

UTTAR BANGA KRISHI VISWAVIDYALAYA
PUNDIBARI: COOCH BEHAR
DETAILED NOTICE INVITING e - TENDER NO - 01 of 2026– 2027

Ref No: 0421/UBKV/Est./Tend (WD)

Date: 29.07.2026

Sealed e-Tender in two bid System (Technical Bid & Financial Bid) is hereby invited by the undersigned for few Civil Works in Main campus of UBKV, Pundibari, Cooch Behar from bonafide Agencies having experience of executing similar nature of work in any reputed Institution / Govt. Organization. Last date and time of submission of Tender is **14.08.2026 (up to 02.00 pm)**. Date and Time of Opening of Tender is **17.08.2026 (02:00 pm onwards)**.

Sl. No	Name of the Work	Estimated Amount put to Tender (Rs)	Amount of Earnest Money to be deposited (Rs)	Price of Technical , Financial Bid documents, 2911 & others Annexure	Time of completion of the work	Eligibility of Tenderer
1	2	3	4	5	6	7
1.	Civil, S&P and Electrical Repair, Renovation, Modification and Refurbishing work at Vice Chancellor's Residence at Railghumti, Cooch Behar under Uttar Banga Krishi Viswavidyalaya, Pundibari, Cooch Behar. [Composite work]	15,01,087.00 (Rupees fifteen lacs one thousand and eighty-seven)	2.00 % (two point zero) of the Estimated amount put to tender = Rs. 30,022.00	Rs. 1000.00 (one thousand only)	90 (ninety) days	See Clause 1 & 4 of Page- 2, 3 & 7
2.	M.S Structural work of TATA/JSW make with Zn-Alloy Coated TATA/JSW Make (0.50 mm thick) tin shed on the roof of PCM Hall Kitchen and Dining hall under Uttar Banga Krishi Viswavidyalaya, Pundibari, Cooch Behar.	10,40,110.00 (Rupees ten lacs forty thousand one hundred and ten)	2.00 % (two point zero) of the Estimated amount put to tender = Rs. 20,802.00	Rs. 1000.00 (one thousand only)	90 (ninety) days	See Clause 1 & 4 of Page- 2, 3 & 7
3.	i. Cleaning of Septic Tank and construction of soak well at Teesta Hall ii. Inter Connection between water tanks at Central Farmers Hostel, iii. Supply, fitting, fixing of Iron Gate No-4, iv. Supply fitting fixing of 2000 ltr new water tank along with replacement of old G.I. pipe in Promology and Post Harvesting dept at Faculty of Horticulture under Uttar Banga Krishi Viswavidyalaya, Pundibari, Cooch Behar.	2,12,535.00 (Rupees two lacs twelve thousand five hundred and thirty-five)	2.00 % (two point zero) of the Estimated amount put to tender = Rs. 4,251.00	Rs. 300.00 (three hundred only)	90 (ninety) days	See Clause 1 & 4 of Page- 2, 3 & 7
4.	Electrical repair and renovation of Meeting room and power distribution work at Agriculture Dean office under Uttar Banga Krishi Viswavidyalaya, Pundibari, Cooch Behar.	1,46,264 .00 (Rupees one lac forty-six thousand two hundred and sixty-four)	2.00 % (two point zero) of the Estimated amount put to tender = Rs. 2,925.00	Rs. 300.00 (three hundred only)	60 (sixty) days	See Clause 1 & 4 of Page- 2, 3 & 7

Tender Schedule:

•	Date of Online Publication	:	31.07.2026
•	Date for displaying on www.wbtenders.gov.in & www.ubkv.ac.in	:	31.07.2026 after 05:00 PM
•	Start Date of Online Upload & Submission	:	31.07.2026 after 05.00 PM
•	Last date and time of online bid submission	:	14.08.2026 up to 02:00 PM
•	Date of Bid opening	:	17.08.2026 after 02:00 PM
•	Details available in the websites	:	www.wbtenders.gov.in , www.ubkv.ac.in

Registrar (Actg.)
Uttar Banga Krishi Viswavidyalaya

TERMS & CONDITIONS

1. Methodology for submission of EMD: [as per order no- 3975-F(Y) Dated-28/07/2016 of Finance Dept, Govt. of W.B.] **For all bidders required to submit the requisite EMD using the online payment mode. Exemption will be allowed for Labour Co-operative Society as per MEMORANDUM No.-815-F(Y) Dated – 23/02/2023 of Finance Dept., Govt. of W.B.** Accordingly, the net banking option shall have to be availed with any of the Banks listed in the ICICI Bank payment gateway & the option of RTGS / NEFT through Bank A/C in any Bank have to procure with the payment gateway of ICICI Bank by the e-procurement portal through web services. As a prequalification documents, the EMD amount paid by the bidder will get credited to the respective pooling A/C maintained by the Focal point Branch of ICICI bank.

Refund / settlement process of EMD [as per order no- 3975-F(Y) Dated-28/07/2016 of Finance Dept, Govt of W.B.):

i. After opening of the bids and technical evaluation of the same by the tender inviting authority through electronic processing in the e-procurement portal of the State Government, the tender inviting authority will declare the portal of bids as successful or unsuccessful which will be made available, along with the details of the unsuccessful bidders, to ICICI Bank by the e-procurement portal through web services.

ii. On receipt of the information from the e-Procurement portal, the Bank will refund, through an automated process, the EMD of the bidders disqualified at the technical evaluation to the respective bidders' bank accounts from which they made the payment transaction. Such refund will take place within T+2 Bank Working Days where T will mean the date on which information on rejection of bids is uploaded to the e-procurement portal by the tender inviting authority.

iii. Once the financial bid evaluation is electronically processed in the e-procurement portal, EMD of the technically qualified bidders other than that of the L1 and L2 bidders will be refunded, through an automated process, to the respective bidders' bank accounts from which they made the payment transaction. Such refund will take place within T+2 Bank Working Days where T will mean the date on which information on rejection of financial bid is uploaded to the e-procurement portal by the tender inviting authority. However, the L2 bidder should not be rejected till the LOI process successful.

iv. If the L1 bidder accepts the LOI and the same is processed electronically in the e-procurement portal, EMD of the L2 bidder will be refunded through an automated process, to his bank account from which he made the payment transaction. Such refund will take place within T+2 Bank Working Days where T will mean the date on which information on Award of Contract (AOC) to the L1 bidder is uploaded to the e-procurement portal by the tender inviting authority.

v. As soon as the L1 bidder is awarded the contract (AOC) and the same is processed electronically in the eProcurement portal) EMD of the L1 bidder for tenders of State Government offices will automatically get transferred from the pooling account to the State Government deposit head "8443-00-103-001-07" through GRIPS along with the bank particulars of the L1 bidder.

b) EMD of the L1 bidder for tenders of the State PSUs/Autonomous Bodies/Local Bodies/PRIs, etc will automatically get transferred from the pooling account to their respective linked bank accounts along with the bank particulars of the L1 bidder.

In both the above cases, such transfer will take place within T+1 Bank working Days where T will mean the date on which the Award of Contract (AOC) is issued.

vi. The Bank will share the details of the GRN No. generated on successful entry in GRIPS with the E-Procurement portal for updation.

vii. Once the EMD of the L1 bidder is transferred in the manner mentioned above, Tender fees, if any, deposited by the bidders will be transferred electronically from the pooling account to the Government revenue receipt head "0070-60-800-013-27" through GRIPS for Government tenders and to the respective linked bank accounts for State PSU/Autonomous Body/Local Body/PRIs, etc tenders.

viii. All refunds will be made mandatorily to the Bank A/c from which the payment of EMD & Tender fees (if any) were initiated.

2. Intending Tenders should download the Tender Documents from the website <https://www.ubkv.ac.in> and www.wbtenders.gov.in directly with the help of Digital Signature Certificate and Earnest Money Deposit (EMD) should be remitted through Demand Draft/Banker's Cheque issued from any Nationalized Bank in favour of Uttar Banga Krishi Viswavidyalaya Pundibari, Cooch Behar, Payable at Pundibari, Cooch Behar, and the same (along with document for EMD exemption, if any) should be documented and scan copy of the aforesaid documents are to be uploaded through said website.

3. Both Technical Bid and Financial Bid should be submitted duly digitally signed by the Tenderer through the website <https://www.ubkv.ac.in> and www.wbtenders.gov.in (Details of which has been narrated in Instruction to Bidders').

4. ELIGIBILITY CRITERIA FOR PARTICIPATION IN TENDER:

a) The prime agency should himself meet the eligibility criteria as per following: -

The intending bidder should produce a similar nature of completed work having minimum credential of 40% of the amount of Civil works put to tender, 40 % of the amount on Electrical works put to tender in combined or in separate during 5 years prior to the date of issue of the tender notice.

OR,

Intending bidder should produce credentials of 2 (two) similar nature of completed Civil works, each of the minimum credential of 30% of the amount of Civil Works put to tender and 30% of the amount on Electrical works put to tender in combined or in separate during 5 (Five) years prior to the date of issue of the tender notice.

OR,

Intending bidder should produce credentials of one single / combined running work of similar nature which has been completed to the extent of 80% or more (in which the Civil part have to be completed 80% or above the quantum of progressing work) and value of which is not less than the desired value of amount put to tender.

[In case of running works, only those tenderers who will submit the certificate of satisfactory running work from the concerned Executive Engineer, or equivalent competent authority, will be eligible for the tender. In the required certificate it should be clearly stated that the work is in progress satisfactorily and also that no penal action has been initiated against the executing agency, i.e., the tenderer.]

- i) Credential certificate issued by the Executive Engineer or equivalent or competent authority of a State / Central Government, State / Central Government undertaking, statutory / Autonomous bodies constituted under Central / State statute, on the executed value of completed / running works will be taken as credential.
- ii) As a supporting document of credential, the W/O, BOQ, Payment Certificate should be submitted.
- iii) Payment Certificate will not be treated as Credential.

N.B. Estimated amount, Date of completion of project & detail communicational address of Client must be indicated in the Credential Certificate.

- iv) The prospective bidders shall have full time engaged/appointed in their Pay roll experienced technical personnel, the minimum being 1 (one) **Civil Engineering Degree holder and two Civil Engineering Diploma holder** (Authenticated documents in respect of Qualification and engagement shall be furnished for Technical Evaluation). **In this respect the bidder shall upload from no- IV B in Section- "B" duly notarized, failing which the bid may be treated as non-responsive.** [Non-Statutory Documents].

Provisional certificate in support of qualification will not be considered beyond three (03) year from final examination. The Contractor (L1 bidder) shall immediately after receiving letter of acceptance of the tender and before commencement of work will intimate in writing to the Engineer in charge, the Principal Technical representative and other technical representative for the work for approval.

- v) Pan Card, Professional Tax receipts Challan, GST registration Certificate to be accompanied with the Technical Bid document. Income Tax (Saral) Acknowledgement Receipt for the current assessment year to be submitted. [Non-Statutory Documents].

vi) **PF certificate & Up to date Return (Minimum 3 years old organization).**

vii) **ESI certificate and up to date return.**

viii) **Audit report and Turnover Certificate of last Five financial year (should have UDIN last 3 years).**

- ix) Prohibition on suspended /debarred persons / Entities to participate in the bidding of the Govt project / contract of the Department. A person / entity that is suspended / debarred by a procuring entity shall not be allowed to participate in any work under this NIT during the period of suspension / debarment unless the same has been revoked. Authenticated proof shall have to be submitted in this matter.
- x) Available liquid assets (aggregate of working capital, cash-in-hand, uncommitted Bank Guarantees) and / or credit facilities not less than 10% of the estimated cost put to tender.
- xi) Working Capital shall not be less than 10 (ten) percent of the amount put to tender.
- xii) Average annual turnover on construction works during last 3 (three) consecutive financial year should be at least 30% of the estimated cost put to tender.
- xiii) The available Bid Capacity (to be calculated on the basis of prescribed format) of the prospective applicant shall not be less than the amount put to tender. Net worth for the last year calculated on the basis of capital, profit and free reserve available to the firm should be positive.
- xiv) In case of Proprietorship and Partnership Firms and Company the Tax Audited Report in 3CD Form to be furnished along with balance sheet and profit and loss account and all schedules forming the part of Balance Sheet and Profit & Loss Account. Tax Audited report, Balance Sheet and Profit & Loss Account including all schedules forming the part of Balance Sheet and Profit & Loss Account should be in favour of applicant. No other name along with applicant name, in such enclosure will be entertained. [Non- Statutory Documents].
- xv) The prospective bidders should have assured ownership/ lease (Details as mentioned in "Clause-7 of, Instruction to the bidder") / [Non-Statutory Documents].
- xvi) A prospective bidder shall be allowed to participate in the particular Job either in the capacity of individual or as a partner of a firm, if found to have applied severally in a single job, all his applications will be rejected for that job.
- xvii) The partnership firm shall furnish the registered partnership deed and the company shall furnish the Article of Association and Memorandum. [Non-Statutory Documents]
- xviii) 'Joint Venture' will not be allowed
- xix) Sub-Contractor / sub-let will not be allowed
- xvii) The prospective tenderers should own or arrange through lease deed (details as mentioned in SL no 23) the

required plant and machineries of prescribed specifications as shown in format. Conclusive proof of ownership (Tax Invoice, Way Bill, Delivery Challan, incorporation in the balance sheet as fixed asset) for each plant and machineries in working condition shall have to be submitted. Present location of installation of main plant and machineries as mentioned in the specified format has also to be disclosed.

