

ASSAM POWER GENERATION CORPORATION LIMITED
OFFICE OF THE CHIEF GENERAL MANAGER (HYDRO & CIVIL),
BIJULEE BHAWAN, GUWAHATI-781001
TENDER DOCUMENT FOR



E-Tender Notice No.10 of 2019-20 of CGM (H & C)

NAME OF THE WORK: - Slope protection work at Left bank downstream of Hatidubi Dam, KLHEP.

November-2019

Price: - - 2000/-
(Non Refundable)

INDEX

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CHAPTER-I

TENDER NOTICE



ASSAM POWER GENERATION CORPORATION LIMITED

Registered Office: Bijulee Bhawan, 2nd floor, Paltanbazar, Guwahati-781 001, Assam.

CIN: U40101AS2003SGC007239

Email: cgmh2010@yahoo.in. Tele-Fax: 0361-2739522.

Chief General Manager (Hydro & Civil)

E-Tender Notice No. 10 of 2019-20 of CGM (H&C)

Dated: 18/11/2019

Tender Notice No. 10 of 2019 -20

Invitee	The Chief General Manager(Hydro & Civil) 2nd Floor Bijulee Bhawan, Paltanbazar, Guwahati, Assam, PIN-781001
Name of work	Slope protection work at Left bank downstream of Hatidubi Dam, KLHEP.
Duration of work	90 (Ninety) days from handing over the site
Tendered value	Rs. 40,59,670.00 (inclusive of all taxes) (Rupees Forty lakhs fifty nine thousand six hundred and seventy only)
Eligibility of the bidder	Reputed and financially sound Civil Engineering firms/contractors with an average Annual turnover of at least 30% of the tendered amount in the last three financial years i.e. year ending 31 st March of the previous financial year and having experience of executing similar nature of work having total value not less than 40% of tendered amount during last the last 5 (five) years. (Documents to be submitted.) Each tender shall be accompanied by a statement declaring that he/she is a bona-fide engineering contractor and has in possession of adequate equipment & machineries of their own and man power (Manpower and machinery list to be submitted) including experienced technical personnel to handle the job. (Documents to be submitted).
Tender fee (Non-refundable)	Rs. 2000/- (Rupees two thousand only) in the shape of Demand Draft only duly pledged in favour of the Deputy General Manager (F&A), APGCL, Guwahati-781001 .
Earnest Money Deposit (EMD)	Rs. 81,200.00(for General) Rs. 40,600.00 (for SC/ST/OBC)(For Individual only) in the shape of Demand Draft only duly pledged in favour of the Deputy General Manager (F&A), APGCL, Guwahati-781001
Address for mailing payment instruments	The Chief General Manager(Hydro & Civil) 2nd Floor Bijulee Bhawan, Paltanbazar, Guwahati, Assam, PIN-781001
Start date of Tender	19.11.2019
Last date and time of Online bid submission	4.00 p.m. on 27.11.2019
Tender Opening	2.00 p.m. on 28.11.2019

Bidder must download the Bidding Documents and submit the bid electronically on the portal <https://assamtenders.gov.in>

The Bidders will be required to submit the bids by using own Digital Signature Certificate with both Signing and Encryption Certificates (minimum Class-II Certificate). Prospective Bidders must procure DSC before participating in the tenders.

The viewing & downloading of the bid document will be free of cost.

Bid shall be submitted electronically/ online.

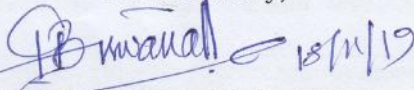
The Bidders will be required to download the Bidding Documents from the web portals mentioned above. However, they will have to pay a non - refundable tender document fee as mentioned above in the form of demand draft, the details of which are stipulated in the tender document. The acceptance of the bid shall be subjected to acceptance of the document fee.

Demand draft for Tender document fees and Earnest money in original has to be submitted on or before the date of opening of bid in the office of Chief General Manager (Hydro & Civil). Failure to do so will lead to rejection of the bids without assigning any reason thereof.

The Chief General Manager (Hydro & Civil), APGCL is not bound to accept the lowest rates and reserves the right to accept or reject any or all tenders without assigning any reason thereof.

Note: Any addendum/corrigendum, extension etc in respect of this tender shall be issued on the portal <https://assamtenders.gov.in> and APGCL's website: www.apgcl.org

Yours faithfully,



Chief General Manager (Hydro & Civil)
APGCL

Memo no: APGCL/CGM (H&C)/W/2018-19/740/10(a)

Date: 18/11/2019

C.c. to: -

- 1) The Managing Director, APGCL, Bijulee Bhawan, Paltanbazar, Guwahati-781 001, for favour of kind information.
- 2) The Chief General Manager (Gen), APGCL, Bijulee Bhawan, Paltanbazar, Guwahati-781 001, for information.
- 3) The Chief General Manager (F&A), APGCL, Bijulee Bhawan, Paltanbazar, Guwahati-781 001, for information.
- 4) The General Manager, Design (Civil), APGCL, Narengi, Guwahati-781026, for information and wide circulation.
- 5) The Deputy General Manager, Investigation Circle, APGCL, Narengi, Guwahati-781026, for information and wide circulation.
- 6) The General Manager, KLHEP, APGCL, Dist- Karbi Anglong for information and wide circulation.
- 7) The P.R.O, APDCL, Bijulee Bhawan, Paltanbazar, Guwahati-1, for information with a request to publish the NIT in 1 (one) issue of Local Dailies in Regional and English language on or before 19/11/2019.
- 8) Relevant File.


