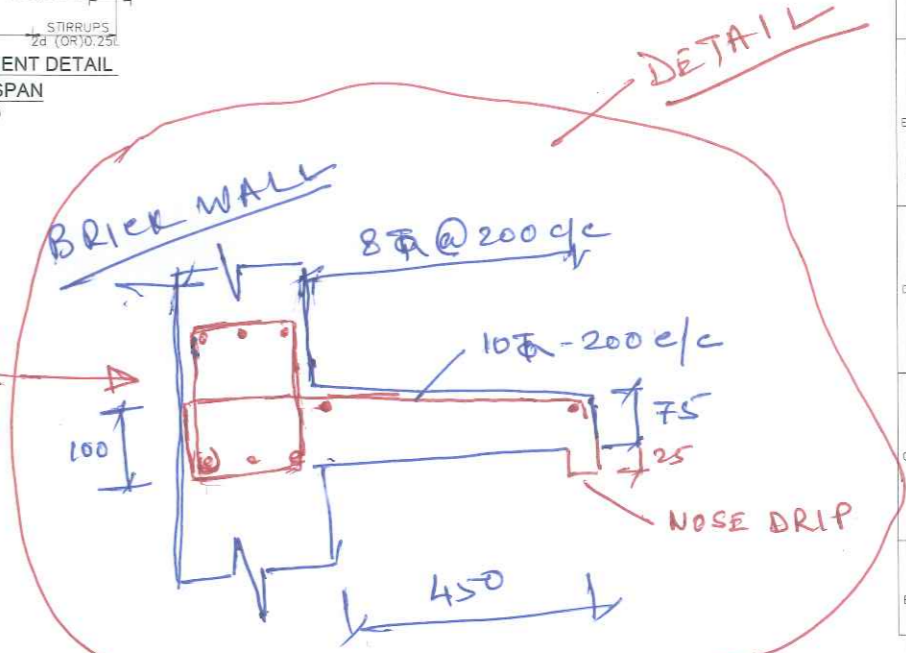
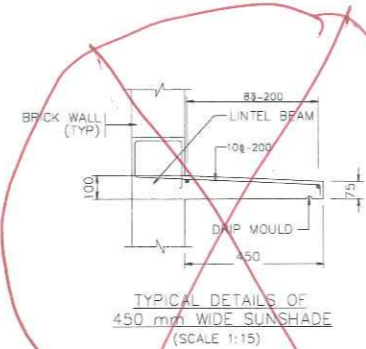
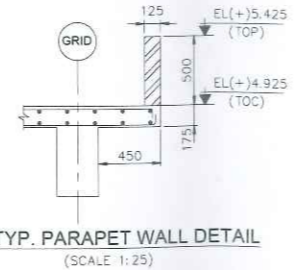
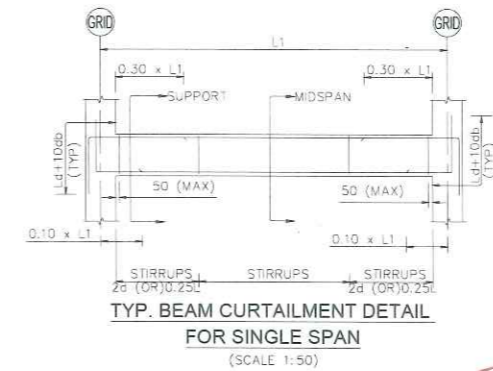
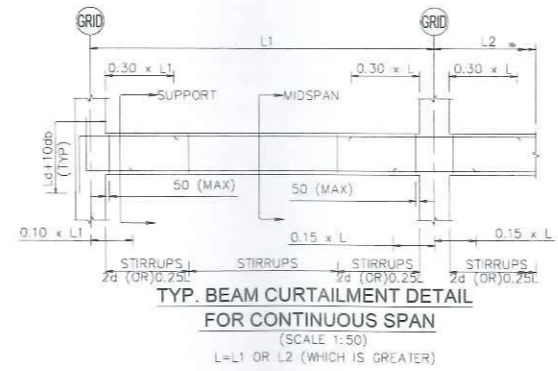
SECTION C/S OF ROOF SLAB DETAIL  
(SCALE 1:50)

SCHEDULE OF ROOF BEAMS (SCALE 1:25)

BEAM MARK	SUPPORT	MID SPAN
RB1	EL(+).4.925 (TOC) 300 3-20 $\phi$ 8 $\phi$ -100 3-25 $\phi$	300 3-20 $\phi$ 8 $\phi$ -150 3-25 $\phi$
RB2	EL(+).4.925 (TOC) 300 3-16 $\phi$ 8 $\phi$ -100 2-20 $\phi$ 1-16 $\phi$	300 3-16 $\phi$ 8 $\phi$ -150 2-20 $\phi$ 1-16 $\phi$

SCHEDULE OF TIE/LINTEL BEAMS (SCALE 1:25)

BEAM MARK	SUPPORT	MID SPAN
TB1	EL(+).2.850 (BOC) 250 2-16 $\phi$ 1-12 $\phi$ 8 $\phi$ -100 3-12 $\phi$	250 2-16 $\phi$ 8 $\phi$ -150 3-12 $\phi$

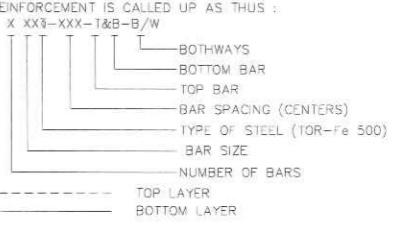


NOTES

- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE TERMS, CONDITIONS, AND SPECIFICATIONS OF THE CONTRACT.
- EL(+).0.00M. CORRESPONDS TO THE FGL OF THE BUILDING.
- ALL DIMENSIONS ARE IN MILLIMETER AND LEVELS ARE IN METERS, UNO.
- FGL SHALL BE FINISHED GROUND LEVEL, AFTER NECESSARY LAND DEVELOPMENT BY FILLING/CUTTING AS THE CASE MAY BE, IF ANY.
- GRADE OF CONCRETE SHALL BE OF M25 WITH 20MM DOWN AGGREGATES.
- REINFORCEMENT STEEL SHALL BE OF Fe 500 GRADE, CONFORMING TO IS 1786
- CLEAR COVER TO REINFORCEMENT SHALL BE AS FOLLOWS:

DESCRIPTION	TOP	BOTTOM	SIDES
ROOF BEAM	25	40	40
ROOF SLABS	30	30	30

- LAP LENGTH (Ld) FOR REINFORCEMENT SHALL BE 50 DIA OF SMALLEST BAR BEING LAPPED.
- REINFORCEMENT IS CALLED UP AS THIS:  
X XXX-XXX-1&B-B/W



LEGEND

- BOC - BOTTOM OF CONCRETE
- C - CENTER LINE
- C.J - CONSTRUCTION JOINT
- EL - ELEVATION
- LVL - LEVEL
- Ld - DEVELOPMENT LENGTH
- RB - ROOF BEAM
- THK - THICKNESS
- TOC - TOP OF CONCRETE
- TYP - TYPICAL
- UNO - UNLESS NOTED OTHERWISE
- TB - TIE/LINTEL BEAM

REFERENCE DRAWING

- BH-WBSEDCL-SAN-IR-DC-001 - INVERTER ROOM - ARCHITECTURE PLAN, ELEVATIONS AT SANTALDIH.