If the same is engaged in the other works, then name of client along with his contact no should be furnished in the declaration by the intended tenderer countersigned by the client with tentative release of such plant and machineries where the same are presently engaged. If necessary, authority may inspect such plant and machineries or call for original documents as proof of ownership in favour of owner / lessor of the same. (non-statutory document)

6. Agencies shall have to arrange for required plant & Machineries, store of materials, labour shed, Laboratory etc. and land for according to the creation of the same at their own cost and responsibility.

7. Work order for restricted amount may also be issued as per availability of fund. Intending tenderers may consider these criteria while submission of Tender and quoting their rates.

8. In case of Materials, reputed brand as per specification and / or as approved by the University authority / concerned Engineer on behalf of the University shall be allowed to use in the work. All materials to be used shall be pre-approved if not mentioned in the tendered schedule.

9. The Tenderer at the Tenderer's own responsibility and risk is encouraged to visit and examine the site of works and its surroundings and obtain all information that may be necessary for preparing the Tender and entering into a contract for the work as mentioned in the Notice Inviting Tender, the cost of visiting the site shall be at the Tenderer's own expense.

10. The Tender Inviting Authority of Uttar Banga Krishi Viswavidyalaya reserves the right to cancel this N.I.T. due to unavoidable circumstances and no claim in this respect will be entertained.

11. The intending Tenderers shall clearly understand that whatever may be the outcome of the present Invitation of Tender, no cost of Tendering shall be reimbursable by the Department. The Tender Inviting Authority of Uttar Banga Krishi Viswavidyalaya reserves the right to reject any Tender or all Tenders without assigning any reason whatsoever and is not liable for any cost that might have incurred by any tenderer at any stage of Tendering.

12. Before issuance of the work order, the Tender Accepting Authority may verify the credential and other documents of the lowest tenderer if found necessary. After verification, if it is found that such documents submitted by the lowest tenderer is either manufactured or false in that case, work order will not be issued in favour of the tenderer under any circumstances and legal action will be taken against him.

13. Security Deposit: In respect of successful Tenderer, the Earnest Money deposit on acceptance of Tender shall be converted as a part of the Security Deposit. **Security Deposit shall be realized by recovering from the progressive bill @ 8% (Eight percent) of the amount of each such bill. Defect Liability Period shall be one (01) year for repair/renovation and SITC work and three (03) year for Construction work from the date of Handing over- Taking Over of the work.**

14. The Additional Performance Security shall be obtained from the successful bidder, if the accepted bid value is more than 20 % less than the estimated amount put to tender, from the successful bidder having own prime machineries for construction of the work. If the successful bidder not having ownership of any of those prime machineries, the Additional Performance Security shall be obtained from the successful bidder if the accepted bid value is more than 10 % less than the estimated amount put to tender. The Additional Performance Security shall be equal to 10 % of the tendered amount.

The Additional Performance Security shall be submitted in the form of Bank Guarantee from any Scheduled Bank as per enclosed format (Annexure-B) before issuance of Work Order. If the bidder fails to submit the Additional Performance Security within seven working days from the date of issuance of Letter of Acceptance, his earnest money will be forfeited. The said Bank Guarantee shall be valid up to the end of the contract period and shall be renewed accordingly, if required. The said bank Guarantee shall be returned immediately after successful completion of the contract. If the bidder fails to complete the work successfully, the Additional Performance Security shall be forfeited at any time during the pendency of the Contract period after serving proper notice to the Contractor.

Necessary provisions regarding deduction of security deposit from the progressive bills of the contractor as per relevant clauses of the contract will in no way affected/altered by this Additional performance Security

15. Unless otherwise stipulated all the works are to be done as per General Conditions and General Specifications in the "Departmental Schedule" which means the relevant PWD (WB) Schedule of Rates for the working area including up to date addenda and corrigenda, if any, published by Public Works Department, Government of West Bengal. For Road & bridge works, "Departmental Schedule" means the relevant PW(R) Dte. Schedule of Rates for the working area including upto date addenda and corrigenda, if any, published by Public Works (Roads) Department, Government of West Bengal. The project should be executed as per IS CODE / IRC/ MOST/ MORTH standards regarding the quality of materials and various items of works.

16. Deduction of Income Tax from the Contractor's Bill will be made as per Govt. rules.

17. Labour Welfare Cess @ 1% (one percent) of the cost of construction works will be deducted from every Bill of the selected agency. Royalty & all other Statutory levy/ Cess will have to be borne by the contractor as per Govt. Rules and the rate in the B.O.Q. is inclusive of all taxes & Cess stated above.

18. Deduction of Tax shall be made as per provision of the GST with up to date amendments.

19. Bids shall remain valid for a period of 120 (hundred twenty) days.

20. The Agency will be liable to maintain the work at working portion at the appropriate service level to the satisfaction of the Engineer -in -Charge at his own cost for a period of Security Period from the date of completion of the work. If any defect/ damage is found during the period as mentioned above, the Agency shall make the same good at his own cost. Failure to do so, penal action against the Agency will be imposed by the department as deemed fit. The Agency will have to quote his rate considering the above aspect. Also, the prospective Tenderers shall have to execute the work in such a manner so that appropriate service level of the work is kept during progress of work and the period of Security Period from the date of successful completion of the work to the entire satisfaction of the Engineer – in – Charge may be considered towards release of “Security Deposit”.

21. In case of ascertaining Authority at any stage of application or executing of work necessary registered power of Attorney is to be produced.

22. In case of inadvertent typographical mistake found in the specified price Schedule of Rates, the same will be treated to be so corrected as to conform to the relevant P.W.D. (W.B.) Schedule of Rates of Building, Sanitary and Plumbing, Electrical and / or technically sanctioned estimate.

23. Adjustment of price (increase or decrease) Since BOQ for the works under this NIT is based upon the schedule of rates of Public Works Department for Building, S and P Works with up-to-date Addenda and Corrigendum, the tenderers shall quote their rate (percentage above/ below/ at par) accordingly considering that no escalation and / or price adjustment will be allowed by the department thereto under any circumstances. Time/ cost overrun and consequent cost of escalation for any materials, labour, P.O.L. etc. will not be allowed.

24. Requirement of Principal Machineries which must be possessed by [Non-Statutory Document]

i) Concrete Mixer Diesel or Electric operated with a minimum capacity of 7 – 10 cft.

ii) Any other machinery or instrument as may be prescribed by tender inviting authority.

N.B. The above machinery should be owned or arranged through lease deed. It is obligatory to execute the concreting work by using the above the mentioned machine.

Original documents in support of own possession or arranged through lease deed of the aforesaid machineries is to be furnished if required by the tender inviting authority.

25. Canvassing in connection with the tender is strictly prohibited in the tender submitted by the Contractor.

26. Site of work and necessary drawings may be handed over to the successful Tenderer phase wise. No claim in this regard will be entertained.

27. In case of the successful tenderer who has been exempted from depositing Earnest Money, the Government will be at liberty to recover the forfeited amount (equal to the amount of Earnest Money) by any means that may be deemed suitable.

28. Two separate sealed envelopes one for “**Technical Bid**” and another for “**Financial Bid**” shall have to be submitted in a big envelope superscripting name of work and Sl. No. in block letters. “**Technical Bid**” should comprise of self-attested scanned copy of valid Current Trade License, up to date Professional Tax receipt Challan, GST Registration Certificate with current Tax receipt Challan, Income Tax Return (ITR) Acknowledgement, PAN Card and Balance Sheet verified by competent authority i.e. Audited Accountants of last 3 years along with credential in the form of **Work Completion Certificate** and Earnest money. “**Financial Bid**” should comprise of issued tender documents viz. Specification, Price Schedule / Schedule of Work duly signed by the applicant along with **Rate Quote** in figures and words. “**Financial Bid**” of the technically qualified participants will only be opened as per the discretion of UBKV Authority.

29. The successful Tenderer will have to start the work as per the work order to commence the work.

30. Successful tenderer will be required to obtain valid Registration Certificate & Labour License from respective Regional Labour Offices where construction work by them are proposed to be carried out under the West Bengal Building & other Construction Works’ Act, 1996 and the Contract Labour (Regulation & Abolition) Act, 1970 and the same should be submitted to the Engineer- in- Charge.

31. The Successful Tenderer shall have to comply with the provision of (a) the Contract Labour (Regulation & Abolition) Act, 1970 (b) the Apprentice Act, 1961 and (c) the Minimum Wages Act, 1948(d) the West Bengal Building & other Construction Works, Act, 1996 and the Notification thereof of other laws relating thereto and the rules. The contractor shall also be liable for any liability arising on account of any violation by him of the provisions of the Act and rules made there under time to time.

32. The Contractor shall not be entitled for any loss suffered by him due to delay arising out for modification of the work, due to non-delivery of the possession of site and / or modification of drawing and design.

33. Prevailing safety norms has to be followed by the successful Tenderer during execution of the work so that LTI (Loss of time due to injury) is zero.

34. Guiding schedule of rates: Schedule of rates of P.W.D., W.B. with effect from 01.11.2017 for Building, Sanitary & Plumbing works, Electrical works materials and labour along with up-to-date corrigenda and addenda and / or prevailing market rates for non-scheduled items.

35. The Eligibility of a Tenderer will be ascertained on the basis of the documents submitted by a tenderer in support of eligibility criteria. If any document submitted by a Tenderer is incorrect / manufactured/ fabricated or false, his Tender will be out right rejected at any stage and legal action will be taken against him.

36. Bidders must have qualified Engineer for supervision of the work. Necessary documents and undertaking in support of existence of such engineer must be produced to the satisfaction of the tendering authority.

36. PAINTING WORKS

The painting work shall be executed through original paint manufacturer or their authorized applicator or as suggested by the University. Sampling on surface at site shall be done in presence of the manufacturer's representative and the quality of application to be certified by the manufacturer. Surface preparation and procedure of paints application to be followed as per guidelines suggested by paint manufacturer.

37. PAINT FAILURE SHALL MEAN:-

- a) Flaking/peeling/cracking or chalking of paint film, or,
- b) Growth of micro-organism like algae/fungus on the painted surface. or,
- c) Fading of colour shade of painted surface.

For a particular area, primer and paint to be used shall be of same make as approved by UBKV.

38. Structural Work of Tin Shed:

Steel work in built up tubular (round, square or rectangular hollow tubes etc.) trusses of **TATA/JSW Make.**, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc. complete.

Providing and fixing precoated galvanised iron profile sheets (size, shape and pitch of corrugation as approved by Engineer-in-Charge) of total coated thickness 0.50 mm of **TATA/JSW Make** (base metal of minimum 0.45 mm thickness with total coating thickness of 0.05mm) with zinc coating 120 grams per sqm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns. Sheet should have protective guard film of 25 microns minimum to avoid scratches during transportation and should be supplied in single length upto 12 metre or as desired by Engineer-in-charge. The sheet shall be fixed using self drilling /self tapping screws of size (5.5x 55 mm) with EPDM seal, complete upto any pitch in horizontal/ vertical or curved surfaces, excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.

Registrar (Actg.)

Uttar Banga Krishi Viswavidyalaya

THE ABOVE STATED NON-STATUTORY/TECHNICAL DOCUMENTS SHOULD BE ARRANGED IN THE FOLLOWING MANNER

SL No	Category Name	Sub Category Description	Work SL No	Details
A.	CERTIFICATES	CERTIFICATES	All	1. Valid 15-digit Goods and Service Taxpayer Identification Number (GSTIN) under GST Act,2017 2. PAN Card 3. Annual Tax Statement/ 26AS for last three financial year.
B.	CERTIFICATES	CERTIFICATES	SL No 1 & 2	1. PF Certificate and up to date return (minimum 3 years old organization) 2. ESI certificate and up to date return. 3. Audit report and Turnover certificate of last Five financial year (should have UDIN last three years)
C.	COMPANY DETAILS	COMPANY DETAILS 1	All	1. PROPRIETORSHIP FIRM (TRDE LICENCE) 2. PARTNERSHIP FIRM (FIRM REGISTRATION CERTIFICATE, REG. PARTNERSHIP DEED, TRADELICENCE) 3. LTD. COMPANY (COMPANY INCORPORATION CERTIFICATE, Article of Association & Memorandum of Association, TRADE LICENCE) 4. SOCIETY (SOC. REGISTRATION COPY, BY-LAWS, TRADE LICENCE) 5. POWER OF ATTORNEY IF NEEDED.
D.	CREDENTIAL	CREDENTIAL1	All	As per Tender Clause 4-a
E.	EQUIPMENT	MACHINERIES	All 03	1. AUTHENTICATED COPY OF INVOICE CHALLAN & WAY BILL (MECHNERY), LEASE DEED AGREEMENT IF NOT OWNED BY THE AGENCY
F.	FINANCIAL (INFO)	WORK IN HAND	All	1. AUTHENTICATED DOCUMENT
			SL No 1 & 2	Filled up Annexure-A, Annexure-B of Page No: 12 & 13
G..	MAN POWER	TECHNICAL PERSONNEL	SL No 1 & 2	The prospective bidders shall have full time engaged/appointed in their Pay roll experienced technical personnel, the minimum being 1 (one) Civil Engineering Degree holder and two Civil Engineering Diploma holder (Authenticated documents in respect of Qualification and engagement shall be furnished for Technical Evaluation). In this respect the bidder shall upload from no- IV B in Section- "B" duly notarized, failing which the bid may be treated as non-responsive.

*Registrar (Actg.)
Uttar Banga Krishi Viswavidyalaya*

FORM-I

PRE-QUALIFICATION APPLICATION

To
The Registrar,
Uttar Banga Krishi Viswavidyalaya, Pundibari,
Cooch Behar.