Chief General Manager (Hydro & Civil),
APGCL

CHAPTER-II

1 TERMINOLOGY

- 1.01** APGCL wherever used in this document shall mean Assam Power Generation Corporation Limited incorporated vide The Companies Act 1961 in exercise of Powers conferred under the Act including subsequent amendments, if any. APGCL is a successor company of ASEB.
- 1.02** CGM (H&C) or owner or purchaser or project authority wherever used in this document shall mean the officer holding the post of the Chief General Manager (Hydro & Civil) APGCL, Guwahati (Assam), who or his authorized representative will exercise authority on behalf of the Department in respect of the Tender and the works specified herein.
- 1.03** Engineer-in-Charge/or engineer shall mean the Officer holding the charge of the Departmental post of General Manager/ Assistant General Manager (Civil) pertaining to supervision of works specified in this document
- 1.04** The term 'Contractor' wherever used in this document shall mean the individual/firm or company who shall have entered into a contract agreement with the owner or the project authority, undertaking on his behalf to carry out the works in full or in part as may be specified in contract documents, and shall include in the case of an individual/ his heirs, administrators and permitted assignees, in case of a firm, the partners of the said firm, their respective heirs, executors, administrators and permitted assignees, and in case of a Company its successors and permitted assignees.
- 1.05** Contract documents shall mean and comprise the following documents and shall be the basis of agreement between the owner and the contractor for carrying out the works in accordance with the terms and conditions, specifications, drawings and directions contained in the said documents
- a) Bid documents duly filled in respect of rates, process & signed, the tender forms properly filled in, signed and dated by the contractor & duly submitted
 - b) Contractor's original bid proposal and subsequent correspondences relating to clarifications and negotiations, if any, prior to award of the contract.
 - c) Equipment specifications and drawings, so far as applicable
 - d) Approved agreement forms duly signed, dated and sealed by the contractor and the owner as specified in the said forms
- 1.06** 'Equipments' and 'Plants' shall mean and include all sorts of machineries and accessories, apparatus, instruments, components manufactured articles and parts etc. to be supplied or provided by the contractor under the terms of the contract , unless otherwise specified
- 1.07** The 'Works' shall unless be repugnant to such description shall be construed and taken to mean the works contracted, or by virtue of the contract agreement, to be executed whether temporary or permanent and whether original, altered, substituted or additional
- 1.08** The expression 'Specifications' wherever used in this document shall mean all the pertinent terms and stipulations furnished herein in respect of the work or part thereof and/or indicated in the drawings appended hereto and to be issued for construction and shall have reference also to other relevant terms and stipulations not furnished herein, but as far as applicable

CHAPTER-III

INSTRUCTION FOR BIDDERS AND SPECIAL CONDITIONS

E-Tender Notice No. 10 of 2019-20 of CGM (H & C) Dated:-18/11/2019

BID INVITATION FOR: - Slope protection work at Left bank downstream of Hatidubi Dam, KLHEP.

EARNEST MONEY DEPOSIT:

Rs. 81,200.00 (for General)

Rs. 40,600.00 (for SC/ST/OBC)(For Individual only)

In the shape of Demand Draft only duly pledged in favour of the Deputy General Manager (F&A), APGCL, Guwahati-781001

1. DUE DATE AND CLOSING TIME

The bid will be received up to 4.00 p.m. on 27/11/2019. The opening time of the bids will be at 02.00 p.m. on 28/11/2019 and the venue will be the office of the Chief General Manager (Hydro & Civil), APGCL. Bidders or their authorized representatives will make it convenient to attend the bid opening on time. In case the tender opening and last bid submission date falls on a Govt. Holiday, the next working day shall be considered as the above mentioned date.

2. TIME OF COMPLETION OF WORK

The stipulated time of completion of the work is 90 (ninety) days from the date of handing over the site.

3. BID-GUARANTEE OR EARNEST MONEY DEPOSIT: (E.M.)

3.1 Every bid or tender shall be accompanied by a deposit of E.M for an amount indicated in the Tender Notice pertaining to the work (ordinarily equivalent to 2% of the estimated value of work, unless otherwise specified in the Notice), in the form of an acceptable **Demand Draft only from a Nationalized/Schedule Bank pledged in favour of the Deputy General Manager (F & A), APGCL, Guwahati.** Irregular tender is liable to be rejected.

3.2 The E.M. as mentioned above will be returned to the respective unsuccessful bidder soon after the award of the contract. The E.M. will be retained towards the contract security deposit in the case of selected bidder or bidders in whose favour the contract is awarded. The APGCL will not entertain any claim for release of the E.M. during pendency in selection of contractors for awarding the contract. The APGCL will not pay any interest on the E.M. deposit.

3.3 The E.M. is liable to be forfeited in the absolute discretion of the CGM (H&C), APGCL, if a selected bidder revokes or causes to withdraw his offer / tender before the expiry of its validity or fails after the contract is awarded to him to execute the 'Contract agreement' with the APGCL described herein after (so far as applicable) or to commence the work within the period as notified in the work order.

4. PERFORMANCE –GUARANTEE OR SECURITY DEPOSIT (S.D.)

4.1 The security to be taken for due performance of the contract in terms of the 'contract agreement' will be a deduction of 10% (ten percent) from every ad-interim payment made on account of works performed, until the sum of these deductions and E.M. together becomes equal to 10 (ten) percent of the total value of the contract.

4.2 Such S.D. shall be forfeited or appropriated by the CGM (H&C), APGCL, Bijulee Bhawan, Guwahati under authority of the owner in his discretion towards any loss, damage etc. that may be sustained by the APGCL as a result of breach of any terms, conditions of the contract by the contractor, notwithstanding other remedies open to the APGCL under the terms of the contract or law.

4.3 Subject to the provisions mentioned above and the provisions of **guarantee period of one year**, the Security Deposit will be returned to the contractor on the due and satisfactory performance of the contract and after all claims of the APGCL shall have been settled. The APGCL will not pay any interest on the amount of Security Deposit of Performance Guarantee.