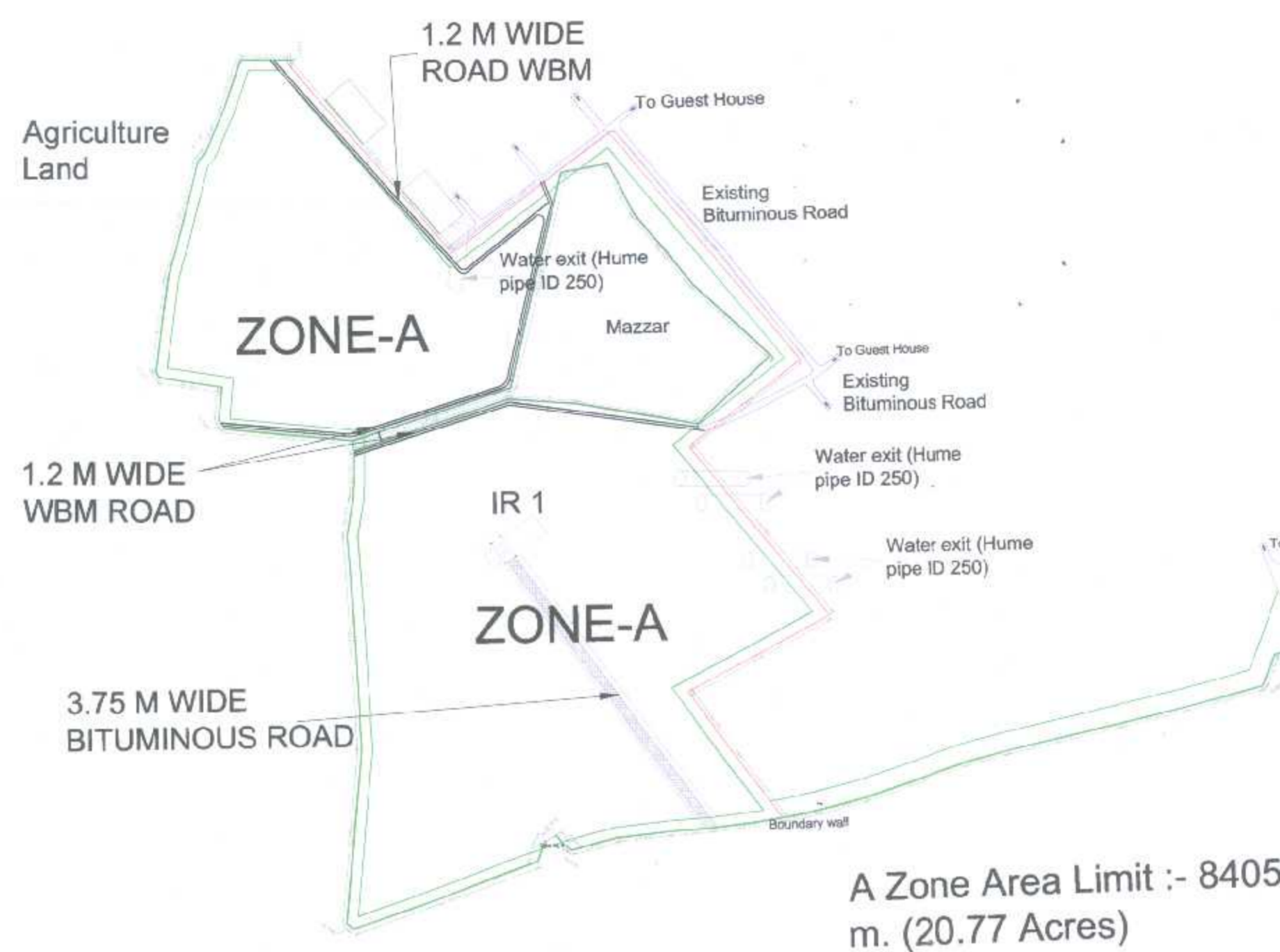
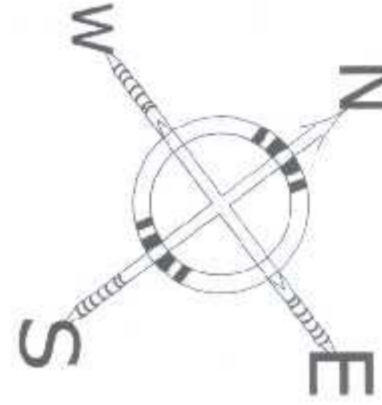
APPROVED Subject to incorporation of corrections & subsequent changes that will subsequently come up.

09/09/17 (S.F.C.)  
Siddhartha Chattopadhyay  
Chief Engineer  
Solar Power Generation Deptt.

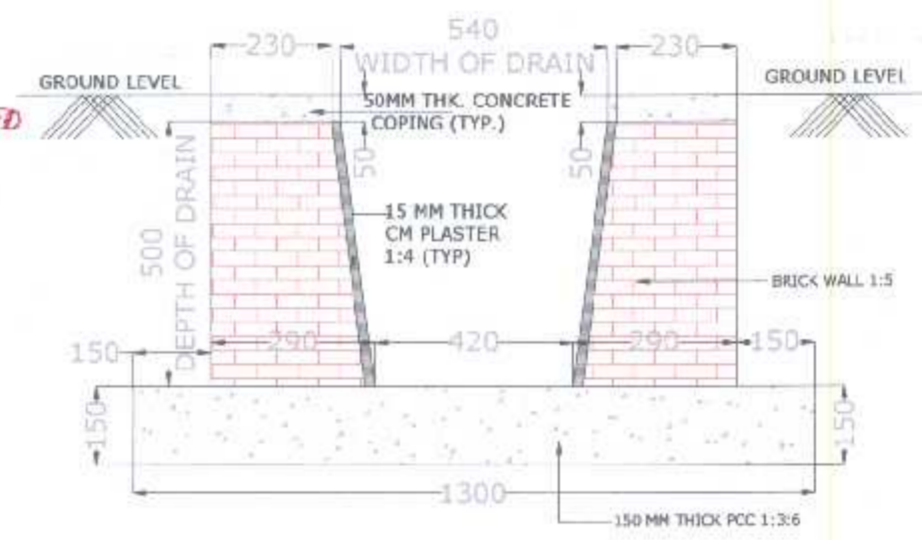
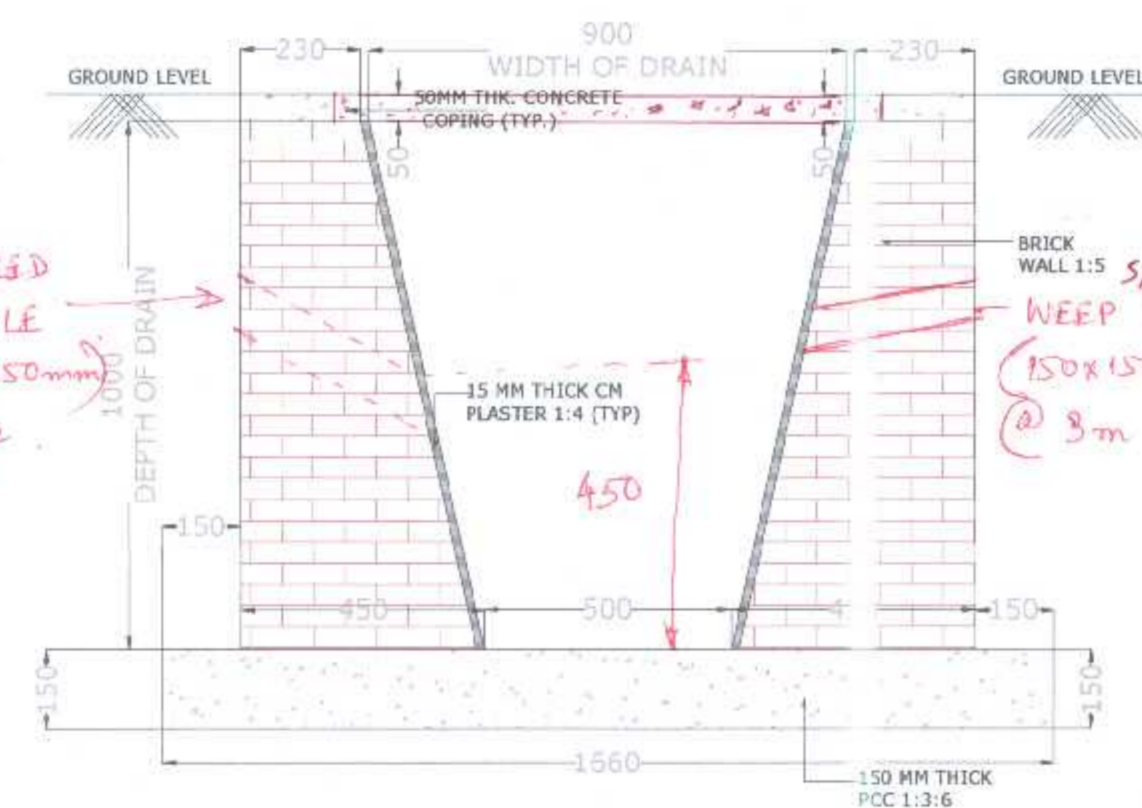
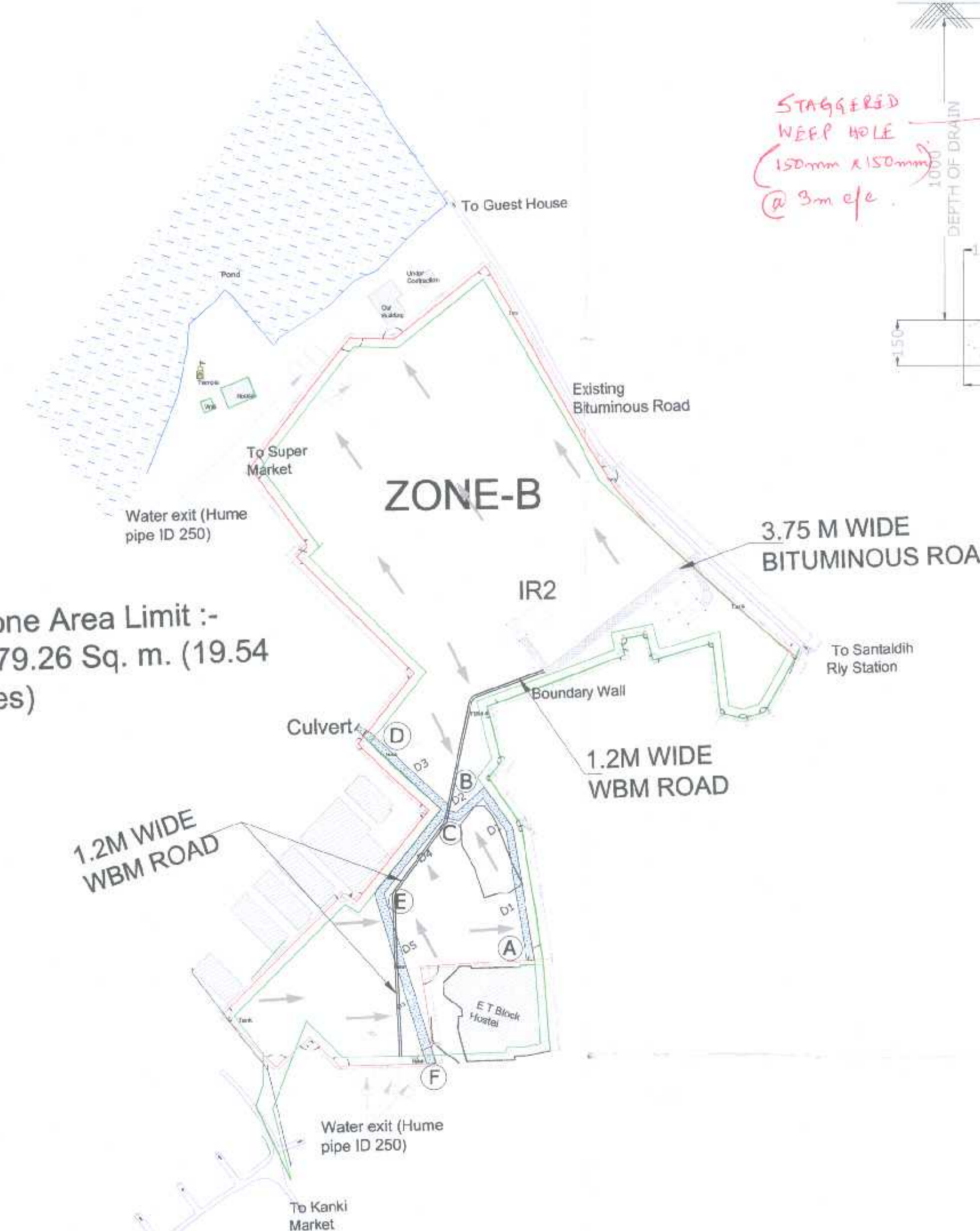
DEPT	SOE/PPV	WBSEDCL 3x10MW PV POWER PLANT AT WEST BENGAL
STATUS	CONTRACT	
DISTRIBUTION		
BHARAT HEAVY ELECTRICALS LTD ELECTRONICS DIVISION, BANGALORE		
TITLE INVERTER ROOM - LAYOUT AND DETAILS OF LINTEL/TIE BEAM, ROOF BEAM & ROOF SLAB AT CHHARRAI		
SCALE	1:100	DRAWING NO.
DATE	02.01.2017	02.01.2017
SHEET 1 OF 1		