Sub.: Tender for _____

Ref.: N.I.e.T. No.: _____ ation and

The application is made by me / us on behalf of
_____ in the capacity
_____ duly authorized to submit the offer.

The necessary evidence admissible by law in respect of authority assigned to us on behalf of the group we are interested in bidding for the work(s) given in enclosure to this letter.

We understand that:

- a) Tender Inviting & Accepting Authority / Engineer-in-Charge can amend the scope & value of the contract bid under this project.
- b) Tender Inviting & Accepting Authority / Engineer-in-Charge reserve the right to reject any application without assigning any reason.

Enclo.: e-Filling

- 1. Statutory Documents.
- 2. Non-Statutory Documents.

Signature of applicant including title
and capacity in which application is made.

Date:

FORM-II

ORGANISATION STRUCTURE

1	Name of Applicant (indicate whether Proprietary firm / Partnership / Limited Company / Corporation / Other)	:	
2	Office Address	:	
3	Telephone No.	:	
4	Fax No.	:	
5	E-mail address	:	
6	Name and Address of Banker	:	
7	Details of Technical Staff available	:	

Signature of applicant including title
and capacity in which application is made.

Date:

FORM-III

WORK EXPERIENCE DETAIL

1. Name of Applicant: _____

2. List of similar type of work completed / ongoing:

Name of Employer	Name, location and nature of work	Reference of Work Order (Memo. No. and Date)	Contract Value	Date of Start of Work	Present Status (If completed, please mention date of completion)

Note : Copy of Work Order or Completion Certificate from the employer to be attached.

(to be furnished in Non-Judicial Stamp paper of appropriate value duly notarized on or after the date of publication of this NIT) (to be furnished in Non-Judicial Stamp paper of appropriate value duly notarized on or after the date of publication of this NIT)

From-IV B

Name of the Work: _____

E NIT Number: _____

Sl No	Name of Technical Person	Qualification	Designation	Date of joining	PAN	Mobile Number

I on behalf of (bidders name) do hereby declare that the above information furnished by me are true to the best of knowledge and belief and shall be held responsible if any information is found incorrect in due course and the department has got all right to take any action as deems fit.

Witness: _____

Signed by authenticate officer of the firm

Title of the officer

Name of the firm with seal

Date: _____

Signature of Notary

N.B: all documents photo copy relating to Technical personnel must be uploaded by the agency with duly signed by the bidder.

Annexure-A

FINANCIAL STATEMENT

Name of the Work :

eNit Number :

B.1 Name of Applicant:

B.2 Summary of assets and liabilities on the basis of the audited financial statement of the last five financial years.

(Attach copies of the audited financial statement of the last five financial years)

F.Y/CALENDAR YEAR	Year-1 (2023-2024/ 2024-2025) (Rs. In Lakh)	Year-2 (2022-2023/ 2023-2024) (Rs. In Lakh)	Year-3 (2021-2022/ 2023-2024) (Rs. In Lakh)	Year-4 (2020-2021/ 2021-2022) (Rs. In Lakh)	Year-5 (2019-2020/ 2020-2021) (Rs. In Lakh)
a) Current Assets : (It should not include investment in)					
b) Current liabilities : (It should not include bank over draft)					
c) Working capital : (a) –(b)					
d) Net worth: (Proprietors Capital or Partners Capital or paid up Capital + Resource & surplus)					
e) Bank loan /Guarantee:					

B3. Net profit before Tax (In %)

- a) Current Period :
b) During the last Financial Year :
c) During each of the two previous :
financial years

B4. a) Applicant's Own Resource :

b) Bank Credits :

B5. Approximate value of works in hand :

..... Signature, name and designation of Authorised signatory for and on behalf of (Name of the applicant)	 Name of the Statutory Auditor's Firm/Chartered Accountant Signature:- Seal of the Audit Chartered Accountant Firm: Name of Signatory (in Capital):- Membership no:- Firm Regn no:- Date of Birth:- UDIN:- Mobile no :-
---	---

N.B.:- THIS FORM (i.e FORM-II B) MUST BE PROPERLY MADE IN THE LETTER HEAD OF THE AUDITOR'S /CHARTERED ACCOUNTANT FIRM, CLEARLY MENTIONING THE ADDRESS, e-mail ID, and CONTACT NUMBER OF THE FIRM & should preferably be made in a single page else to be authenticated in each page similarly,

NB:-i) All information sought w.r.i. Firm/Chartered Accountant is mandatory,

ii) All data as mentioned in form 11B shall be available through UDIN verification.

Annexure-B

SECTION-B

NAME OF APPLICANT :

Information of assets and liabilities on the basis of the audited financial statements of the last 5 (five) financial years to demonstrate the current soundness of the Bidder's financial position: -

1. The Bidder's Net worth for the last year calculated on the basis of capital, profit & free reserve available to the firm should be positive. (modified vide memo. 237-W@/1M-23/15 dt. 15.05.2015 of Principal Secretary, Govt. of W.B. (PWD))

2. Bidders, who meet the minimum qualification criteria, will be qualified only if their available bid capacity at the expected time of bidding is more than the total estimated cost of the works. The available bid capacity will be calculated as under:

Assessed Available Bid capacity = $(A \times N \times 2 - B)$ where

A = Maximum value of engineering works in respect of projects executed in any one year during the last five years (updated to the price level of the year indicated in the table below under note) taking into account the completed as well as works in progress. The projects include turnkey project/ item rate contract/construction works.

B = Financial Liability of the bidder to be incurred for existing commitments and on-going works during the period of the subject contracts.

N = Numbers of years (i.e. year) prescribed for completion of the works for which Bids are invited.

Financial liability means remaining all financial involvement of the estimate cost of the project without applying contractual rate.

The calculation of financial liability (i.e. B value) of the bidders will be followed as stated below.

B. Estimate amount put to tender x (100% - physical percentage of the work in progress)

Percentage of physical progress should be certified by an officer not below the rank executive engineer.

N.B.

The Audited Balance Sheet and Profit & Loss account will all the schedule and annexure forming part of the Balance sheet and profit & loss account for the last 5 (five) years should be given. All these financial statements should be signed by a competent authority.

To calculate the value of "A"

i) A table containing value of Engineering Works in respect of projects (turnkey project / item rate contract / Construction works) undertaken by the Bidder during the last 5 years is as follows:

Sl. no	Financial Year	Year	Value of Engineering Works undertaken w.r.t. Projects (Rs. In Crore)
1.	(2023-2024/2024-2025)	Year-1	
2.	(2022-2023/2023-2024)	Year-2	
3.	(2021-2022/2022-2023)	Year-3	
4.	(2020-2021/2021-2022)	Year-4	
5.	(2019-2020/2020-2021)	Year-5	

ii) maximum value of project that been undertaken during the F.Y. out of the last 5 years and value thereof Rs. Crore (Rupees). Further, value updated to the price level of the year indicated in table is as follows:

Rs. Crore x (Updating Factor as per Table annexed)

= Rs. Crore (Rupees)

Table including the factor for the year for updating to the price level indicated as under

Sl. no	Financial Year	Year	Updating factor
1.	(2023-2024/2024-2025)	Year-1	1.00
2.	(2022-2023/2023-2024)	Year-2	1.05
3.	(2021-2022/2022-2023)	Year-3	1.10
4.	(2020-2021/2021-2022)	Year-4	1.15
5.	(2019-2020/2020-2021)	Year-5	1.20

..... Signature, name and designation of Authorised signatory for and on behalf of (Name of the applicant)	 Name of the Statutory Auditor's Firm/Chartered Accountant Signature:- Seal of the Audit Chartered Accountant Firm: Name of Signatory (in Capital):- Membership no:- Firm Regn no:- Date of Birth:- UDIN:- Mobile no :-
---	---

DECLARATION BY THE BIDDER

Affidavit to be affirmed on Non-Judicial Stamp Paper of Rs. 10/- only and to be enclosed with the tender Documents which is also required to be mentioned in the forwarding letter of the bidder.

I, ----- Son of ----- aged about ----- years by occupation ----- do hereby solemnly affirm and declare as follows:

1. That, I am the ----- (designation of) ----- (Name of bidder) and I am duly authorized and competent to affirm this affidavit on behalf of the said bidder.

2. That, my / our authorized and competent personnel including myself have inspected all the sites of work covered under NleT No. ----- (Circulated vide memo No. -----) Dated: ----- and S.L. No of NleT ----- of the Registrar, Uttar banga Krishi Viswavidyalaya and have made ourselves fully acquainted with the site conditions and local conditions in or around the site of work. We have also carefully gone through the Notice Inviting Tender and Tender documents. Tender of the above named bidder is offered upon due consideration of all factors and if the same is accepted, I, on behalf of the aforesaid bidder, being duly authorized, promise to abide by all the covenants, conditions, and stipulations of the contract document and to carry out construction based on Departmental design and drawing, supply, erection, commissioning to the entire satisfaction of the Engineer – in – charge of the work and abide by his instruction as may be given by him time to time to the effect. I also undertake to abide by the provisions of law including the provision of Contract labour (Regulation & Abolition) Act 1970, Apprentice Act, 1961, West Bengal Sales tax Act, Income Tax Act as would be applicable to the Bidder upon entering into formal contract with the Uttar Banga Krishi Viswavidyalaya.

3. That I declare that no relevant information as required to be furnishing by the Bidder has been suppressed in the Tender Documents.

4. That I declare that for execution of different types of works in connection with the present work, as per scope of Tender Document we will not claim any extra payment for any type of work in any manner whatsoever in the event of becoming successful Bidder.

5. It is understood and agreed that cost whatsoever is incurred / involved for participation in this Tender would not be compensated / borne by UBKV and therefore, in consideration of submitting its qualifications as a prospective Contractor for review, I fully agree to waive any claim against UBKV that might arise with respect to its decision of a prospective Contractor's qualification. The decision of UBKV is final, binding and not subjected to appeal / review of any kind.

6. That I declare that UBKV shall not be held responsible for making payment against any anticipated profit and / or compensation for any losses, whatsoever for the works as stated in this Tender Document and we shall not claim any payment for such purposes in the event of becoming successful Bidder.

7. That I declare that my / our organization not declared / blacklisted by any Municipal corporation / Development Authorities / State or Central Government Authority or Private sector in India since last 5 (five) years. My / our organization has not been declared Bankrupts or Insolvent by any Govt. or Private Financial Institution. Nor any other ill record has been recorded in the name of my / our organization in any of the Municipal Corporation / Development Authorities / State or Central Government Authority or private Sector in India. Nor any activity of our organization staff has been recorded as anti- national / against the law of the land in any concerned law protecting authority.

8. That the statement made in paragraph no 1 to 7 is true to the best of my knowledge and belief.

Solemnly affirmed by the

Said -----

Deponent

Before me

(1st Class Judicial Magistrate / Notary Public)

FORMAT OF THE BANK GUARANTEE FOR ADDITIONAL PERFORMANCE SECURITY DEPOSIT

To

-----[Designation of Tender Inviting Authority]
-----[Office address of Tender Inviting Authority]

WHEREAS..... [name and address of Contractor] (hereafter called. "the Contractor") has undertaken, in pursuance of Letter of acceptance NoDatedto execute [name of Contract and brief description of works] (hereinafter called "the Contract")

AND WHEREAS it has been stipulated by you in the said contract that the Contractor shall furnish you with a Bank Guarantee by a Scheduled commercial bank for the sum specified therein for 'ADDITIONAL PERFORMANCE SECURITY DEPOSIT' for compliance with his obligation in accordance with the Contract.

ANDWHEREAS we..... (Indicate the name of the bank & branch) have agreed to give the Contractor such a Bank Guarantee.

NOWTHEREFORE we.....(Indicate the name of the bank & branch) hereby affirm that we are the Guarantor and responsible to you on behalf of the Contractor, up to a total of Rs..... [Amount of guarantee] (in words). We undertake to pay you, upon your first written demand and without cavil or argument, a sum within the limits of.....[amount of guarantee] as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We(Indicate the name of the bank & branch) hereby waive the necessity of your demanding the said debt from the contractor before presenting us with the demand.

We(Indicate the name of the bank & branch) further agree to pay to you any money so demanded notwithstanding any dispute or disputes raised by the contractor(s) in any suit or proceeding pending before any court of Tribunal relating thereto, our liability under this present absolute and unequivocal.

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

We(Indicate the name of the bank & branch) further agree that no change or addition to or other modification of the terms of the Contract or of the works to be performed there under or of any of the Contract documents which may be made between you and the Contractor shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

We(Indicate the name of the bank & branch) lastly undertake not to revoke this guarantee except with the previous consent of you in writing.

This Guarantee shall be valid up to ----- --. It come into force with immediate effect and shall remain in force and valid up to the end of the contract period under the stated contract plus claim period of Six months for the Bank Guarantee. Notwithstanding, anything mentioned above, our liability against this guarantee is restricted to Rs.....

(Rs.....

) and unless a claim in writing is lodged with us within the validity period, i.e. up to of this guarantee all our liabilities under this guarantee shall cease to exist.

Signed and sealed thisday of 20 At.....