5. **GOODS AND SERVICE TAX / INCOME TAX CERTIFICATE (PAN / GST):**

The offered rates and / or prices for the work shall include all taxes, duties, forest royalties, monopolies etc. as may be applicable on material and labour during the tenure of the contract. There will be no reimbursement for any increase or levy of new taxes, duties etc. on materials utilized for this work or equipments furnished / supplied for completing the work or for machineries, equipments, tools and tackle, fuel and lubricants etc. used in connection with the performance of the work, unless otherwise specified or qualified by the bidder in his bid. If, however, any tax or duty is levied by the Govt. or statutory body on the finished work (after complete installation and / or delivery), such tax or duty will be to the account of the APGCL.

5.1 **The contractors must have a valid GST Registration No. and should submit copy of GST Certificate and attested copy of PAN Card.**

5.2 Caste certificate must be produced where necessary.

6. **BIDDER'S QUALIFICATIONS:**

6.1 The Bidder should submit a list and description of similar or comparable works previously executed by him successfully during last five consecutive financial years indicating the individual volume and contract price along with the name and address of the respective owner / authority.

6.2 All prospective bidders are hereby notified that, before any bid submitted in response to this invitation is considered for award, the CGM (H&C), APGCL may require the bidder to submit a further statement of facts in detail as to the previous experience of the bidder and financial resource available with him for performing the contemplated work. The CGM (H&C), APGCL expressly reserves the right to reject any bid or which the facts as to business, financial and other resources or business experience, compared with the work bid upon, justify such rejection.

6.3 **The Bidder should submit valid Labour License Certificate.**

6.4 **Civil Engineering firms / contractors with adequate experience must complete similar works having total value not less than 40% of tendered amount during last the last 5 (five) years. They must submit such completion certificate with the tender.**

6.5 Cost over run shall not be accepted.

6.6 **Contractors should be financially sound to invest the amount and should submit necessary evidence on this account. Average Annual turnover during the last 3 (three) years ending 31st March of the previous financial year, should be at least 30% of the tendered amount.**

6.7 **It should be ensured that the contractors shall have Provident Fund Code No. It will be ascertained that all the workers engaged by the contractor directly should be registered for Employees' Provident Fund (EPF) and due contribution have been credited into their account.**

7. **BIDDER SHOULD EXAMINE & UNDERSTAND**

7.1 All prospective bidders are required to thoroughly study and carefully examine *all the terms and conditions, instructions, drawing & specifications pertaining to the work and visit the field of work to fully satisfy and acquaint themselves about the nature and location of work, the configuration of the ground.* The spring level, the surface conditions, quality and quantity of materials required and their availability the type of equipments and facilities needed preliminary to and during the execution of the work and local conditions which may affect the work or cost thereof. Failure to do so will be at the bidder's risk.

8. **SUBMISSION OF TENDER**

8.1 **Bidders are to quote their rates in the prescribed format. It may be noted that in the e tender portal, rates are to be quoted for all the items of the BOQ and evaluation criteria shall be on the basis of the summation of quoted rates/amounts for all the items of the BOQ, otherwise the price bid of that bidder will be rejected.**

8.2 **The rates are to be quoted on item rate basis on specified schedule of rates. The rates are to be quoted in figures.**

8.3 **The rates quoted by the bidders will be inclusive of all taxes, royalties and other statutory levies as applicable.**

- 8.4 **Bidders should note that unusually low rates not feasible for execution may not be technically accepted.**
- 8.5 Bidders should note that during the time of execution of work, any item not covered by the schedule of work if required to be done as per decision of the CGM (H&C)/ Engineer-in Charge of work, they have to execute such work/works as supplementary item of works, rates of which will be same as the accepted rate for the work on S.O.R. for APWRD Rural Roads for the year 2016-17.If the rate of such supplementary item/items is/are not available in the aforesaid S.O.R, the same will be analyzed by the department as per reasonable market price but in any case of dispute for rate of supplementary item/items, the decision of CGM (H&C) will be final and conclusive.
- 8.6 **The quoted rates will be firm for entire period of completion of the work. No price escalation on any component will be admissible.**
- 8.7 Firms submitting tender should enclose a certified copy of the Firm's constitution and a certified copy of Power of Attorney authorizing a person to operate the tender and contract and should furnish full address of the partners and the persons holding power of attorney on behalf of the firm.
- 8.8 **Information regarding litigation, current or during the last five years, in which the Bidder is involved with APGCL/AEGCL/APDCL, must be furnished, if any in the prescribed format.**
- 8.9 Every page of the tender document must be duly signed by the contractor/firm participating in the bidding process.

9. AWARD OF CONTRACT

- 9.1 The contract will be awarded to that responsible bidder whose bid, confirming to the schedule conditions of contract and specifications will be most advantageous to the Department, price and other factors considered. An award mailed (or otherwise furnished) to the successful bidder within the time for acceptance specified in the bid will result in a binding contract without further action by either party. *The CGM (H&C), APGCL does not bind itself to accept the lowest bid or any bid. As the interest of the Department may require, the right is reserved to reject any or all bids and to waive any minor informality or irregularity in bids received without assigning any reason thereof.* Bid which are incomplete or which contain undesirable conditions are liable to rejection.
- 9.2 **APGCL will try to make timely payment of bills, but on unavoidable circumstances cannot guarantee timely payment of bills, for which no interest on the payable amount will be entertained.**

10. CONTRACT AGREEMENT

- 10.1 The 'Contract agreement' (or Tender Agreement) for the works will be drawn up with the selected bidder/bidders within **7 (Seven)** working days of issue of the work order and the contract documents will comprise as described herein before.
- 10.2 The conditions of the F-2 form shall form part and parcel of the agreement. However wherever there is any contradiction or variation between the conditions of the F-2 form, the terms and conditions specified elsewhere in this document, the later will be treated as superseding the former. Terms and conditions shall be as per F-2 Form of agreement and has to follow accordingly. In the Form-F-2 all the designations appearing as Executive Engineer/Sub divisional Officer shall be read as Chief General Manager (Hydro & Civil), Assam Power Generation Corporation Limited (herein after called as C.G.M (H&C), APGCL).
- 10.3 In a case where the selected bidder fails to commence the work as shall be notified in the work order or fails to execute the tender agreement with the CGM (H&C), APGCL as stipulated herein before; the CGM (H&C), APGCL reserves the right to claim loss, damage etc. and take appropriate action under the terms of this document or law including forfeiture of E.M.