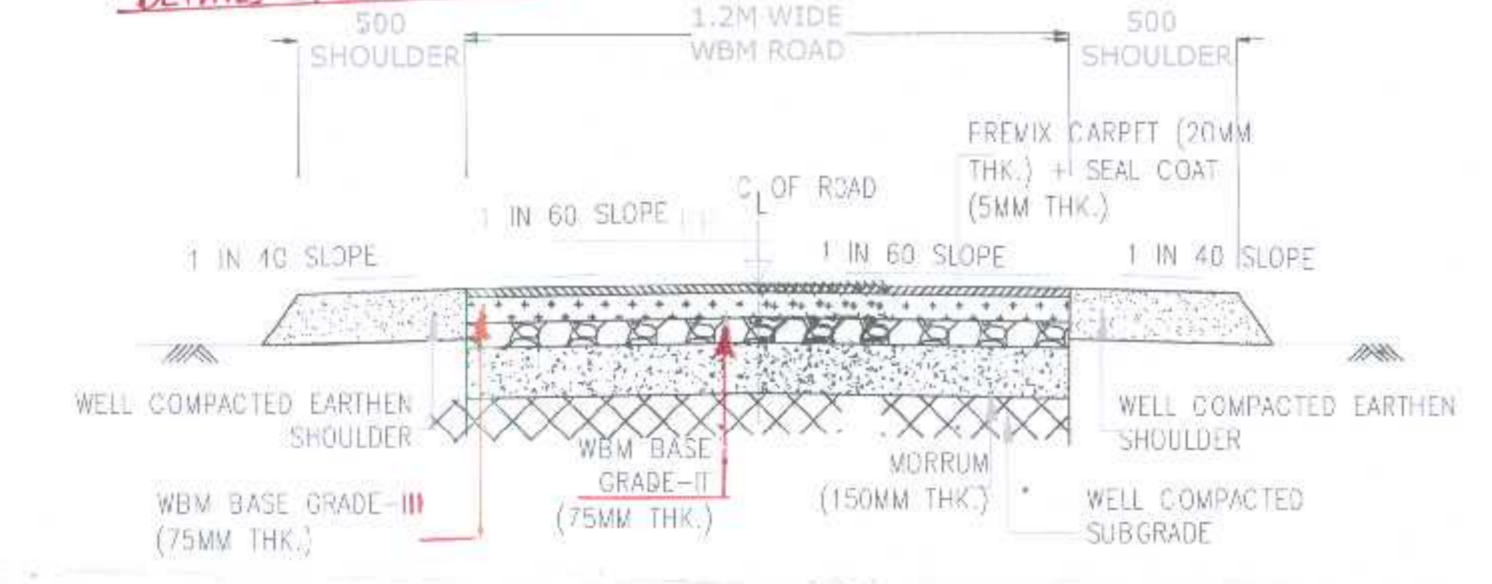
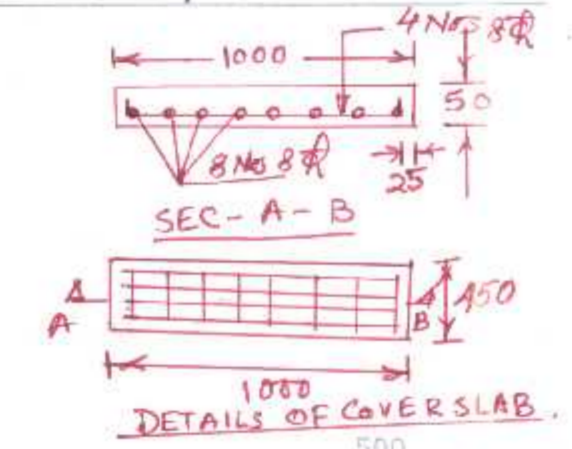


B Zone Area Limit :-  
 79079.26 Sq. m. (19.54 Acres)

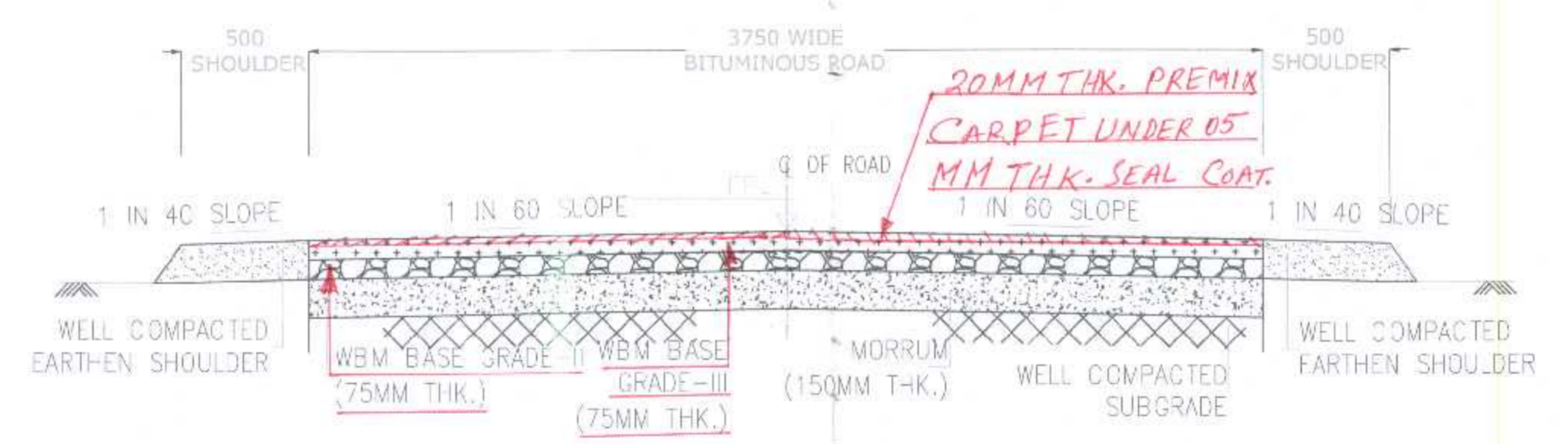


TYP DETAILS OF OPEN DRAIN C-D, C-E and E-F

TYP DETAILS OF OPEN DRAIN A-B AND B-C



TYP. CROSS SECTION OF 1.2M WIDE WBM ROAD  
 (SCALE 1:25)



TYP. CROSS SECTION OF 3.75M BITUMINOUS ROAD  
 (SCALE 1:25)

NOTES

- ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METRES UNLESS NOTED OTHERWISE.
- GRADE OF CONCRETE SHALL BE OF M25.
- MINOR MODIFICATIONS OF DRAINS & ROADS SHALL BE SUIT TO SITE CONDITION.
- FRL OF ROADS SHALL BE MINIMUM 150MM ABOVE FGL.