SIGNED, SEALED AND DELIVERED

For and on behalf of the BANK by:

(Signature)

(Name)

(Designation)

(Code Number)

(Address)

- (i) Notes: The bank guarantee should contain the name, designation and code number of the officer (s) signing the guarantee. The address, telephone number and other details of the Head Office of the Bank as well as of issuing Branch should be mentioned on the covering letter of issuing Branch

D.1 Definition of Engineer-in-Charge and commencement of work:

The word “Engineer-in-Charge” means the University Engineer / Assistant Engineer of Uttar Banga Krishi Viswavidyalaya. The word “Department” appearing anywhere in the tender documents means Uttar Banga Krishi Viswavidyalaya, SAU under Government of West Bengal, who have jurisdiction, administrative or executive, over part of whole of the works forming the subject matter of the tender or contract. The word “approved” appearing anywhere in the documents means approved by the authority of Uttar Banga Krishi Viswavidyalaya. The work shall have to be taken up within seven days of the receipt of the work order or otherwise mentioned therein. Failure to do so will constitute a violation of the contract stipulation as regards of proportionate progress and timely completion of work and the contractor will thereby make himself liable to pay compensation or other penal action as per stipulation of the printed tender form.

D.2 Terms & Conditions in extended period:

As Clause 5 of W.B.F. No. 2911 as the case may be when an extension of time for completion of work is granted by the Tender Inviting Authority / Engineer-in-Charge against proper reasoning's, it will be taken for granted by the working contractor that the validity of the contract is extended automatically up to the extended period with all terms and conditions rates etc. remaining unaltered, i.e. the tender is revalidated up to the extended period. [Except in case of adjustment of price for increase or decrease of basic materials which is guided by relevant G.O.s

D.3 Co-operation with other agencies and damages and safety of road users:

All works are to be carried out in close co-operation with the Department and other contract or contracts that may be working in the area of work. The work should also be carried out with due regard to the convenience of the road users and occupants of the adjacent locality, if any. All arrangements and programme of work must be adjusted accordingly. All precautions must be taken to guard against chances of injury or accidents to workers, road users, occupants of the adjacent locality etc. The contractor must see that all damages to any property which, in the opinion of the Engineer-in-Charge are due to the negligence of the contractor are promptly rectified by the contractor at his own cost and expenses and according to the direction and satisfaction of the Engineer-in-Charge.

D.4 Transportation arrangement:

The contractor shall arrange for all means of transport including railways wagons required for carriage and supply of materials and also the materials required for the construction work. The Department may however, at their own discretion grant necessary certificates, if required, for booking of railways wagons etc. But, in case of failure of the department to help the contractor in this respect, the contractor will have arranged at his own initiative so that progress of work will not hamper and no claim whatever on this ground will be entertained under any circumstances. If railways facilities are not available, the contractor will have to depend on transport of materials by road as necessary to complete the work without claiming any extra payment from department in this regard. The contractor must consider his aspect while quoting rate.

D.5 Contractor's Site office:

The contractor shall have an office adjacent to the work as may be approved by the Engineer-in-Charge where all directions and notice of any kind whatsoever, which the Engineer-in-Charge or his representative may desire to give to the contractor in connection with the contract, may be left or sent by post to such office or delivered to the contractor's authorized agent or representative. For such intimation to the contractor's site office, it shall be deemed to the sufficient enough to be served upon the contractor.

D.6 Incidental and other charges:

The cost of all materials, hire charges to Tools and plants, labour, Corporation/Municipal Fees for water supply, Royalty or road materials (if any), electricity and other charges of Municipalities or statutory local bodies, ferry charges, Toll charges, loading and unloading charges, handling chargers, overhead charges etc. will be deemed to have been covered by the rates quoted by the contractor inclusive of also Income Tax, Octroi Duty/Terminal Tax, Turnover Tax, GST etc. All other charges for the execution of the specified work, including supply of materials and related carriage, complete or finished in all respect up to the entire satisfaction of the Engineer-in-charge of the work. No extra claim in this regard beyond the specified rate as per work schedule whatsoever in this respect will be entertained.

D.7 Authorized Representative of Contractor:

The contractor shall not assign the agreement or sublet any portion of the work. The contractor, may however, appoint and authorized representative in respect of one or more of the following purposes only.

- a) General day to day management of work.
- b) To give requisition for Departmental materials, Tools & Plants etc. to receive the same and sign hand receipts thereof.
- c) To attend measurements when taken by the Departmental Officers and sign the records of such measurements which will be taken of acceptance by the contractor.

The selection of the authorized representatives shall be subject to the prior approval of the Engineer-in-Charge concerned and the contractor shall in writing seek such approval of the Engineer-in-Charge giving therein the name of work, Tender No., the Name, Address and the specimen signature of the representative he wants to appoint and the specific purposes as specified here-in-above, which the representative will be authorized for. Even after first approval, the Engineer-in-Charge may issue at any subsequent date, revised directions about such authorized representative and the contractor shall be bound to abide by such directions. The Engineer-in-Charge shall not be bound to assign any reason for his revised directions. Any notice correspondence etc. issued to the authorized representative or left at his address, will be deemed to have been issued to the contractor.

D.8 Power of Attorney:

The Provision of the power of attorney, if any, must be subject to the approval of the Department. Otherwise the Department shall not be bound to take cognizance of such of attorney.

D.9 Extension of time:

For cogent reasons over which the contractor will have no control and which will retard the progress, extension of time for the period lost will be granted on receipt of application from the contractor before the expiry date of contract. No claim whatsoever for idle labour, additional establishment, cost of materials and labour and hire charges of tools & plants etc. would be entertained under any circumstances. The contractor should consider the above factor while quoting this rate. Applications for such extension of time should be submitted by the contractor in the manner indicated in Clause-5 of the printed form of W.B.F. No.2911.

D.10 Contractor's Go-down:

The contractor must provide suitable go-downs for cement and other materials at the site of work. The cement go-down is to be sufficient in capacity and it must be water tight with either an elevated floor with proper ventilation arrangement underneath the floor or if solid raised flooring is made, cement is to be stored on bamboo or timber platform to the satisfaction of the Engineer-in-Charge. No separate payment will be made for these go-downs or for the store yard. Any cement, which is found at the time of use to have been damaged, shall be rejected and must immediately to remove from the site by the contractor as per directed of the Engineer-in-Charge.

D.11 Arrangement of Land:

The contractor will arrange land for installation of his Plants and Machineries, his go down, store yard, labour camp etc. at his own cost for the execution of the work. Departmental land, if available and if applied for, may be spared for the purpose on usual charges as fixed by the Engineer-in-charge.

D.12 Use of Government Land:

Before using any space in Government land for any purpose whatsoever, approval of the Engineer-in-charge will be required. Department all and, if available and if applied for, may be spared for the purpose on usual charges as fixed by the Engineer-in charge. The contractor shall make his own arrangements for storage of tools, plant, equipments; materials etc. of adequate capacity and shall clear and remove on completion of work and shed, huts etc. which he might have erected in Government land. If after such use, the contractor failed to clear the land, Department will arrange to remove those installation and adequate recovery will be made from the dues of the contractor.

D.13 Work Order Book:

The contractor shall within seven days of receipt of the order to take up work, supply at his own cost one Work Order Book to Sub-Divisional Officer/Assistant Engineer Concerned, who is authorized to receive and keep in custody the Work Order Book on behalf of the Engineer-in-Charge. The Work Order Book shall be kept at the site of work under the custody of Sub-Divisional Officer/Assistant Engineer or his authorized representative. The Work Order Book shall have machine numbered pages in triplicates. Directions or instruction from Departmental officers to be issued to the Contractor will be entered (in triplicate) in the Work Order Book (except when such directions or instructions are given by separate letters). The contractor or his authorized representative shall regularly note the entries made in the Work Order Book and also record thereon the action taken or being taken by him complying with the said directions or instruction on any relevant point relating to the work. The contractor or his authorized representative may take away the triplicate page of the Work Order Book for his own record and guidance. Cases of supplementary items or of claims may not be entertained unless supported by entries in the Work Order Book or any written order from the Tender Accepting Authority.

The first page of the Work Order Book shall contain the following particulars:

- a) Name of the Work
- b) Reference to contract number
- c) Contractual rate in percentage
- d) Date of opening of the Work Order Book
- e) Name and address of the Contractor
- f) Signature of the Contractor
- g) Name & address of the Authorized representative (if any of the contractor authorized by him)
- h) Specific purpose for which the contractor's representatives is authorized to act on behalf if the Contractor.
- i) Signature of the authorized representative duly attested by the Contractor.
- j) Signature of the Sub-Divisional Officer/Assistant Engineer concerned.
- k) Date of actual completion of work.
- l) Date of recording final measurement.

Entries in (k) & (l) above shall be filled in on completion of the work and before the Work Order Book is recorded in the office of the Sub-Divisional Officer/Assistant Engineer.

D.14 Clearing of Materials:

Before starting any work, work site, where necessary, must be properly dressed after cutting clearing all varieties of jungles shrubs,

bamboo clusters or any undesirable vegetation from the alignment or site of works on completion of works all temporary structure or obstruction including some pipes in underground work, if any, must also be removed. All scars of construction shall be obliterated and the whole site shall be left in a clear and neat manner to the satisfaction of the Engineer-In-Charge. Total length (in case of road project) shall be demarcated by proper chainage and with fixing 200m post as per direction of Engineer-in-Charge on both side of the alignment and Bench Marking at desired locations as per direction of Engineer-in-Charge. No separate payment shall be made for all these works, the cost thereof being deemed to have been included in the rates of various items of works quoted by the contractor in the schedule of probable items of works.

D.15 Sundry Materials:

The contractor must erect temporary pillars, master pillars etc. as may be required in suitable places as directed by the Engineer-In-Charge at his own cost before starting and during the work by which the departmental staff will check levels layout different works and fix up alignment and the contractor shall have to maintain and protect the same till completion of the work. All machineries and equipments like Level Machine, Staff, Theodolite etc. and

other sundry material like, pegs, strings, nails flakes instruments etc. and also skill labour require for setting out the levels for laying out difference structures and alignment shall also be supplied by the contractor as per direction of Engineer-in-Charge at his own cost without any extra claim towards the department.

D.16 Supplementary / Additional items of Works:

Notwithstanding the provisions made in the related printed tender form any item of the work which can be legitimately be considered as not stipulated in the specific price schedule of probable items of work but has become necessary as a reasonable contingent item during actual execution of work will have to be done by the Contractor, if so directed by the Engineer-in-Charge and the rates will be fixed with manner as stated below: -

- (a) Rate of supplementary items shall be analyzed to the maximum extent possible from rates of the allied items of work appearing in the P.W. (Roads) Department schedule of rates of probable items of work forming part of tender document Rates for the working area enforce at the time of N.I.T.
- (b) In Case, extra items do not appear in the above Public Works (Roads) Department Schedule of Rates, such items for the works shall be paid at the rates entered in the Public Works Department Schedule of Rates for the working area enforce at the time of N.I.T.
- (c) In case, addition items do not appear in the above Public Works (Roads) Department Schedule of Rates, such items for the works shall be paid at the rates entered in the Public Works Department Schedule of Rates for the working area enforce at the time of N.I.T.
- (d) If the rates of the supplementary items cannot be computed even after applications of clauses stated above, the same shall be determined by analyses from market rates of material, labour and carriage cost prevailing at the time of execution of such items work. Profit and overhead charges (both together) at 10% (Ten percent) will be allowed only; the contractual percentage will not be applicable.

Unbalanced market rates shall never be allowed.

Contractual percentage shall only be applicable with regard to the portions of the analysis based on clauses (a) & (b) stated above only.

It may be noted that the cases of supplementary items of claim shall not be entertained unless supported by entries in the Work Order Book or any written order from the tender accepting authority.

N.B. In addition to the above noted guide line, the amendment of Rules 238 & 239 of PWD code vide notification no. 6754-PW/L&A/2M-312/2017 dated 18/12/2017 of the Law & Arbitration Cell, PWD shall also be followed in the contract.

D.17 Covered up works:

When one item of work is to be covered up by another item of work the latter item shall not be done before the formal Item has been measure up and has been inspected by the Engineer-in-Charge or the Sub-Divisional officer

/Assistant Engineer, as the authorized representatives of the Engineer-in-Charge and order given by him for proceeding with the latter item of work. However, when this is not possible for practical reasons, the Sub-Assistant Engineer, authorized by the Sub-Divisional Officer/Assistant Engineer may do this inspection in respect of minor works and issue order regarding the latter item.

D.18 Approval of Sample:

Samples of all materials to be supplied by the contractor and to be used in the work shall have to be approved by the Engineer-in-Charge and checking the quality of such materials shall have to be done by the concerned Department or as directed by Engineer-in-Charge prior to utilization in the work.

D.19 Water and energy:

The contractor shall have to arrange at his own cost, required energy for operation of equipments and machineries, for operating of pumping set, illuminating work site, office etc. that may be necessary in difference stages of execution of work. No facility of any sort will be provided for utilization of the departmental sources of energy existing at site of work. Arrangement for obtaining water for the work should also be made by the contractor at his own cost. All cost for getting energy and / or for any purpose whatsoever will have to be borne by the contractor for which no claim will be entertained. All materials, tools and plants and all labour (skilled and unskilled) including their housing, water supply, sanitation, light, procurement of food for contractors' staff & crews, medical aids etc. are to be arranged for by the contractor at his own cost. The cost for transportation of labour, materials and all other incidental items as required for work shall also have to be borne by the Contractor without any extra claim from department.

