

M/s Megha Food Cooperative Society  
**(M/s Mendipathar Multipurpose Cooperative Society – Implementing Agency)**  
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## TENDER DOCUMENT

TENDER REF.NO.: **SFURTI-I/MGH-MMCS/CIVIL-001/2021-22**

# TENDER FOR CONSTRUCTION OF INDUSTRIAL SHED BUILDING & AMENITIES FOR THE COMMON FACILITY CENTRE OF OYSTER MUSHROOM CLUSTER

<b>Bid Particulars</b>	<b>Details</b>
Tender Reference no	SFURTI-I/MGH-MMCS/CIVIL-001/2021-22
Date and Time of release of Tender	26-05-2021 By 10:00 AM
Date and Time of Pre-Bid Meeting	01-06-2021 By 11:00 AM
Last date and Time of Submission of Bid	15-06-2021 By 2:00 PM
Date and Time for Opening of Technical Bid	16-06-2021 By 11:00 AM
Place of Tender submission	Mendipathar Multipurpose Cooperative Society (MMCS), P.O. Mendipathar, Mendipathar, North Garo Hills, Meghalaya  OR  Indian Institute of Entrepreneurship, Near Games Village, Lalmati, Guwahati – 781029, Assam

## TECHNICAL AGENCY

MADHUKAR LIVELIHOOD FOUNDATION

Email: [shweta@madhukar.com](mailto:shweta@madhukar.com), website: [www.madhukarfoundation.com](http://www.madhukarfoundation.com)

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**TENDER FOR THE CONSTRUCTION OF INDUSTRIAL WORK SHED BUILDINGS AND AMENITIES FOR  
OYSTER MUSHROOM CLUSTER**

**1. PREAMBLE**

Ministry of MSME, Government of India has formulated “Scheme of Fund for Regeneration of Traditional Industries (SFURTI)”, for the development of traditional and village industries in order to organize the traditional industries and artisans for their growth and long term sustainability, Indian Institute of Entrepreneurship (IIE), Guwahati is one of the Nodal Agencies for the development of clusters under the scheme, undertaking the role of programme fund management, in addition to monitoring and evaluation of project implementation as per the SFURTI guideline of Ministry of MSME, Government of India.

The scheme specifies the following institutional arrangement at the operational level:

- a Special Purpose Vehicle (SPV) be formed to develop and manage the cluster
- an Implementing Agency (IA) is appointed to undertake scheme implementation
- a Technical Agency (TA) is designated to assist and guide the scheme implementation

“Oyster Mushroom Cluster, North Garo Hills, Meghalaya” is one of the approved clusters under the SFURTI scheme of MSME.

M/s. Megha Food Cooperative Society, having registered office at the office of MMCS, P.O. Mendipathar, Mendipathar, North Garo Hills, Meghalaya – 794110, is the Special Purpose Vehicle (SPV) of the Cluster. M/s. Mendipathar Multipurpose Cooperative Society is the Implementing agency of the cluster and M/s. Madhukar Livelihood Foundation is the designated Technical agency for the cluster.

The scheme envisages establishment of upgraded production infrastructure, as the Common Facility Center (CFC), for the production, processing & value addition, packaging and marketing of Oyster Mushroom products and stipulates the building construction and machinery procurement for the establishment of CFC should adhere the General Financial Rules (GFR) of Government of India. Accordingly, the tender procedures are being undertaken for the construction of CFC building works and procurement of machineries.

M/s. Megha Food Cooperative Society, the Special Purpose Vehicle (SPV) of Oyster Mushroom Cluster proposes to establish a Common Facility Centre (CFC) at land patta no. 228 measuring 2 acres (as per Book No. 86341), situated in Jampara, Mendipathar, North Garo Hills, Meghalaya with

the financial assistance from Government of India under SFURTI. The estimated cost of the project is INR 137.00 lakh.

In this context, M/s. Mendipathar Multipurpose Cooperative Society, the Implementing Agency (IA) of “Oyster Mushroom Cluster, North Garo Hills, Meghalaya” having its administrative office at the office of MMCS, Mendipathar, North Garo Hills, Meghalaya – 794110, invites sealed tenders from Civil contractors in “Two Cover System” for the **“Construction of Industrial Work Shed buildings and amenities for the Common Facility Center for Oyster Mushroom Cluster”** through transparent bidding process. The Tender notification has been published fixing the date of opening of tender as 16.06.2021 at 11:00 AM.

## 2. SCOPE OF WORK

- a) The successful tenderer should undertake construction of industrial work shed buildings including Spawn Lab and amenities at land patta no. 228 measuring 2 acres (as per Book No. 86341), situated in Jampara, Mendipathar, North Garo Hills, Meghalaya as per the drawings and Estimate/Bill of Quantity (BoQ) given in Annexure-I.
- b) Tender documents may be purchased on payment of non-refundable fee of INR 1500.00 per set in the form of account payee demand draft/ cashier’s cheque, drawn on a scheduled commercial bank in India, in favour of Mendipathar Multipurpose Cooperative Society, payable at Mendipathar. The same fee can also be paid along with the EMD with the tender document, if using downloaded tender documents from the web site mentioned.
- c) The successful tenderer must complete the construction of industrial work shed buildings and amenities within 90 days from the date of receipt of Work Order. The timeline for the cumulative percentage of work to be completed based on the value of work shall be as given below:

Days	Percentage of work to be completed
1 <sup>st</sup> 30 days	Min. 20% of total contract value
2 <sup>nd</sup> 30 days	Min. 50% of total contract value
3 <sup>rd</sup> 30 days	100% of total contract value

**3. QUALIFICATION CRITERIA**

S. No.	Clause	Qualification Criteria	Supporting Documents
1	3 (a)	The tenderer should be a registered legal entity	In case of Private / Public Limited Companies, <ul style="list-style-type: none"> <li>• Copy of Incorporation Certificate issued by the Registrar of Companies</li> <li>• Copy of Memorandum and Articles of Association</li> </ul> In case of Partnership Firm, <ul style="list-style-type: none"> <li>• Registered Partnership deed</li> </ul> In case of Proprietorship Concern, <ul style="list-style-type: none"> <li>• Copy of Udyog Aadhaar/ GST Registration Certificate / PAN Card.</li> </ul>
2	3 (b)	The tenderer should be a Civil contractor	i) Valid registration of GST is required
3	3 (c)	The tenderer should have at least 5 years of experience (as on 31st March 2021) as Civil contractor	i) Work orders issued by clients ii) Performance / Completion certificate issued by clients iii) List of construction works executed in last 5 years as per Annexure-V
4	3 (d)	The tenderer should have been awarded and successfully completed at least three works of similar nature in the last 5 years (as on 31 <sup>st</sup> March 2021)	i) Work orders issued by clients ii) Performance/ Completion certificate issued by clients  Similar experience of the Bidder related to this assignment.  Experience in designing, building and construction of an housing project, Industrial Parks/Zones, industrial unit, processing unit, Integrated Area Development, township, multistorey buildings, community housing including Roads & Drainage, Water Supply, Sewerage and electrical works,
5	3 (e)	The tenderer should have reported an Average Annual Turnover of Rs.3.00 Crores in the last five consecutive financial years i.e. 2016-17, 2017-18, 2018-19, 2019-20 and 2020-21	i) The average annual turnover statement duly certified by Chartered Accountant as per Annexure IV ii) The Annual Report/ certified copies of Balance Sheet, Profit & Loss statement along with schedules for the last 5 consecutive financial years
6	3 (f)	The tenderer should not have	The declaration form as per

		been blacklisted for supply of any items or services by any Government department/ agency	Annexure VI should be enclosed
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#### 4. LANGUAGE OF THE TENDER

The Tender prepared by the tenderer as well as all correspondences and documents relating to the Tender shall be in English language only. If the supporting documents are in a language other than English/Assamese/ Garo/ Khasi, the notarized translated English version of the documents should also be enclosed.

#### 5. PURCHASE OF THE TENDER DOCUMENT

- a) Tender documents may be purchased on payment of non-refundable fee of INR 1500/- per set in the form of account payee demand draft/ cashiers cheque, drawn on a scheduled commercial bank in India, in favour of Mendipathar Multipurpose Cooperative Society, payable at Mendipathar. The same fee can also be paid along with the EMD with the tender document, if using downloaded tender documents from the web sites mentioned.
- b) Tenderer may also download the tender documents from the web site [www.mbda.gov.in](http://www.mbda.gov.in) or northgarohill.gov.in or www.iie.gov.in and submit its tender by utilizing the downloaded document, along with the required non-refundable fee as mentioned above. The tenderer should give a declaration for not having tampered the Tender document downloaded from Internet (as per Annexure VII).
- c) The tender document can be downloaded from 26.05.2021 to 15.06.2021.
- d) Tenderers shall ensure that their tenders, duly sealed and signed, complete in all respects as per instructions contained in the Tender Documents, are dropped in the tender box located at "Mendipathar Multipurpose Cooperative Society, Mendipathar, North Garo Hills, Meghalaya-794110" or at "Indian Institute of Entrepreneurship, Near Games Village, Lalmati, Guwahati – 781029" on or before the closing date and time, failing which the tenders will be treated as late and rejected.
- e) TENDER BY POST/ HAND/ COURIER RECEIVED ON OR BEFORE THE DUE DATE AND TIME SHALL BE ACCEPTED. POSTAL DELAY/ DELAY BY COURIER SERVICE ETC. SHALL NOT BE CONDONED AFTER THE DUE DATE AND TIME.

- f) The tender documents are not transferable.

## 6. PREBID MEETING

A pre-bid meeting for providing clarifications to the bidder will be held ON-LINE unless specified otherwise, on 01.06.2021 at 11.00 am in the office of M/s. Mendipathar Multipurpose Cooperative Society, P.O. Mendipathar, North Garo Hills, Meghalaya during which the prospective tenderers can get clarifications about the tender. The link for the meeting will be sent one day in advance to the prospective bidders. The tenderers shall send their queries – both technical and commercial in writing over email ([mmcsmushroom@gmail.com](mailto:mmcsmushroom@gmail.com)) at least two days prior to the pre-bid meeting date. The tenderers are advised to check [www.mbda.gov.in](http://www.mbda.gov.in) or [northgarohills.gov.in](http://northgarohills.gov.in) or [www.iie.gov.in](http://www.iie.gov.in) for up-to-date information like change in date / venue etc., of pre-bid meeting as IA may not be able to identify and communicate with the prospective bidders at this stage.

In addition to pre-bid conversation history any offline queries / clarifications / information will be uploaded on [mmcs.org.in](http://mmcs.org.in) against the Tender ID under tab 'Pre-Bid'. Any modification to the Tender, which may become necessary as a result of the pre-bid meeting, will be uploaded on the website against the Tender ID. Bidders are requested to update themselves by visiting [www.mbda.gov.in](http://www.mbda.gov.in) or [northgarohills.gov.in](http://northgarohills.gov.in) or [www.iie.gov.in](http://www.iie.gov.in) frequently. It may be noted that no queries will be entertained after the expiry of pre-bid meeting. Accordingly, it is requested that bidder along with their associates shall take part in the pre-bid meeting to ensure that tender requirements are clearly understood by all the stakeholders. Non attending of pre-bid meeting is not a disqualification.

## 7. CLARIFICATION ON THE TENDER DOCUMENT

The tenderers may ask for queries in any of the clauses in the tender document before 48 hours of the pre-bid meeting. Such queries may be sent in writing to "M/s. Mendipathar Multipurpose Cooperative Society, Mendipathar, North Garo Hills, Meghalaya- 794110" or by e-mail to [mmcsmushroom@gmail.com](mailto:mmcsmushroom@gmail.com). IA will upload the clarification on [www.mbda.gov.in](http://www.mbda.gov.in) and [northgarohills.gov.in](http://northgarohills.gov.in). It is binding on the part of tenderers to check the above said websites for any amendments or clarifications posted during the entire tender process. It may be noted that no queries will be entertained after the expiry of pre-bid meeting.



**8. AMENDMENT OF TENDER DOCUMENT**

IA whether on its own initiative or as a result of a query, suggestion or comment of an Applicant or a Respondent, may modify the tender document by issuing an addendum or a corrigendum at any time before the opening of the tender, with the concurrence of the tender committee. Any such addendum or corrigendum will be uploaded on [www.mbda.gov.in](http://www.mbda.gov.in) or [northgarohills.gov.in](http://northgarohills.gov.in) or [www.iie.gov.in](http://www.iie.gov.in) and the same will be binding on all Applicants or Respondents or Tenderers, as the case may be.

**9. AUTHORISATION OF THE TENDERER**

The Tender should be signed on each page by the tenderer or by the person who is duly authorized for the same by the tenderer.

**10.SITE VISIT**

The tenderer, on his/her own responsibility, risk and cost, is advised to visit and examine the site of works (land patta no. 228 measuring 2 acres (as per Book No. 86341), situated in Jampara, Mendipathar, North Garo Hills, Meghalaya) and its surroundings and obtain all information that may be necessary for preparing the bid and entering into a contract for the work(s) as mentioned in the Annexure (I).

**11.SPECIFIC INSTRUCTIONS TO BIDDERS / CONTRACTORS FOR QUOTING OF RATES**

- a) The contractors are requested to read the detailed specification and quote the rates clearly in the Price bid. Quoting the rates in the Price bid will only be taken up for comparison and shall be final.
- b) The tenders invited are based on item wise rates mentioned in the estimate of works/BoQ. Any lumpsum deductions or increase or rebate offered either in the tender or in the covering letter or at any portion of the tender will be ignored and only the rates offered in the Price bid alone will be taken as valid rates and taken up for tender comparison. Rates or Lumpsum amounts for items not called for shall not be included in the tender. Any alteration made by tenderer in the contract form, the conditions to Contract, the drawings, specification, or quantities accompanying the same will not be recognized and if any such alterations are made the tender will be void.

- c) The Tenderer/ contractor shall employ an independent Architect and Structural Engineer to provide detail architectural, design, documentation & engineering services. Such services will include but not limited to civil engineering drawings, structural drawings, MEP engineering drawings, interior design drawings, 3D design etc. The civil contractor will engage the structural engineer who will prepare the structural drawings for columns beams and trusses and take into account the soil conditions requirements for the earthquake zone and wind velocity. The drawings shall be certified for compliance of all applicable standard and las for the area. Roofing will be waterproof and to sustain the load of 20 mm hailstorm or higher as maybe required and applicable for the area. The outline drawings of the building shall be provided to the Tenderer.
- d) The tenderer / contractor will make his/her/their own arrangements to procure and use ISI Brand Cement and ISI Brand steel and other materials as required for the work.
- e) It should be clearly understood that the rate quoted by the tenderer / contractor is inclusive of incidental charges such as conveyance, loading, unloading, stacking at site and testing charges etc., complete.
- f) The tenderer/ Contractor shall employ independent chartered engineer/ architect for issuance of phase wise completion certificate, final completion certificate and defects rectification certificate.
- g) The tendered/ contractor shall employ technical expert for detail design, planning and documentation of process flow of each section planned in the oyster mushroom CFC.
- h) The tenderer / Contractor should strictly follow above instructions without fail.

## **12.SUBMISSION OF TENDER IN TWO COVER SYSTEM**

- a) Every page of the terms and conditions of the tender document should be signed and enclosed with the tender, in token of having accepted the tender conditions. Failing which the tender will be rejected summarily.
- b) Tenders should be submitted in two parts:
  - i. Part I will cover technical bid and
  - ii. Part II will cover price bid

- c) Tenderers should ensure submission of all documents pertaining to Part-I and Part II proposals separately as per the Check list given in Annexure -XI.
- d) Tenderers are requested to place Part I and Part II documents in separate sealed covers. Part I cover to be superscripted as **“Part I – Technical bid”** and Part II cover to be superscripted as **“Part II – Price bid”** respectively, mentioning the name and address of the Tenderer in each of the both covers. These two sealed covers (Part I and Part II) must be placed in a single outer cover superscripted as **“Tender for the construction of work shed buildings and amenities for Oyster Mushroom Cluster”** and addressed to **“M/s. Mendipathar Multipurpose Cooperative Society, Mendipathar, North Garo Hills, Meghalaya- 794110”** or **“Indian Institute of Entrepreneurship, Near Games Village, Lalmati, Guwahati – 781029”** mentioning the name and address of the Tenderer in the outer cover. Tenders shall be submitted in sealed cover and unsealed tenders would summarily be rejected.
- e) Tenders should be dropped only in the tender box kept at the office of **“Mendipathar Multipurpose Cooperative Society, Mendipathar, North Garo Hills, Meghalaya- 794110”** or **“Indian Institute of Entrepreneurship, Near Games Village, Lalmati, Guwahati – 781029”** on or before 02.00 PM on 15.06.2021. Tenders will not be received by hand.
- f) Alternatively, the tenders can be submitted through registered post so as to reach the above address on or before 02.00 PM on 15.06.2021. Tenders received after the specified time will not be considered and IA will not be liable or responsible for any postal delays.
- g) A tender once submitted shall not be permitted to be altered or amended.

### 13.FORMAT AND SIGNING OF BIDS

- a) The bidder shall prepare three copies of the bid (one original and two duplicate), clearly making them **“Original Bid”** and **“Duplicate copy of Bid”** respectively. In the event of any discrepancy between them, the original shall govern.
- b) The original and the copy of the bid shall be typed or written in indelible ink and shall be signed by the bidder or a person or persons duly authorized to bind the bidder to the contract. **All pages of the bid, except for un-amended printed literature, shall be initialed by the person or persons signing the bid.**
- c) Any interlineations, erasures or overwriting in the bid shall be valid only if they are initialed by the person or persons signing the bid.

- d) The front page of the bidding documents, containing the signature and date of the officials dispatching the documents and the seal of that office must be written in original by the bidder along with the original copy of the bid, failing which the bid is liable to be rejected.
- e) **PRICE BID TO BE SUBMITTED IN ORIGINAL ONLY.**

#### **14. SEALING AND MARKING OF THE BIDS**

- a) The bidder shall seal the original and the duplicate copy of the bid in separate envelopes, duly marking the envelopes as "Original" and Duplicate" respectively. These envelopes shall then be sealed in an outer envelope. (In case more than two copies are required as per specific stipulation in the Schedule of Requirements, the copies of the bids shall be marked accordingly, like "Original", "Duplicate", "Triplicate" and so on. Each copy of the bid shall be sealed in a separate envelope and these envelopes shall then be sealed in an outer envelope).
- b) The inner and outer envelopes shall be:
- i. addressed to the Mendipathar Multipurpose Cooperative Society at the address given in the Clause 12(e).
  - ii. bear the TENDER NUMBER and the words "DO NOT OPEN BEFORE ....." (The time and date of bid opening, as specified in the Clause 12(e) shall be indicated here).
  - iii. Each inner envelope shall indicate the name and address of the bidder to enable the bid to be returned unopened in case it is declared "Late" or if the tender is cancelled.
  - iv. If the outer envelope is not sealed and marked as required by Clause 13 (b), MMCS will not assume any responsibility for the bid's misplacement or premature opening.
  - v. Bids sent by Telegram, Telex, cable or facsimile are not acceptable and will be rejected.

#### **15. EARNEST MONEY DEPOSIT**

- a) EMD of Rs. 2,74,000/- (Rs Two Lakh Seventy Four Thousand only) equivalent to 2% of the estimated project cost for General category and in case of SC/ST will be 1,37,000/- (Rs One

Lakh thirty-Seven Thousand only) equivalent to 1% of the estimated project cost to be paid in the form of Demand Draft of a scheduled bank in the name of secretary, Mendipathar Multipurpose Cooperative Society, valid for 60 days from the date of opening of the tender. EMD of the unsuccessful bidders shall be refunded without any interest at the earliest after finalization of the purchase of concerned item.

- i. The EMD will be returned to the BIDDER(s) whose offer is not accepted by Mendipathar Multipurpose Cooperative Society within one month from the date of the placing of the final order(s) on the selected BIDDER(s). In case of the BIDDER(s) offer is accepted the EMD will be returned on submission of Bank Guarantee as Security Deposit (SD). However, if the return of EMD is delayed for any reason, no interest / penalty shall be payable to the BIDDERS.
  - ii. The successful BIDDER, on award of contract/ order, must send the contract/ order acceptance in writing, within 15 days of award of contract / order failing which the EMD will be forfeited.
  - iii. The EMD shall be forfeited: In case a successful BIDDER fails to furnish the Security Deposit.
- b) The tenderer should submit **“BID SECURITY DECLARATION”** as per the format given in Annexure VIII, failing which the bid is liable for rejection.
- c) If the tenderer emerges as the successful bidder and after subsequent issuance of letter of acceptance by the IA, failure to sign the agreement, to remit the Security Deposit or to execute the contract as per tender conditions, will result in blacklist of the firm upto a maximum period of 3 years and the EMD/ Bid Security shall be forfeited.

## 16.VALIDITY

- a) The rate quoted in the Tender should be valid for the acceptance by the IA for a minimum period of 90 days from the date of opening of the Tender.
- b) The accepted rate of the successful tenderer is valid till the entire contract is fully completed. Escalation in the rates will not be entertained under any circumstances.

## 17.OPENING AND EVALUATION OF THE TENDER

- a) The tender box will be closed at 2.00 PM as per the office clock on 15.06.2021 and the received tenders in the tender box will only be opened. Tenders received after specified date and time will not be accepted. The Tender will be opened by the Tender committee on 16.06.2021 at 11.00 AM in the presence of the available Tenderers/ representatives of the Tenderers who choose to be present. The Tenderers or their authorized agents are allowed to be present at the time of opening of the tenders.
- b) Tender Committee will inform the attested and unattested corrections, before the Tenderers and sign all such corrections in the presence of the Tenderers. If any of the Tenderers or agents not present then, in such cases the Committee will open the tender of the absentee Tenderer and take out the unattested corrections and communicate it to them. The absentee Tenderer should accept the corrections without any question whatsoever.
- c) If the date fixed for opening of the tender happens to be a Government holiday, the sealed tenders will be received up to 02.00 PM on the next working day and opened at 11.00 AM on 16.06.2021.
- d) The Technical bid will be evaluated by the tender committee in terms of the qualification Criteria. The committee reserves the right to disqualify any of the tender in case the Committee is not satisfied with the documents furnished.
- e) After the completion of evaluation of technical bids, the tenderers declared as qualified by the Committee, will be informed the date of opening of Price bid (Part II).

#### **18.PRICE OFFER**

- a) The Price bid should be kept only in the Part II cover.
- b) The price bid should be prepared as per Annexure-X.
- c) The price should be neatly and legibly written both in figures and words.
- d) In case of discrepancy between the prices quoted in words and figures lower of the two shall be considered.
- e) If a bidder quotes NIL charges/consideration, the bid shall be treated as unresponsive and will not be considered.
- f) Incomplete bid shall be summarily rejected.

- g) Part-II bid should not contain any commercial conditions. Variation in the commercial terms and conditions of the tender will not be accepted.
- h) The price bid shall be inclusive of all seen and unseen cost considering the timeline of work to be completed mentioned in clause 2 (c) above including off season prices of materials etc.

#### **19.EVALUATION OF THE PRICE**

- a) The Tender committee will examine for complete, properly signed and error-free nature of the Price bid (Part II)
- b) The comparison of the rates offered shall be based on the total all inclusive rates offered (i.e. sum of all inclusive rate offered for all the tendered items).

#### **20.AWARD OF CONTRACT**

- a) The Tenderer who has quoted lowest price (L1) will be issued the 'Letter of Acceptance' by the Implementing Agency.
- b) In unavoidable circumstances, the committee may decide upon resorting to Negotiation with the lowest evaluated responsive bidder. In such cases, the Tenderer who has quoted lowest price (L1) will be invited for negotiations and after finalizing the negotiated rate, Letter of Acceptance will be issued.

#### **21.SECURITY DEPOSIT**

- a) On receipt of the Letter of Acceptance from IA, the successful tenderer should remit a Security Deposit (SD) of 110% of the advance amount in the form of Account payee Demand Draft from any Indian Nationalized/Scheduled Commercial Bank or irrevocable Bank Guarantee with a validity period of one year in favour of "Mendipathar Multipurpose Cooperative Society", payable at Mendipathar, within 10 (Ten) working days from the date of receipt of letter of acceptance.
- b) Any other amount pending with IA will not be adjusted under any circumstances, against the Security Deposit if so requested.
- c) Security Deposit amount remitted will not earn any interest.

**22. AGREEMENT**

The successful tenderer should execute an agreement as may be drawn up to suit the conditions on a non-judicial stamp paper of value, as prescribed in law on the date of remittance of Security Deposit and shall pay for all stamps and legal expenses incidental thereto. In the event of failure to execute the agreement, within the time prescribed, the SD amount remitted by the tenderer will be forfeited besides cancelling the Tender.

**23. ISSUE OF WORK ORDER**

After payment of Security Deposit and successful execution of the agreement, Work Order will be released within 10 days by the IA. The successful tenderer should complete the construction of industrial work shed buildings and amenities within 90 days from the date of receipt of Work Order.

**24. DEFECT IDENTIFICATION AND IT'S RECTIFICATIONS**

- a) Defect Liability period shall be 12 months from the date of the completion of work. Any defect arising in the work in guarantee period due to faulty workmanship and faulty materials should be rectified by contractor at his own cost.
- b) Any deficiency in concreting such as cracking, excessive honeycombing, exposure of reinforcement or other fault which entail replacement of the defective part by fresh concrete and whatsoever remedy reasonable required without hampering the structural safety and architectural concept, all at the cost of contractor.
- c) The successful tenderer should submit bank guarantee equivalent to 110% of the advance amount valid for 12 months towards Defect Liability.

**25. EMPLOYMENT OF TECHNICAL ASSISTANTS**

- a) The tenderer shall employ qualified technical persons at his cost to supervise the work and the tenderer should ensure the presence of the technical persons at the site of work during working hours, monitoring all items of works and paying extra attention to such works as may demand special attention.
- b) A movement register should be opened and maintained for Technical persons employed by the Contractor. The Technical persons should note the arrival and the departure timings every



day along with their initials in a register. Such Register should be produced during inspection of the Inspecting Officers (Tender committee members).

## **26.PAYMENT TERMS**

- a) 10% of contract value will be paid, as advance against bank guarantee on execution of agreement. The Tenderer should produce Bank guarantee for the amount equal to 110% of the advance amount, which should be valid for a minimum period of 12 months. If necessary, the bank guarantee should be extended for the required period as requested by the IA.
- b) 30% of the contract value will be paid on completion of Foundation level works and submission of Stage level completion certificate by a Chartered Engineer, based on the inspection report by Tender Committee.  
  
(OR) Alternatively, the bidder may opt for 40% of Contract value on completion of Foundation level works and submission of Stage level completion certificate by a Chartered Engineer, based on the inspection report by Tender Committee, instead of claiming first installment of 10% as advance payment against bank guarantee.
- c) 20% of the contract value will be paid on completion of lintel level works and submission of Stage level completion certificate by a Chartered Engineer, based on the inspection report by Tender Committee.
- d) 20% of the contract value will be paid on completion of roof level works including truss and sheet laying works and submission of Stage level completion certificate by a Chartered Engineer, based on the inspection report by Tender Committee.
- e) The balance 20% and SD will be released only after satisfactory completion of the entire contract based on the inspection report by Tender Committee and submission of Chartered Engineer's work completion & valuation certificate and bank guarantee equivalent to 110% of the advance amount valid for 12 months towards Defect Liability.
- f) IA also reserves the right to recover any dues from the tenderer, which is found on later date, during audit/excess payment, after final settlement is made to them. The successful tenderer is liable to pay such dues to the IA immediately on demand, without raising any dispute/protest.

**27.PENALTY**

- a) Failure to execute the entire contract within the stipulated time as mentioned in Clause 23, due to delay on the part of the Contractor from the date of issue of work order/ advance payment, as the case may be, will attract a penalty of 1% per week, on the full value of the contract upto a maximum of 5%. Delays, on the part of Contractor, beyond that period will result in cancellation of the Contract.
- b) Implementing agency reserves the right to inspect the site at any point of time during the contract period to ensure the progress and quality of work carried out. During the inspection, if any discrepancies found in the quality of work / material used, the IA, with the approval of the tender committee, reserves the right to order for any rework(s) / replace any item(s) of material, as the case may be, in order to ensure the quality of work / progress as per the contract terms.
- c) All the materials used for construction shall be first use, new, high quality material. Old or Used materials will not be accepted and if found, the decision of Committee, either for rework / replace / deduction in payment shall be binding on the contractor.
- d) Any delay on the part of IA should be intimated to the IA in writing and sorted out immediately without affecting the progress of works.
- e) The bidder must mention its **official email ID, detailed courier/ postal address and contact number** in the bid document. All necessary official communications related to the contract will be sent by the IA on these addresses only throughout the period of contract.

**28.FORCE MAJEURE**

- a) Force Majeure means an event beyond the control of the bidder and not involving the bidder's fault of negligence and not foreseeable. Such event may include but not limited to the acts of Nature such as fire, flood, epidemic, etc., and other events such as wars, revolutions, quarantine restrictions, etc.
- b) If a Force Majeure situation arises, the bidder shall promptly notify IA of such conditions and the causes thereof through e-mail within 24 hours of such event. Unless otherwise, directed by IA in writing, the bidder shall continue to perform his obligations under the Contract to a reasonably practical extent and shall seek all reasonable alternative means for effective performance of the Contract in time.

- c) The bidder, to the extent rendered unable to perform its obligations or part thereof under the Agreement as a consequence of the Force Majeure Event shall be excused from performance of the obligations. Provided that, the excuse from performance shall be of no greater scope and of no longer duration than is reasonably warranted by the Force Majeure Event.
- d) The bidder should bear its costs, if any, incurred as a consequence of the Force Majeure Event.
- e) The bidders shall be granted, extension of time specified in the contract for the performance of any obligation by such period not exceeding the period during which the relative performance was affected by the Force Majeure Event and permissible under Applicable Law.

### **29.TERMINATION OF CONTRACT**

IA reserves the right to terminate the contract at any time during the validity period on account of non-fulfillment of contract or for any of the reasons.

### **30.GENERAL CONDITIONS**

- a) Conditional tender in any form will not be accepted.
- b) Any notice regarding any matters, to the contractor shall deemed to be sufficiently served, if given in writing to his usual or last known place of business.
- c) Tender committee reserves the right to relax or waive or amend any of the tender conditions.
- d) The successful tenderer shall not outsource/off load either full or part of the work to any other agency / individual.
- e) If the performance of the tenderer is not as per the schedule, then tender committee reserves the right to cancel / reallocate full or part of the contract, at any stage of the contract execution.

### **31.ARBITRATION**

- a) In case of any dispute in the tender, including interpretation, if any, on the clauses of the tender or the agreement to be executed, the matter shall be referred by IA / Tenderer to an Arbitrator to be appointed by the Parties hereto by mutual agreement. If no such Arbitrator

could be appointed by mutual consent, the matter may then be referred to the Director, IIEG for nominating an Arbitrator, the Arbitration proceedings being governed by the Arbitration and Conciliation (Amendment) Act 2015.

- b) The venue of the Arbitration shall be at the Mendipathar Multipurpose Cooperative Society, Mendipathar, North Garo Hills, Meghalaya-794110. The decision of the Arbitrator shall be final and binding on both the parties to the Arbitration.
- c) The Arbitrator may with the mutual consent of the parties, extend the time for making the award. The award to be passed by the Arbitrator is enforceable in the court at Guwahati only.

### **32. JURISDICTION OF THE COURT**

Any dispute arising out of non-fulfillment of any of the terms and conditions of this Agreement or any other dispute arising out of the arbitration award will be subject to the jurisdiction of the Courts in the City of Guwahati only.

We agree to the above terms and conditions.