LEGEND

- BITUMINOUS ROAD
- DRAIN NO
- BOUNDARY FOR LAYOUT
- FLOW DIRECTION AFTER LAND GRADING
- SURVEYED AREA
- PATHWAYS
- APPROACH ROAD
- FINISHED ROAD LEVEL
- DRAIN
- HUME PIPE ID 250

NOTES

- TOTAL DRAIN LENGTH (500MM WIDTH) = 152.99 METRES
- TOTAL DRAIN LENGTH (900MM WIDTH) = 268.23 METRES
- TOTAL WBM ROAD LENGTH IN ZONE - A = 669.31 METRES
- TOTAL WBM ROAD LENGTH IN ZONE - B = 301.52 METRES
- TOTAL BITUMINOUS ROAD LENGTH IN ZONE - A = 179.11 METRES
- TOTAL BITUMINOUS ROAD LENGTH IN ZONE - B = 365.96 METRES

PROVISIONALLY APPROVED  
 Final Approval will be accorded on incorporation of the corrections made with RED Ink.

(S. DHARA)  
 18-11-18  
 Divisional Engineer (C)  
 Solar Power Generation Department  
 W.B.S.E.D.C.L.

(Subroto Das)  
 18-11-18  
 Superintending Engineer (C)  
 Solar Power Generation Deptt.  
 W. B. S. E. D. C. L.

Siddhartha Chattopadhyay  
 Chief Engineer  
 Solar Power Generation Deptt.

PROJECT : 10MW SOLAR POWER PLANT  
 CUSTOMER : W.B.S.E.D.C.L.

BHARAT HEAVY ELECTRICALS LIMITED.  
 ELEC TRONICS DIVISION, BANGALORE

TITLE : DRAINS, PATHWAY AND ROAD AT SANTALDIH 10MW SOLAR PLANT

BHEL DRG. No. WBSSEDC/SANTALDIH-DC-04

NAME	SRN	DATE
DR		08-08-2018
PC		08-08-2018
CHK		08-08-2018



DEPT. CODE

1:1

**PROFORMA OF BANK GUARANTEE FOR EARNEST MONEY  
(On non-Judicial paper of appropriate value)**

**Bank Guarantee No.....  
Date.....**

**To**  
(Employer's Name and Address)  
.....

Dear Sirs,

In accordance with the terms and conditions of Invitation for Bids/Notice Inviting Tender No.....1(Tender Conditions), M/s. .... having its registered office at .....2 (hereinafter referred to as the 'Tenderer'), is submitting its bid for the work of.....3 invited by .....4.(name of the Employer) through its Unit at .....(

The Tender Conditions provide that the Tenderer shall pay a sum of Rs ..... as Earnest Money Deposit in the form therein mentioned. The form of payment of Earnest Money Deposit includes Bank Guarantee executed by a Scheduled Bank.

In lieu of the stipulations contained in the aforesaid Tender Conditions that an irrevocable and unconditional Bank Guarantee against Earnest Money Deposit for an amount of .....5 ..... is required to be submitted by the Tenderer as a condition precedent for participation in the said Tender and the Tenderer having approached us for giving the said Guarantee,

we, the .....[Name & address of the Bank] ..... having our Registered Office at .....(hereinafter referred to as the Bank) being the Guarantor under this Guarantee, hereby irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer without any demur, merely on your first demand any sum or sums of Rs. 5 .....(in words Rupees.....) without any reservation, protest, and recourse and without the beneficiary needing to prove or demonstrate reasons for its such demand.

Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. \_\_\_\_\_.

We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the Vendor/Contractor/Vendors in any suit or proceeding pending before any Court or Tribunal, Arbitrator or any other authority, our liability under this present being absolute and unequivocal.

The payment so made by us under this Guarantee shall be a valid discharge of our liability for payment hereunder and the Tenderer shall have no claim against us for making such payment.

We ..... Bank further agree that the Employer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Tender or to extend the time of submission of from time to time or to postpone for any time or from time to time any of the powers exercisable by the Employer against the said Tenderer and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Tenderer or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said Tenderer or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Tenderer and notwithstanding any security or other guarantee that the Employer may have in relation to the Tenderer's liabilities.

This Guarantee shall be irrevocable and shall remain in force upto and including.....6 and shall be extended from time to time for such period as may be desired by the Employer.

This Guarantee shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Tenderer but shall in all respects and for all purposes be binding and operative until payment of all money payable to the Employer in terms hereof. However, unless a demand or claim under this Guarantee is made on us in writing on or before the .....<sup>7</sup> we shall be discharged from all liabilities under this Guarantee.

We, ..... Bank lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing.

Notwithstanding anything to the contrary contained hereinabove:

- a) The liability of the Bank under this Guarantee shall not exceed.....5.....
- b) This Guarantee shall be valid up to .....6
- c) Unless the Bank is served a written claim or demand on or before \_\_\_\_\_<sup>7</sup> all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank

We, \_\_\_\_\_ Bank, have power to issue this Guarantee under law and the undersigned as a duly authorized person has full powers to sign this Guarantee on behalf of the Bank.

For and on behalf of

(Name of the Bank)

Date.....

Place of Issue.....

**PRICE BID**

**CONSTRUCTION OF BITUMINOUS/WBM ROAD, BRICK WALL DRAIN, CULVERTS, FENCING OVER EXISTING BOUNDARY WALL, AND OTHER ASSOCIATED WORKS AT FOR 10 MW Solar Photovoltaic Power Plant at Santaldih, Purulia, West Bengal, (WBSEDCL): West Bengal State Electricity Distribution Company Limited**

S.NO	DESCRIPTION	UNIT	QUANTITY	ITEM RATE EXCLUDING GST	Amount in Rs.
	<b>A. 3.75M BITUMINOUS ROAD WITH 500 MM EARTHEN SHOULDER BOTH SIDE</b>				
A1	Earth work in excavation by mechanical means (Hydraulic excavator) /manual means over areas (exceeding 30cm in depth. 1.5 m in width as well as 10 sqm on plan) as per required level/camber/gradient including, rolling and compacting the cut surface <b>to achieve 95% or more of standard proctor's MDD</b> , disposal of excavated earth, lead upto 1500m and lift upto 1.5m, disposed earth to be levelled and neatly dressed.( <b>All kinds of soil</b> )				
		cum	510.30	119.294	60875.524
A2	Banking excavated earth in layers not exceeding 20 cm in depth, breaking clods, watering, rolling each layer with ½ tonne roller, or wooden or steel rammers, and rolling every 3rd and top-most layer with power roller of minimum 8tonne <b>to achieve 95% or more of standard proctor's MDD</b> tonnes and dressing up, in embankments for roads, flood banks, marginal banks, and guide banks etc.,as per required level/camber/gradient, lead upto 1500 m and lift upto 1.5 m ( <b>All kinds of soil</b> )				
		cum	199.5	308.681	61581.820
A3	Supplying, stacking and Spreading MOPORUM, watering and rolling complete including preparation of the surface and rolling With road roller to achieve 95% or more of standard proctor's MDD				
		cum	567.00	1033.233	585842.998
A4	Supplying and stacking at site.63 mm to 45 mm size stone aggregate	cum	252.00	1007.386	253861.373
A5	Supplying and stacking at site. 53 mm to 22.4 mm size stone aggregate	cum	252.00	1147.836	289254.672
A6	Supplying and stacking at site. Stone screening 11.2 mm nominal size (Type B)	cum	118.13	1297.896	153313.965
A7	Supplying and stacking at site.Moorum (binding material)	cum	70.88	529.917	37557.853
A8	Laying, spreading and compacting stone aggregate of specified sizes to WBM specifications in uniform thickness, hand picking, rolling with 3 wheeled road / vibratory roller 8-10 tonne capacity in stages to proper grade and camber, applying and brooming requisite type of screening / binding material to fill up interstices of coarse aggregate, watering and compacting to the required density .				
		cum	393.750	503.316	198180.675

**CONSTRUCTION OF BITUMINOUS/WBM ROAD, BRICK WALL DRAIN, CULVERTS, FENCING OVER EXISTING BOUNDARY WALL, AND OTHER ASSOCIATED WORKS AT FOR 10 MW Solar Photovoltaic Power Plant at Santaldih, Purulia, West Bengal, (WSEDCL): West Bengal State Electricity Distribution Company Limited**

S.NO	DESCRIPTION	UNIT	QUANTITY	ITEM RATE EXCLUDING GST	Amount in Rs.
A9	Providing and applying tack coat using hot straight run bitumen of grade VG - 10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and preparing the existing road surface as per specifications : On W.B.M. @ 0.75 Kg I sqm				
		SQM	2625.000	27.585	72410.100
A10	Providing and applying tack coat using hot straight run bitumen of grade VG - 10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and preparing the existing road surface as per specifications : On bituminous surface @ 0.50 Kg I sqm	SQM	2625.000	22.074	57945.300
A11	2 cm premix carpet surfacing with 1.8 cum and 0.90 cum of stone chippings of 13.2 mm size and 11.2 mm size respectively per 100 sqm and 52 kg and 56 kg of hot bitumen per cum of stone chippings of 13.2 mm and 11.2 mm size respectively, including a tack coat with hot straight run bitumen, including consolidation with road roller of 6 to 9 tonne capacity etc. complete (tack coat to be paid for separately). With paving Asphalt grade VG - 10 heated and then mixed with solvent at the rate of 70 grams per kg of asphalt	SQM	2625.000	113.521	297992.100
A12	Providing and laying seal coat of premixed fine aggregate ( passing 2.36 mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG - 10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface, including rolling and finishing with road roller all complete.	SQM	2625.000	48.347	126911.400
		<b>TOTAL AMOUNT A -3.75M BITUMINOUS ROAD WITH 500 MM EARTHEN SHOULDER BOTH SIDE (Rs) EXCLUDING GST</b>			<b>2195727.779</b>
	<b>B. 1.20 M WBM ROAD WITH 500 MM EARTHEN SHOULDER BOTH SIDE</b>				
B1	Earth work in excavation by mechanical means (Hydraulic excavator) /manual means over areas (exceeding 30cm in depth. 1.5 m in width as well as 10 sqm on plan) as per required level/camber/gradient including, rolling and compacting the cut surface <b>to achieve 95% or more of standard proctor's MDD</b> , disposal of excavated earth, lead upto 1500m and lift upto 1.5m, disposed earth to be levelled and neatly dressed.( <b>All kinds of soil</b> )				
		cum	283.500	119.294	33819.736