11. TOOLS & PLANTS

- 11.1 The APGCL does not ordinarily furnish any tools & tackle, plants and equipments or such facilities for carrying out the work by the contractor (excluding hypothecation). The contractor shall arrange and maintain the equipments required for implementation of work all throughout the period of the contract.

12. MATERIALS & LABOUR

- 12.1 All materials (this includes without limitation raw materials, parts, components etc.) and labourers required for carrying out the work shall be arranged and furnished by the contractor all throughout the tenure of the contract and strictly conform to relevant IS Code (latest revision).
- 12.2 The intending tenderers should inspect the prospective sources of collection of raw materials and fully satisfy him about the quality of materials, availability of materials, lead, and mode of transportation. The Department shall not consider, after acceptance of the contract, to pay any extra charge for lead or any other reasons, in case the contractor found later on, to have misjudged, the quality/quantity of availability of such materials from the source of collection.
- 12.3 APGCL shall not issue any construction materials such as cement, reinforcement bar, or any other materials.
- 12.4 In connection with the performance of work throughout the tenure of the contract, the engagement of labour and payment therefore by the contractor shall conform to the statute, the pertinent law or act of the Central & State Govts, as well as rules, regulations and orders of the local authorities or statutory bodies, as may be in force from time to time.
- 12.5 The materials procured for the work by the contractor shall be placed at site properly for inspection of Engineer-in charge before utilization. Any defective materials should be replaced immediately for which no extra charge will be payable to contractor.

13. CHANGES IN QUANTITY AND ITEM

- 13.1 The authority may at any time, by a written order make changes within the general scope of the contract, in any one or more of the following
- i) Quantity of any item
 - ii) Alteration or omission of any item
 - iii) Addition of any item
 - iv) Alteration in drawings, designs or specifications
- If any such change causes an increase or decrease in the cost of or the time required for performance of the contract, an equitable adjustment shall be made in the contract price or time schedule or both and the contract shall be modified in writing accordingly. Any claim by the contractor for adjustment under this clause must be asserted within 30 days from the date of receipt by the contractor of the notification of change: PROVIDED HOWEVER, that the authority if decides that the facts justify such action, may receive and act upon any such claim asserted at any time prior to final payment under the contract. Failure to agree to any adjustment shall be a dispute concerning a question of fact within the meaning of the disputes mentioned herein after. However nothing in this clause shall excuse the contractor from proceeding with the contract as changed.

14. INSPECTION

- 14.1 All works and all supplies (this term includes without limitation raw materials, parts, components, intermediate assemblies and end products) under the contract shall be subject to inspection and test by the CGM (Hydro & Civil), APGCL or his authorized person to the extent practicable at all times and places including the period of construction or manufacture and in any event prior to final acceptance.
- 14.2 In case any work or part thereof or/and any supply is found defective in material or workmanship or otherwise not in conformity with the specifications or drawings or requirements of the contract, the CGM (Hydro & Civil), APGCL shall have the right either to reject them or to require their correction, as directed by the department.
- 14.3 The inspection and test by the CGM (Hydro & Civil), APGCL or his authorized person of any work or any supplies does not relieve the contractor from any responsibility regarding defects or other failures to meet the contract requirements which may be discovered prior to final acceptance. Except as otherwise provided in this contract final acceptance shall be conclusive except as regards latent defects, fraud or such gross mistakes as amount to fraud.
- 14.4 The contractor shall provide and maintain an inspection system acceptable to the CGM (Hydro & Civil), APGCL covering the works and/or supplies hereunder. Records of all inspection works by the contractor shall be kept complete and available to the CGM (Hydro & Civil), APGCL during the performance of this contract.

15. DEFAULT

15.1 The contractor shall not be liable for any excess cost of any failure to perform the contract arises out of causes beyond the control and without the fault or negligence of the contractor (such as FORCE MAJEURE) PROVIDED THAT the contractor shall notify the authority in writing of the cause of any such delay, within fifteen (15) days from the beginning thereof or within such further period as the authority shall grant for the giving of such notice.

16. LIQUIDITY DAMAGE

16.1 The liquidated damages shall be payable for delay in completion of the work @ 0.3% (point three percent) of the contract prices per week. The liquidated damages so payable shall not exceed 10% (ten percent) of the contract prices.

17. TERMS OF PAYMENT

17.1 Bills shall be entertained on the basis of Actual measurement of completed works as per standard procedure. 1st Running Account Bill shall be entertained only after completion of minimum 30% of total work, 2nd Running Account Bill after completion of minimum 60% of total work and payment shall be made subject to the availability of fund.

18. CONTRACTUAL FAILURE:

18.1 In the event of Contractual Failure of any respect on the part of the successful bidder, APGCL shall be entitled to forfeit the EMD or any money received from the bidder and may take appropriate action under the terms of the Contract or Law.