**SIGNATURE OF THE TENDERER:**

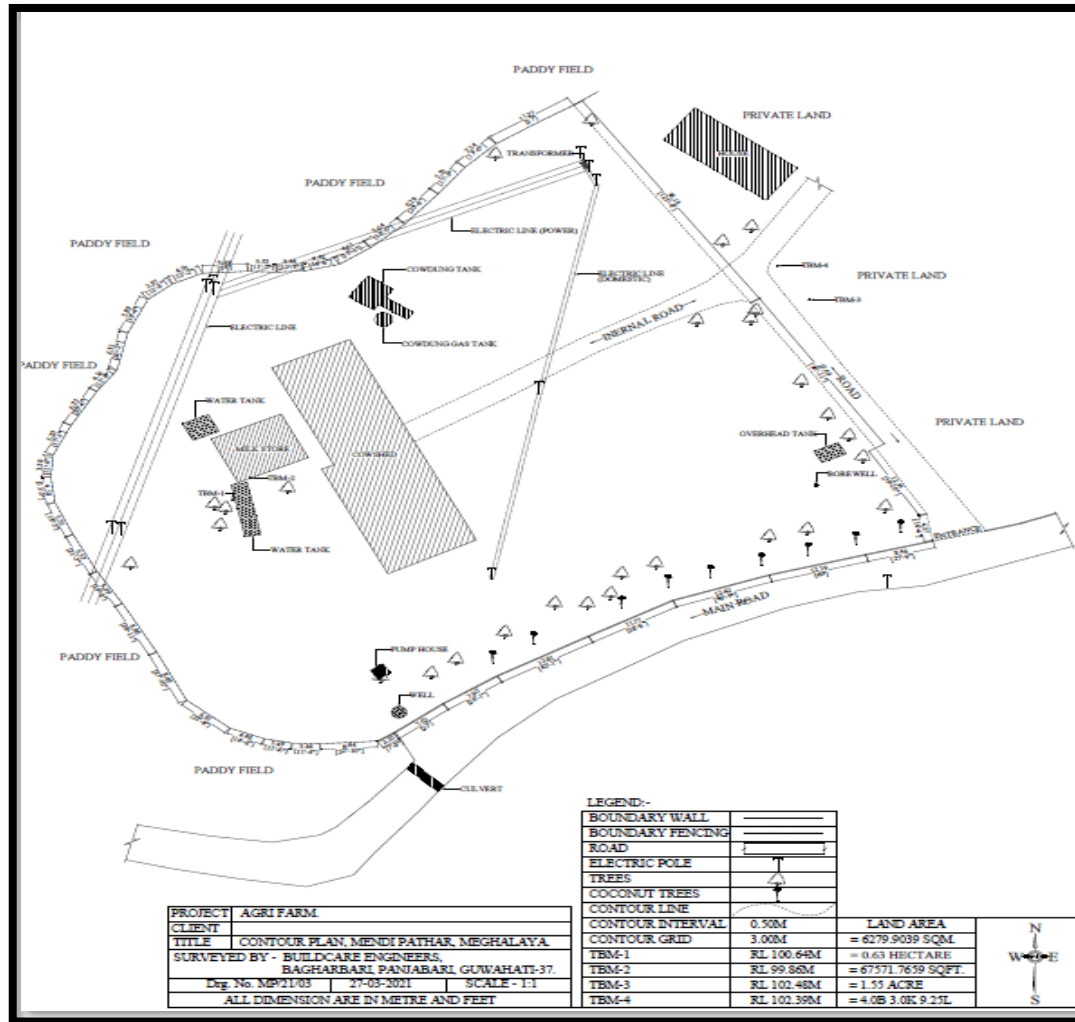
**DATE:**

**NAME IN BLOCK LETTERS:**

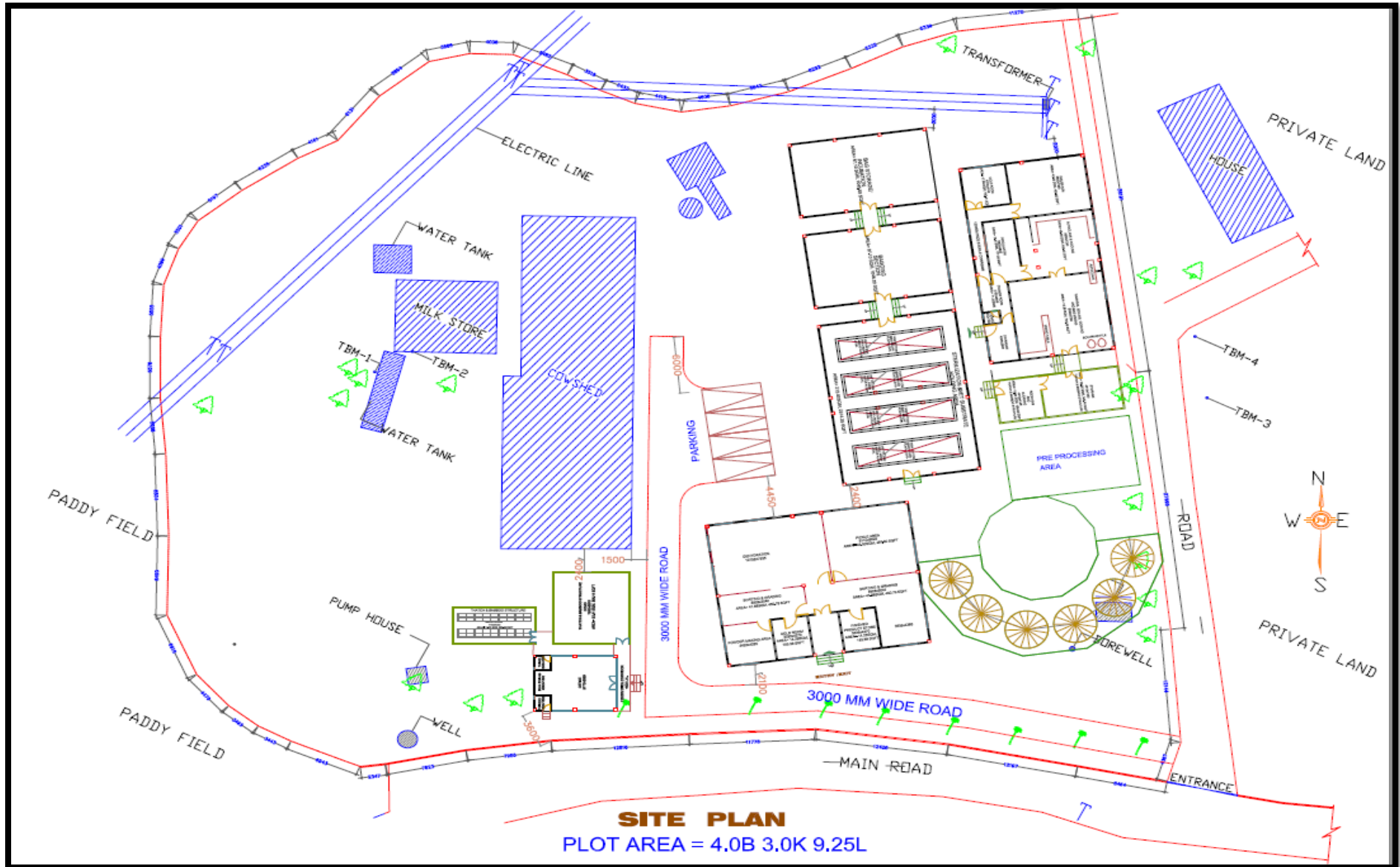
**DESIGNATION:**

**ADDRESS:**

CIVIL TENDER  
**ANNEXURE I**  
**SITE LAYOUT**



Signature of the tendrer with Seal

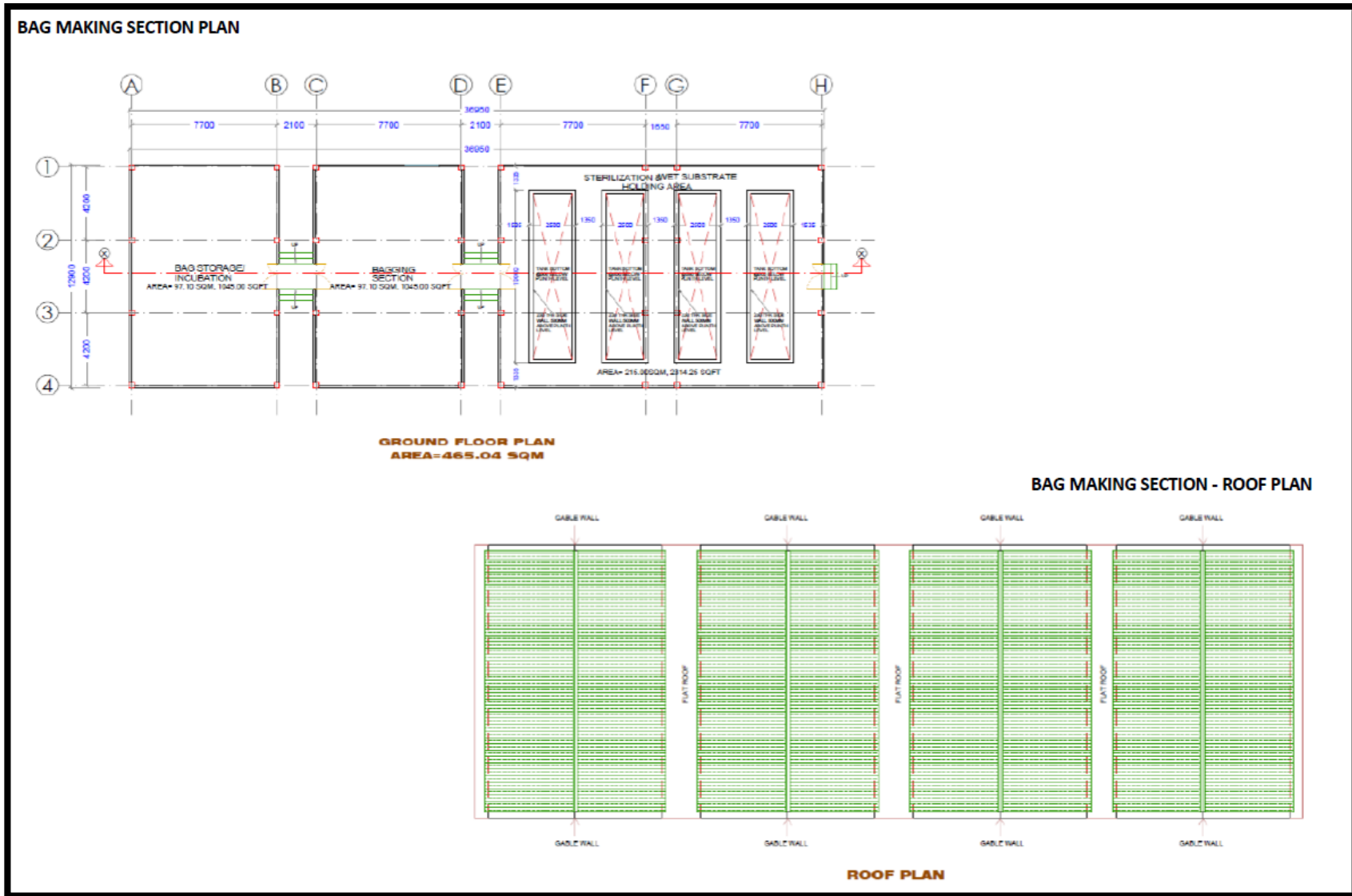


PROPOSED SITE PLAN

Signature of the tendrer with Seal

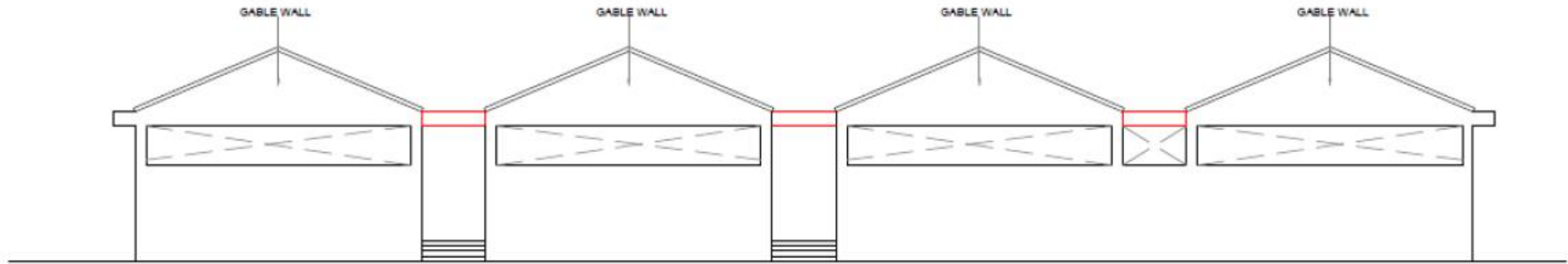
CIVIL TENDER  
SECTION WISE ELEVATION, FLOOR PLAN AND SECTIONS

BAG MAKING UNIT

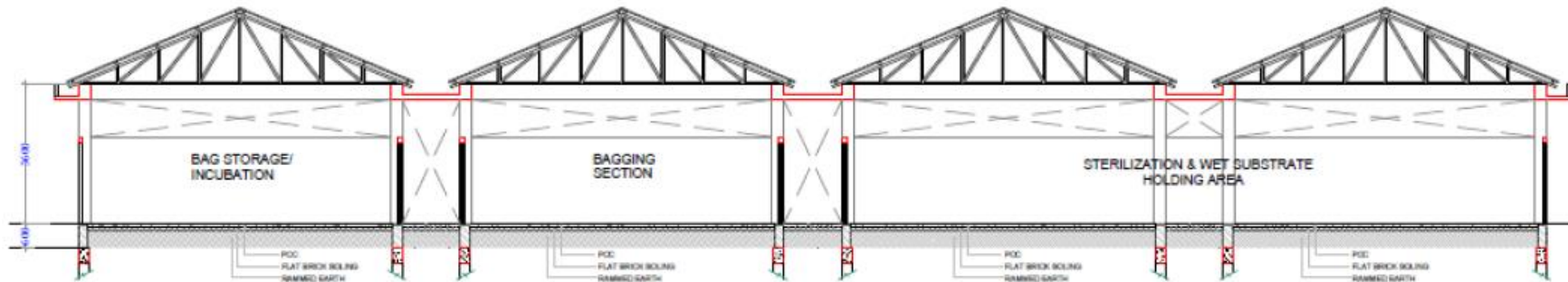


Signature of the tenderer with Seal

**BAG MAKING SECTION – FRONT ELEVATION**



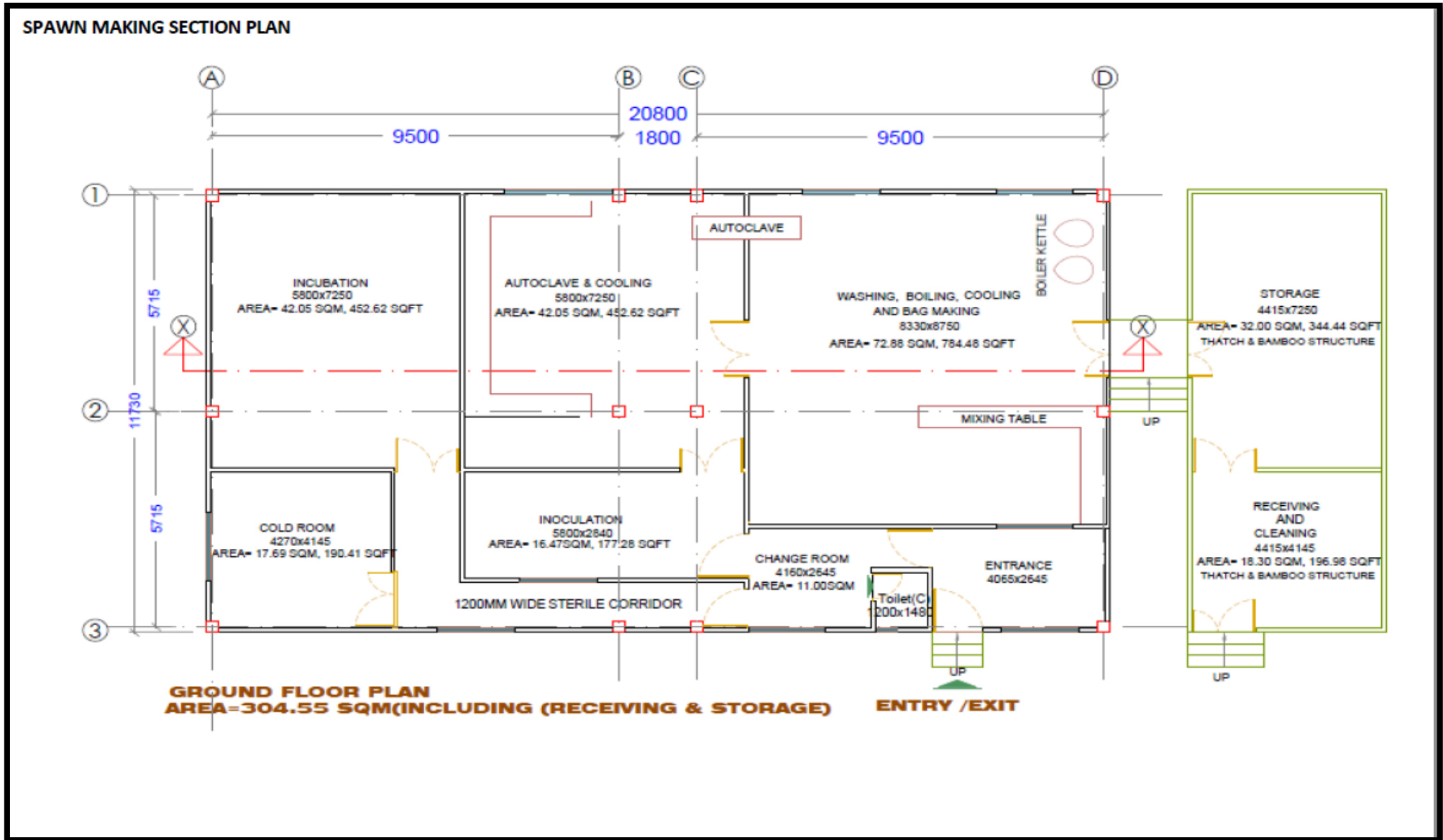
**FRONT ELEVATION**

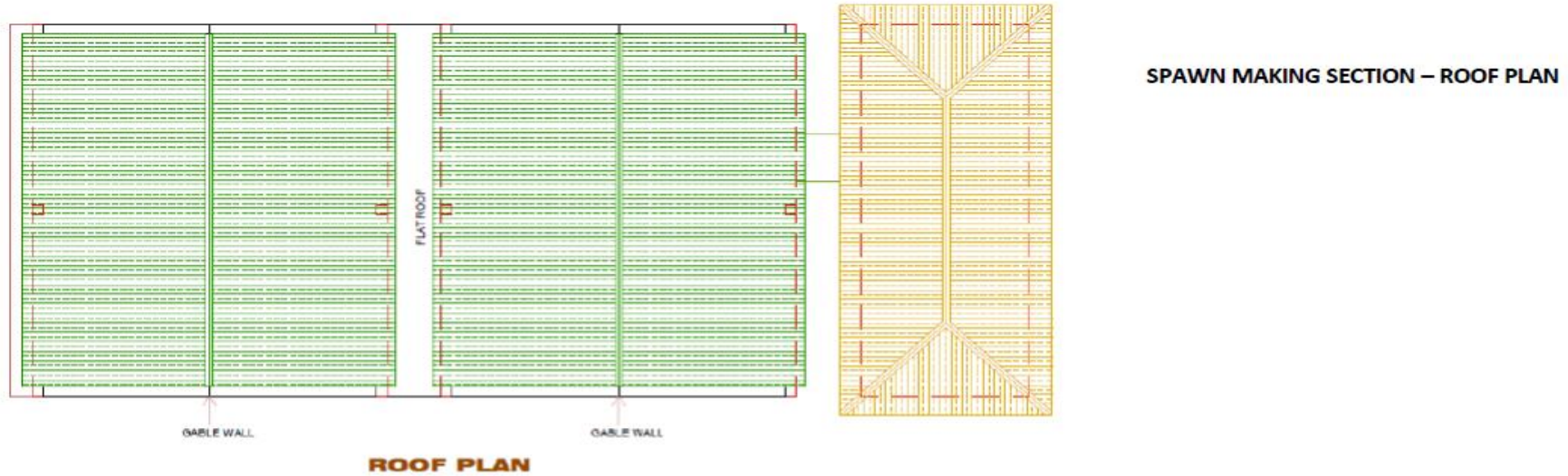


**SECTION XX**

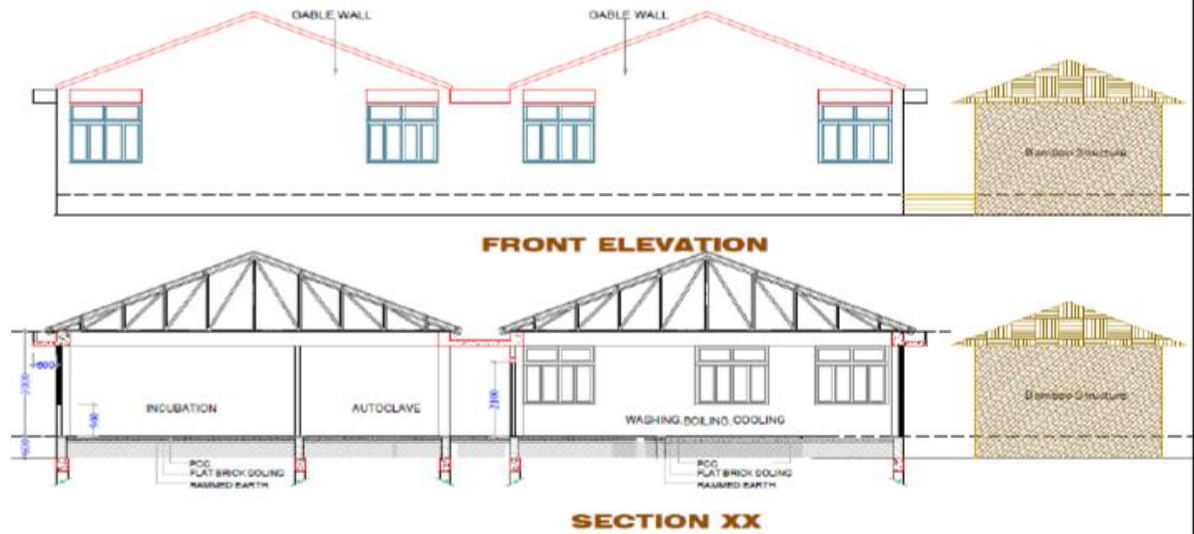
**BAG MAKING SECTION – SECTION DRAWING**

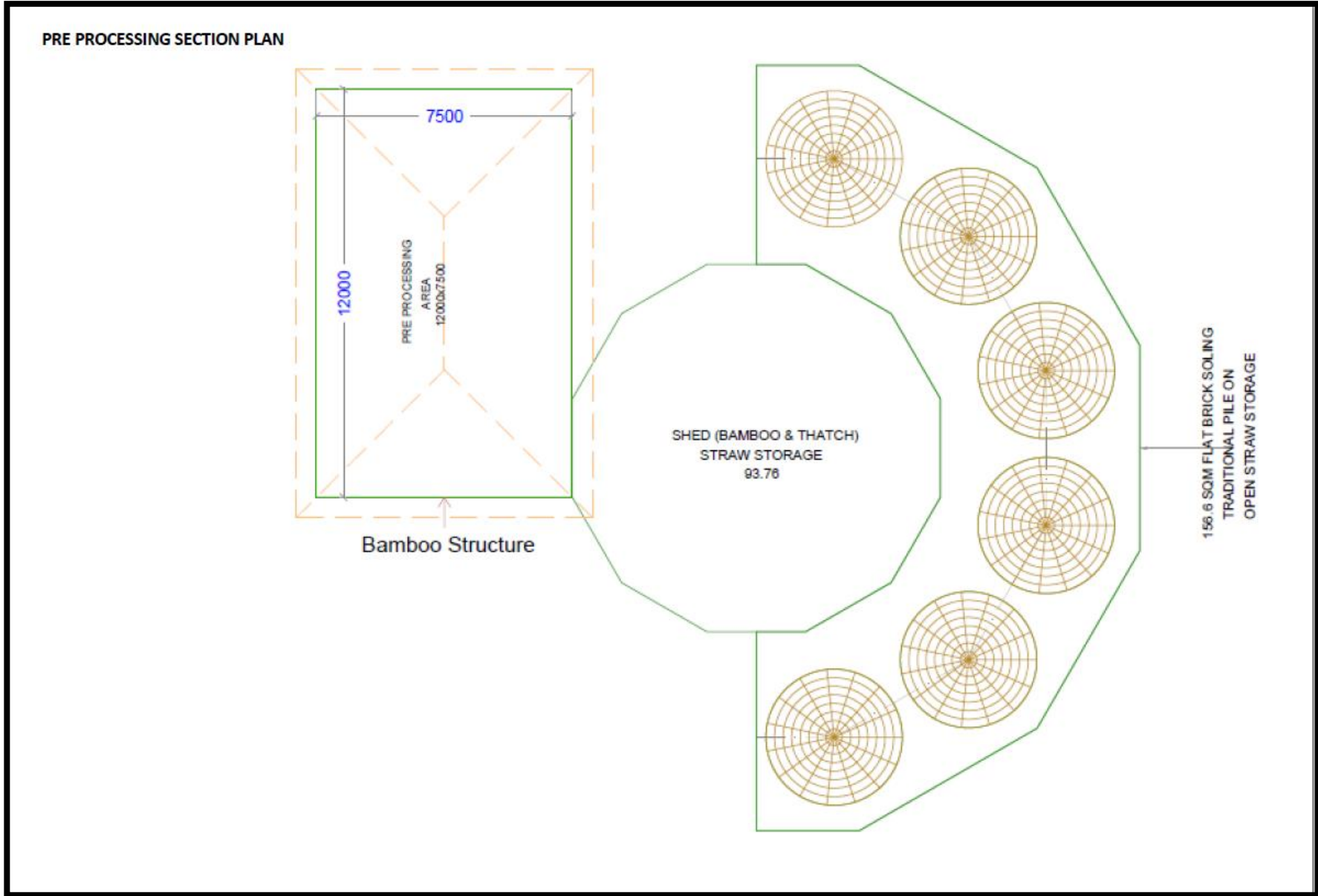




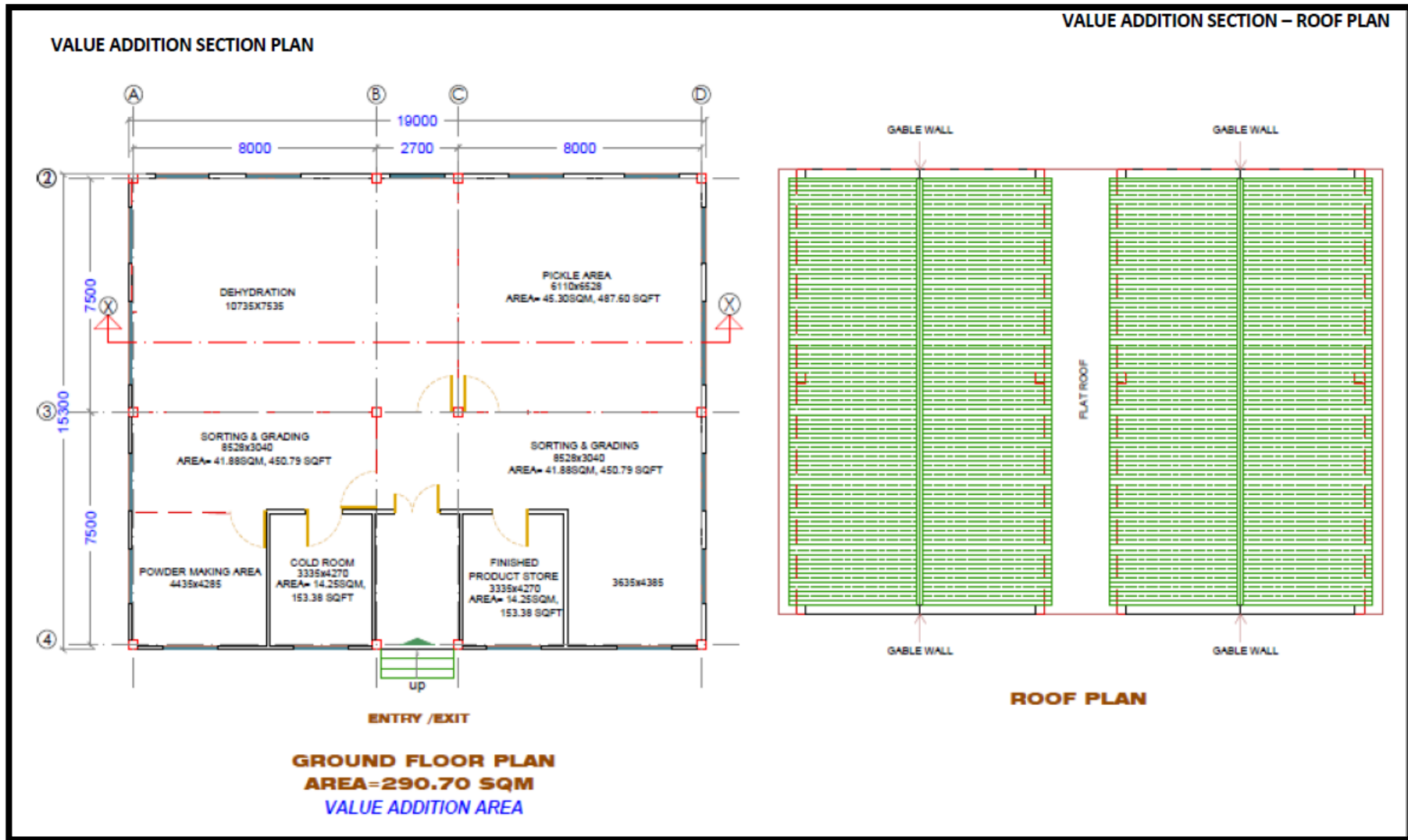


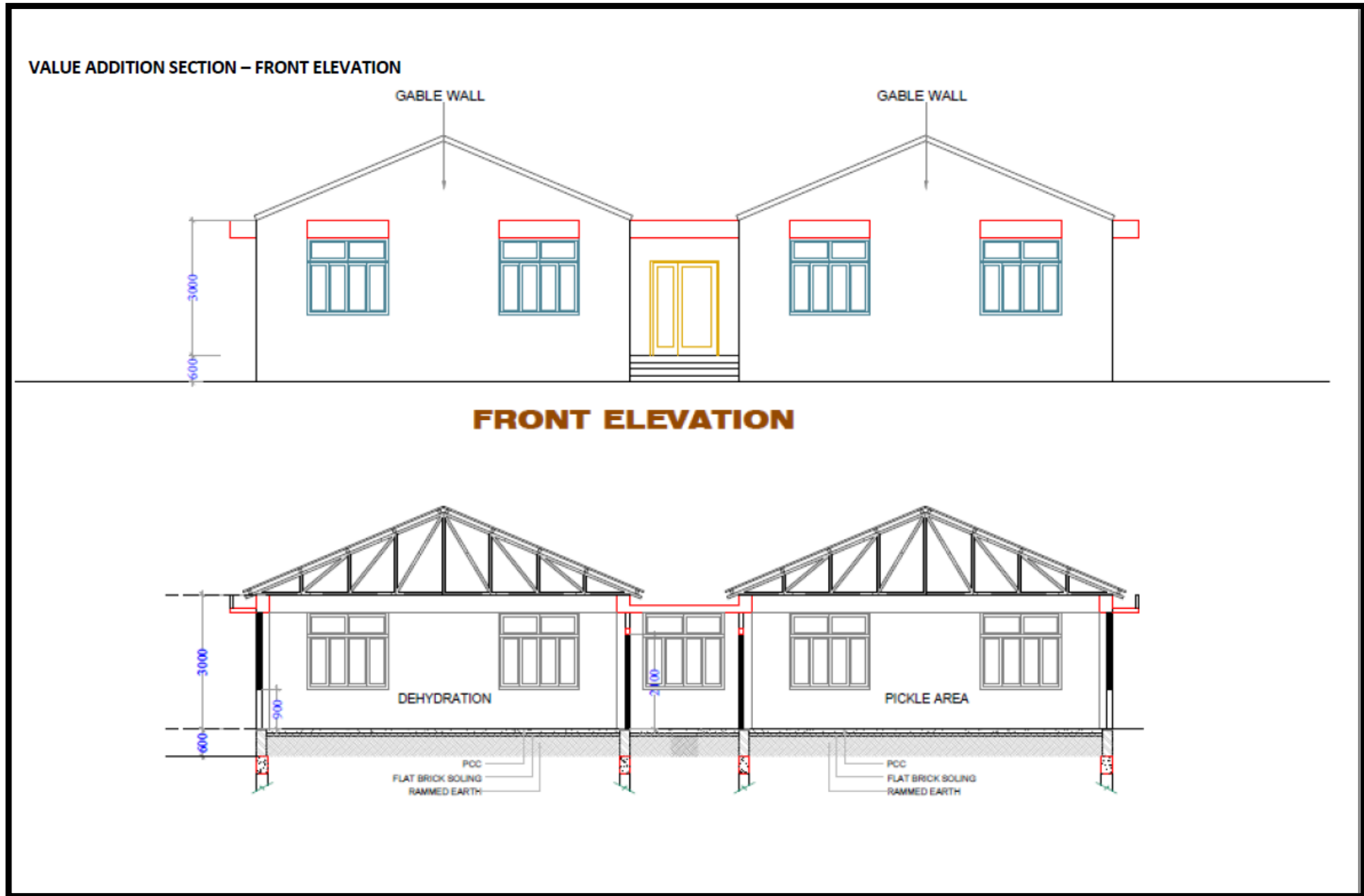
**SPAWN MAKING SECTION – FRONT ELEVATION & SECTION PLAN**