**CONSTRUCTION OF BITUMINOUS/WBM ROAD, BRICK WALL DRAIN, CULVERTS, FENCING OVER EXISTING BOUNDARY WALL, AND OTHER ASSOCIATED WORKS AT FOR 10 MW Solar Photovoltaic Power Plant at Santaldih, Purulia, West Bengal, (WBSSEDCL): West Bengal State Electricity Distribution Company Limited**

S.NO	DESCRIPTION	UNIT	QUANTITY	ITEM RATE EXCLUDING GST	Amount in Rs.
B2	Banking excavated earth in layers not exceeding 20 cm in depth, breaking clods, watering, rolling each layer with ½ tonne roller, or wooden or steel rammers, and rolling every 3rd and top-most layer with power roller of minimum 8tonne to achieve 95% or more of standard proctor's MDDtonnes and dressing up, in embankments for roads, flood banks, marginal banks, and guide banks etc.,as per required level/camber/gradient, lead upto 1500 m and lift upto 1.5 m (All kinds of soil)				
	<b>TOTAL</b>	cum	245.700	308.681	75842.873
B3	Supplying, stacking and Spreading MOPORUM, watering and rolling complete including preparation of the surface and rolling With road roller to achieve 95% or more of standard proctor's MDD				
		cum	315.00	1033.233	325468.332
B4	Supplying and stacking at site.63 mm to 45 mm size stone aggregate	cum	120.96	1007.386	121853.4589
B5	Supplying and stacking at site. 53 mm to 22.4 mm size stone aggregate	cum	120.960	1147.836	138842.2426
B6	Supplying and stacking at site. Stone screening 11.2 mm nominal size (Type B)	cum	56.700	1297.896	73590.7032
B7	Supplying and stacking at site.Moorum (binding material)	cum	34.0200	529.917	18027.76954
B8	Laying, spreading and compacting stone aggregate of specified sizes to WBM specifications in uniform thickness, hand picking, rolling with 3 wheeled road / vibratory roller 8-10 tonne capacity in stages to proper grade and camber, applying and brooming requisite type of screening / binding material to fill up interstices of coarse aggregate, watering and compacting to the required density .				
		cum	189.000	503.316	95126.724
		<b>TOTAL AMOUNT B -1.20 M WBM ROAD WITH 500 MM EARTHEN SHOULDER BOTH SIDE (Rs) EXCLUDING GST</b>			<b>882571.838</b>
	<b>C. BRICK WALL DRAIN &amp; CULVERT</b>				
C1	Earth work in excavation by mechanical means(Hydraulic excavator) / manual means in foundation trenches or drains , including dressing of sides and ramming of bottoms, lift upto 1.5 m,including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 1500 m. All kinds of soil.				
	<b>TOTAL</b>	cum	2127	165.509	352037.2176

**CONSTRUCTION OF BITUMINOUS/WBM ROAD, BRICK WALL DRAIN, CULVERTS, FENCING OVER EXISTING BOUNDARY WALL, AND OTHER ASSOCIATED WORKS AT FOR 10 MW Solar Photovoltaic Power Plant at Santaldih, Purulia, West Bengal, (WSEDCL): West Bengal State Electricity Distribution Company Limited**

S.NO	DESCRIPTION	UNIT	QUANTITY	ITEM RATE EXCLUDING GST	Amount in Rs.
C2	Excavation work by mechanical means (Hydraulic excavator)/ manual means in foundation trenches or drains (not exceeding 1.5m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soils as directed, within a lead of 1500 m. Ordinary rock	cum	100	293.986	29398.64
C3	Filling available excavated earth (excluding rock) in trenches, plinth sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	cum	1796.00	144.090	258786.3584
C4	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level : 1:3:6 (1 Cement : 3 coarse sand (zone-III): 6 graded stone aggregate 40/20 mm nominal size).	cum	227.50	4018.820	914281.55
C5	Providing and laying in position cement concrete of specified grade excluding - All work up to plinth level the cost of centering and shutterin "1:2:4 (1 cement : 2 coarse sand (zone-III) : 4 graded stone aggregate 20/10 mm nominal size).	cum	30.7	4453.322	136716.9731
C6	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level : 1:1.5:3 (1 cement : 1.5 coarse sand (zone-III): 3 graded stone aggregate 20 mm nominal size).	cum	35	5063.172	177211.02
C7	Centering and shuttering including strutting, propping etc. and removal of form for all heights Foundations, footings, bases of columns, etc. for mass concrete	sqm	1311.111	186.862	244996.32
C8	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level. Thermo-Mechanically Treated bars of grade Fe-500D or more.	kg	3500.000	54.776	191716

**CONSTRUCTION OF BITUMINOUS/WBM ROAD, BRICK WALL DRAIN, CULVERTS, FENCING OVER EXISTING BOUNDARY WALL, AND OTHER ASSOCIATED WORKS AT FOR 10 MW Solar Photovoltaic Power Plant at Santaldih, Purulia, West Bengal, (WSEDCL): West Bengal State Electricity Distribution Company Limited**

S.NO	DESCRIPTION	UNIT	QUANTITY	ITEM RATE EXCLUDING GST	Amount in Rs.
C9	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth in: Cement mortar 1:4 (1 cement : 4 coarse sand)				
		cum	464.000	4182.820	1940828.48
C10	15 mm cement plaster of mix 1:4 (1 cement: 4 fine sand)				
		sqm	2612.000	201.982	527578.0288
C11	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete : 300 mm dia. R.C.C. pipe				
		meter	60.000	566.554	33993.264
C12	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete : 600 mm dia. R.C.C. pipe				
		meter	20.000	1278.118	25562.352
C13	Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) upto plinth level with : Cement mortar 1:6 (1 cement : 6 coarse sand)				
		cum	50	4015.245	200762.24
C14	Structural steel work riveted, bolted or 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. (FOR GRATING ETC)	KG	500	66.748	33374
C15	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade Two or more coats on new work	SQM	100	79.737	7973.68
C16	Providing and fixing e unplasticised Rigid PVC pipes conforming to IS : 13592 Type A, including all conforming to IS : 5382, leaving 10 mm gap for thermal expansion, (i) Single socketed pipes for WEEP HOLE 110 mm diameter in drain				
		meter	230	200.113	46025.944

**CONSTRUCTION OF BITUMINOUS/WBM ROAD, BRICK WALL DRAIN, CULVERTS, FENCING OVER EXISTING BOUNDARY WALL, AND OTHER ASSOCIATED WORKS AT FOR 10 MW Solar Photovoltaic Power Plant at Santaldih, Purulia, West Bengal, (WBSedcl): West Bengal State Electricity Distribution Company Limited**

S.NO	DESCRIPTION	UNIT	QUANTITY	ITEM RATE EXCLUDING GST	Amount in Rs.
		<b>TOTAL AMOUNT C -BRICK WALL DRAIN &amp; CULVERT (Rs) EXCLUDING GST</b>			<b>5121242.068</b>
	<b>D. FENCING OVER EXISTING BRICK WORK BOUNDARY WALL WITH BARBED WIRE AND STRUCTURAL STEEL</b>				
D1	Demolishing brick work manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge. In cement mortar	CUM	15.12	964.254	14579.527
D2	Demolishing R.C.C. work manually/ by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer - in-charge.	CUM	6.48	1662.763	10774.706
D3	Structural steel work riveted, bolted or 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.	KG	2160	66.748	144175.680
D4	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level : 1:2:4 (1 cement : 2 coarse sand (zone-III) : 4 graded stone aggregate 20 mm nominal size)	CUM	21.6	4453.322	96191.747
D5	Centering and shuttering including strutting, propping etc. and removal of form for : Foundations, footings, bases of columns, etc. for mass concrete	SQM	144	186.862	26908.070
D6	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade :Two or more coats on new work	SQM	73.60	79.737	5868.628
D7	Fencing with angle iron post placed at required distance embedded in cement concrete blocks, every 15th post, last but one end post and corner post shall be strutted on both sides and end post on one side only and provided with horizontal lines and two diagonals interwoven with horizontal wires, of barbed wire weighing 9.38 kg per 100 m (minimum), between the two posts fitted and fixed with G.I. staples, turn buckles etc. complete. (Cost of posts, struts, earth work and concrete work to be paid for separately). Payment to be made per metre cost of total length of barbed wire used. With G.I. barbed wire	METER	6000.00	12.497	74980.800