D.20 Road opened to traffic:

It should be clearly understood that the contractor will be responsible to keep the road open to all kinds of traffic during execution of the work. The work should be so arranged and the programmed of work must be as adjusted as would not disturb the smooth flow of road traffic in any way. If necessary diversion road should be provided and maintained by the contractor at his own cost for the entire period of work, if not separately provided in the tender. The Contractor should take all necessary precautions including guarding, lighting and barricading as necessary, to guard against the chances of injury or accident to the road user and traffic and ferry users during execution of the work for which nothing extra will be paid except otherwise mentioned in specific price schedule. The contractor will also indemnify the Department against consequences of any such injury or accident, if so happens, as per opinion of the Engineer-in-Charge, due to contractor's fault in compliance with any of such obligations. Suitable road sign as and where necessary should be provided by the contractor at his own cost as per direction of the Engineer-in-charge and shall also be maintained till the completion of the work. Road barriers with red light at night are to be placed where the existing surface is disturbed with proper road signs. All these shall be done at the cost of the contractor without any extra claim towards department.

D.21 Drawings:

All works shall be carried out in conformity with the drawings supplied by this Department. The Contractor shall have to carry out all the works according to the departmental General Arrangement Drawing and Detail Working Drawings to be supplied by the Department from time to time.

D.22 Serviceable Materials:

The responsibility for stacking the serviceable materials (as per decision of the Engineer-in-Charge) obtained during dismantling of existing structures/roads and handing over the same to the Engineer-in-charge of work of this Department lies with the contractor and nothing will be paid on this account. In case of any loss or damage

of serviceable materials prior to handing over the same to this Department, full value will be recovering from the contractor's bill at rates as will be assessed by the Engineer in- charge.

D.24 Unserviceable Materials:

The Contractor shall remove all unserviceable materials, obtained during execution at place as directed. The contractor shall dress up and clear the work site after completion of work as per direction of the Engineer-in- Charge. No extra payment will be made on this account.

D.25 Contractor's risk for loss or damage:

All risk on account of railway or road carriage or carriage by boat including loss or damage of vehicles, boats, barges, materials or labour, if any, will have to be borne by the contractor without any extra claim towards department.

D.26 Idle labour & additional cost:

Whatever may be the reason no claim on idle labour, enhancement of labour rate additional establishment cost, cost of Toll and hire and labour charges of tools and plants, railway freight etc. would be entertained under any circumstances.

D.27 Charges and fees payable by contractor:

- a) The contractor shall pay all fees required to be given or paid by any statute or any regulation or by-law of any local or other statutory authority which may be applicable to the works and shall keep the department against all penalties and liabilities of every kinds for breach of such statute regulation or law.
- b) The Contractor shall save, harmless and indemnify the department from and against all claims, demands, suit and proceedings for or an account of infringement of any patent rights, design, trade mark of name of other protected write in respect of any constructional plant, machine, work, materials, thing or process used for or in connection with works or temporary works or any of them.

D.28 Issue of Departmental Tools and Plants:

All Tools and Plants required for the work will have to be deployed by the Contractor at his own cost; all cost of fuel and stores for proper running of the Tools and Plants must be borne by the Contractor.

D.29 Realization of Departmental claims:

Any some of money due and payable to the contractor (including security deposit returnable to him) under this contract may be appropriated by the Government and set off against any claim of Government for the payment of sum of money arising out of this contract or under any other contract made by the contractor with the Government.

D.30 Compliance of different Acts:

The contractor shall comply with the provisions of the Apprentices Act, 1961, Minimum Wages Act, 1848. Contract Labour (Regulation and Abolition) Act 1970 and the rules and orders issued hereunder from time to time. If he fails to do so, E-in- Charge or Superintending Engineer of the concern Circle of P.W. (Roads) Directorate may at his discretions, take necessary measure over the contract.

The Contractor shall also make himself for any pecuniary liabilities arising out on account of any violation of the provision of the said Act(s). The Contractor must obtain necessary certificate and license from the concerned Registering Office under the Contract Labour (Regulation & Abolition) Act, 1970.

The contractor shall be bound to furnish the Engineer-In-Charge all the returns, particulars or date as are called for from time to time in connection with implementation of the provisions of the above Acts and Rules and timely submission of the same, failing which the contractor will be liable for breach of contract and the Engineer-in- Charge may at his discretion take necessary measures over the contract.

D.31 Safety, Security and Protection of the environment:

The Contractor shall, throughout the execution and completion of the Works and the remedying of any defects therein:

- (a) Have full regard for the safety of all persons and the Works (so far as the same are not completed or occupied by the department),
- (b) provide and maintain at his own cost all lights, guards, fencing, warning signs and watching, when and where necessary or required by the Engineer-in-Charge for the protection of the Works or for the safety and convenience of the public or others,
- (c) take all reasonable steps to protect the environment on and off the Site and to avoid damage or nuisance to persons or to property of the public or others resulting from pollution, noise or other causes arising as a consequence of his methods of operation,
- (d) Ensure that all lights provided by the Contractor shall be screened so as not to interfere with any signal light of the railways or with any traffic or signal lights of any local or other authority.

D.32 Commencement of work:

The work must be taken up within the date as stipulated in the work order and completed in all respects within the period specified in Notice Inviting Tender.

D.33 Programme of work:

Before actual commencement of work the contractor shall submit a programme of construction of work clearly showing the required materials, men and equipment. The contractor will submit a programme of construction in the pattern of Bar Chart or Critical Path Method and a time table divided into four equal periods of progress of work to complete the work within the specific period for approval of the Engineer-In- Charge who reserves the right to make addition, alterations and substitutions to such programme in consultation with the contractor and such approved programme shall be adhered to by the contractor unless the same is subsequently found impracticable in part or full in the opinion of the Engineer-In-Charge and is modified by him. The contractor must pray in writing, showing sufficient reasons therein for modification of programme. The conditions laid down in clause 2 of the printed tender form regarding the division of total period and progress to work and the time table there for as provided in the said clause shall be deemed to have been sufficiently complied with the actual progress of work and does not fall short of the progress laid down in the approved time table for one fourth, half and three fourth of time allowed for the work.

D.34 Setting out of the work:

The contractor shall be responsible for the true and perfect setting out of the work and for the correctness of the position, levels, dimensions and alignments of all parts of work, if any rectification or adjustment becomes necessary the contractor shall have to do the same at his own cost according to the direction of the Engineer-in- Charge. During progress of works, if any, error appears or arises in respect of position, level, dimensions or alignment of any part of the work contractor shall at his own cost rectify such defects to the satisfaction of the Engineer-in-Charge. Any setting out that may be done or checked by either of them shall not in any way relieve the contractor from their responsibility for correctness and rectification thereof.

D.35 Precautions during works:

The contractor shall carefully execute the work without disturbing or damaging underground or overhead service utilities viz. Electricity, Telephones, Gas, Water pipes, Sewers etc. In case disturbances of service utilities is found unavoidable the matter should immediately be brought to the notice of the Engineer-in-Charge and necessary precautionary measures as would be directed by the Engineer-in-Charge shall be carried out at the cost and expenses of the contractor. If the service utilities are damaged or disturbed in any way by the contractor during execution of the work, the cost of rectification or restoration of damages as would be fixed by the Engineer in- Charge concerned will be recovered from the contractor.

D.36 Testing of qualities of materials &workmanship:

All materials and workmanship shall be in accordance with the specifications laid down in the contract and also as per M.O.R.T. & H's specification for Road and Bridge Works (Latest Revision) and relevant IS codes and the Engineer-In-Charge reserves the right to test, examine and measure the materials/workmanship direct at the place of manufacture, fabrication or at the site of works or any suitable place. The contractor shall provide such assistance, instrument, machine, labour and materials as the Engineer-in-Charge may require for examining, measuring and testing the works and quality, weight or quantity of materials used and shall supply samples for testing as may be selected and required by the Engineer-in-Charge without any extra cost. Besides this, he will carry out tests from outside Laboratory as per instruction of Engineer-in-Charge. The cost of all such tests shall be borne by the agency and that must be considered during quoting rate.

D.37 Timely completion of work:

All the supply and the work must have to be completed in all respects within the time specified in Notice Inviting Tender from the date of commencement as mentioned in work order. Time for completion as specified in the tender shall be deemed to be the essence of the contract.

D.38 Procurement of materials:

All materials required to complete execution of the work shall be supplied by the contractor after procurement from authorized and approved source.

D.39 Rejection of materials:

All materials brought to the site must be approved by the Engineer-In-Charge. Rejected materials must be removed by the Contractor from the site within 24 hours of the issue of order to that effect. In case of non- compliance of such order, the Engineer-In-Charge shall have the authority to cause such removal at the cost and expense of the contractor and the contractor shall not be entitled to claim

for any loss or damage of that account.

D.40 Implied elements of work in items:

Except of such items as are included in the Specific Priced Schedule of probable items and approximate quantities no separate charges shall be paid for traffic control measures, shoring, shuttering, dewatering, curing etc. and the rates of respective items or works are to be deemed as inclusive of the same.

D.41 Damaged cement:

Any cement lying at contractor's custody which is found at the time of use to have been damaged shall be rejected and must immediately be removed from the site by the contractor or disposed of as directed by Engineer-in- Charge at the costs and expenses of the contractor.

D.42 Issue of Departmental Materials:

Issuance of Departmental materials will be as mentioned in the NIT.

D.43 Force Closure:

In case of force closure or abandonment of the works by the Department the contractor will be eligible to be paid for the finished work and reimbursement of expenses actually incurred but not for any losses.

D.44 Tender Rate:

The contractor should note that the tender is strictly based on the rates quoted by the Contractor on the priced schedule of probable item of work. The quantities for various other items of works as shown in the priced schedule of probable items of works are based on the drawing and design prepared by the Department. If variations become necessary due to design consideration and as per actual site conditions, those have to be done by the contractor at the time of execution at the rate prescribed in the tender condition. No conditional rate will be allowed in any case.

D.45 Delay due to modification of drawing and design:

The contractor shall not be entitled for any compensation for any loss due to delays arising out of modification of the work and due to non-delivery of the possession of site, if any.

D.46 Additional Conditions:

A few additional conditions under special terms and conditions:

1. Rate quoted shall be inclusive of clearing site including removal of surplus (both serviceable & unserviceable) earth, rubbish, materials etc. as per direction of the Engineer-in-Charge.
2. The considered rate against the Items in the BOQ are inclusive of GST @ 18% , Labour welfare Cess @ 1% & all other taxes / charges as applicable.
3. Display board (Informatory) of size 150cm X 90cm is to be provided at starting and end chainage of the work-site with aluminum plate hoisted on steel tubular pipe/ angle post to a height of 1.5 Metre at the cost of the contractor including fitting, fixing, painting, lettering etc. complete as per direction of Engineer-in-Charge.
4. The Contractor is to display caution board maintaining I.R.C. norms at his own cost as per direction of Engineer- in-Charge.
5. Deep excavation of trenches and left out for days shall be avoided.
6. Labour welfare Cess will be deducted @ 1(one) % of gross bill value as per rule.
7. The whole work will have to be executed as per Departmental drawings available in this connection at the tender rate.
8. Income Tax will be deducted from each bill of the contractor as per applicable rate and rules in force.
9. GST will be deducted as applicable in force from the bill in addition to other deduction as per extent rules.

D.47. Payment of Bills: As mentioned in the NIT

D.48. Refund of Security Deposit:

The Contractor shall be responsible for satisfactory maintenance of the Building at appropriate service level to the satisfaction of the Engineer-in-charge for a period of 3(three) years from the date of completion of the work. The security deposit relating to the work shall be refunded (credited to the bank account) to the tune of 30% on expiry of 2nd year (from actual date of completion of the work) & rest 70% on expiry of 3rd year (from actual date of completion of the work).

D.49. Arbitration: As mentioned in Cl. 13NIT

D. 50. Defect Liability Period:

The executed portion of the Building should be guaranteed for 3 (three) years from the date of completion of the work and the entire rectification work will be done by the Agencies at their own cost.

If any defect/ damage is found during the period as mentioned above the contractor has to make the same good at his own expense to the

specification at par with instant project work, or in default, the Engineer-in-charge may cause the same to be made good by other workmen and deduct the expense (of which the certificate of the Engineer-in-charge shall be final and binding on all concerned) from any sums whether under this contract or otherwise that may be then, or at any time thereafter become due to contract from the Government or from his security deposit either full or of a sufficient portion thereof and if the cost, in the opinion of the Engineer-in-Charge (which opinion shall be final and conclusive against the contractor), of making such damage or imperfection good shall exceed the amount of such security deposit and/of such sums, it shall be lawful for the Government to recover the excess cost from the contractor in accordance with the procedure prescribed by any law for the time being in force. Refund of Security Deposit will only be made on the pro-rata basis i.e. release of such security deposit to the tune of 30% on expiry of 2nd year (From actual date of completion of the work) & rest 70% on expiry of 3rd year.

D. 51. Preventive measures against air pollution:

Preventive measures are to be taken: -

- a) Wrapping of construction area/ buildings with geo textile fabric, installing dust barriers or other actions, as appropriate for the location.
- b) Applying water and maintain soil in a visible damp or crusted condition for temporary stabilization.
- c) Applying water prior to levelling or any other earth moving activity to keep the soil moist throughout the process.
- d) Limiting vehicle speeds to 15 mph on the worksite.
- e) Cleaning wheels and undercarriage of haul trucks prior to leaving construction site.
- f) Applying and maintaining dust suppressant on haul routes.
- g) Applying a cover or screen to stockpiles and stabilize stockpiles at completion of activity by water and maintain a dust palliative to all outer surfaces of the stock piles.
- h) Stabilizing surface soils where loaders, support equipment and vehicles should operate by using water and maintain surface soils in a stabilized condition where loaders, support equipment and vehicles will operate.
- i) Stabilizing adjacent disturbed soils following paving activities with immediate landscaping activity or installation of vegetative or rock cover.
- j) Maintaining dust control during working hours and clean track at the end of the work shift /day.
- k) Stabilizing sloping surfaces using soil binders until vegetation or ground cover can effectively stabilize the slope.
- l) Disposal of debris in consultation with the local authorities following proper environmental management practice.
- m) During construction work, including cutting of marbles, ambient noise level should not exceed more than 65 dB(A).