19. SETTLEMENT OF DISPUTE:

19.1 In the event of any dispute or differences at any time arising between the parties relating to work or any other clause or any content of the right and liabilities of the parties or other matters specified therein or with reference to anything arising out of the such dispute or differences shall be endeavored to be resolved by mutual negotiation. If, however, such negotiation is infructuous, the dispute should be finally settled through Arbitration and Conciliation Act 1996 by three arbitrators appointed in accordance with the said Act. The decision of the arbitrator shall be final & binding upon the parties and the expense of the arbitration shall be paid as may be determined by the arbitrator in accordance with provisions of Arbitration and Conciliation Act 1996. The arbitration proceedings shall be held in Guwahati.

20. TERMINATION:

20.1 APGCL may, by not less than 7 (seven) days written notice may terminate the contract, if the contractor :- (i) fails to remedy a failure in the performance of his obligations, (ii) becomes insolvent or bankrupt, (iii) submit to APGCL statement which has a material effect on the rights, obligations or interest of APGCL and which the contractor known to be false, (iv) as result of force majeure, if the whole work cannot be performed for a continuous period of 30 (thirty) days. (v) fails to take over the site within the stipulated time as mentioned in the work order issued to the successful bidder APGCL shall make payment upon termination to contractor the services performed by the contractor to the entire satisfaction of APGCL prior to date of termination.

21 SEQUENCE OF CONSTRUCTION ACTIVITIES:

21.1 Driving equipments should be fabricated as per detailed drawings (at **Annexure B**) and the contractor should get them approved from the engineer in charge before commencement of work.

21.2 Layout of the vertical stakes should be clearly marked at site with any required adjustment in consultation with the site engineer.

21.3 Tripod should be aligned for driving individual vertical stake by adjusting and placing the legs on the slope. Parts of slope may need superficial dressing and some parts may need to be built up with gunny bags filled with soil so that the legs of the tripod may be firmly supported.

21.4 All steel vertical stakes should be driven with the monkey of about 100kg **falling freely** through a height of 1m.(The process of free falling involves dragging the monkey manually over the pulley and released to drop freely) A log book should be maintained to record the depth of penetration of each steel stake. Each steel stake should be penetrated to the requisite depth as per drawings until and unless there is refusal. (Conditions of refusal enclosed at **Annexure C**)

21.5 Laying of RCC pedestals around each steel pile should be carried out as per drawings.

(at **Annexure B**)

- 21.6 Layout of RCC tie beams running along the ground in the vicinity of steel stakes should be carried out as per drawings.(at **Annexure B**)
- 21.7 Welding of cross steel members will be carried out at site.
- 21.8 All the vertical structural tube stakes should be painted with one coat of Red oxide and two coats of enamel paint as per estimate.
- 21.9 Bamboo palisading should be carried out using bamboos of diameter ranging from 80 mm to 100 mm.

22 SPECIAL NOTE

The driving equipments under Sl no 17 of the BOQ shall be taken away by the contractor after completion of the work and hence rate against the same shall be quoted considering their salvage value.

CHAPTER-IV

SAFETY ENGINEERING & SAFETY CODE

1. SAFETY ENGINEERING

Accident prevention shall be an essential part of the programme of the contractor for all operations involve in performance of the contract under this invitation in order to reduce the cost of construction measures in terms of:

- a. Human life sacrificed
- b. Temporary and permanent injuries to workers.
- c. Loss of materials resulting from accidents.
- d. Loss of damage to equipment.
- e. The cost of workman's compensation insurance.
- f. Loss of times due to accidents.

Suitable safety programme to be developed to cope with the particular hazards for each operations of the performance of the contract.

2. INSPECTION

To ensure effective enforcement of the rules and regulations relating to safety precautions, the arrangements made by the contractor shall be open to inspect by the Engineer-in-Charge or his representative. The Engineer-in-Charge should note that no work should be carried out without proper safety gears such as helmets, harness and other necessary protection equipments as deemed necessary at site.

3. COMPENSATION

No extra charges or additional compensation will be admissible to the contractor by the department for any work done to comply with the provisions of safety Engineering and Safety Code. The bid price of the contractor for various items shall include these incidental cost.

CHAPTER-V

CONTRACTOR'S CAMP

1. CAMP SITES

The contractor shall provide, maintain and operate under competent direction such camp facilities convenient to the site works under this contract as are necessary for housing, feeding and accommodation of his employees. The location, construction, operation and maintenance of such camps shall be subject to the approval of the Assistant General Manager/ Engineer in charge of the site.

2. USE OF LAND FOR CONSTRUCTION PURPOSES

Such land as may be available at work- site will be allowed to be used by the contractor for construction of his camps free of charge. However, development of clearances of the land will have to be done by the contractor at his own cost. The contractor will be responsible to clear and clean the site after completion of his works and handover the land to the Engineer-in-Charge. The contractor will be liable to pay compensation for any damages done to the land or neighboring area.

3. SANITATION IN CAMP SITE:

The temporary sanitation in the camp site should be properly maintained and hygienic so that pollution can be controlled and just before completion of the work site must be cleared properly.

CHAPTER-VI

DECLARATION

I / We hereby declare that I/we shall treat the tender documents and other records connected with the works as secret/confidential and shall not communicate information derived there from to any person other than person to whom I/We/am/are authorized to communicate the same or use the information to any manner prejudicial to the safety of the state.

Signature of the tenderer

Full Name

(In Block letters)

Address

.....

.....

.....

Phone/ Mobile

Date:

CHAPTER-VII

Schedule of work:

To,
The Chief General Manager (Hydro & Civil),
APGCL, Bijulee Bhawan
Paltanbazar, Guwahati-1

Name of work: "Slope protection work at Left bank downstream of Hatidubi Dam, KLHEP."