**CONSTRUCTION OF BITUMINOUS/WBM ROAD, BRICK WALL DRAIN, CULVERTS, FENCING OVER EXISTING BOUNDARY WALL, AND OTHER ASSOCIATED WORKS AT FOR 10 MW Solar Photovoltaic Power Plant at Santaldih, Purulia, West Bengal, (WBSSEDCL): West Bengal State Electricity Distribution Company Limited**

S.NO	DESCRIPTION	UNIT	QUANTITY	ITEM RATE EXCLUDING GST	Amount in Rs.
				<b>TOTAL AMOUNT D -FENCING OVER EXISTING BRICK WORK BOUNDARY WALL WITH BARBED WIRE AND STRUCTURAL STEEL</b>	<b>373479.158</b>
	<b>TOTAL AMOUNT EXCLUDING GST</b>				<b>8573021.000</b>
QUOTE PERCENTAGE (%) ABOVE/BELOW (+/-) (OR) AT PAR TO TOTAL AMOUNT					
QUOTED PERCENTAGE (%) IN WORDS ABOVE/BELOW (OR) AT PAR TO TOTAL AMOUNT					
PLUS APPLICABLE GST					

**NOTE:**

1. CONTRACTOR SHOULD QUOTE PERCENTAGE (%) ABOVE/BELOW (OR) AT PAR TO TOTAL AMOUNT
2. CONTRACTOR SHOULD QUOTE SAME PERCENTAGE FOR BOTH THE WORKS THAT IS BALANCE BUILDING WORKS AND ROAD & DRAIN WORKS
3. QUOTED PERCENTAGE (%) IS APPLICABLE ON ALL ITEM RATES UNIFORMLY.

**PRICE BID**

**Construction of balanced work of Control Room building (CMCS) (1 no), Inverter Room (2nos.), & Security room foundation (2nos.) and other associated works FOR 10 MW Solar Photovoltaic Power Plant at Santaldih, Purulia, West Bengal, (WBSSEDCL: West Bengal State Electricity Distribution Company Limited**

S.NO.	DESCRIPTION	UNIT	QUANTITY	ITEM RATE EXCLUDING GST	Amount in Rs.
<b>A</b>	<b>CIVIL WORKS</b>				
1	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm in depth, 1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50m and lift upto 1.5m, disposed earth to be levelled and neatly dressed. <b>All kinds of soil</b>	Cum	502.94	119.2936	59997.52318
2	.Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30 cm in depth, 1.5m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50 m and lift upto 1.5 m, disposed earth to be levelled and neatly dressed earth work in hard rock (blasting prohibited) <b>Ordinary rock</b>	Cum	20.00	231.2072	4624.144
3	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50 m and lift upto 1.5 m, disposed earth to be levelled and neatly dressed. Hard rock (blasting prohibited)	Cum	10.00	666.6272	6666.272
4	Banking excavated earth in layers not exceeding 20 cm in depth, breaking clods, watering, rolling each layer with ½ tonne roller, or wooden or steel rammers, and rolling every 3rd and top-most layer with power roller of minimum 8 tonnes and dressing up, in embankments for roads, flood banks, marginal banks, and guide banks etc., lead upto 50 m and lift upto 1.5 m <b>All kinds of soil</b>	cum	126.00	308.6808	38893.7808
5	Diluting and injecting chemical emulsion for POSTCONSTRUCTIONAL anti-termite treatment (excluding the cost of chemical emulsion) : Treatment of soil under existing floors using chemical emulsion @ one litre per hole, 300 mm apart including drilling 12 mm diameter holes and plugging with cement mortar 1 :2 (1 cement : 2 Coarse sand) to match the existing floor: With Chlorpyrifos/Lindane E.C. 20% with 1% concentration	Sqm	507	148.9448	75515.0136
6	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 20 mm/40mm nominal size)	Cum	22.95	4018.82	92231.919
7	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including admixtures 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. All works upto any height and level	CUM	100.19	5246.2288	525619.6635
8	Centering and shuttering including strutting, propping etc. and removal of form for : Foundations, footings, bases of columns, etc. for mass concrete at all height and level	SQM	143.49	186.8616	26812.77098
9	Centering and shuttering including strutting, propping etc. and removal of form for : Walls (any thickness) including attached pilasters, buttersesses, plinth and string courses etc. at all height and level	Sqm	510.00	399.7008	203847.408
10	Centering and shuttering including strutting, propping etc. and removal of form for :Columns, pillars, piers, abutments, posts and struts etc., at all height and level	Sqm	55.58	481.3072	26751.05418
11	Centering and shuttering including strutting, propping etc. and removal of form for :Lintels, Beams, plinth beams, girders, bressumers and cantilevers etc., at all height and levels	sqm	139.84	362.1448	50642.32883
12	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position, binding with GI wire, welding if required all complete at all height and levels. Thermo-Mechanically Treated bars	Kg	13924.82	54.776	762745.9403
13	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 , First class brick- all shapes and sizes in Cement mortar 1:6 (1 cement : 6 coarse sand) at all height and level	Cum	22.73	4039.2872	91812.99806

**Construction of balanced work of Control Room building (CMCS) (1 no), Inverter Room (2nos.), & Security room foundation (2nos.) and other associated works FOR 10 MW Solar Photovoltaic Power Plant at Santaldih, Purulia, West Bengal, (WBSSEDCL: West Bengal State Electricity Distribution Company Limited**

S.NO.	DESCRIPTION	UNIT	QUANTITY	ITEM RATE EXCLUDING GST	Amount in Rs.
14	Half brick masonry with common burnt clay F.P.S. (non modular) bricks of class designation 7.5, First class brick in . Cement mortar 1:4 (1 cement :4 coarse sand) at all height and level	Sqm	52.88	507.58	26840.8304
15	Providing and laying damp-proof course 40 mm thick with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5 mm nominal size). With mixing water proofing material in doses by weight of cement as per manufacturer's specification and Applying a coat of residual petroleum bitumen of grade of VG-10 of approved quality using 1.7 kg per square metre on damp proof course after cleaning the surface with brushes and finally with a piece of cloth lightly soaked in kerosene oil	Sqm	44.01	300.3824	13219.82942
16	Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) upto plinth level with : Cement mortar 1:6 (1 cement : 6 coarse sand)	Cum	50.34	4015.2448	202127.4232
17	12 mm cement plaster of mix : 1:4 (1 cement: 4 sand)at all height and levels (INTERNAL PLASTER)	Sqm	174.01	175.0536	30461.07694
18	15mm cement plaster of mix : 1:6 (1 cement: 6 sand)at all height and levels (EXTERNAL PLASTER)	Sqm	648.12	192.1096	124510.074
19	6mm cement plaster of mix : 1:3 (1 cement:3 sand)at all height and levels (CEILING PLASTER)	sqm	115.43	149.1416	17215.41489
20	Making plinth protection 50 mm thick of cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) over 75mm thick bed of dry brick ballast 40 mm nominal size, well rammed and consolidated and grouted with fine sand, including finishing the top smooth.	Sqm	212	402.8168	85397.1616
21	Applying one or more coat of water thinnable cement primer of approved brand and manufacture on wall surface Water thinnable cement primer internal walls at all height and levels	Sqm	315.91	39.36	12434.2176
22	Distempering with 1st quality acrylic distemper (ready mixed) of approved manufacturer, of required shade and colour complete, as per manufacturer's specification. Two or more coats on new work internal walls at all heights and levels	Sqm	315.91	57.1704	18060.70106
23	Painting with Heat reflective synthetic enamel paint of approved brand and manufactureof required colour to give an even shadeTwo or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture external wall at all height and levels	Sqm	642	116.2104	74607.0768
24	Providing and laying Ceramic glazed floor tiles of size 300x300 mm (thickness minimum 8mm) of 1st quality conforming to IS : 15622 of approved make in all colours, laid on 20 mm thick cement mortar 1:4 (1 Cement : 4 Coarse sand), including pointing the joints with white cement and matching pigment etc, complete. toilet floor	Sqm	14	608.0464	8512.6496

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S.NO.	DESCRIPTION	UNIT	QUANTITY	ITEM RATE EXCLUDING GST	Amount in Rs.
25	Providing and fixing Ist quality ceramic glazed wall tiles conforming to IS: 15622 (thickness minimum 6mm), of approved make, in all colours, shades 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. toilet dado	Sqm	71	675.8768	47987.2528
26	Cement concrete flooring 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate) finished with a floating coat of neat cement, including cement slurry, but excluding the cost of nosing of steps etc. complete 40 mm thick with 20 mm /10mm nominal size stone aggregate	Sqm	40	326.9176	13076.704
27	Cement plaster skirting up to 30 cm height, with cement mortar 1:3 (1 cement : 3 coarse sand), finished with a floating coat of neat cement. 18 mm thick	Sqm	7	341.8744	2393.1208
28	Providing and fixing stone slab with table rubbed, edges rounded and polished, of size 75x50 cm deep and 1.8 cm thick, fixed in urinal partitions by cutting a chase of appropriate width with chase cutter and embedding the stone in the chase with epoxy grout or with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 6 mm nominal size) as per direction of Engineer-in-charge and finished smooth.	Sqm	3	2110.2864	6330.8592
29	Providing and fixing 18mm thick gang saw cut mirror polished premoulded and prepolished) machine cut <b>Granite Slabs</b> for kitchen platforms, vanity counters, window sills , facias and similar locations of required size of approved shade, colour and texture laid over 20mm thick base cement mortar 1:4 (1 cement : 4 coarse sand) with joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish etc. complete at all levels. as per direction of Engineer-in-charge	Sqm	2	2629.0184	5258.0368
30	Providing and laying vitrified floor tiles in different sizes (thickness minimum 8mm) with water absorption's less than 0.08% and conforming to IS : 15622 of approved make in all colours and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand) including grouting the joints with white cement and matching pigments etc., complete. Size of Tile 600x600 mm	SQM	95.52	984.3608	94026.14362
31	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling and dash fasteners to be paid for separately) : For fixed portion Anodised aluminium (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 20)	KG	234.04	278.1112	65089.14525