Practices to be discarded: -

- a) Disposal of debris indiscriminately.
- b) Allowing the vehicles to run at high speed within the worksite.
- c) Cutting materials without proper dust control/noise control facility.
- d) Keeping materials without effective cover.
- e) Allowing access to the work area except workers to limit soil disturbance. Access may be prevented by fencing, ditches, vegetation, berms or another suitable barrier.
- f) Leaving the soil, sand and cement stack uncovered.
- g) Keeping materials or debris on the roads or pavements.
- h) Burning of old tyres in hot mix plant as a fuel during construction and repairing of the roads for melting coal tar.

D. 52. GROUNDS FOR SUSPENSION AND DEBARMENT:

- a. Submission of eligibility requirements containing false information/ declaration or falsified documents / records.
- b. Submission of Bids that contain false information or falsified documents, or the concealment of such information in the Bids in order to influence the outcome of eligibility screening or any other stage of the bidding process.
- c. Unauthorized use of one's name / digital signature certificate for purpose of bidding process.
- d. Any documented unsolicited attempt by a bidder to unduly influence the outcome of the bidding in his favour.
- e. Refusal or failure to post a self-declaration to the effect of any previous debarment imposed by any other department of State Government and / or Central Government.
- f. All other acts that tend to defeat the purpose of the competitive bidding such as lodging false complain about any bidder, lodging false complain about any officer duly authorized by the department, restraining any interested bidder to participate in the bidding process, etc.
- g. Assignment and subcontracting of the contract or any part thereof without prior written approval of the procuring entity.
- h. Whenever adverse reports related to adverse performance, misbehavior, direct or indirect involvement in threatening, making false complaints etc. damaging the reputation of the department or any other type complaint considered fit by the competent authority of the department, are received from more than one officer or at more than one occasion from individual officer.
- i. Refusal or failure to post the required performance security / earnest money within the prescribed time without

justifiable cause.

- j. Failure in deployment of technical personnel, engineers and / or work supervisor having requisite license / supervisor certificate of competency as specified in the Contract.
- k. Refusal to accept an award after issuance of “letter of acceptance” or enter into contract with the government without justifiable cause.
- l. Failure of the contractor, due solely to his fault or negligence, to mobilize and start work or performance within the specified period as mentioned in the “Letter of Acceptance”, “Letter of Acceptance cum Work Order”, “Work Order”, “Notice to Proceed”, “Award of Contract, etc.
- m. Failure to submit the ‘Additional Performance Security’ within 7(seven) working days from the date of issuance of ‘LOA’.
- n. Failure by the contractor to fully and faithfully comply with its contractual obligations without valid cause, or failure by the contractor to comply with any written lawful instruction of the procuring entity or its representative(s) pursuant to the implementation of the contract.
- o. For the procurement on consultancy service / contracts, poor performance by the consultant of his services arising from his fault or negligence. Any of the following acts by the consultant shall be construed as poor performance.
 - i) Non-deployment of competent technical personnel, competent engineers and / or work supervisors.
 - ii) Non-deployment of committed equipment, facilities, support staff and manpower. and
 - iii) Defective design resulting in substantial corrective works in design and / or construction.
 - iv) Failure to deliver critical outputs due to consultant’s fault or negligence. and
 - v) Specifying materials which are inappropriate and substandard or way above acceptable standards leading to high procurement cost.
 - vi) Allowing defective workmanship or works by the contractor being supervised by the consultant.
- p. For the procurement of goods, unsatisfactory progress in the delivery of the goods by the manufacture, supplier or distributor arising from his fault or negligence and / or unsatisfactory or inferior quality of goods, vis a vis as laid down in the contract.
- q. Willful or deliberate abandonment or non-performance of the project or contract by the contractor resulting to substantial breach thereof without lawful and / or just cause.

D. 53. Category & Penalty of Offence:

A) Sl No ‘a’ to ‘q’ under D 52 , will be considered as 1st Degree of offence .

For committing 1st Degree of offence, the bidder will be disqualified from participating in any procurement process under the Public Works department, Govt of West Bengal up to 2 (two) years.

C) Any one of the offences as mentioned under (A) above, committed by a particular bidder / contractor by more than one occasions, be considered as 2nd Degree of offence.

For committing 2nd Degree of offence, the bidder will be disqualified from participating in any procurement process under the Public Works department, Govt of West Bengal up to 3 (three) years.

In addition to the penalty of suspension / debarment, the bid security / earnest money posted by the concerned bidder or prospective bidder shall also be

Registrar (Actg.)
Uttar Banga Krishi Viswavidyalaya

SECTION – D

SPECIAL CONDITIONS OF CONTRACT (ELECTRICAL WORKS)

General

These Special Conditions of Contract supplement the preamble and General Instructions, General Conditions of Contract, Bill of Quantities and basic rates and Technical Specifications and tender drawings enclosed thereto, and shall be considered as part of the Tender Papers. Where the provisions of these Special Conditions of Contract are at variance with General Conditions of Contract, the provisions of these Special Conditions of Contract shall prevail.

The several documents forming the tender are to be taken as mutually complementary to one another. Detailed drawings shall be followed in preference to small-scale drawings and figured dimensions in preference to scaled dimensions.

If there are varying or conflicting provisions in the documents forming part of the contract, the Engineer-in-Charge shall be the deciding authority with regard to the intentions of the provisions and his decision shall be final and binding on the contractor.

The Employer reserve the right to exclude any of the Schedule items on reasons of the rates not being reasonable or subsequent change of design for evaluation of tender and deciding the contract.

The Contractor may be required to carry out any additional or alteration work other than the specified in the schedule of work / bill of quantities as and when required, by the 'Employer' within the completion period of the project.

Scope of Work

The works to be governed by this contract shall cover designing and transportation upto destination, safe custody at site, insurance, erection, testing and commissioning of the following:

- i) Main Switchgear panel connecting cables of both incoming and outgoing feeders etc.
- ii) Laying of L.T underground cables from Switch Room to various buildings, feeder pillar boxes, street light poles, etc.
- iii) Electrification of new / old buildings, quarters, outer spaces including renovation works.

The works to be undertaken by the Contractor will inter alias include the following:

- i) Preparation of detailed drawings of electrical wiring, cable laying, erection / fixing of various power panels, distributed wiring, electrical equipment, fittings etc.
- ii) Insurance for all materials and complete work.
- iii) Commissioning tests as per relevant standard specifications, code of practice, Acts and Rules.
- iv) Warranty obligation.
- v) Cable trenches and road crossing as required at site.
- vi) Earthing of installations as per relevant Indian Standard Specifications.
- vii) All other earthwork and masonry work required to be done concerning the electrical works.

Drawings

Contractors shall prepare all the detailed design and working drawings and submit them to the Employer for approval within 15 days from the date of award of contract. The working drawings shall be furnished in triplicate furnishing physical dimensions of the equipment, constructional details, disposition of bus bar, terminal connection etc.

The electrical layout, clearly indicating the electrical clearances, cable run layout with schematic diagram shall be furnished in triplicate for approval.

Execution of work

All the works i.e. power panels, distribution boards, equipment layout, conduits layout, electrical wiring, street lighting, cable laying, earthing etc. have to be done as per approved drawings and directions given at site by the Engineer-in-Charge.

Water and Power

The Contractor has to arrange water and power for construction at his own cost. If the Employer at his own discretion, provides either of the above, subject to the availability, suitable charges will be levied at the Municipal rates for water supply and at Electricity Board rates for power for electrical charges, Contractors would bear the cost for providing electrical meter and meter charges as per the prevailing rate in the area and the same will be recovered from the monthly running bill. Water connection will be provided at a single point convenient to the Employer. The Contractor has to bear the charges for providing water meter and connection charges.

Period of Completion

Completion period is very important in this case. Normally no extension of time will be given, however,

because delay if any, in the construction of building suitable extension will be considered. No price variation shall be admissible on the contract rate for any item during the entire period of contract including extended periods. The Contractor shall not have any claim whatsoever in this regard except statutory variation of duties and taxes imposed by Govt. of India.

Insurance Coverage

The Contractor shall within 15 days from the date of commencement of the work insure all the works and materials with any nationalized Insurance Company for the full amount of the contract at his own cost against loss or damage by fire, storm, tempest, lightning, floods, earthquake, air craft or anything dropped there from, aenal objects, nots, civil commotion and other such usual risks.

Quality of materials and works

All materials used in the execution of the contract shall be of the best quality and of the class most suited for the purpose specified. Components, assemblies and equipment to be obtained from sub-contractors should be from proves sources. The work shall also conform to the following Acts, Rules and Orders.

- i) Indian Factories Act
- ii) Indian Electricity Rules
- iii) National Building Code
- iv) National Electrical Code

All erection work shall be of the best quality to the entire satisfaction of the Employer. The Contractor shall ensure that the equipment and services under the scope of this contract whether manufactured or performed within the Contractor's premises or at his subordinate's premises or at the work site or at any other place are strictly in accordance with the provisions of this contract. For this purpose, the Contractor shall adopt necessary quality assurance programme to control such activities at all stages.

Electrical License

Only a Contractor / Subcontractor / authorized representative holding a valid license by the "State Government for carrying out the installation work of the voltage classes involved, under the direct supervision of the persons holding valid certificates issued or recognized by the State Government shall carry out the work. The tenderer should furnish with his tender the particulars of the license with validity period held by him. The successful tenderer shall furnish the names and particulars of the certificates of competency of the supervisors and workers to be engaged for carrying out this work. A Memorandum of Understanding executed on non-judicial stamp paper with the Contractor / subcontractor / authorized representative duly authenticated by the Notary Public should be submitted to the Executive Engineer, P.W.D.

Inspection

The inspection officer(s) for this contract shall be nominated by the Employer and notified to the Contractor.

The cost of the inspection will be on Employer's account subject to any other provisions contained hereunder or elsewhere in the contract. One week's notice must be given by the Contractor to the Inspecting Engineer to take up the inspection. The Contractor shall provide without any extra cost of the Employer all materials, equipment, tools, labour and maintenance of every kind which the Employer's Inspecting Engineer may consider necessary for any test and examination to be made at the Contractor's or the Sub-contractor's premises and at site and shall pay all cost attended there on.

All the equipment and materials shall be tested / inspected by the Employer or its authorized Inspecting Engineer and approved before they are installed / used in the execution of the works covered in the contract. If the Contractor uses any equipment / materials without the prior approval of Employer, those are liable to be rejected. The exact positions of all switch boards, OPDs and all runs-of-mains, sub-mains and distribution wiring to individual points including exact positions of all light fittings and switch-boards shall be first worked on the buildings and shall have to be approved by the Engineer-in-Charge before actual commencement work. The Inspecting Engineer or his authorized representative shall have at all times access to the Contractor's premises and shall have the power to:

- i) Inspect and examine the materials and workmanship of the work at any time during the manufacture at the manufacturer's premises or in the premises of the Sub-Contractor or at the site of the erection.
- ii) Reject any part of the work submitted by the Contractor as not being in accordance with the Contractor.
- iii) Reject the whole of the work including equipment tendered of inspection if after the inspection of such portion as he may, in his discretion think fit, he is satisfied that the same is unsatisfactory.
- iv) Mark the rejected equipment with a rejection mark so that the same may be easily identified.
- v) Re-inspect at the time of erection at site any equipment both previously inspected and approved by the Inspecting Engineer at the Contractor or Sub-contractor's premises.

Notwithstanding any approval given earlier, the Contractor shall make good such rejections made based on such re-inspection at site to the satisfaction of the Engineer.

- vi) The decision of the Inspecting Engineer as regards to the acceptance or rejection of equipment / work shall be final and binding to the Contractor.

Consequence of Rejection

On the equipment / assemblies being rejected by the Inspecting Officer of the Employer at destination the Contractor shall replace such rejected equipment / assemblies of the work forthwith but in any event not later than a period of 2(two) weeks in the case of minor equipment and 4(four) weeks in the case of major equipment from the date of rejection. The Contractor shall bear all the costs replacement including freight, etc. but without being entitled to any extra time on this account. The decision as to whether the equipment is to be classified as Minor or Major for the purpose of this clause shall be that of the Engineer and it is not questionable.

Installation

All works connected with and inclusive of installation and erection under this contract shall be done in accordance with the standard and established methods of installation and erection of electrical equipment and shall comply

with relevant Indian Electricity Rules, National Electrical Code, BIS Codes of Specifications and Standards. The work shall also be strictly in accordance with the instructions / recommendations of the manufacturers. The equipment shall be leveled carefully before being fixed finally in position. All fragile and sensitive equipment shall be protected adequately and handled carefully during installation and erection.

Commissioning Tests

As soon as the installations are ready for commissioning / sub-station, the Contractor shall arrange for all the tests / inspection as required by the relevant ISS and / or IE Rules and advise the Employer and others concerned. Employer shall depute their Inspecting Officer for witnessing the tests and to carry out inspection independently and also jointly with other concerned agencies wherever necessary and only after the installation passes the required tests and inspection, it should be commissioned / energized.