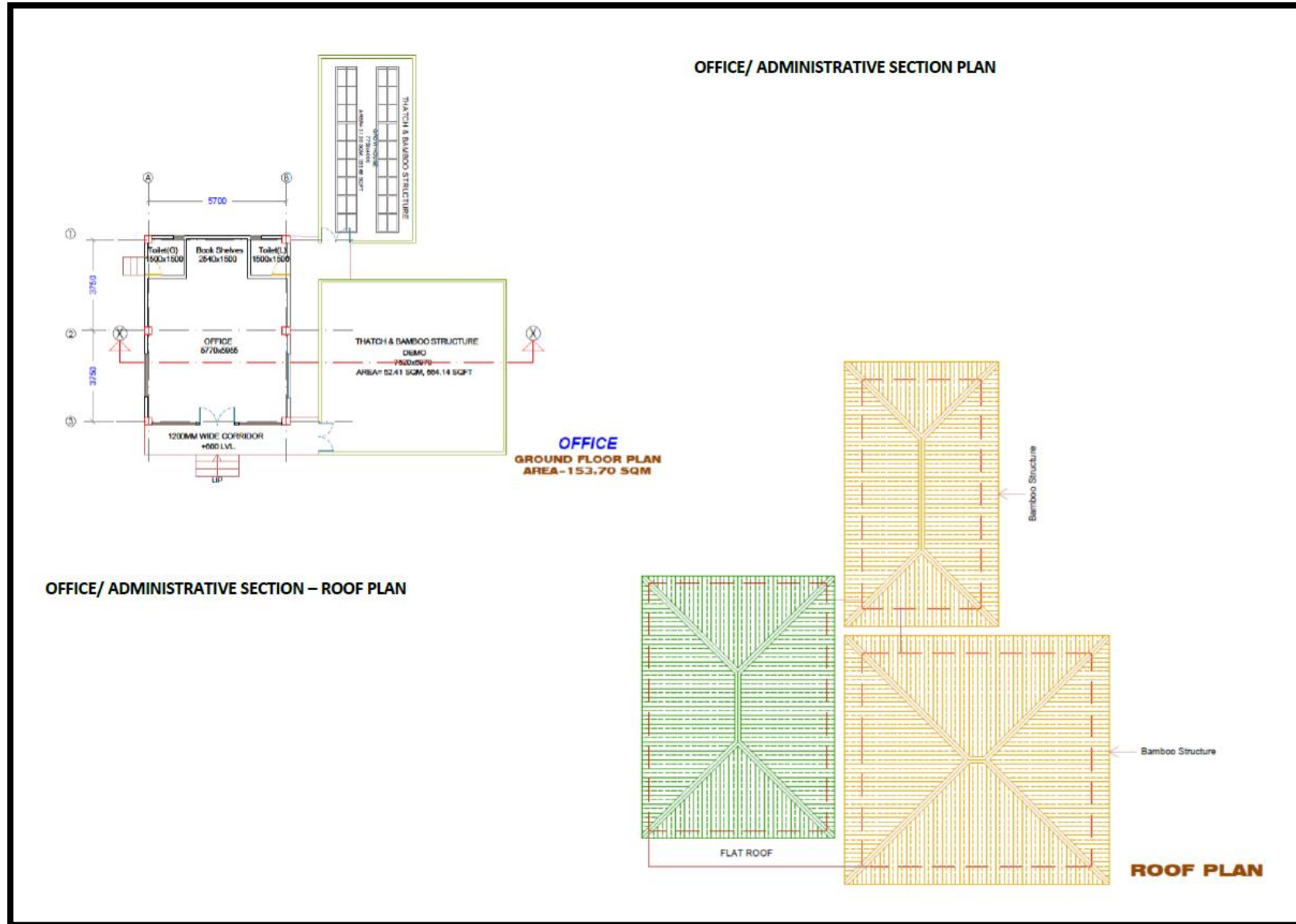


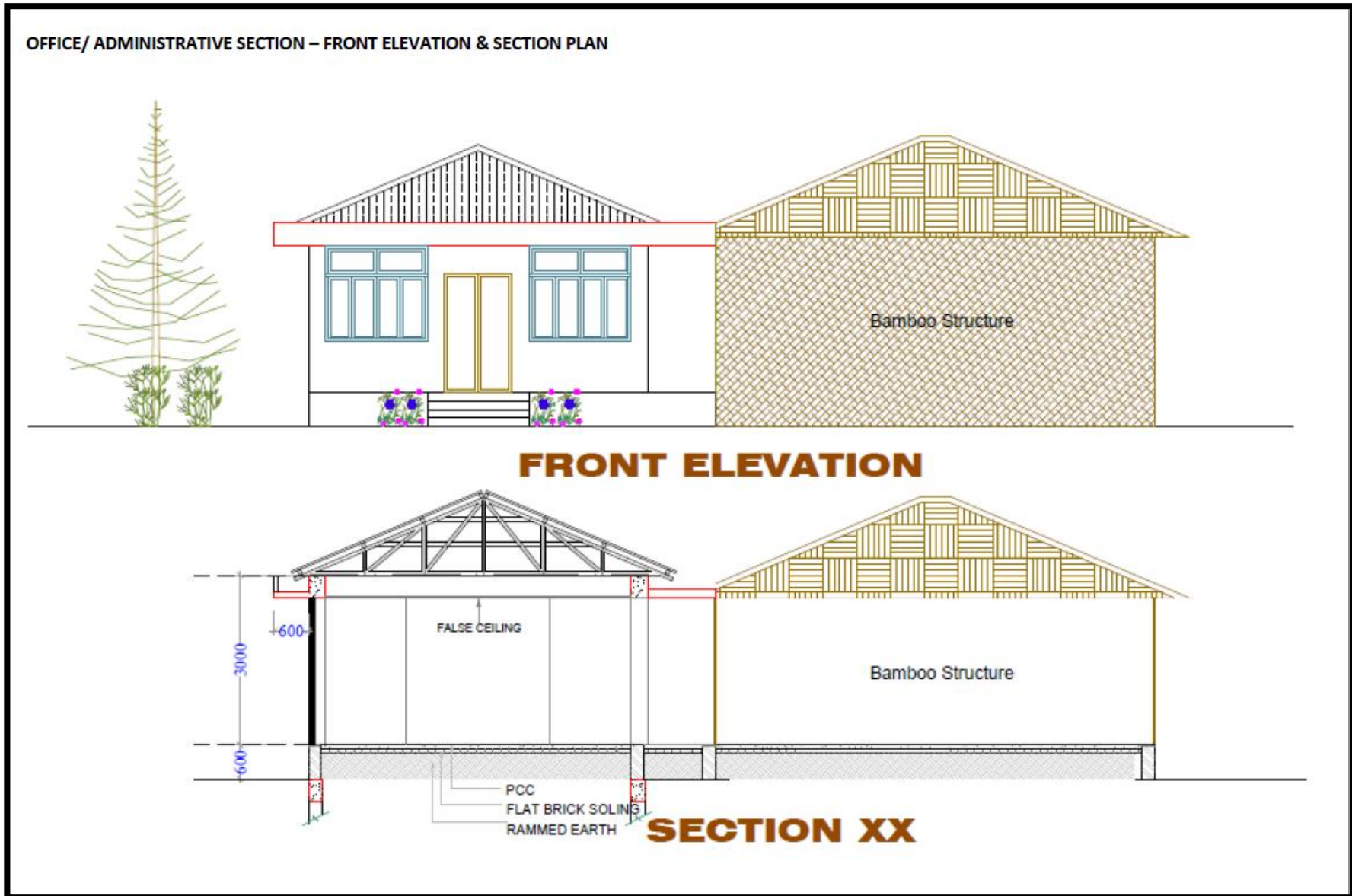


VALUE ADDITION UNIT

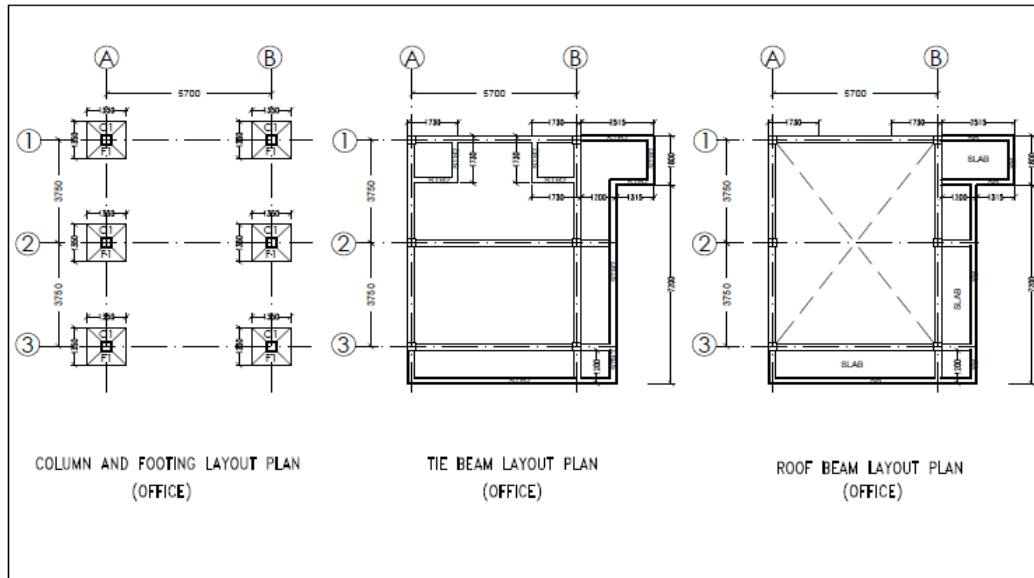








**COLUMN, BEAM AND TRUSSES**



**SCHEDULE OF COLUMN:**

COLUMN MARKING	COLUMN SIZE	COLUMN REINFORCEMENT	STIRRUPS	
		UP TO ROOF FL LVL.	CONFINING	BALANCE
C1	300x300	4-#16	#8 @ 100c/c	#8 @ 150c/c

**SCHEDULE OF FOOTING:**

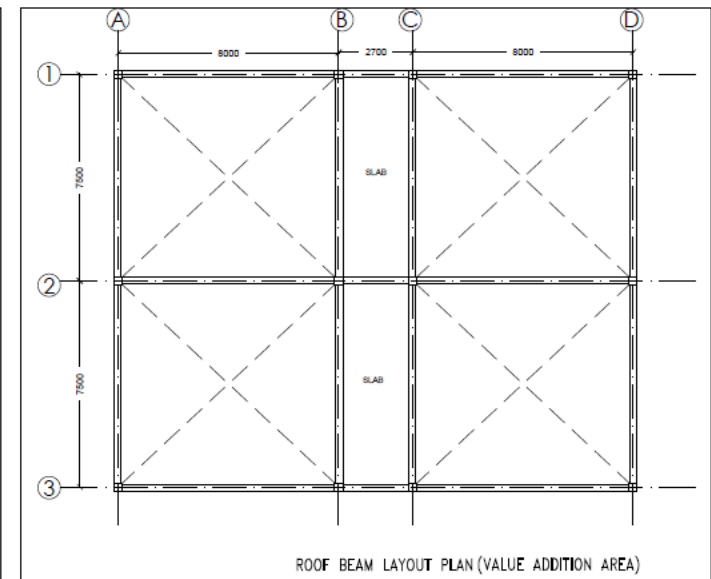
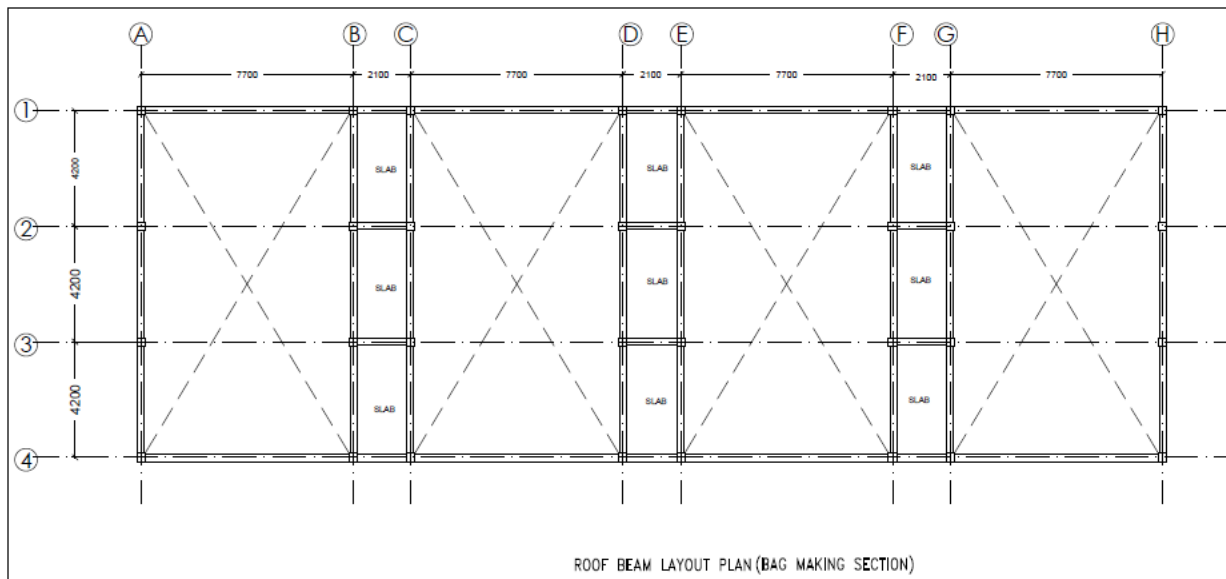
SL NO	FOOTING DESCRIPTION	FOOTING SIZE(LXB)	DEPTH			REINFORCEMENT OF FOOTING	
			D	d1	d2	LONG BARS	SHORT BARS
1.	F1	1350X1350	1500	200	200	#10@150C/C	#10@150C/C
2.	F2	1950X1950	1500	400	250	#10@150C/C	#10@150C/C

**SCHEDULE OF COMBINE FOOTING:**

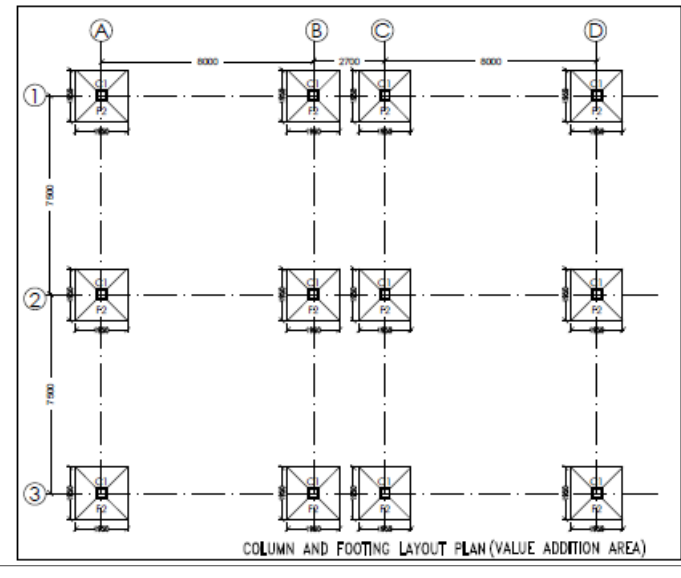
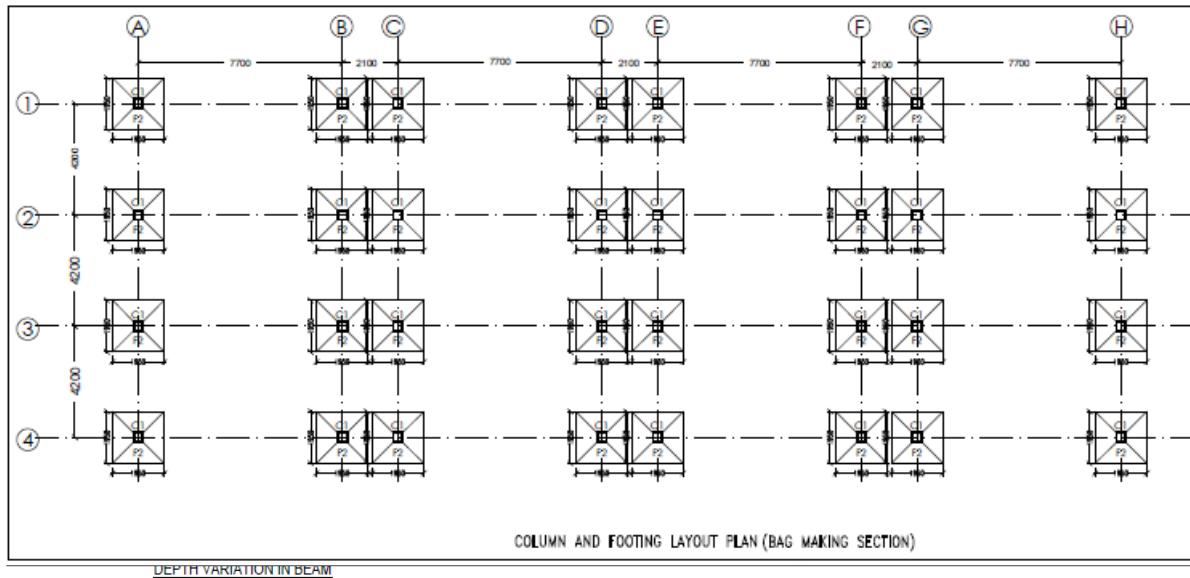
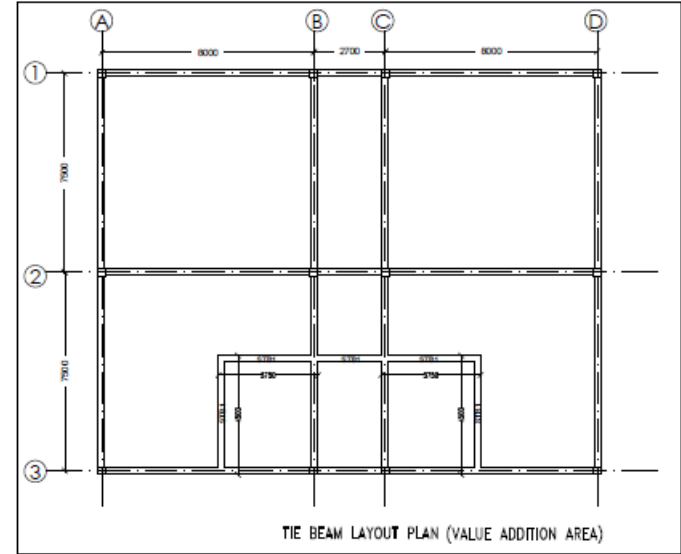
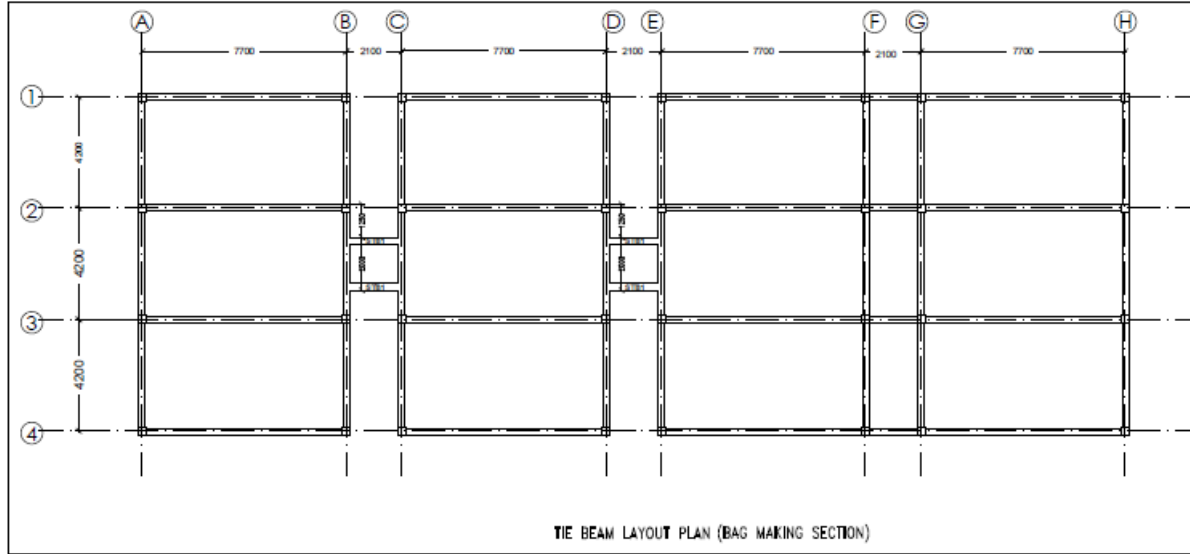
SL NO	FOOTING DESCRIPTION	FOOTING SIZE(LXB)	FOOTING SLAB THK	REINFORCEMENT OF FOOTING	
				LONG BARS	SHORT BARS
1.	FC1	1950X3300	600	#10@150C/C	#10@150C/C

**SCHEDULE OF SLAB:**

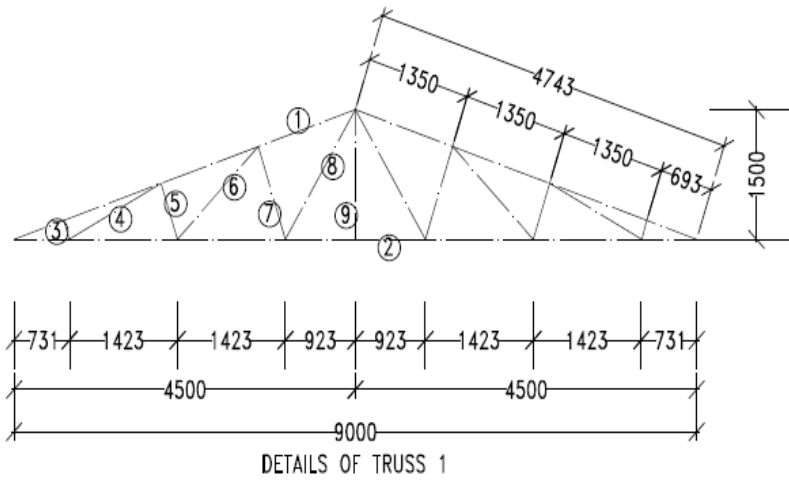
SL NO	DESCRIPTION	SLAB THK	REINFORCEMENT OF SLAB			
			SHORTER SPAN TOP BARS	LONGER SPAN BOTTOM BARS	SHORTER SPAN TOP BARS	LONGER SPAN BOTTOM BARS
1.	SLAB	100	#8@150C/C	#8@150C/C	#8@150C/C	#8@150C/C



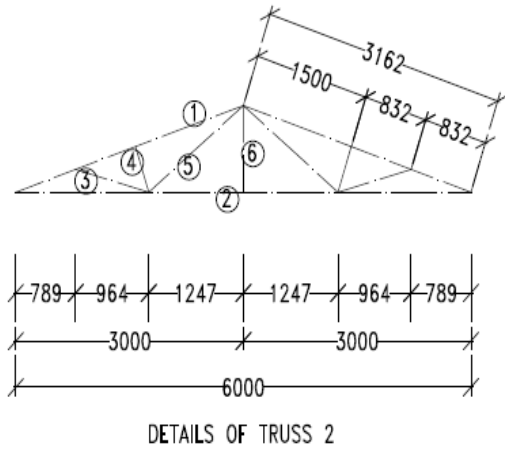




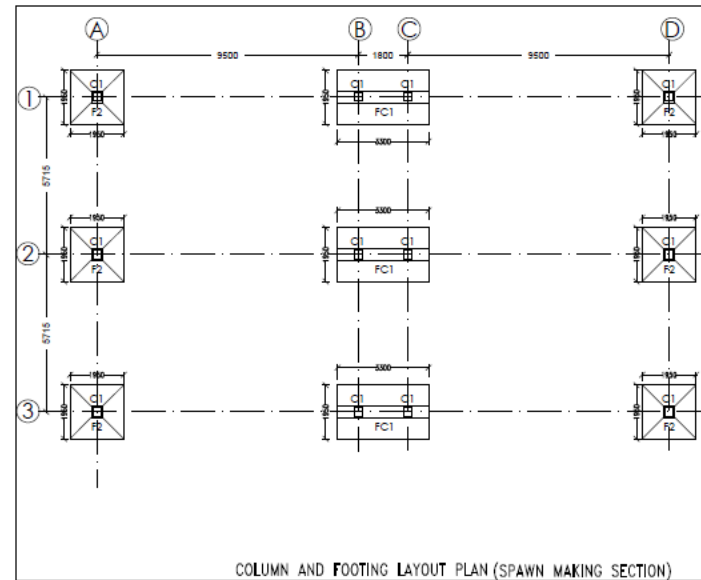
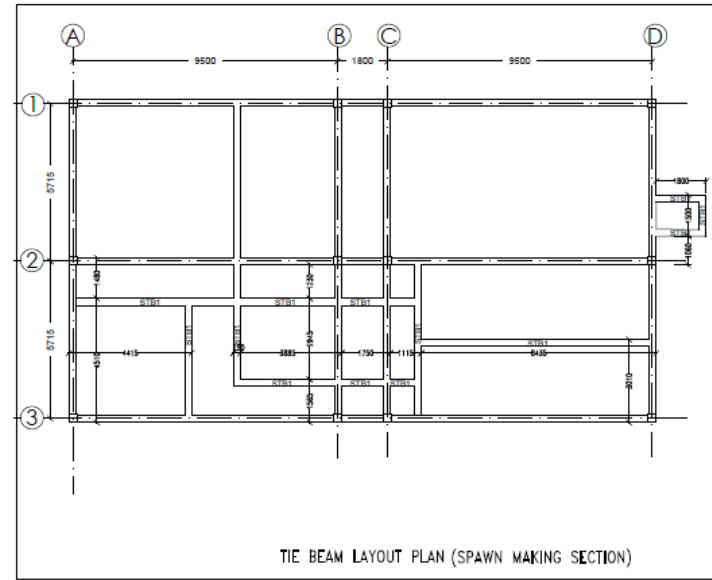




- ① - 50X50X3.6 SHS
- ② - 80X40X4.0 RHS
- ③ - 25X25X2.6 SHS
- ④ - 32X32X2.6 SHS
- ⑤ - 25X25X2.6 SHS
- ⑥ - 32X32X2.6 SHS
- ⑦ - 25X25X2.6 SHS
- ⑧ - 66X33X2.6 RHS
- ⑨ - 25X25X2.6 SHS



- ① - 38X38X2.6 SHS
- ② - 80X40X4.0 RHS
- ③ - 25X25X2.6 SHS
- ④ - 25X25X2.6 SHS
- ⑤ - 50X25X2.6 RHS
- ⑥ - 25X25X2.6 SHS



SITE PICTURES



1. Kutchra road leading to site



2. Protection embankment west of approach road



3. RCC culvert to carry excess rain water



4. Total Station at embankment & plot corner



5. Entrance gate & rows of betelnut trees along internal road



6. Entrance to the site



7. Cocoanut & betelnut trees near main gate



8. Cowshed along NNW-SSE axis from entrance



9. Borewell near entrance gate



10. PVC water supply tank near borewell

## BILL OF QUANTITIES

<b>Proposed Oyster Mushroom Cluster at Resubelpara Block, Mendipathar, North Garo Hills District, Meghalaya</b>						
<b>ABSTRACT OF ESTIMATED COST BASED ON ASSAM PWD SCHEDULE OF RATES FOR CIVIL WORKS 2013-14</b>						
<b>Sl. No.</b>	<b>APWD It. No./Ref</b>	<b>DESCRIPTION</b>	<b>Unit</b>	<b>Quantity</b>	<b>Rate in Rs.</b>	<b>Amount in Rs.</b>
<b>1</b>		<b>Training and Office room</b>				
1.1		Civil Works				
1.2		Internal Electrical works				
<b>2</b>		<b>Spawn Making Section</b>				
2.1		Civil Works				
2.2		ThatchStructure				
2.3		Internal Electrical works				
<b>3</b>		<b>Value Addition Area</b>				
3.1		Civil Works				
3.2		Internal Electrical works				
<b>4</b>		<b>Bagmaking Section</b>				
4.1		Civil Works				
4.2		Internal Electrical works				
<b>5</b>		<b>Preprocessing &amp; Hay Stack</b>				
5.1		Civil Works				
5.2		Internal Electrical works				
<b>6</b>		<b>Demo Hall</b>				
6.1		Civil Works				
6.2		Internal Electrical works				
<b>7</b>		<b>Grow House</b>				
7.1		Civil Works				
7.2		Internal Electrical works				
<b>8</b>		<b>TOTAL (A)</b>				
9		GST @ 7% on Schedule Items				
<b>10</b>		<b>Total (B)</b>				
11		Contingencies @ 1% of Total (B)				
12		Architect and engineering services and supervision @ 5%				
<b>13</b>		<b>GRAND TOTAL</b>				
					<b>say</b>	

Estimated cost of construction of the <b>GROW HOUSE for OYESTER MUSHROOM CLUSTER AT RESUBELPARA BLOCK, MENDIPATHAR, NORTH GARO HILLS Dist., Meghalaya</b> based on Assam PWD Schedule of Rates for Civil Works 2013-14.						
GROW HOUSE						
1. Area of Ground floor			= (68.04+74.08)=142.12 M <sup>2</sup> .			
Item No.	Description of work		Unit	Qty.	Rate in Rupees	Amount in Rupees
BOQ	APWD					
1	1.3	Earth/ sand filling in plinth in layers not more than 150mm thick including necessary carriage, watering, ramming etc. complete as directed and specified including payment of land compensation, forest royalty, sales tax and other duties and taxes as may be necessary.				
	(b)	With hill sand obtained by truck carriage loading and unloading, and carriage to the site of work.	Cum	68.42		
2	N.S.	Bhaluka bamboo dressed post 75mm to 100mm dia driven at least 750mm under ground and tied with wire or cane @ 1500 to 2000 c/c at least 3000 TO 4500 above plinth level.	Each	28.00		
3	N.S.	Spilt bamboo diagonally woven tarja wall with fair side exposed to weather, tied with necessary bamboo kamis on both sides @300mm apart tied with galvanised wire/cane slit and fixed to bamboo posts etc complete as directed including making provision for doors and windows of bamboo tarja on bamboo frames .	Sq.m	108.27		
4	8.1.11	Providing thatch roofing with sun grass (Ulllo) in layer of 75 mm thick with half spilt bamboo fillet and tying with galvd. wire complete.				
	(b)	150 mm thick.	Sqm	183.76		
5	8.1.12	Providing and laying thatching, capping to ridge and hip with new sun grass of 75 mm thick (fine work) stiffened with bamboo slips of size 30mm x 6mm and tied with galvd. tying wire complete.	RM	79.08		
6	8.1.15	Providing and laying bamboo slip jaffri of meshes not exceeding 63mm x 38mm including tying to the purlins and rafters with cane slip or galvd. tying wire.				
	(a)	Fine work	Sqm	183.76		
7	8.1.16	Providing single layer of bamboo mat lining over roof frame.	Sqm	183.76		
8	8.1.17	Providing bamboo maruli ties, purlins, rafters including tying with cane sling / Galvd. tying wire.				
	(a)	(a) With Bhaluka bamboo.	RM	115.08		
9	8.1.18	Providing bamboo roof truss with whole ruas bam boo and kamis, ruas placed at 150 mm apart and kamis 200mm to 230mm apart including tying all members with galvd tying wire.	Sqm	26.46		
10	8.1.19	Providing bamboo jaffri over thatch roof with 200mm sq mesh bamboo slips of 35mm width	Sqm	183.76		
11	8.1.21	Providing bamboo roof frame with kami of size 30mm x 6mm.	Sqm	183.76		
12	5.3.1	Brick-on-edge floor with 1st class brick and grouted with cement mortar in prop.1:4 (1 cement : 4 sand) including cement pointing in proportion 1:1 (1 cement :1 sand) finishing and curing complete.	Sq.m	142.12		
<b>TOTAL COST OF BUILDING CIVIL WORKS</b>						
					<b>SAY</b>	

BAGMAKING SECTION						
ITEM NO.		DESCRIPTION OF WORK	UNIT	QTY.	RATE IN RUPEES	AMOUNT IN RUPEES
BOQ	APWD					
<b>1</b>		<b>EARTH WORK</b>				
1.1	1.1	Earthwork in excavation 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 in the following classification of soils including bailing out water where necessary as directed and specified.				
	(A)	Up to a depth of 2.00m below the existing ground level.				
	(a)	In ordinary soil	cum	148.56		
1.2	1.3(c)	Earth / Sand filling in plinth in layer not more than 150 mm thick including necessary, carriage, watering, ramming etc. complete as directed and specified including payment of land compensation, Forest Royalty, Sales Tax and other duties and taxes as may be necessary. (c) with river sand or silt (predominantly non plastic) by truck carriage including loading and unloading.	cum	187.25		
<b>2</b>		<b>NOMINAL MIX. ( P.C.C. WORKS )</b>				
2.1	2.1.1	Plain cement concrete works with coarse aggregate of sizes 13mm to 32mm in foundation bed for footings, tie beams, 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).				
	a)	In prop. 1 cement : 3 sand : 6 coarse aggregate by volume	cum	22.95		
2.2	2.1.3	Providing and laying 25mm thick damp proof course with cement concrete in prop 1: 1.5: 3 with graded stone agg. Of 10mm down nominal size including providing approved damp proof admixture in proportion as recommended by the manufacturer including curing etc. complete as directed.	sqm	14.33		
<b>3</b>		<b>REINFORCED CEMENT CONCRETE WORKS</b>				
3.1	2.2.1	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				
3.1.1	(A)	In substructure up to plinth level				
	(N)	Foundation, footing, columns with base tie and plinth beam, pile cap, base slab, retaining walls, walls of septic tank, inspection pit and the like and other works not less than 100mm thick up to plinth level.				
	(b)	Without using admixture, plasticiser				
	(b)	M20 grade concrete	cum	46.53		
3.2	(B)	In super structure from plinth level up to 1st floor level.				
3.2.1	(ii)	Columns, pillars, posts, struts, suspended floor, roof, landing shelf and support, balcony, lintel, sill band, beam, girder, bressumer, cantilever, staircase (except spiral staircase and landing) including preparing the top surface and finishing of nosing.				
	(N)	Without using admixture, plasticiser				
	(b)	M20 grade concrete	cum	45.31		
<b>4</b>		<b>PLYBOARD SHUTTERING (FORMWORK)</b>				
4.1	3.2.1	Providing form work of 12mm thick Plywood Board so as to give a rough finish including centering, shattering, 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:				



4.1.1	3.2.1.1	Columns, Pillars, Posts & Strut of square/ rectangular/ polygonal in plan or any shape like Tee/L etc. having plane vertical face	sqm	449.83		
4.1.2	3.2.1.2	Sides and Soffits of Beams, beam haunchings, cantilever girders, bressumers, lintels and horizontal ties.				
		(a) For depth not exceeding 1.0M.	sqm	500.16		
4.1.3	3.2.1.3	Flat Surfaces such as soffits of suspended floors, roofs, landings, cantilever slabs, chajjas, balconies and the like.				
		(a) Floors etc. upto 200mm in thickness.	sqm	100.54		
<b>5</b>	<b>MASONARY WORK</b>					
5.1	4.1.1	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.	sqm	305.95		
5.2	4.1.4	Brick work in cement mortar with 1st class brick including racking out joints and curing complete as directed.				
5.2.1		(I) In Sub-structure upto plinth level including dewatering if necessary				
		(b) In proportion 1:4	cum	69.00		
5.3	4.1.8	1st class brick nogged wall in cement mortar including racking out joints and curing complete as directed in super structure above plinth up to 1st floor level (protruding M.S rod/Tor steel of column to be embedded in cement mortar and will be measured and paid separately)				
		(A) 112 mm thick brick wall				
		(a) In cement mortar in proportion 1:4. (1 cement:4 sand)	sqm	227.10		
5.4	5.3.2	Brick-on-flat floor with 1st class brick and grouted with cement mortar in prop. 1:4 (1 cement : 4 sand) including 15 mm thick cement plastering in proportion 1:2 (1 cement : 2 sand) finishing with a floating coat of neat cement finish using cement slurry @ 2.75 kg. per sq. metre of floor area and curing complete.	sqm	402.00		
<b>6</b>	<b>FLOORING AND FLOOR FINISH</b>					
	5.1	<b>CEMENT CONCRETE FLOORING</b>				
6.1	5.1.4	65 mm thick cement concrete floor consisting of 50 mm under layer of cement concrete in prop. 1:3:6 (1 cement : 3 coarse sand : 6 coarse aggregate of 25mm and down) and 15 mm thick wearing layer in cement concrete in prop. 1:1:2 (1 cement : 1 coarse sand : 2 coarse aggregate of size 10mm down) laid in panels and finished with a floating coat of neat cement finish (using cement slurry for bond @ 2.75 kg. per square metre of floor area) including curing etc. complete as directed.	sqm	75.00		
<b>7</b>	<b>CEMENT PLASTERING</b>					
7.1	6.2.2	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	sqm	252.30		
7.2	6.2.3	20 mm thick Cement plaster in two coats on single or half brick walls for interior plastering up to 1st floor level including arises, internal rounded angles, chamfers and / or rounded angles not exceeding 80mm in girth and finished even and smooth including curing complete as directed.				
		A) On rough side (backing coat 15 mm and finishing coat 5mm thick)				
		b) In cement mortar 1:4	sqm	313.02		
7.3	6.2.5	Extra over item no 6.2.1 to 6.2.3 for plastering on ceiling and soffits of stairs up to 1st floor level (instead of plastering on walls) including curing complete as directed.	sqm	100.54		
<b>8</b>	<b>ROOFING</b>					
8.1	8.1.35	Providing Pre Painted Galvalume Sheet Roofing (PPGL) at all levels including fitting and fixing self drilling, self tapping screws complete (Roof trusses, purlins etc. to be measured and paid separately.) TATA Blue scope/ Dyna roof / Durakolor / Wonder Roof or equivalent as directed by the Department				
		(ii) 0.45 mm thick	sqm	517.24		