**Construction of balanced work of Control Room building (CMCS) (1 no), Inverter Room (2nos.), & Security room foundation (2nos.) and other associated works FOR 10 MW Solar Photovoltaic Power Plant at Santaldih, Purulia, West Bengal, (WBSSEDCL: West Bengal State Electricity Distribution Company Limited**

S.NO.	DESCRIPTION	UNIT	QUANTITY	ITEM RATE EXCLUDING GST	Amount in Rs.
32	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling and dash fasteners to be paid for separately) : For shutters of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber / neoprene gasket required and including all fittings like lock etc Anodised aluminium (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 20)	Kg	126.56	336.7904	42624.19302
33	Providing and fixing anodised aluminium grill (anodised transparent or dyed to required shade according to IS: 1868 with minimum anodic coating of grade AC 20) of approved design/pattern, with approved standard section and fixed to the existing window frame with C.P. brass/ stainless steel screws @ 200mm centre to centre, including cutting the grill to proper opening size for fixing and operation of handles and fixing approved anodised aluminium standard section around the opening, all complete as per requirement and direction of Engineer-in-charge. (Only weight of grill to be measured for payment).	Kg	56.2	341.0216	19165.41392
34	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with EPDM rubber / neoprene gasket etc. complete as per the architectural drawings and the directions of engineer-in-charge . (Cost of aluminium snap beading shall be paid in basic item): With float glass PLAIN/ TINTED panes of 4.0 mm thickness	SQM	15.96	655.7376	10465.5721
35	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with EPDM rubber / neoprene gasket etc. complete as per the architectural drawings and the directions of engineer-in-charge . (Cost of aluminium snap beading shall be paid in basic item): With float glass panes of 5.50/6 mm thickness	Sqm	10.48	850.4384	8912.594432
36	Providing and fixing flat pressed 3 layer particle board medium density exterior grade (Grade I) or graded wood particle board IS : 3087 marked, to frame, backing or studding with screws etc. complete (Frames, backing or studding to be paid separately) 12 mm thick	Sqm	10.48	422.136	4423.98528
37	35 mm thick factory made Solid panel PVC Door shutter, made out of single piece extruded solid PVC profiles, 5 mm (± 0.2 mm) thick, having styles & rails (except lock rail) of size 95 mm x 35 mm x 5 mm, out of which 75 mm shall be flat and 20 mm shall be tapered (on both side), having one side thickness of 15 mm integrally extruded on the hinge side of the profile for better screw holding power, including reinforcing with MS tube of size 40 mm X 20 mm x 1 mm, joints of styles & rails to be mitred cut & joint with the help of PVC solvent cement, self driven self tapping screws & M.S. rectangular pipes bracket of size 190 mm X 100 mm of cross section size 35 mm x 17 mm x 1 mm at each corner. Single piece extruded 5 mm thick solid PVC Lock rail of size 115 mm x 35 mm, out of which 75 mm to be flat and 20 mm to be tapered at both ends, having 15 mm solid core in middle of rail section integrally extruded, fixing the styles & rails with the help of solvent and self driven self tapping screws of 125 mm x 11 mm, including providing 5 mm Single piece solid PVC extruded sheet inserted in the door as panel, all complete as per manufacturer's specification and direction of Engineer-in-charge. Non decorative finish (matt finish)	Sqm	3.5	2125.9648	7440.8768

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S.NO.	DESCRIPTION	UNIT	QUANTITY	ITEM RATE EXCLUDING GST	Amount in Rs.
38	Providing and Fixing factory made uPVC door frame, made of uPVC extruded sections , of size 65 mm x 55 mm with wall thickness 2.0 mm (± 0.2 mm) , corners of the door frame to be mitred cut and jointed with plastic brackets and stainless steel screws, reinforcing hinge side vertical of the frames with PVC profile of Size 28 mm x 30 mm having wall thickness 2 mm (±0.2 mm), including providing & fixing 3 nos of 125 mm long stainless steel hinges to the frame, fixing the frame with jamb with required number & size of anchor dash fastners, all complete as per manufacturer's specification and direction of Engineer-in-charge.	Meter	10	346.5976	3465.976
39	Providing and fixing aluminium extruded section body tubular type universal hydraulic door closer (having brand logo with ISI, IS : 3564, embossed on the body, door weight upto 36 kg to 80 kg and door width from 701 mm to1000 mm), with double speed adjustment with necessary accessories and screws etc. complete.	EACH	8	558.6496	4469.1968
40	Providing and fixing aluminium tower bolts, ISI marked, anodised (anodic coating not less than grade AC 10 as per IS : 1868 ) transparent or dyed to required colour or shade, with necessary screws etc. complete :	EACH	10	67.9288	679.288
41	Providing and fixing aluminium handles, ISI marked, anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade, with necessary screws etc. complete : 125 mm	EACH	10	39.1304	391.304
42	Providing and fixing aluminium hanging floor door stopper, ISI marked, anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade, with necessary screws etc. complete. Single rubber stopper.	EACH	8	22.2712	178.1696
43	Providing and fixing aluminium sliding door bolts, ISI marked anodised anodic coating not less than grade AC 10 as per IS : 1868), transparent or dyed to required colour or shade, with nuts and screws etc. complete 250x16 mm	EACH	10	151.9952	1519.952
44	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer ( TWO COATS OF YELLOW ZINC CHROMATE PRIMER) all complete, (STRUCTURAL STEEL INCLUDING CHEQURED PLATE ETC)	Kg	2093.44	66.748	139732.9331
45	Painting with EPOXY BASED synthetic enamel paint of approved brand and manufacture to give an even shade Two or more coats on new work SHADE: SIEMENS GREY RAL 7032/ OR AS APPROVED	Sqm	109.92	79.7368	8764.669056
46	Supplying and fixing rolling shutters of approved make, made of required size M.S. laths, interlocked together through their entire length and jointed together at the end by end locks, mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete, including the cost of providing and fixing necessary 27.5 cm long wire springs manufactured from high tensile steel wire of adequate strength conforming to IS: 4454 - part 1 and M.S. top cover of required thickness for rolling shutters. 80x1.20 mm M.S. laths with 1.20 mm thick top cover COMPLETE ALL INCLUDING PRIMER ( TWO COATS OF YELLOW ZINC CHROMATE PRIMER)	Sqm	9	1839.1944	16552.7496

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S.NO.	DESCRIPTION	UNIT	QUANTITY	ITEM RATE EXCLUDING GST	Amount in Rs.
47	Providing and laying in situ five course water proofing treatment with APP (Atactic Polypropylene) modified Polymeric memberane over roof consisting of first coat of bitumen primer @ 0.40Kg per sqm, 2nd & 4th courses of bonding material @ 1.20 kg/sqm, which shall consist of blown type bitumen of grade 85/25 conforming to IS : 702, 3rd layer of roofing membrane APP modified Polymeric membrane 2.0 mm thick of 3.00 Kg/ sqm weight consisting of five layers prefabricated with centre core as 100 micron HMHDPE film sandwiched on both sides with polymeric mix and the polymeric mix is protected on both side with 20 micron HMHDPE film. 5th, the top most layer shall be finished with brick tiles of class designation 10 grouted with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 2% integral water proofing compound by weight of cement over a 12 mm layer of cement mortar 1:3 (1 cement : 3 fine sand) and finished neat (item of laying brick tiles shall be paid for separately).	Sqm	509	268.14	136483.26
48	Providing and laying brick tiles over mumty roofs, grouted with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 2% of integral water proofing compound by weight of cement, over 12 mm layer of cement mortar 1:3 (1 cement : 3 fine sand) and finished neat With common burnt clay F.P.S. (non modular) brick tiles of class designation 10	Sqm	509	337.4464	171760.2176
49	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, (i) Single socketed pipes.110 mm diameter	Meter	52	200.1128	10405.8656
50	Providing and fixing G.I. Pipes complete with G.I. fittings and clamps i/c making good the walls etc. concealed pipe including painting with anti corrosive bitumastic paint, cutting chases and making good the wall 15 mm dia nominal bore	RM	10	293.6256	2936.256
51	Providing and fixing G.I. Pipes complete with G.I. fittings and clamps i/c making good the walls etc. concealed pipe including painting with anti corrosive bitumastic paint, cutting chases and making good the wall 20 mm dia nominal bore	RM	30	324.1296	9723.888
52	Providing and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc. 20 mm dia. nominal bore	RM	30	186.1728	5585.184
53	Providing and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc. 25 mm dia. nominal bore	RM	50	239.1448	11957.24
54	Providing and fixing G.I. pipes complete with G.I. fittings and clamps, i/c cutting and making good the walls etc. Internal work – Exposed on wall. 20 mm dia. nominal bore	RM	10	225.7296	2257.296
55	Providing and fixing G.I. pipes complete with G.I. fittings and clamps, i/c cutting and making good the walls etc. Internal work – Exposed on wall. 25 mm dia. nominal bore	RM	20	287.328	5746.56
56	Providing and fixing square-mouth S.W. gully trap class SP-1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design: 100x100 mm size P type With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	4	1513.392	6053.568
57	Providing and fixing brass bib cock of approved quality : 15 mm nominal bore	each	3	198.4728	595.4184
58	Providing and fixing brass bib cock of approved quality : 20mm nominal bore	each	3	214.1512	642.4536
59	Providing and fixing brass stop cock of approved design, quality and make 15 mm NB	Each	3	198.4728	595.4184
60	Providing and fixing brass stop cock of approved design, quality and make 20 mm NB	Each	3	214.1512	642.4536
61	Providing and fixing brass ball valve with C I wheel of approved quality ( screwed end ) for 25 mm dia nominal bore with reducer if necessary at all heights & levels	Each	5	326.1304	1630.652
62	Providing and fixing PVC Nahani Traps of ISI Make of 100 x 100 mm at all heights and levels size and all complete as directed by the Engineer-in-charge..	Each	10	370.184	3701.84