The Contractor shall take full responsibility for these tests. For site sites the Employer where possible, may permit the Contractor for the purpose of testing, the use of any instruments / apparatus and electric power which the Employer can conveniently work not complying with the specifications, the Employer at their discretion ask the Contractor to pay the cost of providing the additional energy required. The Contractor shall provide all apparatus and energy, which may be required for drying out the equipment in a manner approved by the Employer. If, by reasons of the Contractor failing to comply with any of the provisions of this clause, any of the said tests are to be repeated the Contractor shall pay all fees and expenses in connection therewith.

Visual inspection, shall include checks for satisfactory workmanship, all connections, painting, plastering, cleanliness of all fittings etc. and compliance with Indian Electricity Rules.

The ammeters, voltmeters, and energy-meters shall be checked for their calibration, scale, accuracy, etc. for compliance with the specified requirement.

- i) Manufacturer's Test Certificates shall be furnished as evidence that type tests have been made in accordance with IS: 3231. Type test results together with appropriate drawings and records of any relevant alteration, which may have been made to any relay after the type test, shall be made available.
- ii) Certificates of compliance to routine test shall also be furnished.
- iii) Routine tests shall be carried out at manufacturer's premises before commissioning in compliance with IS:3231.
- iv) Routine tests are to be carried out on presence of Engineer-in-Charge and Test Certificates are to be submitted.

All cables shall be tested at manufacturer's works in compliance with relevant standards. All cables and connections after erection shall be tested as required by the Employer for:

- i) Pressure Test.
- ii) Insulation Test.

Earth resistance shall be measured separately for each earth electrode and when they are connected together and to the equipment recorded.

Warranty

Contractor shall guarantee that all the equipment and the works executed under this contract shall be free from all defects and faults in materials, design, workmanship and manufacture and shall be of acceptable standards for the contracted work and in full conformity to the technical specifications.

The Contractor's liability in respect of any compliant defect and / or claim shall be limited to the execution, installation and erection of replacement parts free of charge,

or the repair of defective parts only to the extent that such replacement or repairs are attributable to or arise from faulty workmanship or design of material in the manufacture of the equipment / stores, and or negligence in any manner and also in the event of failure of the equipment to perform as intended.

The Contractor shall, if required, replace, repair, execute and / or install the goods or such portion thereof as is rejected by the Employer free of cost at site or at the option of the Employer the Contractor shall pay to the Employer the value thereof and such other expenditure and damage as may arise by reason of the breach of the conditions therein specified.

If, any defect is not rectified satisfactorily within the above mentioned one month, the Employer may proceed to do the work at Contractor's risk and cost and without prejudice to any other rights of the Contractor under this contract.

If the Contractor so desires, the replaced parts can be taken over by him or his representative for disposal as he deems fit within a period of one month from the date of replacement of goods / parts. At the expiry of this period, no claim whatsoever shall lie on the Employer.

The Employer may, at their discretion recover the ground rent for the goods / parts which have been rejected during the warranty period for the specified period of one month, if the rejected materials are not taken over within that period one month, by the Contractor or his representative.

The warranty herein contained shall not apply to any material which have been repaired or altered by the Employer, or on their behalf in any without the consent of the Contractor so as to affect its strength, performance and reliability or to any defects to any part due to misuse negligence or accidents and to items of normal wear and tear to be specifically mentioned by the Contractor in his offer and got accepted by the Employer. The decision of the Employer concerning Contractor's liability and the amount if any payable, under this warranty, shall be final and conclusive.

Indemnity Bond

The Contractor shall sign an Indemnity Bond before starting the work from any damages, prosecution, other legal suits and claims arising out of any mishaps occurring at site due to negligence, wrong practice, bad workmanship, faulty work, violation of safety rules and regulations etc., for which the Contractor shall be solely responsible. The Indemnity Bond shall be executed in the form prescribed by the Employer.

Taxes, Duties, etc.

Income Tax applicable to this work as per extant rules shall be deducted from the Contractor's bills by the Employer and remitted to the Reserve Bank of India and a certificate to that effect issued to the Contractor. The Contractor shall submit current valid I.T.C.C. and S.T.C.C. at the time of receiving payment.

Supervision of Electrical works

The said works will be supervised by the concerned Officers of the Electrical Wing of PWD and a certificate in this regard should be submitted to the Executive Engineer (Civil), Public Works Directorate along with the Measurement Book.

Mode of Payment

Measurement of Electrical works should be done by the competent officers of the Electrical Wing P.W.D.in Measurement Book according to Priced Schedule and Agreement and the said measurements as authenticated by the Executive Engineer Electrical Wing, P.W.D. shall be forwarded to the Executive Engineer (Civil) P.W.Dte. for making necessary payment.

SPECIFICATION FOR 11 KV GRADE PVCA CABLES, 650V GRADE PVC INSULATED AND SHEATHED WIRING CABLE AND TERMINATION OF POWER CABLES:

All power cable shall be procured from reputed manufacturer. The cables must be manufactured under IS:1554(Part-II) 1976 and latest amendments thereafter. The supplier also obtains manufacturer's test certificate. The cables even in a smaller length should be supplied in a coil formation either in cable drums or duly protected with proper packing so that the same is not damaged during rough handling in transport or at site on work. The both ends should be properly sealed with PVC caps and adhesive so that no moisture can penetrate in side cables.

Termination of above cables, including supply of suitable brass compression cable glands for respective size of heavy-duty type including solderless copper cable sockets (Dowell's make) and necessary anti oxide pest (Dowell's make) required during cramping sockets by suitable section of cramping dice and tools etc. mention may be made that beyond 120 sq. mm size hydraulic type machine to be used for proper crimping of cable sockets. The sockets must be tinned properly and should be cleaned before insinuating the conductors applying anti-oxide pest for proper surface bondage.

Wiring cable shall be manufactured under IS:694/1900 or BS:2004 for PVC insulated sheathed/unsheathed with copper conductor stranded of 1.1 KV or 650 volts grade having colour code

as required for electrical use.

POWER CABLES - LAYING:

Sizes of cables required are given in the bill of quantities. Only armored and unarmored cables shall be stranded Aluminium conductors, PVC sheathed, 1100V grade conforming to IS:1554 & 694.

Cables are to be laid both inside and outside the buildings. Laying of cables shall be in accordance with IS:1255. Inside the buildings, cables shall be laid in G.I pipes / Polythene pipes of suitable sizes or open trench as required. Outside the buildings, the cables shall be laid in the ground at a depth of 1 meter from the ground level along with approved routes with necessary brick and G.I protection for vertical riser / road crossings.

Laying of cable includes excavation of earth i.e. making the required trench, placing the cables in trenches, providing the necessary sand cushioning below and above the cables and brick protection at top. Identification – tags shall be provided on the cables at regular intervals where more than one cable is laid. After the laying of cables as approved by the Engineer-in-Charge, the trenches shall be filled with shifted earth and well rammed to bring the surface in level with the surroundings. Sand shall be of good quality river sand and the bricks B class burnt. Sand and bricks shall be laid continuously on the cables to cover the cables fully. Cable identification makers made of galvanized steel plates incorporating the information such as the line voltage, size of cables. Cable identification no. shall be provided at intervals of 10 meters along with entire cable route in an approved arrangement.

Wherever the cables are crossing the roads, drains, water / sewerage pipes or entering / leaving the buildings the cables shall be laid in class B G.I. pipes of suitable size as directed by the Engineer-in-Charge.

Straights through joints are not normally permitted. In case of unusually long distances of cable, laying work straight through joints would be considered on permission only if the kits of specified make are used. No extra payment will be permitted for such joints.

SUB POWER-DISTRIBUTION BOARDS (PDB/EPDB) AND LIGHTING DISTRIBUTION BOARDS (LDB/ELDB) SERVICE / METER BOARDS AND MAIN SWITCHBOARD:

All the PDB/EPDB/LDB/ELDB, Service Meter and Main Switch Boards shall be of robust construction and suitable for flush-mounting / wall mounting type. They must be of industrial heavy duty type, compartmentalized and fabricated out of 14 SWG sheet-steel with MS angles and channels of suitable sizes wherever necessary, totally enclosed, fully gasket, dust and vermin proof, removable top and bottom plates with suitable knockouts at appropriate location for entry of 20-25 and 40 mm dia PVC/MS conduits, hinged front doors (single or two half doors depending upon the size of the board) with locking arrangements & two earthing terminals etc. to be provided.

Service Meter Boards housing front operated SFUs, terminal blocks, fuse cut-outs, kWh meters etc., shall be provided with suitable arrangements for locking and sealing front door. Suitable cut-outs and glass windows in front of kWh meters shall be provided for taking readings and for periodical watching meters working.

PDB/EPDB, LDB/ELDB service meter boards and main switch boards shall be complete with all the equipment such as MCCBs, MCBs, Isolators, SFUs, Fuse Cut- outs, kWh meters etc. as indicated in the Schedule of Quantities for the incoming and outgoing circuits, suitably rated copper bus bars, neutral link, internal wiring, phenolic phase barriers wherever necessary, clearances between phases, phases- neutral and earth maintained as per relevant IS and properly painted with anti- corrosive primers and finish paints. Finish colour should be as per client's choice.

Moulded Case Circuit Breaker (MCCB)

MCCBs are required for use in three phases, 400 Volt feeders for "On-load" closing and opening. Current rating shall be as indicated in the Schedule of Quantities. Breaking capacity at 415V and P. F. between 0.2 and 0.4 shall not be less than 25 KA for 100A, 35 KA for 200A, 35 KA for 250A, 50 KA for 400A and 50 KA for 630A rated MCCBs. The MCCBs shall have mechanisms for quick make and break operation and provided with thermal magnetic release for short circuit and over current protections. There shall be provision for setting the short circuit tripping between 300% and 800% and over-load tripping between 50% and 100% of the nominal rating in addition to continuous current setting (IR) in 5 steps between 100% and 50% of nominal rating. All the PCCs, MCCs are to be provided with door interlocking arrangements.

SPECIFICATION OF SUB-MAIN AND POINT WRING

A power circuit shall always be originated from a distribution fuse boards and the same shall run in a separate PVC conduit/ cable as considered in general scheme.

Insulated or covered earthing conductors where used, shall have green insulation braiding or covering as appropriate. Under as circumstance shall the colour green be used for other than earthing conductor. In addition, where it is required that cables of different colours be used for-identification purposes; the following system shall be employed. Red, Yellow and Blue colour for phases and black for neutral only.

The electric load of all lights, power outlets etc. shall be balanced across the three phases.

Unless otherwise mentioned in the schedule of quantities single way porcelain/Bakelite terminal connector with nickel-plated brass pin and screws to suit the conductor. Size shall be used for intermediate wiring joints in junction boxes and switch-boards.

Distribution wiring in PVC conduit casing capping to light, fan, socket outlets, exhaust fan points etc. shall be done in looping in system. In this system except at stopping points such as at terminals of switches, ceiling-roses, etc, and in case of socket outlets at the socket terminals. Intermediate wiring joint in junction boxes will not be permitted.

The maximum number of wires drawn in one PVC conduit shall not be greater than the recommended number given in the table of IS. 732-1963, contractor must consult the specification given above.

Sub-mains are considered for the wiring from PDB to power outlets LDBs and point control switch boards. These may be by two-core PVCA cable/PVC insulated sheathed copper conductor wires as considered in bill of quantities.

POINT WIRING IN BUILDINGS

Wiring in the buildings shall be concealed/surface drawn. PVC conduits accessories, PVC casing capping cables, ceiling-rose, switches etc. used in the wiring shall be of approved makes. All wiring to be done by stranded single core copper PVC cable of size 1.5 sq.mm for phase and neutral and one sq.mm copper PVC cables for earth wire (Green colour). In case of rewiring partially, the similar cables are to be used as existing.

Laying of conduits, conduit accessories and wiring in concealed and surface system shall meet the requirements of IS-732; National Electrical Code and national Building Code.

The PVC and MS conduits shall conform to IS:9537 (part 1 and 3) and IS : 1653 respectively. Metal junction boxes/ PVC junction boxes shall be used with PVC/MS conduits as the case may be conduit accessories such as junction boxes/pull boxes, outlet boxes, bends. Sleeves etc shall conform to IS : 5133 Necessary GI pull wire of 14 SWG shall be provided in the conduits from and end to the other as required for drawing electrical wires.

PVC conduits/Alkathene pipes shall be laid as far possible in straight runs tied to the reinforcement bars to prevent the getting dislocated during concreting. Where conduits are required to be embedded in the walls, the walls shall be chased to the required depth and conduits fixed in position by means or suitable pipe hoods at every 600mm distance in an approved manner. The walls chased for conduit embedding shall be covered suitably by the Electrical Contractor.

Preparing switch board covers, control switches for all lights, fans, call bells, exhaust fans, ceiling roses, PVC insulated electrical wires bond wire etc. are parts of Schedules for point wiring. Similarly, conduits laying covered under a separate schedule item include providing and embedding Alkathene pipe/MS conduits in RCC roof slabs/beams, walls, MS junction boxes, bends, outlet switch boxes with 3mm thick Phylum sheet, fixing brass screws and cup washer etc. in running meter measurement. Switch-boards may be of double teak-wood board with Phylum cover or MS with Phylum cover as the case maybe.