Ref: Your. E-Tender Notice No.10 of 2019-20 of CGM (H&C) Dated: 18/11/2019

Dear Sir,

In response to your above notice I/We am /are submitting herewith, my / our rates for the work as mentioned below. Necessary documents, as asked for, are enclosed herewith, for your kind perusal.

Sl no	Item	Quantity	Unit	Rate (inclusive of all taxes)	Amount (inclusive of all taxes)
1	Earthwork in excavation in ordinary soil for foundation trenches of walls, retaining walls, footings of column, steps, septic tank etc. including refilling (return filling) the quantity as necessary after completion of work, breaking clods in return filling, dressing, watering and ramming etc. and removal of surplus earth with all lead and lifts as directed and specified including bailing out water where necessary as directed and specified. (A) Upto a depth of 2.00 m below the existing G.L.	103.28	cum		
2	Providing soling in foundation and under floor with stone/ best quality picked jhama brick, sand packed and laid to level and in panel after preparing the subgrade as directed including all labour and materials and if necessary dewatering, complete. (a).Brick on flat soling.	156.06	sqm		
3	Plain cement concrete works with coarse aggregate of sizes 13mm to 32mm in foundation bed for footing steps, walls, brick works etc. as directed and specified including dewatering if necessary, and curing complete (shuttering where necessary shall be measured and paid separately) in proportion 1 cement: 3 sand: 6 coarse aggregate by volume	23.72	cum		

4	Providing and laying plain/reinforced cement concrete works cement, coarse sand & 20mm down graded stone aggregate including dewatering if necessary, and curing complete but excluding cost of form work and reinforcement for reinforced cement concrete work (form work and reinforcement will be measured and paid separately) (I) Using Mixer Machine. (A) In substructure up to plinth level. N) Without using admixture, plasticiser. b) M20 grade concrete or Prop. 1:1.5:3	19.82	cum		
5	Supplying, fitting and fixing in position reinforcement bars conforming to relevant I.S. Code for R.C.C. work/ R.B. walling including straightening, cleaning, cutting and bending to proper shapes and length as per details, supplying and binding with 20G annealed black wire and placing in position with proper blocks, supports, chairs, spacers etc. complete (upto 1st floor level). (b)Other ISI approved TMT reinforcement bar upto first floor	18.10	Qtl		
6	Providing form work of ordinary timber planking so as to give a rough finish including centering, shuttering, strutting and propping etc., height of propping and centering below supporting floor to ceiling not exceeding 4.0M and removal of the same for in-situ reinforced concrete and plain concrete work in: Sides of tie beams, grade beams etc. at or below ground level. (b) Using 25mm thick plank	132.13	sqm		
7	Brick work in cement mortar of proportion (1:5) with 1st class brick including racking out joints and curing complete as directed. In sub-structure upto plinth level including dewatering if necessary	10.8	cum		
8	15 mm thick Cement plaster in single coat on single or half brick wall for interior plastering up to 1st floor level including arises, internal rounded angles, not exceeding 80mm girth and finished even and smooth including curing complete as directed. A) On rough side . b) In cement mortar 1:4	225	sqm		

9	Stone masonry work in retaining wall, wing wall, abutment, foundation, steps, plinth etc. in cement mortar in prop 1:6 with levelling course of 1:6:12 with both faces hammer dressed including bonding, providing face stone, through stone and centering including racking of joints, curing and supplying and all carriage of stone as directed including payment of forest royalty and sales tax and carriage. (a) Random Rubble Masonry	50	cum		
10	Providing steel tube stakes of MS circular hollow section conforming to relevant I.S. code, as per approved design and drawings including providing M.S. cleats, base plates, bolts and nuts and one coat of red oxide Zinc Chromate primer and two coats of approved enamel paints complete including all splicing plates and MS steel shoes etc as per drawing and direction by the deptt. b) Using other ISI marked approved circular hollow section	105.62	qtl		
11	Structural steel work In M.S. angles, channels, Tees etc. single sections including cutting, hoisting, fixing in position and applying a priming coat of red lead paint (up to 4.6m height) from plinth level including drilling holes, supplying, fitting and fixing with bolts and nuts or welding, if necessary as directed.	218.22	qtl		
12	Providing dressed sal wood work in driving head cushions including supplying and fixing with spikes, nails, bolt and nuts of 12mm dia(M.S) and required length etc. complete with kiricide oiling two coats to faces in contact with C.C or masonry (M.S flats, angle cleats and bolt and nuts required for flats, angle cleats wherever use shall be measured and paid separately)	0.03	cum		
13	Supplying and dibbling of selected lawn grass [Doob grass (Cynodon dactylon), cushion grass (Axonopus affinis)] after preparing the land by ploughing / working to a depth of 40 -45 cm, removing of all unwanted debris (rubbles, pebbles, plant roots etc.), mixing of organic manure(10kg - 15kg/sq.m), levelling the surface and initial maintenance by proper and periodic rolling, mowing and irrigation etc.(as specified) for a period of six months from the date of dibbling including the application of recommended dose of fertilizers(N:P:K) mixture as specified and directed by the department. (a) By Doob grass (Cynodon dactylon)	700	sqm		