8.2	8.1.36	Providing Pre Painted Galvalume Sheet (PPGL) accessories Ridges / Valley / Gutter / Flashing) at all levels including fitting and fixing self drilling, self tapping screws complete. TATA Blue scope/ Dyna roof / Durakolor / Wonder Roof or equivalent as directed by the Departement				
		(ii) 0.45 mm thick	R.m	44.95		
<b>9</b>	<b>WOOD WORKS</b>					
9.1	9.18.1	Providing, fitting and fixing factory made Santro Flush door shutters having core & cross bands fabricated from seasoned 1st class timber, 25mm core battens, 2.5mm to 3.5mm uniformly thick cross bands, styles & rails made from hardwood timber of width not less than 50mm, fixed to the door frames (chowkath) with necessary hinges, screws, bolts etc. as specified and directed at all levels (Door fixtures and fittings to be measured and paid seperately.)				
		(b) 35mm thick	sqm	15.75		
<b>10</b>	<b>GRILL</b>					
10.1	10.2	Providing, fitting and fixing M.S. grill of required pattern for windows/ clerestory windows/ opening with M.S. flats at required spacing in frame all round, square or round M.S. bars with round headed bolts and nuts or screws.				
		I. Plain grill				
		(c) Fixed to Brickwork/P.C.C/R.C.C.	kg.	692.00		
<b>11</b>	<b>ALUMINIUM WINDOWS</b>					
11.1	11.1.2	Providing, fitting and fixing anodised aluminium sliding windows and ventilators of standard sections of approved brand without horizontal glazing bars, joints mitred and welded (manufactured to relevant IS specifications) and providing and fixing handles, angle cleat, rubber gasket, roller, bolting device, locking arrangements, screws etc as required complete as specified and directed for all levels.				
11.1.1	(a)	2 track sliding windows				
		(i) 6mm clear glass	sqm	0.00		
11.1.2	(b)	3 Track sliding window				
		(i) 6mm clear glass	Sq.m	34.56		
<b>12</b>	<b>PAINTING</b>					
	<b>13.3</b>	<b>PLASTER OF PARIS &amp; WALL PUTTY</b>				
12.1	13.3.1	Providing surface preparation for walls, ceiling etc. using average 1.50 mm thick plaster of paris including clearing, rubbing with sand paper, filling gaps, depression etc. where necessary, with chalk powder and plaster of paris paste, making the surface even and smooth complete at all levels as specified and directed.	Sqm	257.97		
12.2	13.3.4	Providing two coats of Birla White Wall Care Putty (Water Resistant White Cement based putty for concrete/ mortar walls and ceiling both internal and external) after removing all loosely adhering material from the wall surface with the help of emery stone, putty blade or wire brush and moistening the wall with sufficient quantity of clean water as specified and directed by the department. (Total thickness of two coats is maximum 1.5mm)				
	(i)	Thickness = 1.5 mm thick	sqm	313.02		
	<b>WALL PAINTING</b>					
12.3	13.2.3(a)	Applying one coat of cement primer of approved brand and manufacture on new wall surface after thoroughly brooming the surfaces free from mortar droppings and other foreign matter and including preparing the surface even and sand papered smooth.	Sqm	570.99		
12.4	13.2.3(b)	b) Finishing wall with water proofing cement paint of approved brand and manufacture and of required shade on new wall surface (two coats) to give an even shade after thoroughly brooming the surfaces to remove all dirt and remains of loose powdered materials.	Sqm	570.99		
12.5	13.4.5	Extra over for painting on ceiling and on sloping roof.	sqm	102.30		
	<b>13.7</b>	<b>PAINTING ON STEEL AND OTHER METAL SURFACE</b>				
12.6	13.7.2	Applying primary coat over new steel and other metal surface over 100m in width or girth after preparing the surface by thoroughly cleaning oil, grease, dirt and other foreign matter and scoured with wire brushes, fine steels, wood scrapers and sand paper.				
		a). With ready mixed "red-lead/ red oxide" primer.	sqm	69.12		

12.7	13.7.4	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. (i). Surfaces over 100mm in width or girth. a). General purpose (Asian paint/ Berger paint/ ICI paint/ J & N paint/ Nerolac).				
			sqm	69.12		
<b>13</b>		<b>DOOR AND WINDOW FITTINGS</b>				
	<b>15.2</b>	<b>ALUMINIUM FITTINGS</b>				
13.1	15.2.1	Supplying, fitting, fixing anodised aluminium fittings of approved make, reasonably smooth, free from sharp edges and corners, flaws and other defects and with counter sunk holes for screws including necessary aluminium screws etc. complete. (anodised to bright natural matt & satin finished)				
13.1.1	A	Sliding door bolts				
	(ii)	250mm x 16mm sliding door bolt.	Each	3		
13.2	B	Tower bolt				
	(iii)	200mm x 10mm tower bolt.	Each	10		
13.3	C	Door handles				
		150 mm	Each	10		
<b>14</b>		<b>STEEL AND IRON WORKS</b>				
	<b>18.1</b>	<b>REINFORCEMENT</b>				
14.1	18.1.1	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. (No extra measurement for lap, hook, chair, anchor etc. will be entertained in the measurement as they are included in the rate) (Upto 1st floor level) b) Other ISI approved TMT reinforcement bar (SAI/BISCON/THERMAX)				
			Qtl	94.42		
14.2	<b>18.3</b>	<b>ROOF TRUSS</b>				
	18.3.2	Providing, fitting, hoisting and fixing of roof trusses fabricated out of combination of any two or all of the following sections (i) Square section (ii) Rectangular Hollow section of specification RSH/SHS and (iii) M.S. circular hollow section of Grade 210 including purlins, bottom runners and providing M.S. cleat, M.S. angle base plank, bolts and nuts with red oxide primer including fitting bottom runner and cleat etc for fixing ceiling joist as per design complete as directed as per specifications.				
	(b)	Using other ISI marked approved brand tube	Qtl	37.25		
14.3	<b>18.7</b>	<b>DOOR FRAMES</b>				
	18.7.2	Providing, fitting and fixing powder coated pressed steel door frame made of 1.25mm/ 1.6mm thick sheet of various sizes with necessary hinge jamb, lock jamb, head and steel base ties at the bottom of the frame. The whole frame shall be welded or rigidly fixed together by mechanical means with base ties of pressed mild steel angle of size 20x20x1.25mm thick. Frame to be filled up with 1:4:8 P.C.C. after fitting the frame with brick/ concrete works etc. complete as directed by the department for all levels. (P.C.C. to be measured and paid for separately). (a) 1.25mm thick sheet (iii) Size 125mm x 60mm (Single rebate)				
			R.m	28.50		
<b>15</b>		<b>PLINTH PROTECTION WORKS AND PERIPHERY</b>				
15.1	19.2	Providing plinth protection with bricks flat laid in cement mortar 1: 4 and finished with 15mm thick cement plaster in prop. 1:2 with a floating coat of neat cement finish.	sqm	46.35		
15.2	19.5	Providing drain with brick work in cement mortar in proportion 1:5 with half brick thick side walls and 100mm thick C.C. (1:3:6) base over one brick flat soling including 15mm thick cement plastering in prop. 1:3 finished with a floating coat of cement slurry as directed with necessary shuttering for sides and earth work in excavation of foundation trenches and refilling the sides after completion of work etc. as specified. ii). 300mm wide and average 250mm deep with bed slope 1 in 150 with initial depth of 100mm.				
			R.m	107.20		
<b>16</b>		<b>ANTI TERMITE TREATMENT</b>				
	<b>26</b>	<b>PRE CONSTRUCTION ANTI - TERMITE TREATMENT</b>				

16.1	26.1.1	Pre construction anti - termite treatment at the bottom of foundation pits and walls on either side up to a height of 300mm from bottom of the excavation made for column plinth beam, wall, trenches etc. by applying the emulsion @ 5 (five litres per square meter of the surface area before starting construction work (supplying of necessary tools and accessories by the contractor) as per the direction of the Department complete.				
		a) with aqueous emulsion having concentration 1:19 with chlorophosphate solution (trical or equivalent) and water, i.e. 1% solution.	Sqm	72.00		
<b>TOTAL COST OF BUILDING CIVIL WORKS</b>					<b>SAY</b>	

## RECEIVING &amp; STORAGE (SPAWN SECTION)

1. Area of Ground floor = 51.61 M<sup>2</sup>.

Item No.		Description of work	Unit	Qty.	Rate in Rupees	Amount in Rupees
BOQ	APWD					
1	1.3	Earth/ sand filling in plinth in layers not more than 150mm thick including necessary carriage, watering, ramming etc. complete as directed and specified including payment of land compensation, forest royalty, sales tax and other duties and taxes as may be necessary.				
	(b)	With hill sand obtained by truck carriage loading and unloading, and carriage to the site of work.	Cum	25.44		
2	N.S.	Bhaluka bamboo dressed post 75mm to 100mm dia driven at least 750mm under ground and tied with wire or cane @ 1500 to 2000 c/c at least 3000 TO 4500 above plinth level.	Each	16.00		
3	N.S.	Spilt bamboo diagonally woven tarja wall with fair side exposed to weather, tied with necessary bamboo kamis on both sides @300mm apart tied with galvanised wire/cane slit and fixed to bamboo posts etc complete as directed including making provision for doors and windows of bamboo tarja on bamboo frames .	Sq.m	101.18		
4	8.1.11	Providing thatch roofing with sun grass (Ulllo) in layer of 75 mm thick with half spilt bamboo fillet and tying with galvd. wire complete.				
	(b)	150 mm thick.	Sqm	62.06		
5	8.1.12	Providing and laying thatching, capping to ridge and hip with new sun grass of 75 mm thick (fine work) stiffened with bamboo slips of size 30mm x 6mm and tied with galvd. tying wire complete.	RM	12.93		
6	8.1.15	Providing and laying bamboo slip jaffri of meshes not exceeding 63mm x 38mm including tying to the purlins and rafters with cane slip or galvd. tying wire.				
	(a)	Fine work	Sqm	62.06		
7	8.1.16	Providing single layer of bamboo mat lining over roof frame.	Sqm	62.06		
8	8.1.17	Providing bamboo maruli ties, purlins, rafters including tying with cane sling / Galvd. tying wire.				
	(a)	(a) With Bhaluka bamboo.	RM	155.16		
9	8.1.18	Providing bamboo roof truss with whole ruas bam boo and kamis, ruas placed at 150 mm apart and kamis 200mm to 230mm apart including tying all members with galvd tying wire.	Sqm	15.40		
10	8.1.19	Providing bamboo jaffri over thatch roof with 200mm sq mesh bamboo slips of 35mm width	Sqm	62.06		
11	8.1.21	Providing bamboo roof frame with kami of size 30mm x 6mm.	Sqm	62.06		
12	5.3.1	Brick-on-edge floor with 1st class brick and grouted with cement mortar in prop.1:4 (1 cement : 4 sand) including cement pointing in proportion 1:1 (1 cement :1 sand) finishing and curing complete.	Sq.m	51.61		
<b>TOTAL COST OF BUILDING CIVIL WORKS</b>						
					<b>SAY</b>	

SPAWN MAKING SECTION						
1. Area of Ground floor		= 247.50 M <sup>2</sup> .				
ITEM NO.	DESCRIPTION OF WORK		UNIT	QTY.	RATE IN RUPEES	AMOUNT IN
BOQ	APWD					
<b>A</b>		<b>CIVIL WORKS</b>				
<b>1</b>	<b>EARTH WORK</b>					
1.1	1.1	Earthwork in excavation 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 in the following classification of soils including bailing out water where necessary as directed and specified.				
	(A)	Up to a depth of 2.00m below the existing ground level.				
	(a)	In ordinary soil	cum	58.95		
1.2	1.3(c)	Earth / Sand filling in plinth in layer not more than 150 mm thick including necessary, carriage, watering, ramming etc. complete as directed and specified including payment of land compensation, Forest Royalty, Sales Tax and other duties and taxes as may be necessary. (c) with river sand or silt (predominantly non plastic) by truck carriage including loading and unloading	cum	111.38		
<b>2</b>	<b>NOMINAL MIX. ( P.C.C. WORKS )</b>					
2.1	2.1.1	Plain cement concrete works with coarse aggregate of sizes 13mm to 32mm in foundation bed for footings, tie beams, 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).				
2.1.1	a)	In prop. 1 cement : 3 sand : 6 coarse aggregate by volume	cum	23.35		
2.2	2.1.3	Providing and laying 25mm thick damp proof course with cement concrete in prop 1: 1.5: 3 with graded stone agg. Of 10mm down nominal size including providing approved damp proof admixture in proportion as recommended by the manufacturer including curing etc. complete as directed.	sqm	12.00		
<b>3</b>	<b>REINFORCED CEMENT CONCRETE WORKS</b>					
3.1	2.2.1	Providing and laying plain/reinforced cement concrete works cement, coarse sand & 20mm downgraded 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				
3.1.1	(A)	In substructure up to plinth level				
		Foundation, footing, columns with base tie and plinth beam, pile cap, base slab, retaining walls, walls of septic tank, inspection pit and the like and other works not less than 100mm thick up to plinth				
	N)	Without using admixture, plasticiser				
	(b)	M20 grade concrete	cum	19.72		

3.2	(B)	In super structure from plinth level up to 1st floor level.				
3.2.1	(ii)	Columns, pillars, posts, struts, suspended floor, roof, landing, shelf and support, balcony, lintel, sill band, beam, girder, bressumer, cantilever, staircase (except spiral staircase and landing ) including preparing the top surface and finishing of				
	N)	Without using admixture, plasticiser				
	(b)	M20 grade concrete	cum	20.12		
<b>4</b>		<b>PLYBOARDSHUTTERING (FORMWORK)</b>				
4.1	3.2.1	Providing form work of 12mm thick Plywood Board so as to give a rough finish including centering, shattering, 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:				
4.1.1	3.2.1.1	Columns, Pillars, Posts & Strut of square/ rectangular/ polygonal in plan or any shape like Tee/L etc. having plane vertical face	sqm	185.97		
4.1.2	3.2.1.2	Sides and Soffits of Beams, beam haunchings, cantilever girders, bressumers, lintels and horizontal ties.				
		(a) For depth not exceeding 1.0M.	sqm	177.36		
4.1.3	3.2.1.3	Flat Surfaces such as soffits of suspended floors, roofs, landings, cantilever slabs, chajjas, balconies and the like.				
		(a) Floors etc. upto 200mm in thickness.	sqm	75.03		
<b>5</b>		<b>MASONARY WORK</b>				
5.1	4.1.1	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.	sqm	311.39		
5.2	4.1.4	Brick work in cement mortar with 1st class brick including racking out joints and curing complete as directed.				
5.2.1		(I) In Sub-structure upto plinth level including dewatering if necessary				
		(d) In proportion 1:6	cum	20.25		
5.3	4.1.8	1st class brick nogged wall in cement mortar including racking out joints and curing complete as directed in super structure above plinth up to 1st floor level (protruding M.S rod/Tor steel of column to be embedded in cement mortar and will be measured and paid separately)				
		(A) 112 mm thick brick wall				
		(b) In cement mortar in proportion 1:5.(1 cement:5 sand)	sqm	253.93		
<b>6</b>		<b>FLOORING AND FLOOR FINISH</b>				
6.1	5.7.1.2	Providing polished ceramic wall tiles of approved quality, size, shape and thickness not less than 8mm on walls and skirtings over cement mortar bed 10 mm thick in prop. 1:3 (1 cement : 3 coarse sand ) including cutting where necessary finished with flush pointing with Fix-A-Tile (Choksey / Sika / Pedelite / Rouf) /white cement slurry mixed with approved pigment to match shade of tiles complete at all levels as specified and directed. (Cement plastering to be measured and paid separately). (Coloured pigment should be in conformity with colour of tiles and as approved and directed by the Department). (Walls means both interior and exterior walls).				
		b) Executive range Somany/ Orient/Nitco/Asian Make				
		i) Of size 200mmx300mm and above	sqm	9.14		

6.2	5.7.2.1	Providing VITRIFIED floor tiles of approved quality of specified size, shape and thickness not less than 18mm on floors, skirtings, risers and treads of steps over 15 mm thick base of cement mortar in prop. 1:3 (1 cement : 3 coarse sand) including cutting where necessary finished with flush pointing with Fix-A-Tile (Choksey/Sika/Pedelite/Rouf) / white cement slurry mixed with approved pigment to match shade of tiles, mixed with approved pigment to match the shade of the tiles, complete at all levels as specified and directed. (Coloured pigment should be in conformity with colour of tiles and as approved and directed by the Department)				
		a) Normal range Somany/ Orient/Nitco /Varmora/VITA/ Marbitto/ Make				
	(ii)	Of size 600mmx600mm and above	sqm	122.85		
6.3	5.3.2	Brick-on-flat floor with 1st class brick and grouted with cement mortar in prop. 1:4 (1 cement : 4 sand) including 15 mm thick cement plastering in proportion 1:2 (1 cement : 2 sand) finishing with a floating coat of neat cement finish using cement slurry @ 2.75 kg. per sq. metre of floor area and curing complete.	sqm	122.85		
6.4	5.11	<b>ANTISKID TILES</b>				
	5.11.1	Providing Antiskid Tiles of approved quality size, shape not less than 8mm on floor, skirting over a cement mortar bed 15mm thick of 1:3 (1 cement: 3 coarse sand), approved make fix with Fix-A-Tile (Choksey/Sika/Pedelite/Rouf)/ white cement complete at all level as specified and directed.				
		<b>(A) CERAMIC</b>				
		i) Normal range (Sizes 300 mm x 300mm and				
		(a) Orient made: Galaxy Brown, Galaxy creama, Galaxy Pink, Galaxy Green, Pulsar Beige, Pulsar Blue, Pulsar Dove, Pulsar Pink, Burj Brown, Burj Green, Burj Slate	sqm	1.80		
6.5	5.1	<b>CEMENT CONCRETE FLOORING</b>				
	5.1.4	65 mm thick cement concrete floor consisting of 50 mm under layer of cement concrete in prop. 1:3:6 (1 cement : 3 coarse sand : 6 coarse aggregate of 25mm and down) and 15 mm thick wearing layer in cement concrete in prop. 1:1:2 (1 cement : 1 coarse sand : 2 coarse aggregate of size 10mm down) laid in panels and finished with a floating coat of neat cement finish (using cement slurry for bond @ 2.75 kg. per square metre of floor area) including curing etc. complete as directed.	sqm	17.60		
<b>7</b>	<b>CEMENT PLASTERING</b>					
7.1	6.2.2	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	sqm	439.62		
7.2	6.2.3	20 mm thick Cement plaster in two coats on single or half brick walls for interior plastering up to 1st floor level including arises, internal rounded angles, chamfers and / or rounded angles not exceeding 80mm in girth and finished even and smooth including curing complete as directed.				
		A) On rough side (backing coat 15 mm and finishing coat 5mm thick)				
		b) In cement mortar 1:4	sqm	141.91		
7.3	6.2.5	Extra over item no 6.2.1 to 6.2.3 for plastering on ceiling and soffits of stairs up to 1st floor level (instead of plastering on walls) including curing complete as directed.	sqm	75.03		
<b>8</b>	<b>ROOFING</b>					



8.1	8.1.35	Providing Pre Painted Galvalume Sheet Roofing(PPGL) at all levels including fitting and fixing self drilling, self tapping screws complete (Roof trusses,purlins etc. to be measured and paid separately.) TATA Blue scope/ Dyna roof / Durakolor /Wonder Roof or equivalent as directed by the Departement			
		(ii) 0.45 mm thick	sqm	279.54	
8.2	8.1.36	Providing Pre Painted Galvalume Sheet (PPGL) accessories ( Ridges / Valley / Gutter / Flashing) at all levels including fitting and fixing self drilling, self tapping screws complete. TATA Blue scope/ Dyna roof / Durakolor /Wonder Roof or equivalent as directed by the Departement			
		(ii) 0.45 mm thick	R.m	24.66	
<b>9</b>	<b>WOODWORKS</b>				
9.1	9.18.1	Providing, fitting and fixing factory made Santro Flush door shutters having core & cross bands fabricated from seasoned 1st class timber, 25mm core battens, 2.5mm to 3.5mm uniformly thick crossbands, styles & rails made from hardwood timber ofwidth not less than 50mm, fixed to the door frames (chowkath) with necessary hinges, screws, bolts etc.as specified and directed at all levels (Door fixtures and fittings to be measured and paid seperately.)			
		(b) 35mm thick	sqm	26.78	
<b>10</b>	<b>GRILL</b>				
10.1	10.2	Providing, fitting and fixing M.S. grill of required pattern for windows/ clerestory windows/ openingwith M.S. flats at required spacing in frame all round, squre or round M.S. bars with round headed bolts and nuts or screws. I. Plain grill			
		(c) Fixed to Brickwork/P.C.C/R.C.C.	kg.	594.00	
<b>11</b>	<b>ALUMINIUM WINDOWS</b>				
11.1	11.1.2	Providing, fitting and fixing anodised aluminium sliding windows and ventilators of standard sections of approved brand without horizontal glazing bars, joints mitred and welded (manufactured to relevant IS specifications) and providing and fixing handles, angle cleat, rubber gasket, roller, bolting device, locking arrangements, screws etc as required complete as specified and directed for all levels.			
11.1.1	(a)	2 track sliding windows (i) 6mm clear glass	sqm	0.54	
11.1.2	(b)	3 Track sliding window (i) 6mm clear glass	Sq.m	29.16	
<b>12</b>	<b>PAINTING</b>				
12.1	<b>13.3</b>	<b>PLASTER OF PARIS &amp; WALL PUTTY</b>			
	13.3.4	Providing two coats of Birla White Wall Care Putty (Water Resistant White Cement based putty for concrete/ mortar walls and ceiling both internal and external) after removing all loosely adhering material from the wall surface with the help of emerystone, putty blade or wire brush and moisteningthe wall with sufficient quantity of clean water as specified and directed by the department. (Total thickness of two coats is maximum 1.5mm)			
	(i)	Thickness = 1.5 mm thick	sqm	581.53	
12.2	<b>13.4</b>	<b>WALL PAINTING</b>			
	13.4.1	Wall painting (two coats) with acrylic emulsion paint approved brand and manufacture (Asian paint/ Berger paint/ ICI paint/ J & N paint/ Nerolac) on newsurface to give an even shade after throughly brushing the surfaces free from mortar droppings and other foreign matter and sand papered smooth.			

		(a).Acrylic Emulsion Paint approved brand and manufacture (Asian paint/ Berger paint/ ICI paint/ J & N paint/ Nerolac)	sqm	439.62		
12.3	13.4.5	Extra over item no 13.4.1 above for painting with acrylic emulsion paint of approved brand and manufacture (Asian paint/ Berger paint/ ICI paint/ J & N paint/ Nerolac) on ceiling and on sloping roof.				
		(i).Acrylic Emulsion Paint approved brand and manufacture (Asian paint/ Berger paint/ ICI paint/ J & N paint/ Nerolac)	sqm	75.03		
12.4	<b>13.7</b>	<b>PAINTING ON STEEL AND OTHER METAL SURFACE</b>				
	13.7.2	Applying primary coat over new steel and other metal surface over 100m in width or girth after preparing the surface by thoroughly cleaning oil,grease, dirt and other foreign matter and scoured with wire brushes, fine steels, wood scrapers and sand paper.				
		a). With ready mixed "red-lead/ red oxide" primer.	sqm	59.40		
12.5	13.7.4	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.				
		(i).Surfaces over 100mm in width or girth.				
		a). General purpose (Asian paint/ Berger paint/ ICI paint/ J & N paint/ Nerolac).	sqm	59.40		
12.6	<b>13.9</b>	<b>SPECIAL WEATHER PROOF COLOURING</b>				
	13.9.5	Finishing wall with water proofing weather coat smooth anti-fungal exterior painting of Ace brand of Asian Paints and of required shade on old/new wall surface after cleaning and clearing the surface etc. including scaffolding complete as directed at all levels (two coats)	sqm	141.91		
<b>13</b>	<b>DOOR AND WINDOW FITTINGS</b>					
13.1	<b>15.2</b>	<b>ALUMINIUM FITTINGS</b>				
	15.2.1	Supplying, fitting, fixing anodised aluminium fittings of approved make, reasonably smooth, free from sharp edges and corners, flaws and other defects and with counter sunk holes for screws including necessary aluminium screws etc. complete.( anodised to bright natural matt & satin finished )				
13.1.1	A	Sliding door bolts				
	(ii)	250mm x 16mm sliding door bolt.	Each	6		
13.2	B	Tower bolt				
	(iii)	200mm x 10mm tower bolt.	Each	20		
13.3	C	Door handles				
		150 mm	Each	20		
13.4		l) Hydraulic door closure	Each			
13.5		t) Door stopper with rubber stopper	Each			
<b>14</b>	<b>STEEL AND IRON WORKS</b>					
14.1	<b>18.1</b>	<b>REINFORCEMENT</b>				
	18.1.1	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. (No extra measurement for lap, hook, chair, anchor etc. will be entertained in the measurement as they are included in the rate) (Upto 1st floor level)				
		b) Other ISI approved TMT reinforcement bar (SAI/BISCON/THERMAX)	Qty	40.96		
14.2	<b>18.3</b>	<b>ROOF TRUSS</b>				

	18.3.2	Providing, fitting, hoisting and fixing of roof trusses fabricated out of combination of any two or all of the following sections (i) Square section (ii) Rectangular Hollow section of specification RSH/SHS and (iii) M.S. circular hollow section of Grade 210 including purlins, bottom runners and providing M.S. cleat, M.S. angle base plank, bolts and nuts with red oxide primer including fitting bottom runner and cleat etc. for fixing ceiling joist as per design complete as directed as per specifications.				
	(b)	Using other ISI marked approved brand tube	Qtl	31.94		
14.3	<b>18.7</b>	<b>DOOR FRAMES</b>				
	18.7.2	Providing, fitting and fixing powder coated pressed steel door frame made of 1.25mm/ 1.6mm thick sheet of various sizes with necessary hinge jamb, lock jamb, head and steel base ties at the bottom of the frame. The whole frame shall be welded or rigidly fixed together by mechanical means with base ties of pressed mild steel angle of size 20x20x1.25mm thick. Frame to be filled up with 1:4:8 P.C.C. after fitting the frame with brick/concrete works etc. complete as directed by the department for all levels. (P.C.C. to be measured and paid for separately).				
		(a) 1.25mm thick sheet				
		(iii) Size 125mm x 60mm (Single rebate)	R.m	54.75		
<b>15</b>		<b>PLINTH PROTECTION WORKS AND PERIPHERY</b>				
15.1	19.2	Providing plinth protection with bricks flat laid in cement mortar 1: 4 and finished with 15mm thick cement plaster in prop. 1:2 with a floating coat of neat cement finish.	sqm	30.36		
15.2	19.5	Providing drain with brick work in cement mortar in proportion 1:5 with half brick thick side walls and 100mm thick C.C (1:3:6) base over one brick flat soling including 15mm thick cement plastering in prop. 1:3 finished with a floating coat of cement slurry as directed with necessary shuttering for sides and earth work in excavation of foundation trenches and refilling the sides after completion of work etc. as specified.				
		ii). 300mm wide and average 250mm deep with bed slope 1 in 150 with initial depth of 100mm.	R.m	71.66		
<b>16</b>		<b>ANTI TERMITE TREATMENT</b>				
16.1	<b>26</b>	<b>PRE CONSTRUCTION ANTI - TERMITE TREATMENT</b>				
	26.1.1	Pre construction anti - termite treatment at the bottom of foundation pits and walls on either side up to a height of 300mm from bottom of the excavation made for column plinth beam, wall, trenches etc. by applying the emulsion @ 5 (five) litres per square meter of the surface area before starting construction work (supplying of necessary tools and accessories by the contractor) as per the direction of the Department complete.				
		a) with aqueous emulsion having concentration 1:19 with chloropyrophose solution (tricel or equivalent) and water, i.e. 1% solution.	Sqm	27.00		
<b>B</b>		<b>SANITARY WORKS</b>				
1	1.1	Providing fitting and fixing vitreous water closet squatting pan (Indian type W.C Orissa pattern) with all fittings and fixtures complete including cutting and making good to the walls and floors wherever required. (Flushing Cistern to be paid separately)				
	1.1.3	Vitreous water closet squatting pan Indian type W.C Orissa pattern of size 580 x 450 mm				
		a) White				
		ii) Hindware make	Each	1		
2	1.5	Supplying, fitting and fixing PVC flushing cistern with all internal fittings with CI brackets including fitting and fixing standard size CP flush pipe, union clamps etc. complete as directed and specified (pipes will be measured separately)				

		ii) Hindware make				
		a) White				
		(i) Slek+ PVC cistern	Each	1		
3	1.13	Providing vitreous China wash basin with CI/MS brackets, C.P brass chain with plug,PVC waste pipe including painting of fittings and brackets, cutting and making good the walls wherever required. (Pillar cock stop cocks, waste coupling are to be paid separately)				
	1.13.2	BASIN (without pedestal)				
		(B) Hindware Make				
		(a) White				
		(i) Alto 510 x 400 (Cat. No.10091)	Each	1		
4	1.18	Providing fitting and fixing Mirror with plastic frame of size 500x400mm complete as directed and specified.	Each	1		
5	1.22	Providing, fitting and fixing CP soap tray / soap dish complete as directed and specified.				
		(i) Jaquar Make				
		(a) Continental (Cat.No.ACN-1331N)	Each	1		
6	1.24	Providing, fitting and fixing CP towel rail complete as directed and specified.				
		(b) Sona make				
		(iii) Towel rail diplomat 600mm long (Cat.No.TR-0605)	Each	1		
7	1.26	Providing, fitting and fixing Chrome Plated towel ring complete as directed and specified.				
		(b) Sona make				
		(i) Towel ring round (Cat.No.TR-06051)	Each	1		
8	1.27	Providing, fitting and fixing Chrome Plated robe hook complete as directed and specified.				
		(b) Agmeco make				
		(vi) Dolfec (Cat.No.DE-00211)	Each	1		
9	1.32	Providing, fitting and fixing Chrome Plated waste coupling complete as directed and specified.				
		(b) Sona				
		(i) Rupa 32mm (HT/ FT) (Cat.No.WS-0801)	Each	1		
10	1.34	Providing, fitting and fixing Chrome Plated bottle trap pipe complete as directed and specified.				
		(a) Sona make				
		(i) Pipe for bottle trap 300mm long (Cat. No.BT-0761)	Each	1		
11	1.37.1	Supplying, fitting and fixing PVC pipes of 6 Kg/cm <sup>2</sup> (Supreme/Prince) or other ISI approved including joining ,fitting and fixing wiyh clamps etc.as necessary complete at all levels including below G.L as directed and specified.				
	(a)	<b>In exposed surfaces or in trenches.</b>				
	(ii)	110mm dia.	R.m	8.00		
12	1.37.3	Supplying fitting and fixing 87.5 degree PVC bend with door of (Supreme/Prince) or other ISI approved including joining , fitting and fixing etc. as necessary complete at all levels including below G.L. as directed and specified.				
	(a)	<b>In exposed surfaces or in trenches.</b>				
	(ii)	110mm dia.	Each	2		
13	1.37.6	Supplying fitting and fixing PVC single tee with door of (Supreme/Prince) or other ISI approved including joining fitting and fixing etc. as necessary complete at all levels including below G.L. as directed and specified.				
	a)	<b>In exposed surfaces or in trenches.</b>				
	(ii)	110mm dia.	Each	2		
14	1.39	Providing fitting and fixing PVC cowl of ISI make complete as directed and specified.				
	(ii)	110mm dia. PVC cowl of ISI make	Each	1		
15	1.42	C.P. Grating				