Terminal/outlet/switch boxes shall be of MS sheet of not less than 1.5mm thick and provided with 4/6/8 threaded holes depending upon the size of the box. The depth of the boxes shall not be less than 75mm and the centre cross sectional area in between from 100 to 750 Sq. cms. The boxes shall be provided with two coats of anti- corrosive paint and the inside surface finished with suitable white paint. The front cover should be 3mm thick coloured or white Phylum sheet and over size by 1 cm, all round shall be provided with suitable brass screws & cup-washer for MS Board only. Sheet Metal Connector Box (16 SWH) of the following sizes with 3mm white Phylum sheet cover is to be used:

- a) 6" x 4" x 2.1/2"
- b) 7" x 4" x 2.1/r
- c) 8" x 6" x 2.1/2"
- d) 4" x 4" x 2.1/2"

In case of surface wiring by casing capping, the double T.W. Switch Board and Junction Box of the following sizes (with 3mm thick white Phylum sheet cover fixing by four Nos. brass wooden screw with Cup-washer) are permitted:

- i) Double T.W. SwitchBoard:
T- x 4" x 2" / 8" x 6" x 2" / 8" x 10" x 2" / 8" x 12" x 2"
- ii) Junction Box: 7" x 4" x 2" / 4" x 4"x2".

T.W. Round Block (75" mm dia)

There shall be 3mm wide and 3 mm deep-groove cut all round the surface against which the bottom of cover will rest and approved plastic compound shall be filled before fixing it finally.

Installation of Switch Board:

These shall be installed at a height of 1.3 meters (4'-3") above the floor level.

Various sizes of wires viz. 1, 1.5, 2.5, 4 and 6 sq. mm which required to be used in the wiring of building shall be of stranded flat twin/single core copper conductors, PVC insulated & sheathed 1100volt grade conforming to relevant IS-specification.

The number of cables/wires drawn in various sizes of conduits shall not exceed the following limit.

Cables sizes	Conduit diameters		
	20mm.	25mm.	40mm.
1.5Sq.mm	6	10	-
2.5Sq.mm	4	18	-
4.0Sq.mm	3	6	-
6.0Sq.mm	2	14	8

Brief details of use of specific wire-sizes/switches/sockets are given below:

- a) For light, fan, call bell and 6A plug point
Stranded 1.5 Sq.mm single core
PVC Unsheathed copper
- b) For connecting air-conditions Board with 20amp capacity industrial
type socket (Crompton/ Standard/ Havells) with
MK-I starter (L&T) with 20 ampere MCB
- c) All main and sub-main power cables will be of Aluminium armoured.
- d) For air-conditioners, in-coming power supply cable will be of 7/0.36mm stranded size (phase and neutral) and of earth 2.5 sq.mm (3/0.036 mm) stranded single core copper cable from separate way of PDB.
- e) Composite 6 in 1 plug-socket board (with following provisions) should be provided in selective areas:
 - i) 16 Amp Socket flush type
 - ii) 6 Amp Socket flush type
 - iii) One switch 16 Amp Socket flush type
 - iv) One fuse flush type
 - v) One indicating lamp flush type
 - vi) 6 Amp one-way flush type switch
 Such composite 6 in 1 plug-sockets should be provided in different places as per Guideline.
- f) All vertical-drops (wiring) should be concealed for horizontal portion only.
- g) In horizontal cases, PVC casing and capping permits surface-drawn wiring but in new OT- both horizontal and vertical wiring should be concealed.
- h) OT switch boards should be water protected as design to be approved by site-in-charge.
- i) For lights/fans/call bells/engaged sign etc. circuit wiring is a part of point wiring. Maximum load per circuit will be 800 watts but number of points should not exceed eight (8) leaving behind two (2) points for future loads.

EQUIPMENT AND FITTINGS

The type, rating the required features, location of fixing etc. are indicated in the Schedules. The schedule includes all other required accessories, fasteners, small wiring etc. fixing, aligning, connecting, testing and commissioning. The materials shall be of good quality acceptable to Engineer-in-Charge and to be fixed in position as directed by him.

Box/Rail Type Fluorescent Light Fittings

Both single and twin tube assemblies shall be of standard fittings made out of cold- drawn sheet steel stove enamelled, the box finished in grey colour and its cover plates in white colour, complete with copper chokes, starter holder, tube holders, lamps and earth terminal etc.

Mirror Optics Type Fluorescent Light Fittings

Both single and twin tube assemblies shall be of standard fittings made out of cold- drawn sheet steel, stove enamelled, the box finished in grey colour and its cover plates in white colour, complete with copper chokes, starters, starter holder, tube holders, lamps and earth terminal etc. with mirror reflector.

Compact Fluorescent Type Light Fittings

Compact fluorescent fitting with 2 x 11 Watts lamps, holders, stainless steel reflector with housing and OPEC acrylic diffuses etc. of SIGMA' search light make.

Street Light (TFL) Fittings

The fittings shall be SON/70W/150W or weather proof type fluorescent street light fittings. The fittings shall be made of Aluminium sheet and finished outside in hammer tone grey colour, stove Enameled and white inside complete with copper wire chokes, starters condensers, suitable lamp.

Control switches for lights, fans, call bells, exhaust fans etc. shall be of rating 6 Amps, 230 Volt, Piano-type flush mounted, cream colour conforming to relevant Indian Standards. Ceiling roses also shall be of 6 Amps, rating 230 V. cream colour deluxe conforming to the relevant IS – Specification Switches of 16 Amps capacity and associated 16A socket would also require to provided facility of connection of power load up to 1 KW. Alternatively, Industrial type plug-socket board may be used in specific cases. Cable used for power load should be of suitable capacity.

After successful completion of the work., the final drawings/Blue Print Plan showing the details circuit diagrams and fittings, fixtures are to be submitted along with the final bill.

EARTHING

All non-current carrying metal parts of the electrical installations such as switch gears, LT panel, distribution boards, power plugs exhaust fans, air conditions, cable glands, MS conduits, switch boxes etc. shall be bounded together suitably and connected to earth-stations in accordance with the requirements of Indian Electricity Rules and IS: 3043.

All earth stations shall be of the same type similar to one illustrated in IS: 3403, using pipe electrode of galvanized steel Class B having 65mm dia and a length of

3.04 meter buried vertically in the ground and providing layers of charcoal/coke and salt as necessary. The top end of the pipe electrode shall have suitable arrangements for making connections of earth wire/flats in the manner approved by the Engineer- in-Charge. The earth stations shall be located at least 2 M away from the buildings and not less than 6M apart. Nearby earth stations (at least two) shall be interconnected with suitable size GI flat.

Earth connections shall be as follows:

- i) For building wiring the earth lead will be drawn from earth electrode to earth bus-bar by 19/10 GL stranded wire and from earth bar to PDB & SWG GI wire & from PDB to, SDB & LDB etc. by No. 10 SWG GI wire. For Power plug and 6 Amp plug, either by 1 Sq. mm stranded copper/16 SWG G.I wire as the case may be which will be mentioned in B.O.Q.
- ii) Double connections shall be made for medium voltage supply (251 to 650V).
- iii) All earth wires and flats from one end to the other shall be continuous and without any joints and so laid to protect them against mechanical damage.

If the required earth resistivity is not obtained with the earth-pits, additional pits shall be made for improving the system resistivity. The rates payable for additional pits shall be same as the rates quoted in the tender.

Earthing Schedule includes supply of all required material, digging pits, providing charcoal / coke and salt, filling up the pits (providing cement concrete chamber with cover for substation earthing only for laying of earth wires / flat making connection with proper fasteners, finishing machinery work that have been disturbed for electrical works, testing etc.

Erection of Poles:

Erection of single street tubular pole of length, as given below with or without sole plate & cap etc. in cement concrete foundation (proportion and dimension indicated below) as to G.S having 600 x 600 x 150mm thick cement concrete (4:2:1) base block below sole plate/Pole with hard Jhama metal including CC (6:3:1) muffing of 0.3 Mt (3ft) dia and 0.3 Mt (1 ft) above ground level including 3 mm

(1/8") thick neat cemented finish and providing G.I earth bolt after making drilled hole etc. on pole & carriage of pole upto 1.6km from store depot to work site including filling up the excavated earth pit with shifted soil and ramming properly.

Dimension of poles	Proportion	Dimension
3) Upto 9Mts	6 : 3:1	0.6x0.6x1.70Mt.
b) Above 9Mt	6 : 3- 1	0.6x0.6x 1.91Mt

Erection of H – pole (D.P.) structure with 9 Mt long steel tubular poles (0.9 Mt. to 1.5 Mt. apart) in cement concrete (6:3:1) foundations (as to similar dimension in item 1.2 (above) including 600 x 600 x 150mm (2' x 2' x 6") thick cement concrete (4:2:1) base block below sole plate / pole with hard jhama meta including cement concrete (6:3:1) muffing 300mm (1 ft.) dia and 300mm above ground level neatly cemented finish 3mm (1/8") thick and providing galvanised MS channels, cross arms and cross bracing made out of galvanised, angle, flats etc. anti-climbing devices, 'Danger' board & earth bolt etc. "as per IS code of practice".

Extension items 1 & 2 above, for providing cement concrete (6:2:1) base block (around the pole) dimension 0.60 x 0.60 x 0.76 mt. (2" x 2" 2'.6") above ground level, neatly cemented finish (3mm thick) at the base of pole (in lieu of cement concrete muffing) including S & F looping cable box 25cm x 25cm 10cm (10" x 10" x 4") made of C.I & including providing drilled hole in pole suitable for Alkathene/polythene pipe entry as directed for street light wiring.

Painting of Steel Tubular Pole of lengths and no. of coats of paints as given below with ready mixed paint/primer of approval make brand including preparation of surface by sand paper/ emery paper, cleaning etc. for receiving fresh coat of paint. Painting block letters or digits within a circle/square as required with "Black Japan" paint of approved make & brand the size of letters and digits.

Painting of Steel Tubular pole of lengths and no. of coats of paint as given below with ready mixed paint/primer of approved make & brand including preparation of surface by sand-paper/emery paper, cleaning etc. for receiving fresh coat of paint. Painting of any steel /iron surface with no of coats of paints as given below with ready mixed paint/primer of approved make and brand including preparation of surface by sand paper, cleaning etc. for receiving fresh coat of paint. Street light as described in bill of quantities. The Schedule item of street light poles include manufacture of stepped poles, excavation of pits, making concrete foundations, erection of poles, filling up of pits satisfactorily, fixing of light fixing on poles, connection with suitable weather proof insulated wires, earthing, testing and commissioning at the locations decided by the Engineer-in-Charge. The pole shall as per the sketch enclosed.

The poles shall be manufactured out of steel tubes conforming to IS: 2713 as shown in the drawing. There shall be a base plate of MS of size 220 x 200 x 6mm welded to the bottom of the pole and one MS rod of 19/20mm dia and 300mm long inserted across the and welded at a height of 600mm from the base plate and both of them coated with bituminous paint. The cable terminal arrangement shall be built in within the MS sleeve loop box as per in the sketch. Water light 2 ram thick MS box shall have locking arrangement to house two sets of terminals for incoming and looping connections and one re- wireable fuse fitting with 6 Amps fuse on 6mm thick phylum base & properly insulated to withstand weather conditions. The poles shall be erected properly with cement concrete foundations as per P.W.D (ELECT) specification-Necessary change of the concrete shall be done as per relevant procedures. Two P.V.C pipe of not less than 30mm dis. With gland and bends shall be provided in the foundation for cables entry into terminal box. Electrical connection between the terminal box and the light fitting shall be made by means of 2.5mm single core, PVC insulated copper cable of 1100V grade.

☆ **GOVERNING CODES**

The work will be carried on as per the guidelines and specification given in prevailing Indian Code of practices with up to date amendments if any which govern the requirements as follows:-

Code of practice -

- b) List of Indian standards mentioned in appendix-I.
- c) List of Acts / Bye Laws mentioned in appendix-II

➤ **LIST OF ACT/BYE-LAWS**

The composite works shall also be governed by the following Acts/Bye-Laws/Codes as amended up to date in addition to the codes specified in the tender:

1. National Building Code of India –2005
2. Indian Electricity Act – 2003
3. Indian Electricity Rule –1956
4. Building Bye-Laws
5. Local Fire Prevention and Fire Safety Rule.

Appendix –V.

THE FOLLOWING INDIAN STANDARD CODES ARE APPLICABLE

- i) IS: 732/1989 – Code of practice for elec. Installation.
- ii) IS: 1646-1961 – Code of practice for safety of Building (General Electrical Installation)
- iii) IS: 3646 Part – I – Code of practice Principles Part – H and Part – m for good lighting and aspects of design, schedule for values of illumination and glare level and calculation of coefficient of utilisation
- iv) IS: 4347-Code of practice for Hospital lighting
- v) NEC – 1985 – National Electrical Code for hospital and Operation Theatre.
- vi) IS: 3480 – Flexible Steel Conduits for Electrical Wiring
- vii) IS: 2667 – Fittings for rigid Steel Conduits for Electrical Wiring
- viii) IS: 3837 – Accessories for rigid Steel Conduits for Electrical Wiring
- ix) IS: 9537 Part-Hi- 1983-PVC Conduits for Electrical Wiring
- x) IS: 694 – 1977 – Specifications for PVC insulated Cable for working voltage up to and including 1100Volts
- xi) IS: 8130-1984 – Specification for Conduits for insulated Electrical Cable and Flexible Cords
- xii) IS-5563 – Electrical Power Connectors
- xiii) IS: 3854-1988 – Flush type Switches
- xiv) IS: 1293-1988 – Pin Sockets
- xv) IS: 6538 – 1971 – 3 pin piano top
- xvi) IS: 371 – 1979- Ceiling Roses
- xvii) IS: 374-1979- Ceiling Fan