14	Painting two coats (excluding priming coat) on new steel and other metal surface with enamel paint of approved brand and manufacture(Asian paint/ Berger paint/ ICI paint/ J & N paint/ Nerolac) to give an even shade including cleaning the surface of all dirt, dust and other foreign matter. (ii).Surfaces up to 100mm in width or girth. a). General purpose (Asian paint/ Berger paint/ ICI paint/J & N paint/ Nerolac)	2025.3	Rm		
15 (Pro rata)	Labours for grading, construction of fench, preparation & carriage of gunny bags and other miscellaneous works	115	Each		
16 (Pro rata)	Driving of steel stakes into the soil upto 2m or refusal (considering that a gang of five labours will accomplish driving three steel stakes into the ground per day.)	159	Each		
17 (Pro rata)	8m high Steel tripod,manual winch of 200 kg capacity without gear,steel wire each of 7m length , driving head assembly,monkey of 100kg each, pulley, and guiding base frame. (driving head assembly and guiding base frame should be fabricated as per drawings provided by the department)	3	Each		
18 (Pro rata)	Plain sheet rounded for casting of pedestals around each steel stake	22.50	sqm		
19 (Pro rata)	Bamboo of 125mm dia (approx) and 5m height(approx) for the purpose of construction of fench by tying them horizontally against the first row of steel stakes to act as a screen in order to arrest soil particles. Vertical spacing between the bamboos should be 5cm.	215	Each		
Grand Total					

N.B: The driving equipments under Sl no 17 of the BOQ shall be taken away by the contractor after completion of the work and hence rate against the same shall be quoted considering their salvage value.

CHAPTER-VIII

Drawings:

SPlicing OF VERTICAL TUBE POSTS

DETAIL OF DRIVING HEAD

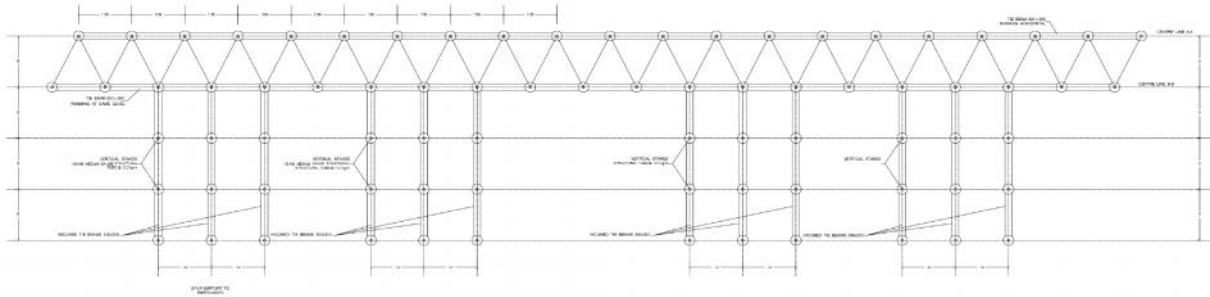
GUIDING BRACKET FOR DRIVING
SECTIONAL ELEVATION

PLAN OF GUIDING BRACKET

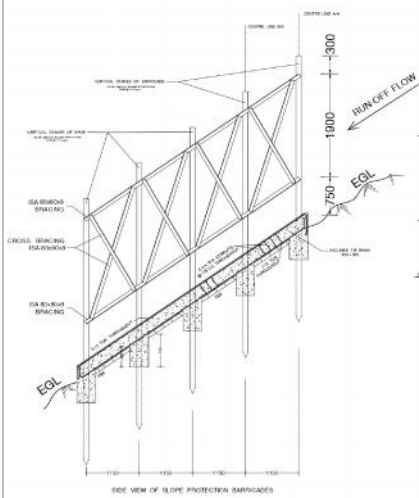
DETAIL OF SHOE FOR VERTICAL STAKE
SECTIONAL ELEVATION

ASSAM POWER GENERATION CORPORATION LTD.
OFFICE OF THE CHIEF GENERAL MANAGER
(HYDRO & CIVIL), PALTANBAZAR, GHY-01
SLOPE PROTECTION WORK, LEFT BANK NEAR
HATIDUBI DAM AT KLHEP
DETAIL OF DRIVING HEAD, GUIDE MECHANISM AND
VERTICAL STAKE SHOE
DRAWN BY: R. BISWANATH, CGM APPROVED BY: R. BISWANATH, CGM
DRG. NO. CGM(H&C)/KLHEP/2019/01
DATE: NOVEMBER, 2019