	(ii)	110 mm dia	Each	2		
<b>C</b>		<b>INTERNAL WATER SUPPLY WORKS</b>				
1	3.1.6	Providing and fixing Chlorinated Polyvinyle Chloride (CPVC) Pipes, having thermal stability for hot and cold water supply including all CPVC plain and brassthreaded fittings i/c fixing the pipe with clamps at 1.00m spacing. This includes jointing of pipe				
1.1	<b>A</b>	<b>In exposed surfaces or in trenches.</b>				
1.1.1	(c)	25 mm nominal outer dia pipe	R.m	6.00		
1.1.2	(f)	50 mm nominal outer dia pipe	R.m	6.00		
1.2	<b>B</b>	<b>Concealed pipe with cutting chases &amp; making good the walls</b>				
1.2.1	(a)	15 mm nominal outer dia pipe	R.m	4.00		
1.2.2	(b)	20 mm nominal outer dia pipe	R.m	4.00		
2	3.2.1	Supplying fitting and fixing C.P. bib cock 15mm dia of approved brand directed and specified. (G.I. & C.P pipes will be measured separately)				
	<b>(IV)</b>	<b>Agmeco brand</b>				
	(v)	Bib Cock Two way with Flange CAT No.CC 00203/CATNo.CN00203	Each	1		
3	3.3.2	Supplying fitting and fixing chrome plated (C.P.) stop-cock of approved brand and size as mentioned below as directed and specified. (G.I. & C.P pipes will be measured and paid separately)				
	<b>(II)</b>	<b>Agmeco Brand</b>				
3.1	(a)	15mm dia (Male/ Female )	Each	2		
3.2	(b)	15mm dia (Concealed )	Each	1		
4	3.5.1	Supplying and fitting fixing C.P. pillar cock of 15mm dia of approved brand as specified and directed.				
	<b>(III)</b>	<b>Agmeco (classic)</b>				
	(a)	Flat	Each	1		
<b>TOTAL COST OF BUILDING CIVIL WORKS</b>						
					<b>SAY</b>	

VALUE ADDITION BUILDING						
ITEM NO.		DESCRIPTION OF WORK	UNIT	QTY.	RATE IN RUPEES	AMOUNT IN
BOQ	APWD					
<b>1</b>		<b>EARTH WORK</b>				
1.1	1.1	Earthwork in excavation 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 in the following classification of soils including bailing out water where necessary as directed and specified.				
	(A)	Up to a depth of 2.00m below the existing ground level.				
	(a)	In ordinary soil	cum	57.62		
1.2	1.3(c)	Earth / Sand filling in plinth in layer not more than 150 mm thick including necessary, carriage, watering, ramming etc. complete as directed and specified including payment of land compensation, Forest Royalty, Sales Tax and other duties and taxes as may be necessary. (c) with river sand or silt (predominantly non plastic) by truck carriage including loading and unloading	cum	130.82		
<b>2</b>		<b>NOMINAL MIX. ( P.C.C. WORKS )</b>				
2.1	2.1.1	Plain cement concrete works with coarse aggregate of sizes 13mm to 32mm in foundation bed for footings, tie beams, 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).				
2.1.1	a)	In prop. 1 cement : 3 sand : 6 coarse aggregate by volume	cum	26.40		
2.2	2.1.3	Providing and laying 25mm thick damp proof course with cement concrete in prop 1: 1.5: 3 with graded stone agg. Of 10mm down nominal size including providing approved damp proof admixture in proportion as recommended by the manufacturer including curing etc. complete as directed.	sqm	10.55		
<b>3</b>		<b>REINFORCED CEMENT CONCRETE WORKS</b>				
3.1	2.2.1	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				
3.1.1	(A)	In substructure up to plinth level				
	(N)	Foundation, footing, columns with base tie and plinth beam, pile cap, base slab, retaining walls, walls of septic tank, inspection pit and the like and other works not less than 100mm thick up to plinth level.				
	(b)	Without using admixture, plasticiser				
	(b)	M20 grade concrete	cum	18.79		
3.2	(B)	In super structure from plinth level up to 1st floor level.				
3.2.1	(ii)	Columns, pillars, posts, struts, suspended floor, roof, landing, shelf and support, balcony, lintel, sill band, beam, girder, bressumer, cantilever, staircase (except spiral staircase and landing ) including preparing the top surface and finishing of nosing.				
	(N)	Without using admixture, plasticiser				
	(b)	M20 grade concrete	cum	22.87		
<b>4</b>		<b>PLYBOARD SHUTTERING (FORMWORK)</b>				
4.1	3.2.1	Providing form work of 12mm thick Plywood Board so as to give a rough finish including centering, shattering, 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:				

4.1.1	3.2.1.1	Columns, Pillars, Posts & Strut of square/ rectangular/ polygonal in plan or any shape like Tee/L etc. having plane vertical face	sqm	175.30		
4.1.2	3.2.1.2	Sides and Soffits of Beams, beam haunchings, cantilever girders, bressumers, lintels and horizontal ties. (a) For depth not exceeding 1.0M.	sqm	177.62		
4.1.3	3.2.1.3	Flat Surfaces such as soffits of suspended floors, roofs, landings, cantilever slabs, chajjas, balconies and the like. (a) Floors etc. upto 200mm in thickness.	sqm	99.12		
<b>5</b>	<b>MASONARY WORK</b>					
5.1	4.1.1	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.	sqm	351.94		
5.2	4.1.4	Brick work in cement mortar with 1st class brick including racking out joints and curing complete as directed. (I) In Sub-structure upto plinth level including dewatering if necessary (d) In proportion 1:6	cum	18.29		
5.3	4.1.8	1st class brick nogged wall in cement mortar including racking out joints and curing complete as directed in super structure above plinth up to 1st floor level (protruding M.S rod/Tor steel of column to be embedded in cement mortar and will be measured and paid separately) (A) 112 mm thick brick wall (b) In cement mortar in proportion 1:5.(1 cement:5 sand)	sqm	190.86		
<b>6</b>	<b>FLOORING</b>					
6.1	5.7.2.1	Providing VITRIFIED floor tiles of approved quality of specified size, shape and thickness not less than 18mm on floors, skirtings, risers and treads of steps over 15 mm thick base of cement mortar in prop. 1:3 (1 cement : 3 coarse sand ) including cutting where necessary finished with flush pointing with Fix-A-Tile (Choksey/Sika/Pedelite/Rouf) / white cement slurry mixed with approved pigment to match shade of tiles, mixed with approved pigment to match the shade of the tiles, complete at all levels as specified and directed. (Coloured pigment should be in conformity with colour of tiles and as approved and directed by the Department) a) Normal range Somany/ Orient/Nitco /Varmora/VITA/ Marbitto/ Make (ii) Of size 600mmx600mm and above	sqm	145.35		
6.2	5.3.2	Brick-on-flat floor with 1st class brick and grouted with cement mortar in prop. 1:4 (1 cement : 4 sand) including 15mm thick cement plastering in proportion 1:2 (1 cement : 2 sand) finishing with a floating coat of neat cement finish using cement slurry @ 2.75 kg. per sq. metre of floor area and curing complete.	sqm	145.35		
	5.1	<b>CEMENT CONCRETE FLOORING</b>				
6.3	5.1.4	65 mm thick cement concrete floor consisting of 50 mm under layer of cement concrete in prop. 1:3:6 (1 cement : 3 coarse sand : 6 coarse aggregate of 25mm and down) and 15 mm thick wearing layer in cement concrete in prop. 1:1:2 (1 cement : 1 coarse sand : 2 coarse aggregate of size 10mm down) laid in panels and finished with a floating coat of neat cement finish (using cement slurry for bond @ 2.75 kg. per square metre of floor area) including curing etc. complete as directed.	sqm	36.72		
<b>7</b>	<b>CEMENT PLASTERING</b>					
7.1	6.2.2	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	sqm	286.44		
7.2	6.2.3	20 mm thick Cement plaster in two coats on single or half brick walls for interior plastering up to 1st floor level including arises, internal rounded angles, chamfers and / or rounded angles not exceeding 80mm in girth and finished even and smooth including curing complete as directed.				

		A) On rough side (backing coat 15 mm and finishing coat 5mm thick) b) In cement mortar 1:4	sqm	188.73		
7.3	6.2.5	Extra over item no 6.2.1 to 6.2.3 for plastering on ceiling and soffits of stairs up to 1st floor level (instead of plastering on walls) including curing complete as directed.	sqm	99.12		
<b>8</b>	<b>ROOFING</b>					
8.1	8.1.35	Providing Pre Painted Galvalume Sheet Roofing (PPGL) at all levels including fitting and fixing self drilling, self tapping screws complete (Roof trusses, purlins etc. to be measured and paid separately.) TATA Blue scope/ Dyna roof / Durakolor /Wonder Roof or equivalent as directed by the Departement (ii) 0.45 mm thick	sqm	308.49		
8.2	8.1.36	Providing Pre Painted Galvalume Sheet (PPGL) accessories ( Ridges / Valley / Gutter / Flashing) at all levels including fitting and fixing self drilling, self tapping screws complete. TATA Blue scope/ Dyna roof / Durakolor /Wonder Roof or equivalent as directed by the Departement (ii) 0.45 mm thick	R.m	31.80		
<b>9</b>	<b>WOOD WORKS</b>					
9.1	9.18.1	Providing, fitting and fixing factory made Santro Flush door shutters having core & cross bands fabricated from seasoned 1st class timber, 25mm core battens, 2.5mm to 3.5mm uniformly thick cross bands, styles & rails made from hardwood timber of width not less than 50mm, fixed to the door frames (chowkath) with necessary hinges, screws, bolts etc. as specified and directed at all levels (Door fixtures and fittings to be measured and paid separately.) (b) 35mm thick	sqm	10.71		
<b>10</b>	<b>GRILL</b>					
10.1	10.2	Providing, fitting and fixing M.S. grill of required pattern for windows/ clerestory windows/ opening with M.S. flats at required spacing in frame all round, square or round M.S. bars with round headed bolts and nuts or screws. I. Plain grill (c) Fixed to Brickwork/P.C.C/R.C.C.	kg.	1,102.00		
<b>11</b>	<b>ALUMINIUM WINDOWS</b>					
11.1	11.1.2	Providing, fitting and fixing anodised aluminium sliding windows and ventilators of standard sections of approved brand without horizontal glazing bars, joints mitred and welded (manufactured to relevant IS specifications) and providing and fixing handles, angle cleat, rubber gasket, roller, bolting device, locking arrangements, screws etc as required complete as specified and directed for all levels.				
11.1.1	(a)	2 track sliding windows (i) 6mm clear glass	sqm	0.00		
11.1.2	(b)	3 Track sliding window (i) 6mm clear glass	Sq.m	55.08		
<b>12</b>	<b>PAINTING</b>					
	<b>13.3</b>	<b>PLASTER OF PARIS &amp; WALL PUTTY</b>				
12.1	13.3.4	Providing two coats of Birla White Wall Care Putty (Water Resistant White Cement based putty for concrete/ mortar walls and ceiling both internal and external) after removing all loosely adhering material from the wall surface with the help of emery stone, putty blade or wire brush and moistening the wall with sufficient quantity of clean water as specified and directed by the department. (Total thickness of two coats is maximum 1.5mm) (i) Thickness = 1.5 mm thick	sqm	475.17		
	<b>13.4</b>					
12.2	13.4.1	Wall painting (two coats) with acrylic emulsion paint approved brand and manufacture (Asian paint/ Berger paint/ ICI paint/ J & N paint/ Nerolac) on new surface to give an even shade after thoroughly brushing the surfaces free from mortar droppings and other foreign matter and sand papered smooth. (a).Acrylic Emulsion Paint approved brand and manufacture (Asian paint/ Berger paint/ ICI paint/ J & N paint/ Nerolac)	sqm	286.44		
12.3	13.4.5	Extra over item no 13.4.1 above for painting with acrylic emulsion paint of approved brand and manufacture (Asian paint/ Berger paint/ ICI paint/ J & N paint/ Nerolac) on ceiling and on sloping roof.				



		(i).Acrylic Emulsion Paint approved brand and manufacture (Asian paint/ Berger paint/ ICI paint/ J & N paint/ Nerolac)	sqm	99.12		
	<b>13.7</b>	<b>PAINTING ON STEEL AND OTHER METAL SURFACE</b>				
12.4	13.7.2	Applying primary coat over new steel and other metal surface over 100m in width or girth after preparing the surface by thoroughly cleaning oil,grease, dirt and other foreign matter and scoured with wire brushes, fine steels, wood scrapers and sand paper. a). With ready mixed "red-lead/ red oxide" primer.	sqm	110.16		
12.5	13.7.4	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.  (i).Surfaces over 100mm in width or girth. a). General purpose (Asian paint/ Berger paint/ ICI paint/ J& N paint/ Nerolac).	sqm	110.16		
	<b>13.9</b>	<b>SPECIAL WEATHER PROOF COLOURING</b>				
12.6	13.9.5	Finishing wall with water proofing weather coat smooth antifungal exterior painting of Ace brand of Asian Paints and ofrequired shade on old/new wall surface after cleaning and clearing the surface etc. including scaffolding complete as directed at all levels (two coats)	sqm	188.73		
<b>13</b>		<b>DOOR AND WINDOW FITTINGS</b>				
	<b>15.2</b>	<b>ALUMINIUM FITTINGS</b>				
13.1	15.2.1	Supplying, fitting, fixing anodised aluminium fittings of approved make, resonably smooth, free from sharp edges and corners, flaws and other defects and with counter sunk holes for screws including necessary aluminium screws etc. complete.( anodised to bright natural matt & satin finished )				
13.1.1	A	Sliding door bolts				
	(ii)	250mm x16mm sliding door bolt.	Each	3		
13.2	B	Tower bolt				
	(iii)	200mm x 10mm tower bolt.	Each	8		
13.3	C	Door handles				
		150 mm	Each	8		
<b>14</b>		<b>STEEL AND IRON WORKS</b>				
	<b>18.1</b>	<b>REINFORCEMENT</b>				
14.1	18.1.1	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. (No extra measurement for lap, hook, chair, anchor etc. will be entertained in the measurement as they are included in the rate) (Upto 1st floor level)  b) Other ISI approved TMT reinforcement bar (SAI/BISCON/THERMAX)	Qtl	43.30		
	<b>18.3</b>	<b>ROOF TRUSS</b>				
14.2	18.3.2	Providing, fitting, hoisting and fixing of roof trussesfabricated out of combination of any two or all of the following sections (i) Square section (ii) Rectangular Hollowsection ofspecification RSH/SHS and (iii) M.S. circular hollow section of Grade 210 including purlins, bottom runners and providing M.S. cleat, M.S. angle base plank, bolts and nuts with red oxide primer including fitting bottom runner and cleat etc. for fixing ceiling joist as per design complete as directed as per specifications.				
	(b)	Using other ISI marked approved brand tube	Qtl	40.59		
	<b>18.7</b>	<b>DOOR FRAMES</b>				
14.3	18.7.2	Providing, fitting and fixing powder coated pressed steel door frame made of 1.25mm/ 1.6mm thick sheet of various sizes with necessary hinge jamb, lock jamb, head and steelbase ties at the bottom of the frame. The whole frame shall be welded or rigidly fixed together by mechanical means with base ties of pressed mild steel angle of size 20x20x1.25mmthick. Frame to be filled up with 1:4:8 P.C.C. after fitting the frame with brick/ concrete works etc.complete as directed by the department for all levels. (P.C.C. to be measured and paid for seperately).  (a) 1.25mm thick sheet				
	(iii)	Size 125mm x 60mm (Single rebate)	R.m	21.90		

15		PLINTH PROTECTION WORKS AND PERIPHERY			
15.1	19.2	Providing plinth protection with bricks flat laid in cement mortar 1: 4 and finished with 15mm thick cement plaster inprop. 1:2 with a floating coat of neat cement finish.	sqm	31.68	
15.2	19.5	Providing drain with brick work in cement mortar in proportion 1:5 with half brick thick side walls and 100mm thick C.C (1:3:6) base over one brick flat soling including 15mm thick cement plastering in prop. 1:3 finished with a floating coat of cement slurry as directed with necessary shuttering for sides and earth work in excavation of foundation trenches and refilling the sides after completion of work etc. as specified.			
		ii). 300mm wide and average 250mm deep with bed slope 1 in 150 with initial depth of 100mm.	R.m	74.60	
16		ANTI TERMITE TREATMENT			
26		PRE CONSTRUCTION ANTI - TERMITE TREATMENT			
16.1	26.1.1	Pre construction anti - termite treatment at the bottom of foundation pits and walls on either side up to a height of 300mm from bottom of the excavation made for column plinth beam, wall, trenches etc. by applying the emulsion @5 (five) litres per square meter of the surface area before starting construction work (supplying of necessary tools and accessories by the contractor) as per the direction of the Department complete.			
		a) with aqueous emulsion having concentration 1:19 with chloropyrophose solution (trichel or equivalent) and water, i.e. 1% solution.	Sqm	27.00	
		<b>TOTAL COST OF BUILDING CIVIL WORKS</b>			
					<b>SAY</b>

## GROW HOUSE

1. Area of Ground floor = 31.00 M<sup>2</sup>.

Item No.		Description of work	Unit	Qty.	Rate in Rupees	Amount in Rupees
BOQ	APWD					
1	1.3	Earth/ sand filling in plinth in layers not more than 150mm thick including necessary carriage, watering, ramming etc. complete as directed and specified including payment of land compensation, forest royalty, sales tax and other duties and taxes as may be necessary.				
	(b)	With hill sand obtained by truck carriage loading and unloading, and carriage to the site of work.	Cum	15.58		
2	N.S.	Bhaluka bamboo dressed post 75mm to 100mm dia driven at least 750mm under ground and tied with wire or cane @ 1500 to 2000 c/c at least 3000 TO 4500 above plinth level.	Each	14.00		
3	N.S.	Spilt bamboo diagonally woven tarja wall with fair side exposed to weather, tied with necessary bamboo kamis on both sides @300mm apart tied with galvanised wire/cane slit and fixed to bamboo posts etc complete as directed including making provision for doors and windows of bamboo tarja on bamboo frames .	Sq.m	74.10		
4	8.1.11	Providing thatch roofing with sun grass (Ullu) in layer of 75 mm thick with half spilt bamboo fillet and tying with galvd. wire complete.				
	(b)	150 mm thick.	Sqm	39.38		
5	8.1.12	Providing and laying thatching, capping to ridge and hip with new sun grass of 75 mm thick (fine work) stiffened with bamboo slips of size 30mm x 6mm and tied with galvd. tying wire complete.	RM	8.95		
6	8.1.15	Providing and laying bamboo slip jaffri of meshes not exceeding 63mm x 38mm including tying to the purlins and rafters with cane slip or galvd. tying wire.				
	(a)	Fine work	Sqm	39.38		
7	8.1.16	Providing single layer of bamboo mat lining over roof frame.	Sqm	39.38		
8	8.1.17	Providing bamboo maruli ties, purlins, rafters including tying with cane sling / Galvd. tying wire.				
	(a)	(a) With Bhaluka bamboo.	RM	107.40		
9	8.1.18	Providing bamboo roof truss with whole ruas bam boo and kamis, ruas placed at 150 mm apart and kamis 200mm to 230mm apart including tying all members with galvd tying wire.	Sqm	9.00		
10	8.1.19	Providing bamboo jaffri over thatch roof with 200mm sq mesh bamboo slips of 35mm width	Sqm	39.38		
11	8.1.21	Providing bamboo roof frame with kami of size 30mm x 6mm.	Sqm	39.38		
12	5.3.1	Brick-on-edge floor with 1st class brick and grouted with cement mortar in prop.1:4 (1 cement : 4 sand) including cement pointing in proportion 1:1 (1 cement :1 sand) finishing and curing complete.	Sq.m	31.00		
<b>TOTAL COST OF BUILDING CIVIL WORKS</b>						
					<b>SAY</b>	

## DEMO HALL

1. Area of Ground floor = 57.21 M<sup>2</sup>.

Item No.		Description of work	Unit	Qty.	Rate in Rupees	Amount in Rupees
BOQ	APWD					
1	1.3	Earth/ sand filling in plinth in layers not more than 150mm thick including necessary carriage, watering, ramming etc. complete as directed and specified including payment of land compensation, forest royalty, sales tax and other duties and taxes as may be necessary.				
	(b)	With hill sand obtained by truck carriage loading and unloading, and carriage to the site of work.	Cum	25.58		
2	N.S.	Bhaluka bamboo dressed post 75mm to 100mm dia driven at least 750mm under ground and tied with wire or cane @ 1500 to 2000 c/c at least 3000 TO 4500 above plinth level.	Each	24.00		
3	N.S.	Spilt bamboo diagonally woven tarja wall with fair side exposed to weather, tied with necessary bamboo kamis on both sides @300mm apart tied with galvanised wire/cane slit and fixed to bamboo posts etc complete as directed including making provision for doors and windows of bamboo tarja on bamboo frames .	Sq.m	94.44		
4	8.1.11	Providing thatch roofing with sun grass (Ullo) in layer of 75 mm thick with half spilt bamboo fillet and tying with galvd. wire complete.				
	(b)	150 mm thick.	Sqm	162.96		
5	8.1.12	Providing and laying thatching, capping to ridge and hip with new sun grass of 75 mm thick (fine work) stiffened with bamboo slips of size 30mmx 6mm and tied with galvd. tying wire complete.	RM	23.88		
6	8.1.15	Providing and laying bamboo slip jaffri of meshes not exceeding 63mm x 38mm including tying to the purlins and rafters with cane slip or galvd. tying wire.				
	(a)	Fine work	Sqm	162.96		
7	8.1.16	Providing single layer of bamboo mat lining over roof frame.	Sqm	162.96		
8	8.1.17	Providing bamboo maruli ties, purlins, rafters including tying with cane sling / Galvd. tying wire.				
	(a)	(a) With Bhaluka bamboo.	RM	210.48		
9	8.1.18	Providing bamboo roof truss with whole ruas bam boo and kamis, ruas placed at 150 mm apart and kamis 200mm to 230mm apart including tying all members with galvd tying wire.	Sqm	32.72		
10	8.1.19	Providing bamboo jaffri over thatch roof with 200mm sq mesh bamboo slips of 35mm width	Sqm	162.96		
11	8.1.21	Providing bamboo roof frame with kami of size 30mm x 6mm.	Sqm	162.96		
12	5.3.1	Brick-on-edge floor with 1st class brick and grouted with cement mortar in prop.1:4 (1 cement : 4 sand) including cement pointing in proportion 1:1 (1 cement :1 sand) finishing and curing complete.	Sq.m	57.21		
<b>TOTAL COST OF BUILDING CIVIL WORKS</b>						
					<b>SAY</b>	

TRAINING & OFFICE BUILDING						
ITEM NO.		DESCRIPTION OF WORK	UNIT	QTY.	RATE IN RUPEES	AMOUNT IN
BOQ	APWD					
<b>1</b>		<b>CIVIL WORKS</b>				
<b>1</b>		<b>EARTH WORK</b>				
1.1	1.1	Earthwork in excavation 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 in the following classification of soils including bailing out water where necessary as directed and specified.				
	(A)	Up to a depth of 2.00m below the existing ground level.				
	(a)	In ordinary soil	cum	25.63		
1.2	1.3(c)	Earth / Sand filling in plinth in layer not more than 150mm thick including necessary, carriage, watering, ramming etc. complete as directed and specified including payment of land compensation, Forest Royalty, Sales Tax and other duties and taxes as maybe necessary. (c) with river sand or silt (predominantly non plastic) by truck carriage including loading and unloading	cum	25.92		
<b>2</b>		<b>NOMINAL MIX. ( P.C.C. WORKS )</b>				
2.1	2.1.1	Plain cement concrete works with coarse aggregate of size 13mm to 32mm in foundation bed for footings, tie beams 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).				
2.1.1	a)	In prop. 1 cement : 3 sand : 6 coarse aggregate by volume	cum	6.14		
2.2	2.1.3	Providing and laying 25mm thick damp proof course with cement concrete in prop 1: 1.5: 3 with graded stone agg. Of 10mm down nominal size including providing approved damp proof admixture in proportion as recommended by the manufacturer including curing etc. complete as directed.	sqm	3.20		
<b>3</b>		<b>REINFORCED CEMENT CONCRETE WORKS</b>				
3.1	2.2.1	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				
3.1.1	(A)	In substructure up to plinth level				
	(N)	Foundation, footing, columns with base tie and plinth beam pile cap, base slab, retaining walls, walls of septic tank inspection pit and the like and other works not less than 100mm thick up to plinth level.				
	(b)	Without using admixture, plasticiser				
	(b)	M20 grade concrete	cum	7.17		
3.2	(B)	In super structure from plinth level up to 1st floor level.				
3.2.1	(ii)	Columns, pillars, posts, struts, suspended floor, roof, landing, shelf and support, balcony, lintel, sill band, beam, girder, bressumer, cantilever, staircase (except spiral staircase and landing ) including preparing the top surface and finishing of nosing.				
	(N)	Without using admixture, plasticiser				
	(b)	M20 grade concrete	cum	9.12		

4		PLYBOARD SHUTTERING (FORMWORK)			
4.1	3.2.1	Providing form work of 12mm thick Plywood Board so as to give a rough finish including centering, shattering, 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:			
4.1.1	3.2.1.1	Columns, Pillars, Posts & Strut of square/ rectangular/ polygonal in plan or any shape like Tee/L etc. having plane vertical face	sqm	69.15	
4.1.2	3.2.1.2	Sides and Soffits of Beams, beam haunchings, cantilever girders, bressumers, lintels and horizontal ties.			
		(a) For depth not exceeding 1.0M.	sqm	70.68	
4.1.3	3.2.1.3	Flat Surfaces such as soffits of suspended floors, roofs, landings, cantilever slabs, chajjas, balconies and the like.			
		(a) Floors etc. upto 200mm in thickness.	sqm	32.04	
5		MASONRY WORK			
5.1	4.1.1	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.	sqm	81.86	
5.2	4.1.4	Brick work in cement mortar with 1st class brick including racking out joints and curing complete as directed.			
5.2.1		(I) In Sub-structure upto plinth level including dewatering if necessary			
		(d) In proportion 1:4	cum	6.19	
5.3	4.1.8	1st class brick nogged wall in cement mortar including racking out joints and curing complete as directed in super structure above plinth up to 1st floor level (protruding M.S rod/Tor steel of column to be embedded in cement mortar and will be measured and paid separately)			
		(A) 112 mm thick brick wall			
		(b) In cement mortar in proportion 1:5.(1 cement:5 sand)	sqm	61.36	
6		FLOORING AND FLOOR FINISH			
6.1	5.7.1.2	Providing polished ceramic wall tiles of approved quality, size, shape and thickness not less than 8mm on walls and skirtings over cement mortar bed 10 mm thick in prop. 1:3 (1 cement : 3 coarse sand ) including cutting where necessary finished with flush pointing with Fix-A-Tile (Choksey / Sika / Pedelite / Rouf) /white cement slurry mixed with approved pigment to match shade of tiles complete at all levels as specified and directed (Cement plastering to be measured and paid separately) (Coloured pigment should be in conformity with colour of tiles and as approved and directed by the Department). (Wall means both interior and exterior walls).			
		b) Executive range Somany/Orient/Nitco/Asian Make			
		i) Of size 200mmx300mm and above	sqm	20.97	
6.2	5.7.2.1	Providing VITRIFIED floor tiles of approved quality of specified size, shape and thickness not less than 18mm on floors, skirtings, risers and treads of steps over 15 mm thick base of cement mortar in prop. 1:3 (1 cement : 3 coarse sand ) including cutting where necessary finished with flush pointing with Fix-A-Tile (Choksey/Sika/Pedelite/Rouf) / white cement slurry mixed with approved pigment to match shade of tiles, mixed with approved pigment to match the shade of the tiles, complete at all levels as specified and directed. (Coloured pigment should be in conformity with colour of tiles and as approved and directed by the Department)			
		a) Normal range Somany/Orient/Nitco/Varmora/VITA/ Marbitto/ Make			
	(ii)	Of size 600mmx600mm and above	sqm	53.10	
5.11	<b>ANTISKID TILES</b>				

6.3	5.11.1	Providing Antiskid Tiles of approved quality size, shapenot less than 8mm on floor, skirting over a cement mortar bed 15mm thick of 1:3 (1 cement: 3 coarse sand)approved make fix with Fix-A-Tile (Choksey/Sika/Pedelite/Rouf)/ white cement complete at all level as specified and directed.				
		<b>(A) CERAMIC</b>				
		i)Normal range (Sizes 300 mm x 300mm and above)				
		(a)Orient made: Galaxy Brown, Galaxy crema,Galaxy Pink, Galaxy Green, Pulsar Beige, Pulsar Blue, Pulsar Dove, Pulsar Pink, Burj Brown, Burj Green, Burj Slate	sqm	4.50		
	5.1	<b>CEMENT CONCRETE FLOORING</b>				
6.4	5.1.4	65 mm thick cement concrete floor consisting of 50 mmunder layer of cement concrete in prop. 1:3:6 (1cement : 3 coarse sand : 6 coarse aggregate of 25mm and down) and 15 mm thick wearing layer in cement concrete in prop. 1:1:2 (1cement :1 coarse sand : 2 coarse aggregate of size 10mm down) laid in panels and finished with a floating coat of neat cement finish (using cement slurry for bond @ 2.75 kg. per square metre of floor area) including curing etc. complete as directed.	sqm	12.60		
<b>7</b>		<b>CEMENT PLASTERING</b>				
7.1	6.2.2	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	sqm	71.00		
7.2	6.2.3	20 mm thick Cement plaster in two coats on single or half brick walls for interior plastering up to 1st floor levelincluding arises, internal rounded angles,chamfers and / or rounded angles not exceeding 80mm in girth and finished even and smooth including curing complete as directed.				
		A) On rough side (backing coat 15 mm and finishingcoat 5mm thick)				
		b) In cement mortar 1:4	sqm	84.00		
7.3	6.2.5	Extra over item no 6.2.1 to 6.2.3 for plastering oncellingand soffits of stairs up to 1st floor level (instead of plastering on walls) including curing complete as directed.	sqm	33.00		
<b>8</b>		<b>ROOFING</b>				
8.1	8.1.35	Providing Pre Painted Galvalume Sheet Roofing(PPGL) at all levels including fitting and fixing selfdrilling, self tapping screws complete (Roof trusses,purlins etc. to be measured and paid separately.) TATABlue scope/ Dyna roof / Durakolor /Wonder Roof orequivalent as directed by the Departement				
		(ii) 0.45 mm thick	sqm	61.00		
8.2	8.1.36	Providing Pre Painted Galvalume Sheet (PPGL) accessories ( Ridges / Valley / Gutter / Flashing) at all levels including fitting and fixing self drilling, self tapping screws complete. TATA Blue scope/ Dyna roof / Durakolor /Wonder Roofor equivalent as directed by the Departement				
		(ii) 0.45 mm thick	R.m	21.00		
<b>9</b>		<b>WOOD WORKS</b>				
9.1	9.18.1	Providing, fitting and fixing factory made Santro Flush door shutters having core & cross bands fabricated fromseasoned 1st class timber, 25mm core battens, 2.5mm to 3.5mm uniformly thick cross bands, styles & rails made from hardwood timber of width not less than 50mm, fixed to the door frames (chowkath) with necessary hinges, screws, bolt etc. as specified and directed at all levels (Door fixtures and fittings to be measured and paid seperately.)				
		(b) 35mm thick	sqm	6.30		

ITEM NO.		DESCRIPTION OF WORK	UNIT	QTY.	RATE IN RUPEES	AMOUNT IN
BOQ	APWD					
<b>10</b>		<b>GRILL</b>				
10.1	10.2	Providing, fitting and fixing M.S. grill of required pattern for windows/ clerestory windows/ opening with M.S. flats at required spacing in frame all round, square or round M.S. bars with round headed bolts and nuts or screws.				
		I. Plain grill				
		(c) Fixed to Brickwork/P.C.C/R.C.C.	kg.	281.00		
<b>11</b>		<b>ALUMINIUM WINDOWS</b>				
11.1	11.1.2	Providing, fitting and fixing anodised aluminium sliding windows and ventilators of standard sections of approved brand without horizontal glazing bars, joints mitred and welded (manufactured to relevant IS specifications) and providing and fixing handles, angle cleat, rubber gasket roller, bolting device, locking arrangements, screws etc as required complete as specified and directed for all levels.				
11.1.1	(a)	2 track sliding windows				
		(i) 6mm clear glass	sqm	1.08		
11.1.2	(b)	3 Track sliding window				
		(i) 6mm clear glass	Sq.m	12.96		
<b>12</b>		<b>PAINTING</b>				
<b>13.3</b>		<b>PLASTER OF PARIS &amp; WALL PUTTY</b>				
12.1	13.3.4	Providing two coats of Birla White Wall Care Putty (Water Resistant White Cement based putty for concrete/ mortar walls and ceiling both internal and external) after removing all loosely adhering material from the wall surface with the help of emery stone, putty blade or wire brush and moistening the wall with sufficient quantity of clean water as specified and directed by the department. (Total thickness of two coats is maximum 1.5mm)				
	(i)	Thickness = 1.5 mm thick	sqm	84.00		
<b>13.4</b>		<b>WALL PAINTING</b>				
12.2	13.4.1	Wall painting (two coats) with acrylic emulsion paint approved brand and manufacture (Asian paint/ Berger paint/ ICI paint/ J & N paint/ Nerolac) on new surface to give an even shade after thoroughly brushing the surfaces free from mortar droppings and other foreign matter and sand papered smooth.				
		(a). Acrylic Emulsion Paint approved brand and manufacture (Asian paint/ Berger paint/ ICI paint/ J & N paint/ Nerolac)	sqm	71.00		
12.3	13.4.5	Extra over item no 13.4.1 above for painting with acrylic emulsion paint of approved brand and manufacture (Asian paint/ Berger paint/ ICI paint/ J & N paint/ Nerolac) on ceiling and on sloping roof.				
		(i). Acrylic Emulsion Paint approved brand and manufacture (Asian paint/ Berger paint/ ICI paint/ J & N paint/ Nerolac)	sqm	33.00		
<b>13.7</b>		<b>PAINTING ON STEEL AND OTHER METAL SURFACE</b>				
12.4	13.7.2	Applying primary coat over new steel and other metal surface over 100mm in width or girth after preparing the surface by thoroughly cleaning oil, grease, dirt and other foreign matter and scoured with wire brushes, fine steels, wood scrapers and sand paper.				
	a).	With ready mixed "red-lead/ red oxide" primer.	sqm	30.00		
12.5	13.7.4	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.				
		(i). Surfaces over 100mm in width or girth.				
		a). General purpose (Asian paint/ Berger paint/ ICI paint/ J & N paint/ Nerolac).	sqm	30.00		
<b>13.9</b>		<b>SPECIAL WEATHER PROOF COLOURING</b>				