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S.NO.	DESCRIPTION	UNIT	QUANTITY	ITEM RATE EXCLUDING GST	Amount in Rs.
63	Providing and fixing PTMT towel rail complete with brackets fixed to wooden cleats with CP brass screws with concealed fitting arrangement of approved quality and colour. 600mm long towel rail with total length of 645mm, width 78mm and effective height of 88mm, weighing not less than 190gms all complete as directed by the Engineer-in-charge..	Each	3	390.648	1171.944
64	Providing and fixing PVC, soil waste and vent pipes conforming to IS 4985 of SWR quality 6 Kg / Sq cm, pressure. The rate shall include cost of all fittings like plain elbow, plain tee, plain Y, 4 way tee and all required necessary specials etc., complete. jointing with rubber ring and solvent joints providing MS brackets grouted in the wall and fasteners cutting and making good the walls and floors (pipes running expose in sanitary ducts) supreme or prince/approved quality pipes. 75 mm dia	meter	25	444.2208	11105.52
65	Providing and fixing PVC, soil waste and vent pipes conforming to IS 4985 of SWR quality 6 Kg / Sq cm, pressure. The rate shall include cost of all fittings like plain elbow, plain tee, plain Y, 4 way tee and all required necessary specials etc., complete. jointing with rubber ring and solvent joints providing MS brackets grouted in the wall and fasteners cutting and making good the walls and floors (pipes running expose in sanitary ducts) supreme or prince/approved quality pipes. 110 mm dia	meter	50	444.2208	22211.04
66	Providing and fixing PVC, soil waste and vent pipes conforming to IS 4985 of SWR quality 6 Kg / Sq cm, pressure. The rate shall include cost of all fittings like plain elbow, plain tee, plain Y, 4 way tee and all required necessary specials etc., complete. jointing with rubber ring and solvent joints providing MS brackets grouted in the wall and fasteners cutting and making good the walls and floors (pipes running expose in sanitary ducts) supreme or prince/approved quality pipes. 150 mm dia	meter	15	481.2392	7218.588
67	Providing and fixing Stainless Steel A ISI 304 (18/8) kitchen sink as per IS 13983 with C.I. brackets and stainless steel plug 40 mm including painting of fittings and brackets, cutting and making good the walls wherever required, 510x1040 mm bowl depth 200mm	Nos	1	3663.1696	3663.1696
68	Providing and fixing wash basin above platform with C.I. brackets, 15 mm C.P. brass pillar taps, 32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require :White Vitreous China Flat back wash basin size 550x400 mm with single 15 mm C.P. brass pillar tap. all complete as directed by the Engineer-in-charge..	Each	2	1646.8552	3293.7104
69	Providing and fixing 600x450 mm beveled edge mirror of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers all complete as directed by the Engineer-in-charge..	Each	2	841.6808	1683.3616
70	Providing and fixing white vitreous china pedestal type/ wall mounted water closet ( european/Western type ) with seat & lid, 10 litre low level flushing cistern with fittings and CI / MS brackets, 40 mm flush bend, over flow arrangement with specials of standard make and mosquito proof coupling of approved municipal design complete including painting of fittings and brackets, cutting and making good the walls and floors where ever required WC pan with ISI marked coloured solid plastic and lid with coloured vitreous china flushing cistern and CP flush bend (low level cistern), toilet paper roll holder and all fittings all complete as directed by the Engineer-in-charge..	Each	2	3451.1832	6902.3664

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S.NO.	DESCRIPTION	UNIT	QUANTITY	ITEM RATE EXCLUDING GST	Amount in Rs.
71	Providing and fixing white vitreous china flat back half stall urinal / wall mounted of 430*260*350mm parryware/Hindware/seabird/orient (coral) with fittings size C.P. Brass , spreaders with unions and clamps (all in C.P.Brass) with waste fitting as per I.S.2556, C. I. trap with outlet grating and other coupling in C.P. brass including painting of fittings and brackets, cutting and making good the walls and floors wherever required: all CP fittings are jaquar or yes yes brand. flush pipe: Single half stall urinal with 5 litre P.V.C. automatic flushing cistern.all complete as directed by the Engineer-in-charge..	Each	1	3268.356	3268.356
72	Providing and fixing toilet paper holder : C.P. brass	Each	2	382.94	765.88
73	Providing and fixing liquid soap dispenser and holder as per approved design.	Each	2	370.184	740.368
74	Providing and fixing fancy CP brass fittings and flange of approved brand and manufacture( oriental series of MARC or pearl/jade series of Parryware or Continental clasion series of JAGUAR or crystal series of MARC) 15 mm nominal health faucet	Each	2	1480.736	2961.472
75	Providing and placing on terrace (at all floor levels) polyethylene water storage tank ISI : 12701 marked with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank. (Syntax or equivalent)	Ltr	1500	7.40368	11105.52
76	Constructing brick masonry manhole in cement mortar 1:4 ( 1 cement : 4 coarse sand ) with R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40mm nominal size), inside plastering 12mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement complete as per standard design : Inside size 90x80 cm and 45 cm deep including C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover and frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg) : With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	1	7153.7128	7153.7128
77	Constructing brick masonry manhole in cement mortar 1:4 ( 1 cement : 4 coarse sand ) with R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40mm nominal size), inside plastering 12mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement complete as per standard design :Inside size 120x90 cm and 90 cm deep including C.I. cover with frame (medium duty) 500 mm internal diameter, total weight of cover and frame to be not less than 116 kg (weight of cover 58 kg and weight of frame 58 kg) :With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	1	15048.4104	15048.4104
<b>TOTAL AMOUNT FOR CIVIL WORKS (excluding GST)</b>					<b>3551506.399</b>
<b>B</b>	<b>Electrical Works (supply and Erection)</b>				
1	LED office luminaire Office room, 42W, 240V, Philips make Sereno type SP 824	no.	4.000	13326.624	53306.496

**Construction of balanced work of Control Room building (CMCS) (1 no), Inverter Room (2nos.), & Security room foundation (2nos.) and other associated works FOR 10 MW Solar Photovoltaic Power Plant at Santaldih, Purulia, West Bengal, (WBSEDCL: West Bengal State Electricity Distribution Company Limited**

S.NO.	DESCRIPTION	UNIT	QUANTITY	ITEM RATE EXCLUDING GST	Amount in Rs.
2	LED recessed mounted luminaire, SCADA room, 40W, 240V, Philips make MIDFLUX Fullglow High efficiency Lumio diffuser	no.	4.000	11845.888	47383.552
3	Surface mounted luminaire with CFL lamps, Pantry room, Portico, 2x18W, 240V, Philips make Lotus FCS518 2xPL-L18W HF	no.	1.000	1776.8832	1776.8832
4	Surface mounted luminaire with CFL lamps, Toilets, 2x11W,240V, Philips make Lotus FCS518 2xPL-S11W, Philips make Lotus FCS518 2xPL-S11W	no.	3.000	1628.8096	4886.4288
<b>TOTAL AMOUNT FOR ELETRICAL WORKS (excluding GST)</b>					<b>107353.36</b>
<b>TOTAL AMOUNT FOR CIVIL &amp; ELECTRICAL WORKS (excluding GST)</b>					<b>3658859.759</b>
<b>QUOTE PERCENTAGE (%) ABOVE/BELOW (+/-) (OR) AT PAR TO TOTAL AMOUNT</b>					
<b>QUOTED PERCENTAGE (%) IN WORDS ABOVE/BELOW (OR) AT PAR TO TOTAL AMOUNT</b>					
GST as applicable					
<p>NOTE:            1. CONTRACTOR SHOULD QUOTE PERCENTAGE (%) ABOVE/BELOW (OR) AT PAR TO TOTAL AMOUNT            2.CONTRACTOR SHOULD QUOTE SAME PERCENTAGE FOR BOTH THE WORKS THAT IS BALANCE BUILDING WORKS AND ROAD &amp; DRAIN WORKS            3. QUOTED PERCENTAGE (%) IS APPLICABLE ON ALL ITEM RATES UNIFORMLY.</p>					