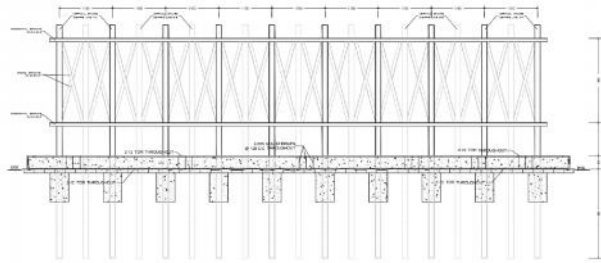
ALL DIMENSIONS ARE IN mm AND ONLY WRITTEN DIMENSIONS SHOULD BE FOLLOWED



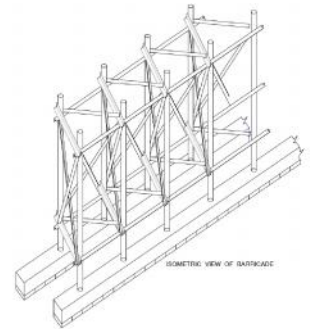
PLAN OF SLOPE PROTECTION BARRICADES



SIDE VIEW OF SLOPE PROTECTION BARRICADES



ELEVATION OF SLOPE PROTECTION BARRICADES FROM UP HILL SIDE

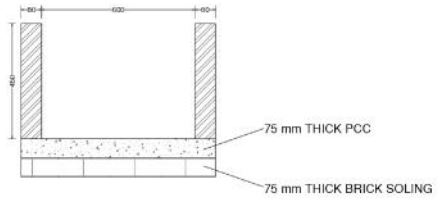
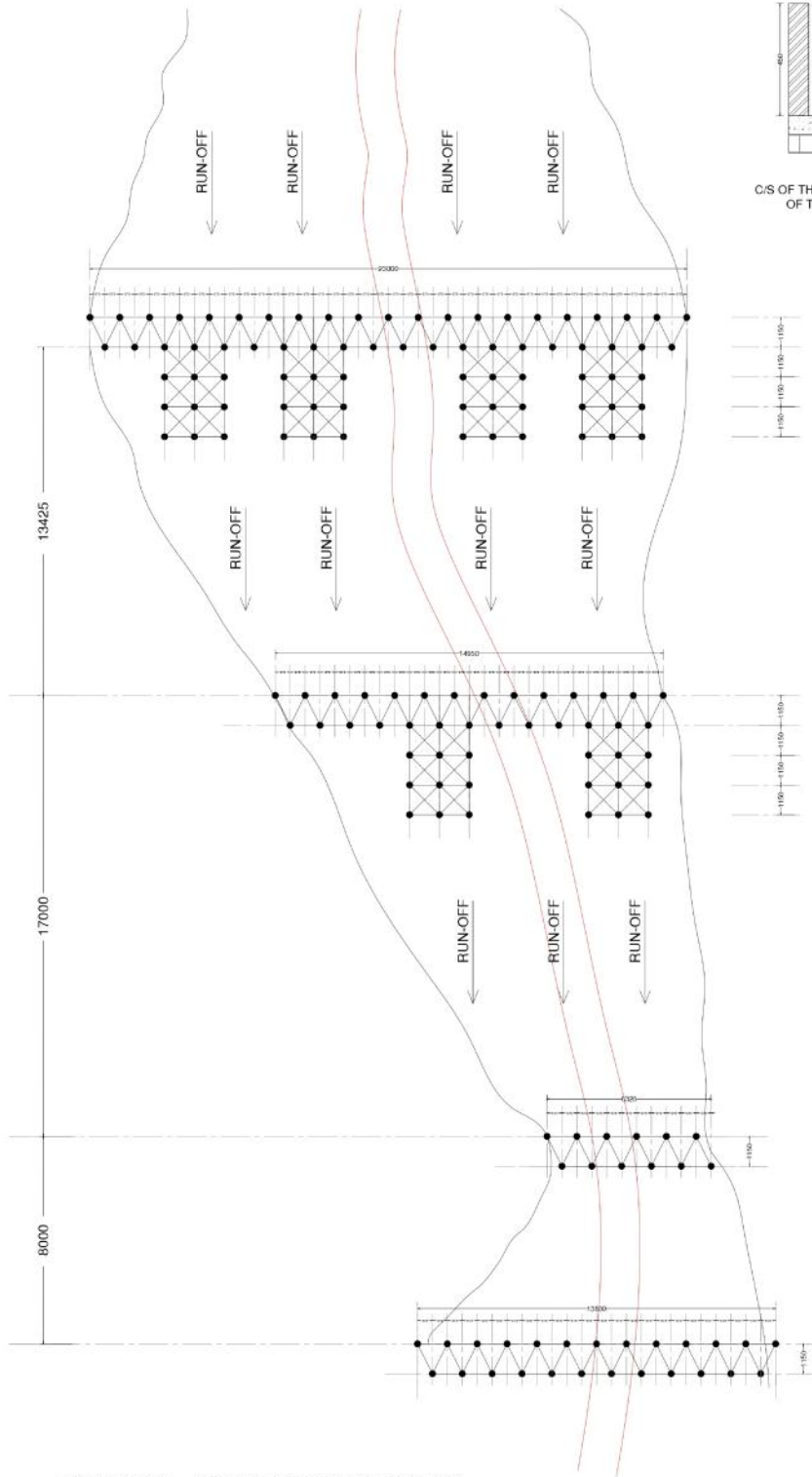


ISOMETRIC VIEW OF BARRICADE

ALL DIMENSIONS ARE IN MM AND ONLY WRITTEN DIMENSIONS SHOULD BE FOLLOWED.

FOR TENDER PURPOSE ONLY.

ASSAM POWER GENERATION CORPORATION LTD	
OFFICE OF THE CHIEF GENERAL MANAGER	
(HYDRO & CIVIL), PALTANBAZAR, GHY-01	
SLOPE PROTECTION WORK, LEFT BANK NEAR	
HARIDUR DAM AT GHY	
LAY-OUT PLAN, ELEVATION AND ISOMETRIC VIEW	
OF SLOPE PROTECTION BARRICADES	
DRAWN BY:	APPROVED BY:
II BIRMANATHI ICOM	II DEBAMATHI ICOM
DRG. NO. CGM/18/C/RI/HP/2019/02	
DATE	NOVEMBER, 2019



C/S OF THE BRICK DRAIN ON UPPER REACHES OF THE ERODED SLOPE 150m LONG

ALL DIMENSIONS ARE IN mm AND ONLY WRITTEN DIMENSIONS SHOULD BE FOLLOWED

PLAN OF EROSION SITE ALIGNMENT OF SLOPE PROTECTION BARRICADES

FOR TENDER PURPOSE ONLY.

ASSAM POWER GENERATION CORPORATION LTD.	
OFFICE OF THE CHIEF GENERAL MANAGER (HYDRO & CIVIL), PALTANBAZAR, GHY-01	
SLOPE PROTECTION WORK LEFT BANK NEAR HATIDUBI DAM AT KLHEP	
LAY-OUT PLAN OF SLOPE PROTECTION AND C/S OF BRICK DRAIN	
DRAWN BY R. BISWANATHI.CGM	APPROVED BY R. BISWANATHI.CGM
DRG. NO. CGM(H&C)KLHEP/2019/03	
DATE	NOVEMBER, 2019

Conditions for refusal of the penetration test

The boring log shows refusal and the test is halted if

- 1) 50 blows are required for any 50 mm penetration.
- 2) 100 blows are required for any 300 mm penetration.
- 3) 10 successive blows produce no advance.