12.6	13.9.5	Finishing wall with water proofing weather coat smooth anti-fungal exterior painting of Ace brand of Asian Paints and of required shade on old/new wall surface after cleaning and clearing the surface etc. including scaffolding complete as directed at all levels (two coats)	sqm	84.00		
ITEM NO.		DESCRIPTION OF WORK	UNIT	QTY.	RATE IN RUPEES	AMOUNT IN
BOQ	APWD					
<b>13</b>		<b>DOOR AND WINDOW FITTINGS</b>				
<b>15.2</b>		<b>ALUMINIUM FITTINGS</b>				
13.1	15.2.1	Supplying, fitting, fixing anodised aluminium fittings of approved make, reasonably smooth, free from sharp edges and corners, flaws and other defects and with counter sunk holes for screws including necessary aluminium screws etc. complete.( anodised to bright natural matt & satin finished )				
13.1.1	A	Sliding door bolts				
	(ii)	250mm x 16mm sliding door bolt.	Each	1		
13.2	B	Tower bolt				
	(iii)	200mm x 10mm tower bolt.	Each	6		
13.3	C	Door handles				
		150 mm	Each	6		
13.4		l) Hydraulic door closure	Each	2		
13.5		t) Door stopper with rubber stopper	Each	2		
<b>14</b>		<b>STEEL AND IRON WORKS</b>				
<b>18.1</b>		<b>REINFORCEMENT</b>				
14.1	18.1.1	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. (No extra measurement for lap, hook, chair, anchor etc. will be entertained in the measurement as they are included in the rate) (Upto 1st floor level)				
		b) Other ISI approved TMT reinforcement bar (SAI/BISCON/THERMAX)	Qtl	5.82		
<b>18.3</b>		<b>ROOF TRUSS</b>				
14.2	18.3.2	Providing, fitting, hoisting and fixing of roof trusses fabricated out of combination of any two or all of the following sections (i) Square section (ii) Rectangular Hollow section of specification RSH/SHS and (iii) M.S. circular hollow section of Grade 210 including purlins, bottom runners and providing M.S. cleat, M.S. angle base plank, bolts and nuts with red oxide primer including fitting bottom runner and cleat etc. for fixing ceiling joist as per design complete as directed as per specifications.				
	(b)	Using other ISI marked approved brand tube	Qtl	17.00		
<b>18.7</b>		<b>DOOR FRAMES</b>				
14.3	18.7.2	Providing, fitting and fixing powder coated pressed steel door frame made of 1.25mm/ 1.6mm thick sheet of various size with necessary hinge jamb, lock jamb, head and steel base tie at the bottom of the frame. The whole frame shall be welded or rigidly fixed together by mechanical means with base ties of pressed mild steel angle of size 20x20x1.25mm thick. Frame to be filled up with 1:4:8 P.C.C. after fitting the frame with brick concrete works etc. complete as directed by the department for all levels. (P.C.C. to be measured and paid for separately).				
	(a)	1.25mm thick sheet				
	(iii)	Size 125mm x 60mm (Single rebate)	R.m	16.00		
<b>15</b>		<b>PLINTH PROTECTION WORKS AND PERIPHERY</b>				
15.1	19.2	Providing plinth protection with bricks flat laid in cement mortar 1: 4 and finished with 15mm thick cement plaster in prop. 1:2 with a floating coat of neat cement finish.	sqm	40.00		

15.2	19.5	Providing drain with brick work in cement mortar in proportion 1:5 with half brick thick side walls and 100mm thick C.C (1:3:6) base over one brick flat soling including 15mm thick cement plastering in prop. 1:3 finished with a floating coat of cement slurry as directed with necessary shuttering for sides and earth work in excavation of foundation trenches and refilling the sides after completion of work etc. as specified.				
		ii). 300mm wide and average 250mm deep with bed slope 1 in 150 with initial depth of 100mm.	R.m	71.80		
ITEM NO.		DESCRIPTION OF WORK	UNIT	QTY.	RATE IN RUPEES	AMOUNT IN
BOQ	APWD					
16		<b>ANTI TERMITE TREATMENT</b>				
	26	<b>PRE CONSTRUCTION ANTI - TERMITE TREATMENT</b>				
16.1	26.1.1	Pre construction anti - termite treatment at the bottom of foundation pits and walls on either side up to a height of 300mm from bottom of the excavation made for column plinth beam, wall, trenches etc. by applying the emulsion @ 5 (five litres per square meter of the surface area before starting construction work (supplying of necessary tools and accessories by the contractor) as per the direction of the Department complete.				
		a) with aqueous emulsion having concentration 1:19 with chloropirophose solution (trichel or euivalent) and water, i.e. 1% solution.	Sqm	14.00		
17		<b>FIRE EXTINGUISHER</b>				
17.1	29.2.2	Supply, Installation, Fixing of DRY CHEMICAL POWDER Fire Extinguisher confirming to IS: 2171 with ISI mark and CO2 cartridge will be confirming to IS: 4947 with ISI mark, Powder will be confirming to IS: 4308 with ISI Mark (10 kg)	Each	2.00		
<b>B</b>		<b>SANITARY WORKS</b>				
1	1.1	Providing fitting and fixing vitreous water closet squatting pan (Indian type W.C Orissa pattern) with all fittings and fixtures complete including cutting and making good to the walls and floors wherever required.(Flushing Cistern to be paid separately)				
	1.1.3	Vitreous water closet squatting pan Indian type W.COrrisa pattern of size 580 x 450 mm				
		a) White				
		ii)Hindware make	Each	2		
2	1.5	Supplying, fitting and fixing PVC flushing cistern with all internal fittings with CI brackets including fitting and fixing standard size CP flush pipe, union clamps etc. complete as directed and specified (pipes will be measured separately)				
		ii) Hindware make				
		a) White				
		(i) Sleek+ PVC cistern	Each	2		
3	1.13	Providing vitreous China wash basin with CI/MS brackets, C.P brass chain with plug,PVC waste pipe including painting of fittings and brackets, cutting and making good the walls wherever required. (Pillar cock, stop cocks, waste coupling are to be paid separately)				
	1.13.2	BASIN (without pedestal)				
		(B) Hindware Make				
		(a) White				
		(i) Alto 510 x 400 (Cat. No.10091)	Each	2		
4	1.18	Providing fitting and fixing Mirror with plastic frame of size 500x400mm complete as directed and specified.	Each	2		
5	1.22	Providing, fitting and fixing CP soap tray / soap dish complete as directed and specified.				
		(i) Jaquar Make				
		(a) Continental (Cat.No.ACN-1331N)	Each	2		
6	1.24	Providing, fitting and fixing CP towel rail complete as directed and specified.				

		(b) Sona make				
		(iii) Towel rail diplomat 600mm long (Cat.No.TR-0605)	Each	2		
7	1.26	Providing, fitting and fixing Chrome Plated towel ring complete as directed and specified.				
		(b) Sona make				
		(i) Towel ring round (Cat.No.TR-06051)	Each	2		
8	1.27	Providing, fitting and fixing Chrome Plated robe hook complete as directed and specified.				
		(b) Agmeco make				
		(vi) Dolfee (Cat.No.DE-00211)	Each	2		
9	1.32	Providing, fitting and fixing Chrome Plated wastecoupling complete as directed and specified.				
		(b) Sona				
		(i) Rupa 32mm (HT/ FT) (Cat.No.WS-0801)	Each	2		
10	1.34	Providing, fitting and fixing Chrome Plated bottle trap pipe complete as directed and specified.				
		(a) Sona make				
		(i) Pipe for bottle trap 300mm long (Cat. No.BT-0761)	Each	2		
11	1.37.1	Supplying, fitting and fixing PVC pipes of 6 Kg/cm <sup>2</sup> (Supreme/Prince) or other ISI approved including joining, fitting and fixing with clamps etc.as necessary complete at all levels including below G.L as directed and specified.				
		(a) <b>In exposed surfaces or in trenches.</b>				
		(ii) 110mm dia.	R.m	15.00		
12	1.37.3	Supplying fitting and fixing 87.5 degree PVC bend with door of (Supreme/Prince) or other ISI approved including joining, fitting and fixing etc. as necessary complete at all levels including below G.L. as directed and specified.				
		(a) <b>In exposed surfaces or in trenches.</b>				
		(ii) 110mm dia.	Each	4		
13	1.37.6	Supplying fitting and fixing PVC single tee with door of (Supreme/Prince) or other ISI approved including joining fitting and fixing etc. as necessary complete at all level including below G.L. as directed and specified.				
		a) In exposed surfaces or in trenches.				
		(ii) 110mm dia.	Each	4		
14	1.39	Providing fitting and fixing PVC cowl of ISI make complete as directed and specified.				
		(ii) 110mm dia. PVC cowl of ISI make	Each	2		
15	1.42	C.P. Grating				
		(ii) 110 mm dia	Each	4		
<b>C INTERNAL WATER SUPPLY WORKS</b>						
1	3.1.6	Providing and fixing Chlorinated Polyvinyle Chloride (CPVC) Pipes, having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings i/c fixing the pipe with clamps at 1.00m spacing. This includes jointing of pipe				
		<b>A In exposed surfaces or in trenches.</b>				
1.1.1	(c)	25 mm nominal outer dia pipe	R.m	10.00		
1.1.2	(f)	50 mm nominal outer dia pipe	R.m	10.00		
		<b>B Concealed pipe with cutting chases &amp; making good the walls</b>				
1.2.1	(a)	15 mm nominal outer dia pipe	R.m	6.00		
1.2.2	(b)	20 mm nominal outer dia pipe	R.m	6.00		
2	3.2.1	Supplying fitting and fixing C.P. bib cock 15mm dia of approved brand directed and specified. (G.I. & C.P.pipes will be measured separately)				
		<b>(IV) Agmeco brand</b>				
		(v) Bib Cock Two way with Flange CAT No.CC 00203/CAT No.CN 00203	Each	2		

3	3.3.2	Supplying fitting and fixing chrome plated (C.P.) stop- cocks of approved brand and size as mentioned below as directed and specified.(G.I. & C.P pipes will be measured and paid separately)				
	(II)	<b>Agmecco Brand</b>				
3.1	(a)	15mm dia(Male/ Female )	Each	4		
3.2	(b)	15mm dia(Concealed )	Each	2		
4	3.5.1	Supplying and fitting fixing C.P. pillar cock of 15mm dia of approved brand as specified and directed.				
	(III)	<b>Agmecco (classic)</b>				
	(a)	Flat	Each	2		
		<b>TOTAL COST OF BUILDING CIVIL WORKS</b>				
			<b>SAY</b>			

<b>BOQ for Engineering, Design and Achitect and Supervision Services</b>					
<b>S.No</b>	<b>Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Rate</b>	<b>Amount</b>
<b>1</b>	<p><b>Architectural Drawings, Design and Documentation Services;</b> based on the outline drawings provided consists of further design development drawings and Construction Documents culminating in the following (as applicable to the project):</p> <ul style="list-style-type: none"> <li>• Architectural Cover Sheet (Project Data, Maps, Notes, etc.)</li> <li>• Architectural Site Plan and Details</li> <li>• Architectural Floor Plan (Dimensioned with notes, wall types, key notes, etc.)</li> <li>• Door Types, Door &amp; Hardware Schedules, Interior Door and Window Details, etc.</li> <li>• Exterior Door and Window Details</li> <li>• Roof Plan and Details</li> <li>• Building Sections</li> <li>• Walls Sections</li> <li>• Building Elevations</li> <li>• Interior Elevations (Cabinet and Room)</li> <li>• Millwork Details</li> <li>• Reflected Ceiling Plan and Details</li> <li>• Equipment Plan and Notes</li> <li>• Project Manual/Specifications Book</li> </ul>				
<b>2</b>	<p><b>Civil Engineering Drawings:</b> Topographic and Tree Survey, plus Geotechnical Testing (Soils – if needed) to be performed prior to commencement of the work.</p>	<b>Lot</b>	<b>1</b>		
<b>3</b>	<p><b>Structural Engineering Drawings:</b></p> <ul style="list-style-type: none"> <li>• Foundation Plan (with Details and Notes)</li> <li>• Framing Plans (Details, Roof and Special Conditions)</li> </ul>				
<b>4</b>	<p><b>MEP Engineering Drawings (Mechanical, Electrical and Plumbing):</b></p> <ul style="list-style-type: none"> <li>• Mechanical Plan (HVAC with Equipment Schedules and Details)</li> <li>• Electrical Plans (Power, Lighting, Fixture Schedules, and Details)</li> <li>• Plumbing Plans (Wastewater, Venting, Domestic Water, Air, Vacuum and Medical Gases); also, Plumbing Riser Diagrams with Plumbing Notes and Schedules.</li> </ul>				
<b>5</b>	<p><b>Interior Design Drawings (Furniture, Art and Accessories):</b></p> <ul style="list-style-type: none"> <li>• Floor Finish Plan and Finish Schedule</li> <li><b>3D design of the final approved plan</b></li> </ul>				
<b>6.</b>	<p><b>CONSTRUCTION ADMINISTRATION &amp; OTHER REQUIREMENTS:</b></p> <ul style="list-style-type: none"> <li>• Initial Site Visit/Pre-Construction followed by regular Site Visits based on completion of work to be observed</li> <li>• Certificate of interim construction completion</li> <li>• Final Inspection (at completion of work)</li> <li>• Certificate of final completion of construction</li> <li>• The Consultant shall accept full responsibility to</li> </ul>	<b>Lot</b>	<b>1</b>		

	<p>comprehend and verify the required Deliverables as stated in the Scope of Work and provide all information as described above. The Consultant shall be knowledgeable of the project site, its conditions, and all other constraints that may impact the fee.</p> <ul style="list-style-type: none"> <li>• The Consultant shall understand all administrative approvals that will be required for the project.</li> <li>• The Consultant shall complete the Design and support in Bid Documents in accordance with the Scope of Work, Budget, and Schedule.</li> <li>• To minimize errors and omissions, the Consultant shall perform a comprehensive internal Quality Control (QC) of all design documents prior to the issuance of all Conceptual Plan for preparation of Bid Documents.</li> <li>• The Consultants design and construction administration team shall remain consistent throughout the duration of the project.</li> </ul> <p>All drawing and construction reports to be certified by a registered Architect</p>				
	<b>TOTAL</b>	<b>Lot</b>	<b>1</b>		

**SUMMARY OF ELECTRICAL WORKS FOR  
PROPOSED OYESTER MUSHROOM CLUSTER AT RESUBELPARA BLOCK, MENDIPATHAR,  
NORTH GARO HILLS Dist., Meghalaya based on Assam PWD Schedule of Rates for  
Electrical Works 2013-14**

	Amount
1	TOTAL INTERNAL ELECTRICAL WORKS OF OFFICE BUILDING
2	TOTAL INTERNAL ELECTRICAL WORKS OF VALUE ADDITION AREA BUILDING
3	TOTAL INTERNAL ELECTRICAL WORKS OF BAG MAKING SECTION BUILDING
4	TOTAL INTERNAL ELECTRICAL WORKS OF SPAWN MAKING SECTION BUILDING
5	TOTAL INTERNAL ELECTRICAL WORKS
6	TOTAL EXTERNAL ELECTRICAL WORKS
7	<b>Total Internal and External Electrical (Rs.)</b>

Estimated cost of INTERNAL ELECTRICAL WORKS for PROPOSED OYESTER MUSHROOM CLUSTER AT RESUBELPARA BLOCK, MENDIPATHAR, NORTH GARO HILLS Dist., Meghalaya based on Assam PWD Schedule of Rates for Electrical Works 2013-14						
BAG MAKING SECTION						
Sl No.	APWD SL NO.	Description	Units	Qty	Rate	Amount
A.		<b>SCHEDULE ITEMS</b>				
PART - 2		Wiring in surface/ recessed PVC conduit FR (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) cable				
1	2.1	Wiring for light/fan/call bell point with 2x1.5 sq. mm. P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) in surface/ recessed conduit wiring system with 20mm dia 2mm thick / heavy rigid PVC IS: 9537 Part - III conduit (Berlia/ AKG / Precision/ Presto Plast/Polycab/MW or equivalent make as approved by the Deptt.) including 6 Amp flush type switch/ bell push (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.) GI/MS switch board (ISI marked) with phenolic laminated sheet cover ,ceiling rose (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.) etc. complete				
	2.1.1	Short point up to 3.00 metre. length.	Each	12		
	2.1.2	Medium point up to 6.00 metre. Length.	Each	20		
	2.1.3	Long point up to 10.00 metre. Length.	Each	10		
2	2.2	Wiring to 5 a pin 6 Amps plug point with 1.5 sq. mm P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) in surface/ recessed 2 mm thick/ heavy rigid ISI marked IS: 9537 PART - III rigid PVC conduit (Berlia/ AKG / Precision/ Presto Plast/Polycab/ MW or equivalent make as approved by the Deptt.) wiring system including 5 pin 6 Amps flush type plug socket and 6 Amps F/T switch (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.), GI/ MS switch board (I.S.I. mark with phenolic laminated sheet cover including earth continuity with 1.5 sq. mm. cable to third pin of the plug socket etc. as required complete, when placed elsewhere.				
	2.2.2	Medium point up to 6.00 metre. Length.	Each			
3	2.4	Wiring for 5/6 pin 16 Amps power plug point with 4 sq. mm. P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) in surface/ recessed conduit wiring system including and fixing 5/6 pin 16 Amps flush type socket outlets and 16 Amps flush type switch (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt./ Havells make), GI/ MS switch board (I.S.I. mark with phenolic laminated sheet cover earth continuity with 2.5 sq. mm cable to the 3rd pin of the socket as required complete with 20 mm.dia. 2mm thick/ heavy rigid ISI marked IS: 9537 PART - III rigid PVC conduit (Berlia/ AKG / Precision/ Presto Plast/Polycab/ MW or equivalent make as approved by the Deptt.)				
	2.4.1	Extra long point up to 15.00 metre. length.	Each	4		
	2.4.2	Extra long point up to 20.00 metre. Length.	Each	2		
	2.4.3	Extra long point up to 25.00 metre. Length.	Each			



SI No.	APWD SL NO.	Description	Units	Qty	Rate	Amount
4	2.10	Wiring for 5 pin 6 amp plug with 1.5 sq mm P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) including 5 pin 6 amp socket outlet (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.)make and 6 amp flush typeswitch (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.)make) earthing the 3rd pin of the socket as required on the switch board in surface/ recessed P.V.C. conduit wiring system. When fitted on same board of light and fan.	Each	1		
<b>CIRCUIT WIRING</b>						
5.	2.7	Wiring for drawing sub-main line with P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) PVC conduit (Berlia/ AKG / Precision/ Presto Plast/Polycab/ MW or equivalent make as approved by the Deptt.) including earth continuity in surface/ recessed 20 mm. dia. 2mm thick/ heavy ISI marked IS: 9537 PART - III rigid PVC conduit wiring system.				
	2.7.1	With 2 x 2.5 sq. mm. + earth continuity with 1x1.5 sq. mm. in 20 mm. dia. 2mm thick/ heavy rigid PVC IS: 9537 Part - III conduit.	RM	70		
	2.7.3	With 2 x 6 sq. mm. + earth continuity with 1x 4 sq. mm. cable in 25 mm. dia. 2mm thick/ heavy rigid PVC IS: 9537 Part - III conduit.	RM	130		
6.	2.9	Wiring for drawing sub-main line with P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) in surface/ recessed PVC 20 mm. dia. 2mm thick/ heavy ISI marked IS: 9537 PART - III rigid PVC conduit (Berlia/ AKG / Precision/ Presto Plast/Polycab/ MW or equivalent make as approved by the Deptt.) wiring system.				
	2.9.3	With 4x 6 sq. mm. + earth continuity with 2x4 sq. mm. cable in 32 mm. dia. 2mm thick/ heavy rigid PVC IS: 9537 Part - III conduit.	Metre.	90		
	2.9.4	With 4 x 10 sq. mm. + earth continuity with 2x6 sq. mm. cable in 40 mm. dia. 2mm thick/ heavy rigid PVC IS: 9537 Part - III conduit.	Metre.	85		
<b>PART-15</b>		<b>MCB DB (ABB, SCHNEIDER MG, LEGRAND, HAGER MAKE) &amp; (SCHNEIDER NEO BREAK, C&amp;S, Havells, INDOASIAN, HPL OR EQUIVALENT MAKE AS PPROVED BY THE DEPTT.)</b>				
		<b>MCB IN-comer TPN (Horizontal DB)</b>				
7.	15.8	Supplying with fitting and fixing sheet steel, phosphatised, powder painted dust & vermin proof Double door IP-43 double door surface mounting TPN MCB DB incorporated with bas-bar, Neutral link, Earth bar and din rail etc fitted on wall with grouting nuts & bolts as reqd. complete with making necessary connection as approved, specified and directed by the deptt.				
	15.8.1	ABB, Schneider MG, legrand, Hager make)				
	15.8.1.1	4 way TPN (4+12) double door	Each	1		
	15.8.1.3	8 way TPN (4+24) double door	Each			
<b>PART - 16</b>		<b>MCB, MCCB, RCCB, RCBO (ABB, SCHNEIDER MG, LEGRAND, AND HAGER MAKE) &amp; (SCHNEIDER NEO BREAK, C&amp;S, Havells, INDO ASIAN, HPL OR EQUIVALENT MAKE AS PPROVED BY THE DEPTT.) MCB (Conform to IS / IEC 60898-1:200/ MCCB (Conform to IS/IEC 60947- RCCB (Conform to IS/IEC 12640 / 61008)</b>				
8.	16.1	Supplying with fitting and fixing single Pole 10 KA 240/415V 50Hz MCB of the following capacity complete with making necessary connection as approved, specified and directed by the deptt.				
	16.1.2	C Series (Schneider MG, legrand, Hager make)				
	16.1.2.1	6 to 32A	Each	12		
	16.1.2.2	40A	Each	0		
9.	16.6	Supplying with fitting and fixing 4P 10 KA 240/415V 50Hz MCB of the following capacity complete with making necessary connection as approved, specified and directed by the deptt.				
	16.6.2	C Series (ABB, Schneider MG, legrand, Hager make)				
	16.6.2.2	40A	Each	1		

Sl No.	APWD SL NO.	Description	Units	Qty	Rate	Amount
<b>PART-22</b>		<b>EARTHING</b>				
10.	22.7	Supply, installation & testing of G.I. earth station with perforated 40 mm dia and 4.50 Metre long heavy duty G.I. pipe with necessary 40 mm dia. G.I. Fittings such as Socket, Tee, elbow, nipple and 50 mmx40 mm G.I. reducing socket for funnel including locking arrangement 300 mmx300 mmx6 mm hinged cover C.I. earth plate complete with digging of earth pit, construction of brick chamber and plastering of both inner & outer surface of wall as specified and directed by the deptt	Each	2		
11.	22.12	22.12	Extra for using salt (5 K and Charcoal (64 K in pipe Earth Station pitto provide low impedance ground in location of high soil resistivity as and when required and specified by the Deptt.	Each	2	
12.	22.20	Supplying & laying of 25X5mm size G.I. strips drawn on surface from earth electrode to Electrical switch gears, machineries etc complete with supply of G.I. nuts & bolts, screws etc including riveting, soldering & making necessary connection as approved, specified and directed by the deptt.	R.M.	20		
<b>PART -32</b>		<b>U. G. CABLE AND CABLE WORKS</b>				
13.	32.11	Supply and laying of following size Solid Aluminium conductor up to 10sq mm balance stranded conductor, XLPE Insulated, cores laid up, PVC tape inner sheathed, unarmoured/Armour (Aluminium for single core up to 70 sq mm balance Aluminium strip, Galvanised for cables up to 2x10 sq mm.3x10 sq mm,4x6 sq mm balance all galvanised steel strip) , extruded PVC Type ST2 sheathed, 650/1100V grade as per IS 7908(Part 1) 1988 laid in air or through existing cable trench/ duct/ cable tray/ HDPE pipe including fitting required size of lugs at the both end of the cable by using crimping tool and making good damaged done as specified and directed by the deptt. (Nicco/ Havells/ RPG/CCI/Polycab/Gloster/ Finolex make) .				
	32.11.4	<b>Core - 3.5A2XFY</b>				
	32.11.4.1	25 Sq.mm 3 and 1/2 core armoured cable	Metre	50		
<b>ITEMS APPROVED BY THE CHIEF ENGINEER P.W.D. (Bldg.), ASSAM, CHANDMARI, GUWAHATI-3 ON DATED 09-09-2019</b>						
14.		<b>4</b>	Supplying, installation, testing and Commission of the following indoor Decorative Recess mounted LED down lighter luminaries of model no- LESP01R009XC / LESP01R009XN /LESP01R009XW / L00957R000 / L00940R000 / L00930R000 /LD90-111 - XXX-65-XX complete with all accessories such as ballast, starter etc. In the false ceiling type Armstrong /Gypsum or similar ceiling mounting with necessary supportwith 1.5 sq.mm. P.V.C. insulated S.C.copper conductor as required and as directed by the department ( Jaquar / LT / Wipro make). [CL]	Each	2	
15.		<b>10</b>	Supplying, fitting fixing of LED Batten Tubes high quality aluminium extruded with decorative end caps connection with 1.5 Sq.mm 1 core PVC insulated round copper conductor as required and as directed by the department.			
		b)	BN021C LED 20 PSU CW GR S2 [TL]	Each	40	
			<b>Total of Schedule Items (A)</b>			
16.			Less 5% VAT added in SOR			
			<b>Total of Schedule Items less 5% VAT (B)</b>			
17.			Add 7% GST			
			<b>Total of Schedule Items (C)</b>			

Sl No.	APWD SL NO.	Description	Units	Qty	Rate	Amount
<b>B.</b>		<b>NON-SCHEDULE ITEMS</b>				
20.		<b>MAIN LT PANEL-[ BAG MAKING SECTION BUILDING ]</b>				
	Analysis	Supplying and installation of metal enclosed wall/floor mounted front operated cubical type switch gear panel suitable for indoor installation conforming to IS: 8623 (Part I & II). Panel should be made of sheet steel and thickness not less than 2mm and structural steel having light section. The panel shall be completely dust tight and vermin proof and shall be painted with anti corrosive and anti condensation type two coats of primer and two coats of paint. All wiring shall be PVC insulated and PVC sheathed of 1100 volt grade of required size. The panel should have provision of entry of cable at the bottom and also provision of out going feeders from the bottom of the panel. The panel shall be incorporated with double busbar system. The bus bar shall be of high quality copper of uniform cross section. The panel shall consist of the following items (viz. Voltmeter, Ammeter, CT, indicating lamps, selector switch etc.) connected as per drawing and shall be flush mounted on the front of the panel.	Set	1		
		<b>Incommer:</b>				
	a)	160 A ,4P, MCCB, 25 KA - 1 No.				
	b)	Digital Ammeter - 1 No.				
	c)	Digital Voltmeter - 1 No.				
	d)	CT 160/5 -1 Sets.				
	e)	Switch Fuse Unit - 3 Nos				
	f)	Selector Switch - 2 Nos				
	g)	LED Indicating Lamp 1 Set				
	h)	<b>Bus-Bars: 320 A TPN electrolytic Copper Bus Bar of uniform cross-section (40mmx5mm) – 1 set</b>				
		<b>Outgoing:</b>				
	i)	63A 4P MCCB 25 KA – 2 Nos.				
	j)	40 A 4P MCCB 25 KA – 2 Nos.				
	k)	40 A 4P MCB – 1 No.				
	l)	32 A 4P MCB – 4 Nos.				
	m)	32 A DP MCB – 8 Nos.				
	n)	25A DP MCB -1 No.				
21.		Supply, Installation antistatic rubber mat suitable for 1.1 KV Voltage grade	Sq.M	2		
22.		Supply, Fitting Fixing of Shock Treatment Chart	Each	2		
		<b>Total Non-Schedule (D)</b>				
<b>GRAND TOTAL [SCHEDULE ITEMS (A)+NON-SCHEDULE(B)]</b>					<b>Rs.</b>	

<b>Estimated cost of INTERNAL ELECTRICAL WORKS for PROPOSED OYESTER MUSHROOM CLUSTER AT RESUBELPARA BLOCK, MENDIPATHAR, NORTH GARO HILLS Dist., Meghalaya based on Assam PWD Schedule of Rates for Electrical Works 2013-14</b>						
<b>SPAWN MAKING SECTION</b>						
Sl No.	APWD SL NO.	Description	Units	Qty	Rate	Amount
<b>A.</b>		<b>SCHEDULE ITEMS</b>				
<b>PART - 2</b>		<b>Wiring in surface/ recessed PVC conduit FR (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) cable</b>				
1	2.1	Wiring for light/fan/call bell point with 2x1.5 sq. mm. P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) in surface/ recessed conduit wiring system with 20mm dia 2mm thick / heavy rigid PVC IS: 9537 Part - III conduit (Berlia/ AKG / Precision/ Presto Plast/Polycab/MW or equivalent make as approved by the Deptt.) including 6 Amp flush type switch/ bell push (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.) GI/MS switch board (ISI marked) with phenolic laminated sheet cover ,ceiling rose (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.) etc. complete				
	2.1.1	Short point up to 3.00 metre. length.	Each	14		
	2.1.2	Medium point up to 6.00 metre. Length.	Each	19		
	2.1.3	Long point up to 10.00 metre. Length.	Each	12		
2	2.4	Wiring for 5/6 pin 16 Amps power plug point with 4 sq. mm. P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) in surface/ recessed conduit wiring system including and fixing 5/6 pin 16 Amps flush type socket outlets and 16 Amps flush type switch (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt./ Havells make), GI/ MS switch board (I.S.I. mark with phenolic laminated sheet cover earth continuity with 2.5 sq.mm cable to the 3rd pin of the socket as required complete with 20 mm. dia. 2mm thick/ heavy rigid ISI marked IS: 9537 PART - III rigid PVC conduit (Berlia/ AKG / Precision/ Presto Plast/Polycab/ MW or equivalent make as approved by the Deptt.)				
	2.4.1	Extra long point up to 15.00 metre. length.	Each	3		
	2.4.2	Extra long point up to 20.00 metre. Length.	Each			
3	2.10	Wiring for 5 pin 6 amp plug with 1.5 sq mm P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS- 694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) including 5 pin 6 amp socket outlet (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.)make) and 6 amp flush type switch (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.)make) earthing the 3rd pin of the socket as required on the switch board in surface/ recessed P.V.C. conduit wiring system. When fitted on same board of light and	Each	1		
<b>CIRCUIT WIRING</b>						
4.	2.7	Wiring for drawing sub-main line with P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) PVC conduit (Berlia/ AKG / Precision/ Presto Plast/Polycab/ MW or equivalent make as approved by the Deptt.) including earth continuity in surface/ recessed 20 mm. dia. 2mm thick/ heavy ISI marked IS: 9537 PART - III rigid PVC conduit wiring system.				
	2.7.1	With 2 x 2.5 sq. mm. + earth continuity with 1x1.5 sq. mm. in 20 mm. dia. 2mm thick/ heavy rigid PVC IS: 9537 Part - III conduit.	RM	70		
	2.7.3	With 2 x 6 sq. mm. + earth continuity with 1x 4 sq. mm. cable in 25 mm. dia. 2mm thick/ heavy rigid PVC IS: 9537 Part - III conduit.	RM			

5.	2.9		Wiring for drawing sub-main line with P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nikko / Anchor or Equivalent Make as approved by the Deptt.) in surface/ recessed PVC 20 mm. dia. 2mm thick/ heavy ISI marked IS: 9537 PART - III rigid PVC conduit (Berlia/ AKG / Precision/ Presto Plast/Polycab/ MW or equivalent make as approved by the Deptt.) wiring system.				
		2.9.3	With 4 x 6 sq. mm. + earth continuity with 2x4 sq. mm. cable in 32 mm. dia. 2mm thick/ heavy rigid PVC IS: 9537 Part - III conduit.	Metre.	200		
		2.9.4	With 4 x 10 sq. mm. + earth continuity with 2x6 sq. mm. cable in 40 mm. dia. 2mm thick/ heavy rigid PVC IS: 9537 Part - III conduit.	Metre.	200		
<b>PART-10</b>			<b>FITTINGS AND ACCESSORIES (ALL PRODUCTS SHOULD BE ENERGY EFFICIENT AND ENVIRONMENT FRIENDLY)</b>				
6.	11.12		Supplying and fixing of polished Brass Bracket of 18 S.W.G, 25 cm long cast back plate and brass lamp holder complete including connection as approved by the Deptt.)as required Without Lamp. [BK]	Each	1		
<b>PART- 14</b>			<b>SWITCH GEAR &amp; PROTECTION</b>				
			<b>INDUSTRIAL SOCKETS, DB WITHOUT MCB &amp; MCCB , MCB, RCCB, RCBO, SFU, CHANGE OVER ETC.</b> <b>(C&amp;S, Havells, INDOASIAN, HPL OR EQUIVALENT as approved by the Deptt.)MAKE)</b>				
7.	14.1		Supplying fitting and fixing industrial Plug & Socket in surface mounting SPN sheet steel powder painted MCB DB incorporated with MCB DIN rail, neutral link Earth bar of the following rating of DP MCB complete with making necessary connection etc. as specified and directed by the Deptt.				
		14.1.1	20A Capacity. (C&S, Havells, INDOASIAN, HPL or equivalent as approved by the Deptt.)make)	Each	2		
<b>PART-15</b>			<b>MCB DB (ABB, SCHNEIDER MG, LEGRAND, HAGER MAKE) &amp; (SCHNEIDER NEO BREAK, C&amp;S, Havells, INDOASIAN, HPL OR EQUIVALENT MAKE AS PPROVED BY THE DEPTT.)</b>				
			<b>MCB IN-comer SPN DB</b>				
			<b>MCB IN-comer TPN (Horizontal DB)</b>				
8.	15.8		Supplying with fitting and fixing sheet steel, phosphatised, powderpainted dust & vermin proof Double door IP-43 double door surface mounting TPN MCB DB incorporated with bas-bar, Neutral link, Earth bar and din rail etc fitted on wall with grouting nuts & bolts as reqd. complete with making necessary connection as approved, specified and directed by the deptt.				
		15.8.1	ABB, Schneider MG, legrand, Hager make)				
		15.8.1.1	4 way TPN (4+12) double door	Each	1		
<b>PART - 16</b>			<b>MCB, MCCB, RCCB, RCBO (ABB, SCHNEIDER MG, LEGRAND, AND HAGER MAKE) &amp; (SCHNEIDER NEO BREAK, C&amp;S, Havells, INDO ASIAN, HPL OR EQUIVALENT MAKE AS PPROVED BY THE DEPTT.) MCB</b> <b>(Conform to IS / IEC 60898-1:200/ MCCB (Conform to IS/IEC 60947- RCCB (Conform to IS/IEC 12640 / 61008)</b>				
9.	16.1		Supplying with fitting and fixing single Pole 10 KA 240/415V 50Hz MCB of the following capacity complete with making necessary connection as approved, specified and directed by the deptt.				
		16.1.2	C Series (Schneider MG, legrand, Hager make)				
		16.1.2.1	6 to 32A	Each	12		
10.	16.3		Supplying with fitting and fixing DP 10 KA 240/415V 50Hz MCB of the following capacity complete with making necessary connection as approved, specified and directed by the deptt.				
		16.3.2	C Series (ABB, Schneider MG, legrand, Hager make)				
		16.6.2.2	40A	Each	1		
<b>PART-22</b>			<b>EARTHING</b>				
11.	22.7		Supply, installation & testing of G.I. earth station with perforated 40 mm dia and 4.50 Metre long heavy duty G.I. pipe with necessary 40 mm dia. G.I. Fittings such as Socket, Tee, elbow, nipple and 50 mmx40 mm G.I. reducing socket for funnel including locking arrangement 300 mmx300 mmx6 mm hinged cover C.I. earth plate complete with digging of earth pit, construction of brick chamber and plastering of both inner & outer surface of wall as specified and directed by the deptt .	Each	2		
12.	22.12	22.12	Extra for using salt (5 K and Charcoal (64 K in pipe Earth Station pitto provide low impedance ground in location of high soil resistivity as and when required and specified by the Deptt.	Each	2		

SI No.	APWD SL NO.	Description	Units	Qty	Rate	Amount
13.	22.20	Supplying & laying of 25X5mm size G.I. strips drawn on surface from earth electrode to Electrical switch gears, machineries etc complete with supply of G.I. nuts & bolts, screws etc including riveting, soldering & making necessary connection as approved, specified and directed by the deptt.	R.M.	20		
<b>PART - 27</b>		<b>CEILING FAN, EXHAUST FAN AND AIR CURTAIN</b>				
14.	27.2	Supplying including fitting fixing of following A.C. Exhaust fan in the existing hole on the wall of following sweeps with making necessary connection as approved by the Deptt.)as required complete and as directed by the Department.				
	27.2.1	Domestic				
	27.2.1.12	Ventil Air DB 300 mm sweep (Havells make) [EF]	Each	1		
<b>ITEMS APPROVED BY THE CHIEF ENGINEER P.W.D. (Bldg.), ASSAM, CHANDMARI, GUWAHATI-3 ON DATED 09-09-2019</b>						
15.	4	Supplying, installation, testing and Commission of the following indoor Decorative Recess mounted LED down lighter luminaries of model no LESP01R009XC / LESP01R009XN / LESP01R009XW / L00957R000 / L00940R000 / L00930R000 / LD90-111 - XXX-65-XX complete with all accessories such as ballast, starter etc. In the false ceiling type Armstrong /Gypsum or similar ceiling mounting with necessary support with 1.5 sq.mm. P.V.C. insulated S.C.copper conductor as required and as directed by the department ( Jaquar / LT / Wipro make). [CL]	Each	8		
16.	10	Supplying, fitting fixing of LED Batten Tubes high quality aluminium extruded with decorative end caps connection with 1.5 Sq.mm 1 core PVC insulated round copper conductor as required and as directed by the department.				
	a)	B118601000 [FL]	Each	5		
17.	10	Supplying, fitting fixing of LED Batten Tubes high quality aluminium extruded with decorative end caps connection with 1.5 Sq.mm 1 core PVC insulated round copper conductor as required and as directed by the department.				
	b)	BN021C LED 20 PSU CW GR S2 [TL]	Each	21		
18.	6	Supplying fitting & fixing of LED Bulb non-dimmable in the existingbatten / angle holder as required and as directed by the department ( Jaquar or eqvt. make).				
	C)	Prima Series Bulb 9W	Each	1		
		<b>Total of Schedule Items(A)</b>				
19.		Less 5% VAT added in SOR				
		<b>Total of Schedule Items less 5% VAT (B)</b>				
20.		Add 7% GST				
		<b>Total of Schedule Items (C)</b>				

SI No.	APWD SL NO.	Description	Units	Qty	Rate	Amount
<b>B.</b>		<b>NON-SCHEDULE ITEMS</b>				
21.		<b>MAIN LT PANEL-[ SPAWN MAKING SECTION BUILDING ]</b>				
	Analysis	Supplying and installation of metal enclosed wall/floor mounted front operated cubical type switch gear panel suitable for indoor installation conforming to IS: 8623 (Part I & II). Panel should be made of sheet steel and thickness not less than 2mm and structural steel having light section. The panel shall be completely dust tight and vermin proof and shall be painted with anti corrosive and anti condensation type two coats of primer and two coats of paint. All wiring shall be PVC insulated and PVC sheathed of 1100 volt grade of required size. The panel should have provision of entry of cable at the bottom and also provision of out going feeders from the bottom of the panel. The panel shall be incorporated with double busbar system. The bus bar shall be of high quality copper of uniform cross section. The panel shall consist of the following items (viz. Voltmeter, Ammeter, CT, indicating lamps, selector switch etc.) connected as per drawing and shall be flush mounted on the front of the panel.	Set	1		
		<b>Incommer:</b>				
	a)	100 A ,4P, MCCB, 25 KA - 1 No.				
	b)	Digital Ammeter - 1 No.				
	c)	Digital Voltmeter - 1 No.				
	d)	CT 100/5 -1 Sets.				
	e)	Switch Fuse Unit - 3 Nos				
	f)	Selector Switch - 2 Nos				
	g)	LED Indicating Lamp 1 Set				
	h)	<b>Bus-Bars: 220 A TPN electrolytic Copper Bus Bar of uniform cross-section (25mmx4mm) – 1 set</b>				
		<b>Outgoing:</b>				
	i)	40 A 4P MCCB 25 KA – 1 No.				
	j)	40 A 4P MCB – 1 No.				
	k)	32 A 4P MCB – 12 Nos.				
	l)	25A DP MCB -3 Nos.				
22.		Supply, Installation antistatic rubber mat suitable for 1.1 KV Voltage grade	Sq.M	2		
23.		Supply, Fitting Fixing of Shock Treatment Chart	Each	2		
		<b>Total of Non-Schedule Item (B)</b>				
<b>GRAND TOTAL [SCHEDULE ITEMS (C)+NON-SCHEDULE(D)]</b>					<b>Rs.</b>	

Estimated cost of <b>INTERNAL ELECTRICAL WORKS for PROPOSED OYESTER MUSHROOM CLUSTER AT RESUBELPARA BLOCK, MENDIPATHAR, NORTH GARO HILLS Dist., Meghalaya</b> based on Assam PWD Schedule of Rates for Electrical Works 2013-14						
VALUE ADDITION AREA						
Sl No.	APWD SL NO.	Description	Units	Qty	Rate	Amount
A.		<b>SCHEDULE ITEMS</b>				
PART - 2		<b>Wiring in surface/ recessed PVC conduit FR (Finolex /RR Kabel /Nikko / Anchor or Equivalent Make as approved by the Deptt.) cable</b>				
1	2.1	Wiring for light/fan/call bell point with 2x1.5 sq. mm. P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nikko / Anchor or Equivalent Make as approved by the Deptt.) in surface/ recessed conduit wiring system with 20mm dia 2mm thick / heavy rigid PVC IS: 9537 Part - III conduit (Berlia/ AKG / Precision/ Presto Plast/Polycab/MW or equivalent make as approved by the Deptt.) including 6 Amp flush type switch/ bell push (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.) GI/ MS switch board (ISI marked) with phenolic laminated sheet cover ,ceiling rose (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.) etc. complete				
	2.1.1	Short point up to 3.00 metre. length.	Each	8		
	2.1.2	Medium point up to 6.00 metre. Length.	Each	11		
	2.1.3	Long point up to 10.00 metre. Length.	Each	9		
2	2.4	Wiring for 5/6 pin 16 Amps power plug point with 4 sq. mm. P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nikko / Anchor or Equivalent Make as approved by the Deptt.) in surface/ recessed conduit wiring system including and fixing 5/6 pin 16 Amps flush type socket outlets and 16 Amps flush type switch (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt./ Havells make), GI/ MS switch board (I.S.I. mark with phenolic laminated sheet cover earth continuity with 2.5 sq. mm cable to the 3rd pin of the socket as required complete with 20 mm. dia. 2mm thick/ heavy rigid ISI marked IS: 9537 PART - III rigid PVC conduit (Berlia/ AKG / Precision Presto Plast/Polycab/ MW or equivalent make as approved by the Deptt.)				
	2.4.1	Extra long point up to 15.00 metre. length.	Each	3		
	2.4.2	Extra long point up to 20.00 metre. Length.	Each			
3	2.10	Wiring for 5 pin 6 amp plug with 1.5 sq mm P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS- 694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nikko / Anchor or Equivalent Make as approved by the Deptt.) including 5 pin 6 amp socket outlet (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.)make) and 6 amp flush type switch (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.)make) earthing the 3rd pin of the socket as required on the switch board in surface/ recessed P.V.C. conduit wiring system. When fitted on same board of light and	Each	1		
<b>CIRCUIT WIRING</b>						
4.	2.7	Wiring for drawing sub-main line with P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nikko / Anchor or Equivalent Make as approved by the Deptt.) PVC conduit (Berlia/ AKG / Precision/ Presto Plast/Polycab/ MW or equivalent make as approved by the Deptt.) including earth continuity in surface/ recessed 20 mm. dia. 2mm thick/ heavy ISI marked IS: 9537 PART - III rigid PVC conduit wiring system.				
	2.7.1	With 2 x 2.5 sq. mm. + earth continuity with 1x1.5 sq. mm. in 20 mm. dia. 2mm thick/ heavy rigid PVC IS: 9537 Part - III conduit.	RM	90		
	2.7.3	With 2 x 6 sq. mm. + earth continuity with 1x 4 sq. mm. cable in 25 mm. dia. 2mm thick/ heavy rigid PVC IS: 9537 Part - III conduit.	RM			



SI No.	APWD SL NO.	Description	Units	Qty	Rate	Amount
5.	2.9	Wiring for drawing sub-main line with P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) in surface/ recessed PVC 20 mm. dia. 2mm thick/ heavy ISI marked IS: 9537 PART - III rigidPVC conduit (Berlia/ AKG / Precision Presto Plast/Polycab/ MW or equivalent make as approved by the Deptt.) wiring system.				
	2.9.3	With 4x 6 sq. mm. + earth continuity with 2x4 sq. mm. cable in 32 mm. dia. 2mm thick/ heavy rigid PVC IS: 9537 Part - III conduit.	Metre.	80		
	2.9.4	With 4 x 10 sq. mm. + earth continuity with 2x6 sq. mm. cable in 40 mm. dia. 2mm thick/ heavy rigid PVC IS: 9537 Part - III conduit.	Metre.	100		
<b>PART-15</b>		<b>MCB DB (ABB, SCHNEIDER MG, LEGRAND, HAGER MAKE) &amp; (SCHNEIDER NEO BREAK, C&amp;S, Havells, INDOASIAN, HPL OR EQUIVALENT MAKE AS PPROVED BY THE DEPTT.)</b>				
		<b>MCB IN-comer TPN (Horizontal DB)</b>				
6.	15.8	Supplying with fitting and fixing sheet steel, phosphatised, powder painted dust & vermin proof Double door IP-43 double door surface mounting TPN MCB DB incorporated with bas-bar, Neutral link, Earth bar and din rail etc fitted on wall with grouting nuts & bolts as reqd. complete with making necessary connection as approved, specified and directed by the deptt.				
	15.8.1	ABB, Schneider MG, legrand, Hager make)				
	15.8.1.1	4 way TPN (4+12) double door	Each	1		
	15.8.1.3	8 way TPN (4+24) Double Door	Each			
<b>PART - 16</b>		<b>MCCB, MCCB, RCCB, RCBO (ABB, SCHNEIDER MG, LEGRAND, AND HAGER MAKE) &amp; (SCHNEIDER NEO BREAK, C&amp;S, Havells, INDO ASIAN, HPL OR EQUIVALENT MAKE AS PPROVED BY THE DEPTT.) MCCB (Conform to IS / IEC 60898-1:200/ MCCB (Conform to IS/IEC 60947- RCCB (Conform to IS/IEC 12640 / 61008)</b>				
7.	16.1	Supplying with fitting and fixing single Pole 10 KA 240/415V 50Hz MCB of the following capacity complete with making necessary connection as approved, specified and directed by the deptt.				
	16.1.2	C Series (Schneider MG, legrand, Hager make)				
	16.1.2.1	6 to 32A	Each	12		
	16.1.2.2	40A	Each	0		
8.	16.6	Supplying with fitting and fixing 4P 10 KA 240/415V 50Hz MCB of the following capacity complete with making necessary connection as approved, specified and directed by the deptt.				
	16.6.2	C Series (ABB, Schneider MG, legrand, Hager make)				
	16.6.2.2	40A	Each	1		
<b>PART-22</b>		<b>EARTHING</b>				
9.	22.7	Supply, installation & testing of G.I. earth station with perforated 40 mm dia and 4.50 Metre long heavy duty G.I. pipe with necessary 40 mm dia. G.I. Fittings such as Socket, Tee, elbow, nipple and 50 mmx40mm G.I. reducing socket for funnel including locking arrangement 300 mmx300 mmx6 mm hinged cover C.I. earth plate complete with digging of earth pit, construction of brick chamber and plastering of both inner & outer surface of wall as specified and directed by the deptt .	Each	2		
10.	22.12	22.12	Extra for using salt (5 K and Charcoal (64 K in pipe Earth Station pitto provide low impedance ground in location of high soil resistivity as and when required and specified by the Deptt.	Each	2	
11.	22.20	Supplying & laying of 25X5mm size G.I. strips drawn on surface from earth electrode to Electrical switch gears, machineries etc complete with supply of G.I. nuts & bolts, screws etc including riveting, soldering & making necessary connection as approved, specified and directed by the deptt.	R.M.	20		
<b>PART -32</b>		<b>U. G. CABLE AND CABLE WORKS</b>				
12.	32.11	Supply and laying of following size Solid Aluminium conductor up to 10 sq mm balance stranded conductor, XLPE Insulated, cores laid up, PVC tape inner sheathed, unarmoured/Armour (Aluminium for singlecore up to 70 sq mm balance Aluminium strip, Galvanised for cables up to 2x10 sq mm.3x10 sq mm,4x6 sq mm balance all galvanised steelstrip) , extruded PVC Type ST2 sheathed, 650/1100V grade as per IS 7908(Part 1) 1988 laid in air or through existing cable trench/ duct/cable tray/ HDPE pipe including fitting required size of lugs at the both end of the cable by using crimping tool and making good damageddone as specified and directed by the deptt. (Nicco/ Havells/ RPG/CCI/Polycab/Gloster/ Finolex make) .				
	32.11.4	<b>Core - 3.5A2XFY</b>				
	32.11.4.1	25 Sq.mm 3 and 1/2 core armoured cable	Metre	70		

		32.11.4.5	95 Sq.mm 3 and 1/2 core armoured cable	Metre	30		
SI No.	APWD SL NO.	Description		Units	Qty	Rate	Amount
<b>ITEMS APPROVED BY THE CHIEF ENGINEER P.W.D. (Bldg.), ASSAM, CHANDMARI, GUWAHATI-3 ON DATED 09-09-2019</b>							
13.	10	Supplying, fitting fixing of LED Batten Tubes high quality aluminium extruded with decorative end caps connection with 1.5 Sq.mm 1 core PVC insulated round copper conductor as required and as directed by the department.					
	b)	BN021C LED 20 PSU CW GR S2 [TL]		Each	28		
<b>Total of Schedule Items (A)</b>							
25.		Less 5% VAT added in SOR					
<b>Total of Schedule Items less 5% VAT (B)</b>							
26.		Add 7% GST					
<b>Total of Schedule Items (C)</b>							
<b>B. NON-SCHEDULE ITEMS</b>							
27.		<b>MAIN LT PANEL-[ VALUE ADDITION BUILDING ]</b>					
	Analysis	Supplying and installation of metal enclosed wall/floor mounted front operated cubical type switch gear panel suitable for indoor installation conforming to IS: 8623 (Part I & II). Panel should be made of sheet steel and thickness not less than 2mm and structural steel having light section. The panel shall be completely dust tight and vermin proof and shall be painted with anti corrosive and anti condensation type two coats of primer and two coats of paint. All wiring shall be PVC insulated and PVC sheathed of 1100 volt grade of required size. The panel should have provision of entry of cable at the bottom and also provision of out going feeders from the bottom of the panel. The panel shall be incorporated with double busbar system. The bus bar shall be of high quality copper of uniform cross section. The panel shall consist of the following items (viz. Voltmeter, Ammeter, CT, indicating lamps, selector switch etc.) connected as per drawing and shall be flush mounted on the front of the panel.		Set	1		
<b>Incommer:</b>							
	a)	250 A ,4P, MCCB, 36 KA - 1 No.					
	b)	Digital Ammeter - 1 No.					
	c)	Digital Voltmeter - 1 No.					
	d)	CT 250/5 -1 Sets.					
	e)	Switch Fuse Unit - 3 Nos					
	f)	Selector Switch - 2 Nos					
	g)	LED Indicating Lamp 1 Set					
	h)	<b>Bus-Bars: 480 A TPN electrolytic Copper Bus Bar of uniform cross-section (30mmx10mm) – 1 set</b>					
<b>Outgoing:</b>							
	i)	125A 4P MCCB 25 KA – 1 No.					
	j)	63A 4P MCCB 25 KA – 2 Nos.					
	k)	40 A 4P MCCB 25 KA – 2 Nos.					
	l)	40 A 4P MCB – 3 Nos.					
	m)	32 A 4P MCB – 2 Nos.					
	n)	25A DP MCB -3 Nos.					
28.		Supply, Installation antistatic rubber mat suitable for 1.1 KV Voltage grade		Sq.M	2		
29.		Supply, Fitting Fixing of Shock Treatment Chart		Each	2		
<b>Total of Non-Schedule Items (D)</b>							
<b>GRAND TOTAL [SCHEDULE ITEMS (C)+NON-SCHEDULE(D)]</b>							<b>Rs.</b>

Estimated cost of ELECTRICAL WORKS for PROPOSED OYESTER MUSHROOM CLUSTER AT RESUBELPARA BLOCK, MENDIPATHAR, NORTH GARO HILLS Dist., Meghalaya based on Assam PWD Schedule of Rates for Electrical Works 2013-14						
EXTERNAL ELECTRICAL WORKS						
Sl No.	APWD SL NO.	Description	Units	Qty	Rate	Amount
<b>A.</b>		<b>SCHEDULE ITEMS</b>				
<b>PART-22</b>		<b>EARTHING</b>				
1.	22.7	Supply, installation & testing of G.I. earth station with perforated 40 mm dia and 4.50 Metre long heavy duty G.I. pipe with necessary 40 mm dia. G.I. Fittings such as Socket, Tee, elbow, nipple and 50 mmx40 mm G.I. reducing socket for funnel including locking arrangement 300 mmx300 mmx6 mm hinged cover C.I. earth plate complete with digging of earth pit, construction of brick chamber and plastering of both inner & outer surface of wall as specified and directed by the deptt .	Each	6		
2.	22.12	22.12 Extra for using salt (5 K and Charcoal (64 K in pipe Earth Station pit to provide low impedance ground in location of high soil resistivity asand when required and specified by the Deptt.	Each	6		
3.	22.10	Supply, installation & testing of Copper Plate earth station with 600 mmx600 mmx3 mm copper earth plate with necessary 40 mm dia. G.I. medium duty watering pipe with G.I. Fittings such as Socket, Tee, elbow, nipple and 50 mmx40 mm G.I. reducing socket for funnel including locking arrangement with 300 mmx300 mmx6 mm C.I. hinged cover plate complete with digging of earth pit, construction of brick chamber and plastering of both inner & outer surface of wall as specified and directed by the deptt .	Set	4		
4.	22.13	Extra for using salt (5 K and Charcoal (96 K in G.I./Copper plate Earth Station pit to provide low impedance ground in location of highsoil resistivity as and when required and specified by the deptt .	Set	4		
5.	22.15	Supplying & laying of 6 SWG G.I. earth from Earth Electrode (below G.L.) to electrical switch gears or electrical machineries including making necessary connection as approved, specified and directed by the deptt.	Metre.	150		
6.	22.20	Supplying & laying of 25X5mm size G.I. strips drawn on surface from earth electrode to Electrical switch gears, machineries etc complete with supply of G.I. nuts & bolts, screws etc including riveting, soldering & making necessary connection as approved, specified and directed by the deptt.	R.M.	120		
7.	22.24	Supplying & laying of 25X5mm size Copper strips drawn on surface from earth electrode to Electrical switch gears, machineries etc complete with supply of Brass nuts & bolts, screws etc including riveting, soldering & making necessary connection as approved, specified and directed by the deptt.	R.M.	60		
<b>PART -32</b>		<b>U. G. CABLE AND CABLE WORKS</b>				
8.	32.1	Supply and laying of following size PVC/XLPE insulated and PVC sheathed 1.1 KV G Solid Aluminium conductor up to 10 sq mm balance stranded conductor, XLPE Insulated, cores laid up, PVC tape inner sheathed, Armour (Aluminium for single core up to 70 sq mm balance Aluminium strip, Galvanised for cables up to 2x10 sq mm.3x10sq mm,4x6 sq mm balance all galvanised steel strip) , extruded PVC Type ST2 sheathed, 650/1100V grade as per IS 7908(Part 1) 1988 armoured U.G. cable U.G. cable laid in ground/partially in air (as required for termination over ground including excavation of cable trench up to depth of 75cm, refilling, protective brick covering, Sand cushioning etc complete handling of surplus spoil, debris et to proper place as specified and directed by the deptt. (Nicco/ Havells/ RPG/CCI/Polycab/Gloster/ Finolex make) .				
	32.1.2	3 Core A2XWY A2XFY				
	32.1.2.2	6.00 Sq.mm 3 Core armoured U.G. cable	Metre	60		
	32.1.3	3 & 1/2 Core A2XFY				
	32.1.3.4	70.00 Sq. mm.3 & 1/2 Core armoured U.G. cable	Metre	40		
	32.1.3.6	120.00 Sq. mm.3 & 1/2 Core armoured U.G. cable	Metre	40		
	32.1.3.10	300.00 Sq. mm.3 & 1/2 Core armoured U.G. cable	Metre	160		
	32.01.04	4 Core A2XWY A2XFY				
	32.1.4.4	16.00 sq mm 4 Core armoured UG cable	Metre	130		

SI No.	APWD SL NO.	Description	Units	Qty	Rate	Amount
9.	32.5	Supply and laying of following size Solid Aluminium conductor up to 10sq mm balance stranded conductor, XLPE Insulated, cores laid up, PVC tape inner sheathed, Armour (Aluminium for single core up to 70 sq mm balance Aluminium strip, Galvanised for cables up to 2x10 sq mm.3x10 sq mm,4x6 sq mm balance all galvanised steel strip) , extruded PVC Type ST2 sheathed, 650/1100V grade as per IS 7908(Part 1) 1988, LT armoured U.G. cable laid in pucca flooring, roadcrossing, drain crossing as per site requirement and partially in air to connection as approved by the Depts. the control switch, through medium duty G.I. pipe (Tata/ Nezone make or equivalent as approved by the Deptt) bend and socket including excavation and refilling the trench and making good damage done as specified and directed by the deptt. (Nicco/ Havells/ RPG/CCIPolycab/Gloster/ Finolex make)				
	32.5.2	Core - 3 A2XWY A2XFY				
	32.5.2.1	4.00 Sq.mm 3 Core U.G. cable in 25mm dia medium duty G.I. pipe	Metre	0		
	32.5.2.2	6.00 Sq.mm 3 Core U.G. cable in 32mm dia medium duty G.I. pipe	Metre	20		
	32.5.3	Core - 3 & 1/2 A2XWY A2XFY				
	32.5.3.4	70.00 Sq.mm 3&1/2 Core U.G. cable in 50mm dia medium duty hot dip galvanised pipe (AKG or equivalent as approved by the Deptt.)	Metre	5		
	32.5.3.6	120.00 Sq.mm 3&1/2 Core U.G. cable in 65mm dia medium duty hot dip galvanised pipe (AKG or equivalent as approved by the Deptt.)	Metre	5		
	32.5.4.14	300.00 Sq.mm 4 Core U.G. cable in 100mm dia medium duty hot dip galvanised pipe (AKG or equivalent as approved by the Deptt.)	Metre	30		
	32.05.04	Core - 4 A2XWY A2XFY				
	32.5.4.4	16.00 Sq.mm 4 Core U.G. cable in 40mm dia medium duty hot dip galvanised pipe (AKG or equivalent as approved by the Deptt.)	Metre	10		
10.	32.18	Supplying including installation of cast iron cable marker as specified and directed by the deptt.	Each	20		
<b>PART - 34</b>		<b>CABLE KITS</b>				
11.	34.28	Supply including fitting and fixing of 1.1 KV PVC/XLPE cable INDOOR/OUTDOOR end termination Kits (Raychem RPG make) HEAT SHRINK TYPE including all accessories for the following sizes including testing and commissioning as specified and directed by the Deptt.				
	34.28.4	185-300 Sq.mm., 3/ 3.5/ 4 Core cable.	Set	2.00		
<b>PART - 36</b>		<b>OVER HEAD LINE</b>				
12.	36.33	Supplying and fitting fixing of H.T. danger plate complete as required and as directed by the department.	Each	4		
<b>PART - ECBC 6</b>		<b>SOLAR POWER</b>				
13.	ECBC 6.2	Supplying including installation, testing and commissioning of Solar Street light as per following specification and as directed by the Department.				
		15 W LED SOLAR STREET LIGHT[Confirming RDSO Specification No: RDSO/PE/SPEC/PS/0093-2008(Rev 0)]				
		SYSTEM SPECIFICATION				
		15 W LED based luminaries/fixture (1500 Lumens –typical).				
		LED Type: White High Powered LED's 5500-6500 K temperature.				
		Automatic Dusk to Dawn Operate ion. Independent standalone Solar Street Lighting System.				
		Powered by a 12V, 80 Wp Solar PV Module confirming RDSO Part-I Approval & IEC: 61215				
		Certification. (Model: TBP 1280/ 1280M). (make: TATA BP SOLAR or equivalent)				
		12V, 75Ah @ C10, Tubular Plate Lead Acid Low Maintenance Battery with PP Container				
		(make: TATA BP SOLAR or equivalent).				
		Battery Box made of M.S fabricated with corrosion resistance paint.				
		6m height MS Pole with corrosion resistance paint.				
		Manufacturers Criteria:				
		Must have ISO: 9001 & ISO: 14001 Certification.				
		(As per Annexure A: Clause no: b, Page 10)				
		Must have integrated production capacity of Solar PV Cell & Module.				
		(As per Annexure A: Clause no: d, Page: 10)				
		<b>SUGGESTED UNIT PRICE</b>				
		Unit Cost Without Installation & Commissioning)	Each			
		Installation & Commissioning Charges	Each			
		<b>Total of Schedule Items (A)</b>				
14.		Less 5% VAT added in SOR				
		<b>Total of Schedule Items less 5% VAT (B)</b>				
15.		Add 7% GST				
		<b>Total of Schedule Items (C)</b>				

Sl No.	APWD SL NO.	Description	Units	Qty	Rate	Amount
<b>B.</b>		<b>NON-SCHEDULE ITEMS</b>				
16.		<b>MAIN LT FEEDER PANEL</b>				
	Analysis	Supplying and installation of metal enclosed free standing floor readable mounted front operated cubical type switch gear panel suitable for OUTDOOR Type installation conforming to IS: 8623 (Part I & II). Panel should be made of sheet steel and thickness not less than 2mm and structural steel having light section with arrangement for sealing the covers and lockable doors. The panel shall be completely dust tight and vermin proof and shall be painted with anti corrosive and anti condensation type two coats of primer and two coats of paint conforming to Degree of Protection for enclosure shall be IP-55. All wiring shall be PVC insulated and PVC sheathed of 1100 volt grade of required size. The panel should have provision of entry of cable at the bottom and also provision of out going feeders from the bottom of the panel. The panel shall be incorporated with single copper busbar system. The bus bar shall be of high quality copper of uniform cross section. The panel shall consist of the following items (viz. Voltmeter, Ammeter, CT, indicating lamps, selector switch etc.) connected as per drawing and shall be flush mounted on the front of the panel.	Set	1		
		<b>Incommer:</b>				
	a)	500 A ,4P, MCCB, 36 KA - 2 Nos.				
	b)	500 A, 4P, on-load Changeover switch - 1 No.				
	c)	Digital Ammeter - 2 Nos.				
	d)	Digital Voltmeter - 2 Nos.				
	e)	CT 500/5 -1 Sets.				
	f)	CT 500 -1 Sets.				
	g)	Switch Fuse Unit - 6 Nos				
	h)	Selector Switch - 4 Nos				
	i)	LED Indicating Lamp 2 Sets				
	j)	<b>Bus-Bars: 960 A TPN electrolytic Copper Bus Bar of uniform cross-section (60mmx10mm) – 1 set</b>				
		<b>Outgoing:</b>				
	k)	250 A 4P MCCB 36 KA – 1 No.				
	l)	40 A 4P MCCB 25 KA – 1 No.				
	m)	100 A 4P MCCB 25 KA – 1No.				
	n)	63 A 4P MCCB 25 KA – 1No.				
	o)	160 A 4P MCCB 25 KA – 2Nos.				
	p)	40 A 4P MCB – 2 Nos.				
17.		Supply, Installation antistatic rubber mat suitable for 1.1 KV Voltage grade	Sq.M	2		
18.		Supply, Fitting Fixing of Shock Treatment Chart	Each	4		
		<b>Total of Non-Schedule Items (B)</b>				
<b>GRAND TOTAL [SCHEDULE ITEMS (C)+NON-SCHEDULE(D)]</b>					<b>Rs.</b>	

Estimated cost of INTERNAL ELECTRICAL WORKS for PROPOSED OYESTER MUSHROOM CLUSTER AT RESUBELPARA BLOCK, MENDIPATHAR, NORTH GARO HILLS Dist., Meghalaya based on Assam PWD Schedule of Rates for Electrical Works 2013-14						
OFFICE BUILDING						
SI No.	APWD SL NO.	Description	Units	Qty	Rate	Amount
A.		<b>SCHEDULE ITEMS</b>				
PART - 2		<b>Wiring in surface/ recessed PVC conduit FR (Finolex /RR Kabel /Nico / Anchor or Equivalent Make as approved by the Deptt.) cable</b>				
1	2.1	Wiring for light/fan/call bell point with 2x1.5 sq. mm. P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nico / Anchor or Equivalent Make as approved by the Deptt.) in surface/ recessed conduit wiring system with 20mm dia 2mm thick / heavy rigid PVC IS: 9537 Part - III conduit (Berlia/ AKG / Precision/ Presto Plast/Polycab/ MW or equivalent make as approved by the Deptt.) including 6 Amp flush type switch/ bell push (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.) GI/ MS switch board (ISI marked) with phenolic laminated sheet cover ,ceiling rose (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.) etc. complete				
	2.1.1	Short point up to 3.00 metre. length.	Each	5		
	2.1.2	Medium point up to 6.00 metre. Length.	Each	9		
	2.1.3	Long point up to 10.00 metre. Length.	Each	5		
2	2.2	Wiring to 5 a pin 6 Amps plug point with 1.5 sq. mm P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nico / Anchor or Equivalent Make as approved by the Deptt.) in surface/ recessed 2 mm thick/ heavy rigid ISI marked IS: 9537 PART - III rigid PVC conduit (Berlia/ AKG / Precision/ Presto Plast/Polycab/ MW or equivalent make as approved by the Deptt.) wiring system including 5 pin 6 Amps flush type plug socket and 6 Amps F/T switch (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.), GI/ MS switch board (I.S.I. mark with phenolic laminated sheet cover including earth continuity with 1.5 sq. mm. cable to third pin of the plug socket etc. as required complete, when placed elsewhere.				
	2.2.1	Short point up to 3.00 metre. length.	Each	1		
	2.2.2	Medium point up to 6.00 metre. Length.	Each	2		
	2.2.3	Long point up to 10.00 metre. Length.	Each	1		
3	2.4	Wiring for 5/6 pin 16 Amps power plug point with 4 sq. mm. P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nico / Anchor or Equivalent Make as approved by the Deptt.) in surface/ recessed conduit wiring system including and fixing 5/6 pin 16 Amps flush type socket outlets and 16 Amps flush type switch (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt./ Havells make), GI/ MS switch board (I.S.I. mark with phenolic laminated sheet cover earth continuity with 2.5 sq. mm cable to the 3rd pin of the socket as required complete with 20 mm. dia. 2mm thick/ heavy rigid ISI marked IS: 9537 PART - III rigid PVC conduit (Berlia/ AKG / Precision/ Presto Plast/Polycab/ MW or equivalent make as approved by the Deptt.)				
	2.4.1	Extra long point up to 15.00 metre. length.	Each	2		
	2.4.2	Extra long point up to 20.00 metre. Length.	Each			

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SI No.	APWD SL NO.	Description	Units	Qty	Rate	Amount
4	2.10	Wiring for 5 pin 6 amp plug with 1.5 sq mm P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS- 694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nikko / Anchor or Equivalent Make as approved by the Deptt.) including 5 pin 6 amp socket outlet (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.)make and 6 amp flush type switch (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.)make earthing the 3rdpin of the socket as required on the switch board in surface/ recessed P.V.C. conduit wiring system. When fitted on same board of light and	Each	5		
<b>CIRCUIT WIRING</b>						
5.	2.7	Wiring for drawing sub-main line with P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nikko / Anchor or Equivalent Make as approved by the Deptt.) PVC conduit (Berlia/ AKG / Precision/ Presto Plast/Polycab/ MW or equivalent make as approved by the Deptt.) including earth continuity in surface/ recessed 20 mm. dia. 2mm thick/ heavy ISI marked IS: 9537 PART III rigid PVC conduit wiring system.				
	2.7.1	With 2 x 2.5 sq. mm. + earth continuity with 1x1.5 sq. mm. in 20 mm. dia. 2mm thick/ heavy rigid PVC IS: 9537 Part - III conduit.	RM	80		
	2.7.3	With 2 x 6 sq. mm. + earth continuity with 1x 4 sq. mm. cable in 25 mm. dia. 2mm thick/ heavy rigid PVC IS: 9537 Part - III conduit.	RM			
PART-10		<b>FITTINGS AND ACCESSORIES (ALL PRODUCTS SHOULD BE ENERGY EFFICIENT AND ENVIRONMENT FRIENDLY)</b>				
6.	11.12	Supplying and fixing of polished Brass Bracket of 18 S.W.G, 25 cm long cast back plate and brass lamp holder complete including connection as approved by the Deptt.as required Without Lamp. [BK]	Each	2		
7.	11.28	Supplying and fixing of Frosted glass shade of 100 mm dia (Nominal Size as required.	Each	2		
8.	11.32	Supplying and fixing of Call bell ( Buzzer ) including 5/ 6 ampcapacity button piano type bell push switch including connection as approved by the Deptt.as required.	Each	1		
PART-15		<b>MCB DB (ABB, SCHNEIDER MG, LEGRAND, HAGER MAKE) &amp; (SCHNEIDER NEO BREAK, C&amp;S, Havells, INDOASIAN, HPL OR EQUIVALENT MAKE AS PPROVED BY THE DEPTT.)</b>				
		<b>MCB IN-comer SPN DB</b>				
		<b>MCB IN-comer (TPN VERTICAL DB)</b>				
9.	15.22	Supplying with fitting and fixing MCCB income and MCB outgoing sheet steel, phosphatised, powder painted double door IP-43 surface mounting vertical TPN MCB DB incorporated with bas-bar up to 250A, Neutral link, Earth bar and din rail etc fitted on wall with grouting nuts & bolts as reqd. complete with making necessary connection as approved, specified and directed by the deptt.				
	15.22.1	ABB, Schneider MG, legrand, Hager make)				
	15.22.1.1	4 way TPN (4+12) double door	Each	1		
	15.22.1.2	8 way TPN (4+18) double door	Each			
PART - 16		<b>MCB, MCCB, RCCB, RCBO (ABB, SCHNEIDER MG, LEGRAND, AND HAGER MAKE) &amp; (SCHNEIDER NEO BREAK, C&amp;S, Havells, INDO ASIAN, HPL OR EQUIVALENT MAKE AS PPROVED BY THE DEPTT.)</b> <b>MCB (Conform to IS / IEC 60898-1:200/ MCCB (Conform to IS/IEC 60947- RCCB (Conform to IS/IEC 12640 / 61008)</b>				

10.	16.1		Supplying with fitting and fixing single Pole 10 KA 240/415V 50Hz MCB of the following capacity complete with making necessary connection as approved, specified and directed by the deptt.				
		16.1.2	C Series (Schneider MG, legrand, Hager make)				
		16.1.2.1	6 to 32A	Each	12		
		16.1.2.2	40 A	Each			
11.	16.16		Supplying with fitting and fixing panel mounting open execution 25KA 415V 50Hz 4P MCCB (Ics=Icu, adjustable Ir setting 0.7) without enclosure of the following capacity complete with making necessary connection as approved by the Deptt. as specified and directed by the deptt.				
		16.16.1	25 KA 415V 50 Hz 4P MCCB (Schneider, legrand, Siemens make)				
		16.13.1.4	63A	Each	1		
PART-22			<b>EARTHING</b>				

SI No.	APWD SL NO.	Description	Units	Qty	Rate	Amount
12.	22.7	Supply, installation & testing of G.I. earth station with perforated 40 mm dia and 4.50 Metre long heavy duty G.I. pipe with necessary 40 mm dia. G.I. Fittings such as Socket, Tee, elbow, nipple and 50 mmx40 mm G.I. reducing socket for funnel including locking arrangement 300 mmx300 mmx6 mm hinged cover C.I. earth plate complete with digging of earth pit, construction of brick chamber and plastering of both inner & outer surface of wall as specified and directed by the deptt .	Each	2		
13.	22.12	22.12	Extra for using salt (5 K and Charcoal (64 K in pipe Earth Station pit to provide low impedance ground in location of high soil resistivity as and when required and specified by the Deptt.	Each	2	
14.	22.20	Supplying & laying of 25X5mm size G.I. strips drawn on surface from earth electrode to Electrical switch gears, machineries etc complete with supply of G.I. nuts & bolts, screws etc including riveting, soldering & making necessary connection as approved, specified and directed by the deptt.	R.M.	20		
PART - 27			<b>CEILING FAN, EXHAUST FAN AND AIR CURTAIN</b>			
15.	27.1	Supplying including fitting fixing of following A.C. Ceiling fan complete with all accessories like down rod, canopy etc. of following sweeps with making necessary connection as approved by the Deptt.)as required complete and as directed by the Department [Without regulator].				
		27.1.2	Premium model 1200 mm Sweep (ORIENT PSPO make) / Premiummodel 1050 / 1200 mm Sweep SS-390 Deco Havells make) [ F ]	Each	2	
16.	27.2	Supplying including fitting fixing of following A.C. Exhaust fan in the existing hole on the wall of following sweeps with making necessary connection as approved by the Deptt.)as required complete and as directed by the Department.				
		27.2.1	Domestic			
		27.2.1.12	Ventil Air DB 300 mm sweep (Havells make) [EF]	Each	2	
<b>ITEMS APPROVED BY THE CHIEF ENGINEER P.W.D. (Bldg.), ASSAM, CHANDMARI, GUWAHATI-3 ON DATED 09-09-2019</b>						
17.		4	Supplying, installation, testing and Commission of the following indoor Decorative Recess mounted LED down lighter luminaries of model no- LESP01R009XC / LESP01R009XN /LESP01R009XW / L00957R000 / L00940R000 / L00930R000 /LD90-111 - XXX-65-XX complete with all accessories such as ballast, starter etc. In the false ceiling type Armstrong /Gypsum or similar ceiling mounting with necessary support with 1.5 sq.mm. P.V.C. insulated S.C.copper conductor as required and as directed by the department ( Jaquar / LT / Wipro make). [CL]	Each	3	
18.		10	Supplying, fitting fixing of LED Batten Tubes high qualityaluminium extruded with decorative end caps connection with 1.5 Sq.mm 1 core PVC insulated round copper conductor as required and as directed by the department.			
		a)	B118601000 [FL]	Each	5	
19.		10	Supplying, fitting fixing of LED Batten Tubes high qualityaluminium extruded with decorative end caps connection with 1.5 Sq.mm 1 core PVC insulated round copper conductor as required and as directed by the department.			
		b)	BN021C LED 20 PSU CW GR S2 [TL]	Each	5	
20.		6	Supplying fitting & fixing of LED Bulb non-dimmable in the existing batten / angle holder as required and as directed by the department ( Jaquar or eqvt. make).			
		C)	Prima Series Bulb 9W	Each	2	



		<b>Total of Schedule Items (A)</b>				
29.		Less 5% VAT added in SOR				
		<b>Total of Schedule Items less 5% VAT (B)</b>				
30.		Add 7% GST				
		<b>Total of Schedule Items (C)</b>				
	<b>B.</b>	<b>NON-SCHEDULE ITEMS</b>				
31.		Supply, Installation antistatic rubber mat suitable for 1.1 KV Voltage grade	Sq.M	2		
32.		Supply, Fitting Fixing of Shock Treatment Chart	Each	2		
		<b>Total of Non-Schedule Items inclusive of GST (D)</b>				
		<b>GRAND TOTAL [SCHEDULE ITEMS (C)+NON-SCHEDULE(D)]</b>				<b>Rs.</b>

**PART – I  
ANNEXURE II**

Date: \_\_\_\_\_

From,

Name:  
Address:  
Ph:  
Fax:  
E-mail:

To,

**The Secretay,**

M/s Mendipathar Multipurpose Cooperative Society,  
P.O. Mendipathar, Mendipathar, North Garo Hills,  
Meghalaya – 794110

Sir,

**Sub: Tender for the construction of Industrial Work shed buildings and amenities for Oyster  
Mushroom Cluster - Submission of Part I – Reg**

*Ref: Your Tender Notice Dt. ....*

With reference to your tender notice, we submit herewith our sealed Tender for the construction of Industrial Work shed buildings and amenities for Oyster Mushroom Cluster, as specified by IA in this tender document.

We enclose the following documents:

- 1) Tender conditions duly signed in each page and enclosed in token of accepting the Tender conditions
- 2) Authorization letter from the Company for the person to sign the tender.
- 3) Details of the Tenderer (as per Annexure-III)
- 4) Average annual turnover statement duly certified by a Chartered Accountant (as per Annexure-IV).
- 5) List of Building construction works executed in last 5 years as per Annexure-V
- 6) Declaration for not having black listed by any other Govt. agencies (as per Annexure-VI).
- 7) Declaration for not having tampered the Tender documents downloaded from the websites [www.mbda.gov.in](http://www.mbda.gov.in) or [northgarohills.gov.in](http://northgarohills.gov.in) or [www.iie.gov.in](http://www.iie.gov.in) (Annexure-VII).
- 8) Bid Security Declaration form (as per Annexure VIII)

- 9) The copy of certificate of incorporation/registration (If applicable)
- 10) Copy of Memorandum and Articles of Association (If applicable)
- 11) Copy of Registered Partnership deed, in case of Partnership Firm (If applicable)
- 12) Copy of Udyog Aadhaar, GST Registration Certificate & PAN Card
- 13) Work Orders issued by the clients.
- 14) Performance certificate issued by the clients.
- 15) The Annual Report / certified copies of Balance Sheet, Profit & Loss statement along with schedules for the last 5 consecutive financial years FY 2016-17, 2017-18, 2018- 19, 2019-20 and 2020-21.
- 16) Latest I.T return.
- 17) Notarized translated English version of the documents in a language other than English/Assamese/ Garo/ Khasi, if any.

Encl: As stated above

Yours faithfully,

**SIGNATURE OF THE TENDERER**

**ANNEXURE IIII**  
**DETAILS OF THE TENDERER**

Name of the Tenderer	
Registered Office Address	Address: Telephone Number: Fax : Email : Website, if any:
Contact Person	Name: Designation: Phone: Mobile: Email:
Date of Incorporation	
Legal Status	Proprietorship/partnership/Pvt. Limited/Public Limited/ Others (Pl. mention)
Brief profile of the tenderer	
Number of staffs on regular payroll	Technical: Administration:
PAN Number	
GST Registration Number	

**SIGNATURE OF THE TENDERER**  
**(with seal and address)**

**ANNEXURE – IV**  
**ANNUAL TURNOVER STATEMENT**

The Annual turnover of M/s ..... for the past five years are given below and certified that the statement is true and correct

S.No.	Year	Turnover
1.	2106-2017	
2.	2017-2018	
3.	2018-2019	
4.	2019-2020	
5.	2020-2021	
Average annual turnover of last 5 years		

**DATE :**

**SIGNATURE OF THE TENDERER**

**SIGNATURE OF CHARTERED ACCOUNTANT**

**(with seal and Address)**

**ANNEXURE - V****LIST OF CLIENTS FOR WHOM CIVIL CONSTRUCTION WORKS UNDERTAKEN IN THE PAST 3 YEARS**

*(Please provide the details for each project in separate sheet along with work Order/completion certificate from client)*

S.No.	Name & Address of the Client	Details of the Work	Area in Sq. Ft	Year of Completion	Cost (Rs. In Lakh)	Work Order & Completion Certificate enclosed (Yes/No)

**SIGNATURE OF THE TENDERER**  
**(with seal and address)**

**ANNEXURE – VI  
CERTIFICATE**

Date: \_\_\_\_\_

Certified that M/s...../ the firm /company or its partners/ share holders  
had not been blacklisted by any Government Agencies.

**SIGNATURE OF THE TENDERER  
(with seal and address)**

**ANNEXURE - VII  
DECLARATION FORM**

Date: \_\_\_\_\_

- a) I/We ..... having our office at ..... do declare that I/We have carefully read all the conditions of tender floated vide tender ref.no. SFURTI-I/MGH-MMCS/CIVIL-001/2021-22 for the construction of Industrial Work shed buildings and amenities for Oyster Mushroom Cluster and will complete the contract as per the tender conditions.
- b) I/We have downloaded the tender document from the internet site [www.mbda.gov.in](http://www.mbda.gov.in) or [northgarohills.gov.in](http://northgarohills.gov.in) or [www.iie.gov.in](http://www.iie.gov.in) and I /We have not tampered / modified the tender document in any manner. In case, if the same is found to be tampered / modified, I/ We understand that my/our tender will be summarily rejected and I /We am/are liable to be banned from doing business with M/s. Mendipathar Multipurpose Cooperative Society or prosecuted.

**SIGNATURE OF THE TENDERER**  
**(with seal and address)**



**ANNEXURE – VIII  
BID SECURITY DECLARATION FORM**

Date: \_\_\_\_\_

To  
The Secretary,  
M/s. Mendipathar Multipurpose Cooperative Society,  
P.O. Mendipathar, North Garo Hills,  
Meghalaya - 794110

Tender No. SFURTI-I/MGH-MMCS/CIVIL-001/2021-22 dated 03.05.2021

I/We. The undersigned, declare that:

I/We understand that, according to your conditions, bids must be supported by a Bid Securing Declaration.

I/We accept that I/We may be blacklisted from bidding for any contract for a maximum period of 3 years from the date of notification if I am /We are in a breach of any obligation under the bid conditions, because I/We have withdrawn / modified / amended or failure to sign the agreement or to remit the Security Deposit or to execute the contract as per tender conditions, during the period of bid validity specified in the tender document.

I/We understand this Bid Securing Declaration shall cease to be valid if I am/we are not the successful Bidder, upon the earlier of (i) the receipt of your notification of the name of the successful Bidder; or (ii) thirty days after the expiration of the validity of my/our Bid.

**SIGNATURE OF THE TENDERER  
(with seal and address)**

**PART-II**

**ANNEXURE - IX**

From,

Name:  
Address:  
Ph:  
Fax:  
E-mail:

To,  
The Secretary,  
M/s. Mendipathar Multipurpose Cooperative Society,  
P.O. Mendipathar, North Garo Hills,  
Meghalaya - 794110

Sir,

Sub: Tender for the construction of Industrial Work shed buildings and amenities for Oyster Mushroom Cluster - Submission of Part II - Price Offer-Reg.

Ref:- Our tender (Technical Bid) submitted for the "Construction of Industrial Work shed buildings and amenities for Oyster Mushroom Cluster"

In continuation of our above tender, we submit herewith the price offer for the "Construction of Industrial Work shed buildings and amenities for Oyster Mushroom Cluster" as specified by IA in this tender document.

We agree to abide by the terms and conditions stipulated by the IA and also agree to complete the entire contract, at the rates quoted by us. The rate quoted and approved by the IA in this tender will hold good as per IA tender conditions.

Yours faithfully,

SIGNATURE OF THE TENDERER

## ANNEXURE – IX (A)

## PRICE BID

<b>Proposed Oyster Mushroom Cluster at Resubelpara Block, Mendipathar, North Garo Hills District, Meghalaya</b>						
<b>ABSTRACT OF ESTIMATED COST BASED ON ASSAM PWD SCHEDULE OF RATES FOR CIVIL WORKS 2013-14</b>						
<b>Sl. No.</b>	<b>APWD It. No./Ref</b>	<b>DESCRIPTION</b>	<b>Unit</b>	<b>Quantity</b>	<b>Rate in Rs.</b>	<b>Amount in Rs.</b>
<b>1</b>		<b>Training and Office room</b>				
1.1		Civil Works				
1.2		Internal Electrical works				
<b>2</b>		<b>Spawn Making Section</b>				
2.1		Civil Works				
2.2		ThatchStructure				
2.3		Internal Electrical works				
<b>3</b>		<b>Value Addition Area</b>				
3.1		Civil Works				
3.2		Internal Electrical works				
<b>4</b>		<b>Bagmaking Section</b>				
4.1		Civil Works				
4.2		Internal Electrical works				
<b>5</b>		<b>Preprocessing &amp; Hay Stack</b>				
5.1		Civil Works				
5.2		Internal Electrical works				
<b>6</b>		<b>Demo Hall</b>				
6.1		Civil Works				
6.2		Internal Electrical works				
<b>7</b>		<b>Grow House</b>				
7.1		Civil Works				
7.2		Internal Electrical works				
<b>8</b>		<b>TOTAL (A)</b>				
9		GST @ 7% on Schedule Items				
<b>10</b>		<b>Total (B)</b>				
11		Contingencies @ 1% of Total (B)				
12		Architect and engineering services and supervision @ 5%				
<b>13</b>		<b>GRAND TOTAL</b>				
					<b>say</b>	

**Estimated cost of construction of the GROW HOUSE for OYESTER MUSHROOM CLUSTER AT RESUBELPARA BLOCK, MENDIPATHAR, NORTH GARO HILLS Dist., Meghalaya based on Assam PWD Schedule of Rates for Civil Works 2013-14.**

**GROW HOUSE**

**1. Area of Ground floor = (68.04+74.08)=142.12 M<sup>2</sup>.**

Item No.		Description of work	Unit	Qty.	Rate in Rupees	Amount in Rupees
BOQ	APWD					
1	1.3	Earth/ sand filling in plinth in layers not more than 150mm thick including necessary carriage, watering, ramming etc. complete as directed and specified including payment of land compensation, forest royalty, sales tax and other duties and taxes as may be necessary.				
	(b)	With hill sand obtained by truck carriage loading and unloading, and carriage to the site of work.	Cum	68.42		
2	N.S.	Bhaluka bamboo dressed post 75mm to 100mm dia driven at least 750mm under ground and tied with wire or cane @ 1500 to 2000 c/c at least 3000 TO 4500 above plinth level.	Each	28.00		
3	N.S.	Spilt bamboo diagonally woven tarja wall with fair side exposed to weather, tied with necessary bamboo kamis on both sides @300mm apart tied with galvanised wire/cane slit and fixed to bamboo posts etc complete as directed including making provision for doors and windows of bamboo tarja on bamboo frames .	Sq.m	108.27		
4	8.1.11	Providing thatch roofing with sun grass (Ulllo) in layer of 75 mm thick with half spilt bamboo fillet and tying with galvd. wire complete.				
	(b)	150 mm thick.	Sqm	183.76		
5	8.1.12	Providing and laying thatching, capping to ridge and hip with new sun grass of 75 mm thick (fine work) stiffened with bamboo slips of size 30mm x 6mm and tied with galvd. tying wire complete.	RM	79.08		
6	8.1.15	Providing and laying bamboo slip jaffri of meshes not exceeding 63mm x 38mm including tying to the purlins and rafters with cane slip or galvd. tying wire.				
	(a)	Fine work	Sqm	183.76		
7	8.1.16	Providing single layer of bamboo mat lining over roof frame.	Sqm	183.76		
8	8.1.17	Providing bamboo maruli ties, purlins, rafters including tying with cane sling / Galvd. tying wire.				
	(a)	(a) With Bhaluka bamboo.	RM	115.08		
9	8.1.18	Providing bamboo roof truss with whole ruas bam boo and kamis, ruas placed at 150 mm apart and kamis 200mm to 230mm apart including tying all members with galvd tying wire.	Sqm	26.46		
10	8.1.19	Providing bamboo jaffri over thatch roof with 200mm sq mesh bamboo slips of 35mm width	Sqm	183.76		
11	8.1.21	Providing bamboo roof frame with kami of size 30mm x 6mm.	Sqm	183.76		
12	5.3.1	Brick-on-edge floor with 1st class brick and grouted with cement mortar in prop.1:4 (1 cement : 4 sand) including cement pointing in proportion 1:1 (1 cement :1 sand) finishing and curing complete.	Sq.m	142.12		
<b>TOTAL COST OF BUILDING CIVIL WORKS</b>						
					<b>SAY</b>	

BAGMAKING SECTION						
ITEM NO.		DESCRIPTION OF WORK	UNIT	QTY.	RATE IN RUPEES	AMOUNT IN RUPEES
BOQ	APWD					
<b>1</b>		<b>EARTH WORK</b>				
1.1	1.1	Earthwork in excavation 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 in the following classification of soils including bailing out water where necessary as directed and specified.				
	(A)	Up to a depth of 2.00m below the existing ground level.				
	(a)	In ordinary soil	cum	148.56		
1.2	1.3(c)	Earth / Sand filling in plinth in layer not more than 150 mm thick including necessary, carriage, watering, ramming etc complete as directed and specified including payment of land compensation, Forest Royalty, Sales Tax and other duties and taxes as may be necessary. (c) with river sand or sil (predominantly non plastic) by truck carriage including loading and unloading.	cum	187.25		
<b>2</b>		<b>NOMINAL MIX. ( P.C.C. WORKS )</b>				
2.1	2.1.1	Plain cement concrete works with coarse aggregate of sizes 13mm to 32mm in foundation bed for footings, tie beams, 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).				
	a)	In prop. 1 cement : 3 sand : 6 coarse aggregate by volume	cum	22.95		
2.2	2.1.3	Providing and laying 25mm thick damp proof course with cement concrete in prop 1: 1.5: 3 with graded stone agg. Of 10mm down nominal size including providing approved damp proof admixture in proportion as recommended by the manufacturer including curing etc. complete as directed.	sqm	14.33		
<b>3</b>		<b>REINFORCED CEMENT CONCRETE WORKS</b>				
3.1	2.2.1	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				
3.1.1	(A)	In substructure up to plinth level				
	(N)	Foundation, footing, columns with base tie and plinth beam, pile cap, base slab, retaining walls, walls of septic tank, inspection pit and the like and other works not less than 100mm thick up to plinth level.				
	(b)	Without using admixture, plasticizer				
	(b)	M20 grade concrete	cum	46.53		
3.2	(B)	In super structure from plinth level up to 1st floor level.				
3.2.1	(ii)	Columns, pillars, posts, struts, suspended floor, roof, landing shelf and support, balcony, lintel, sill band, beam, girder, bressumer, cantilever, staircase (except spiral staircase and landing ) including preparing the top surface and finishing of nosing.				
	(N)	Without using admixture, plasticizer				
	(b)	M20 grade concrete	cum	45.31		
<b>4</b>		<b>PLYBOARD SHUTTERING (FORMWORK)</b>				
4.1	3.2.1	Providing form work of 12mm thick Plywood Board so as to give a rough finish including centering, shattering, 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:				

4.1.1	3.2.1.1	Columns, Pillars, Posts & Strut of square/ rectangular/ polygonal in plan or any shape like Tee/L etc. having plane vertical face	sqm	449.83		
4.1.2	3.2.1.2	Sides and Soffits of Beams, beam haunchings, cantilever girders, bressumers, lintels and horizontal ties.				
		(a) For depth not exceeding 1.0M.	sqm	500.16		
4.1.3	3.2.1.3	Flat Surfaces such as soffits of suspended floors, roofs, landings, cantilever slabs, chajjas, balconies and the like.				
		(a) Floors etc. upto 200mm in thickness.	sqm	100.54		
<b>5</b>	<b>MASONARY WORK</b>					
5.1	4.1.1	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.	sqm	305.95		
5.2	4.1.4	Brick work in cement mortar with 1st class brick including racking out joints and curing complete as directed.				
5.2.1		(I) In Sub-structure upto plinth level including dewatering if necessary				
		(b) In proportion 1:4	cum	69.00		
5.3	4.1.8	1st class brick nogged wall in cement mortar including racking out joints and curing complete as directed in super structure above plinth up to 1st floor level (protruding M.S rod/Tor steel of column to be embedded in cement mortar and will be measured and paid separately)				
		(A) 112 mm thick brick wall				
		(a) In cement mortar in proportion 1:4. (1 cement:4 sand)	sqm	227.10		
5.4	5.3.2	Brick-on-flat floor with 1st class brick and grouted with cement mortar in prop. 1:4 (1 cement : 4 sand) including 15 mm thick cement plastering in proportion 1:2 (1 cement : 2 sand) finishing with a floating coat of neat cement finish using cement slurry @ 2.75 kg. per sq. metre of floor area and curing complete.	sqm	402.00		
<b>6</b>	<b>FLOORING AND FLOOR FINISH</b>					
	5.1	<b>CEMENT CONCRETE FLOORING</b>				
6.1	5.1.4	65 mm thick cement concrete floor consisting of 50 mm under layer of cement concrete in prop. 1:3:6 (1 cement : 3 coarse sand : 6 coarse aggregate of 25mm and down) and 15 mm thick wearing layer in cement concrete in prop. 1:1:2 (1 cement : 1 coarse sand : 2 coarse aggregate of size 10mm down) laid in panels and finished with a floating coat of neat cement finish (using cement slurry for bond @ 2.75 kg. per square metre of floor area) including curing etc. complete as directed.	sqm	75.00		
<b>7</b>	<b>CEMENT PLASTERING</b>					
7.1	6.2.2	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	sqm	252.30		
7.2	6.2.3	20 mm thick Cement plaster in two coats on single or half brick walls for interior plastering up to 1st floor level including arises, internal rounded angles, chamfers and / or rounded angles not exceeding 80mm in girth and finished even and smooth including curing complete as directed.				
		A) On rough side (backing coat 15 mm and finishing coat 5mm thick)				
		b) In cement mortar 1:4	sqm	313.02		
7.3	6.2.5	Extra over item no 6.2.1 to 6.2.3 for plastering on ceiling and soffits of stairs up to 1st floor level (instead of plastering on walls) including curing complete as directed.	sqm	100.54		
<b>8</b>	<b>ROOFING</b>					
8.1	8.1.35	Providing Pre Painted Galvalume Sheet Roofing (PPGL) at all levels including fitting and fixing self drilling, self tapping screws complete (Roof trusses, purlins etc. to be measured and paid separately.) TATA Blue scope/ Dyna roof / Durakolor / Wonder Roof or equivalent as directed by the Department				
		(ii) 0.45 mm thick	sqm	517.24		

8.2	8.1.36	Providing Pre Painted Galvalume Sheet (PPGL) accessories Ridges / Valley / Gutter / Flashing) at all levels including fitting and fixing self drilling, self tapping screws complete. TATA Blue scope/ Dyna roof / Durakolor / Wonder Roof or equivalent as directed by the Departement				
		(ii) 0.45 mm thick	R.m	44.95		
<b>9</b>	<b>WOOD WORKS</b>					
9.1	9.18.1	Providing, fitting and fixing factory made Santro Flush door shutters having core & cross bands fabricated from seasoned 1st class timber, 25mm core battens, 2.5mm to 3.5mm uniformly thick cross bands, styles & rails made from hardwood timber of width not less than 50mm, fixed to the door frames (chowkath) with necessary hinges, screws, bolts etc. as specified and directed at all levels (Door fixtures and fittings to be measured and paid seperately.)				
		(b) 35mm thick	sqm	15.75		
<b>10</b>	<b>GRILL</b>					
10.1	10.2	Providing, fitting and fixing M.S. grill of required pattern for windows/ clerestory windows/ opening with M.S. flats at required spacing in frame all round, square or round M.S. bars with round headed bolts and nuts or screws.				
		1. Plain grill				
		(c) Fixed to Brickwork/P.C.C/R.C.C.	kg.	692.00		
<b>11</b>	<b>ALUMINIUM WINDOWS</b>					
11.1	11.1.2	Providing, fitting and fixing anodised aluminium sliding windows and ventilators of standard sections of approved brand without horizontal glazing bars, joints mitred and welded (manufactured to relevant IS specifications) and providing and fixing handles, angle cleat, rubber gasket, roller, bolting device, locking arrangements, screws etc as required complete as specified and directed for all levels.				
11.1.1	(a)	2 track sliding windows				
		(i) 6mm clear glass	sqm	0.00		
11.1.2	(b)	3 Track sliding window				
		(i) 6mm clear glass	Sq.m	34.56		
<b>12</b>	<b>PAINTING</b>					
	<b>13.3</b>	<b>PLASTER OF PARIS &amp; WALL PUTTY</b>				
12.1	13.3.1	Providing surface preparation for walls, ceiling etc. using average 1.50 mm thick plaster of paris including clearing, rubbing with sand paper, filling gaps, depression etc. where necessary, with chalk powder and plaster of paris paste, making the surface even and smooth complete at all levels as specified and directed.	Sqm	257.97		
12.2	13.3.4	Providing two coats of Birla White Wall Care Putty (Water Resistant White Cement based putty for concrete/ mortar walls and ceiling both internal and external) after removing all loosely adhering material from the wall surface with the help of emery stone, putty blade or wire brush and moistening the wall with sufficient quantity of clean water as specified and directed by the department. (Total thickness of two coats is maximum 1.5mm)				
	(i)	Thickness = 1.5 mm thick	sqm	313.02		
	<b>WALL PAINTING</b>					
12.3	13.2.3(a)	Applying one coat of cement primer of approved brand and manufacture on new wall surface after thoroughly brooming the surfaces free from mortar droppings and other foreign matter and including preparing the surface even and sand papered smooth.	Sqm	570.99		
12.4	13.2.3(b)	b) Finishing wall with water proofing cement paint of approved brand and manufacture and of required shade on new wall surface (two coats) to give an even shade after thoroughly brooming the surfaces to remove all dirt and remains of loose powdered materials.	Sqm	570.99		
12.5	13.4.5	Extra over for painting on ceiling and on sloping roof.	sqm	102.30		
	<b>13.7</b>	<b>PAINTING ON STEEL AND OTHER METAL SURFACE</b>				
12.6	13.7.2	Applying primary coat over new steel and other metal surface over 100m in width or girth after preparing the surface by thoroughly cleaning oil, grease, dirt and other foreign matter and scoured with wire brushes, fine steels, wood scrapers and sand paper.				
		a). With ready mixed "red-lead/ red oxide" primer.	sqm	69.12		

12.7	13.7.4	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. (i). Surfaces over 100mm in width or girth. a). General purpose (Asian paint/ Berger paint/ ICI paint/ J & N paint/ Nerolac).				
			sqm	69.12		
<b>13</b>		<b>DOOR AND WINDOW FITTINGS</b>				
	<b>15.2</b>	<b>ALUMINIUM FITTINGS</b>				
13.1	15.2.1	Supplying, fitting, fixing anodised aluminium fittings of approved make, reasonably smooth, free from sharp edges and corners, flaws and other defects and with counter sunk holes for screws including necessary aluminium screws etc. complete. (anodised to bright natural matt & satin finished)				
13.1.1	A	Sliding door bolts				
	(ii)	250mm x 16mm sliding door bolt.	Each	5		
13.2	B	Tower bolt				
	(iii)	200mm x 10mm tower bolt.	Each	10		
13.3	C	Door handles				
		150 mm	Each	10		
<b>14</b>		<b>STEEL AND IRON WORKS</b>				
	<b>18.1</b>	<b>REINFORCEMENT</b>				
14.1	18.1.1	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. (No extra measurement for lap, hook, chair, anchor etc. will be entertained in the measurement as they are included in the rate) (Upto 1st floor level) b) Other ISI approved TMT reinforcement bar (SAI/BISCON/THERMAX)				
			Qtl	94.42		
14.2	<b>18.3</b>	<b>ROOF TRUSS</b>				
	18.3.2	Providing, fitting, hoisting and fixing of roof trusses fabricated out of combination of any two or all of the following sections (i) Square section (ii) Rectangular Hollow section of specification RSH/SHS and (iii) M.S. circular hollow section of Grade 210 including purlins, bottom runners and providing M.S. cleat, M.S. angle base plank, bolts and nuts with red oxide primer including fitting bottom runner and cleat etc for fixing ceiling joist as per design complete as directed as per specifications.				
	(b)	Using other ISI marked approved brand tube	Qtl	37.25		
14.3	<b>18.7</b>	<b>DOOR FRAMES</b>				
	18.7.2	Providing, fitting and fixing powder coated pressed steel door frame made of 1.25mm/ 1.6mm thick sheet of various sizes with necessary hinge jamb, lock jamb, head and steel base ties at the bottom of the frame. The whole frame shall be welded or rigidly fixed together by mechanical means with base ties of pressed mild steel angle of size 20x20x1.25mm thick. Frame to be filled up with 1:4:8 P.C.C. after fitting the frame with brick/ concrete works etc. complete as directed by the department for all levels. (P.C.C. to be measured and paid for separately). (a) 1.25mm thick sheet (iii) Size 125mm x 60mm (Single rebate)				
			R.m	28.50		
<b>15</b>		<b>PLINTH PROTECTION WORKS AND PERIPHERY</b>				
15.1	19.2	Providing plinth protection with bricks flat laid in cement mortar 1: 4 and finished with 15mm thick cement plaster in prop. 1:2 with a floating coat of neat cement finish.	sqm	46.35		
15.2	19.5	Providing drain with brick work in cement mortar in proportion 1:5 with half brick thick side walls and 100mm thick C.C (1:3:6) base over one brick flat soling including 15mm thick cement plastering in prop. 1:3 finished with a floating coat of cement slurry as directed with necessary shuttering for sides and earth work in excavation of foundation trenches and refilling the sides after completion of work etc. as specified. ii). 300mm wide and average 250mm deep with bed slope 1 in 150 with initial depth of 100mm.				
			R.m	107.20		
<b>16</b>		<b>ANTI TERMITE TREATMENT</b>				
	<b>26</b>	<b>PRE CONSTRUCTION ANTI - TERMITE TREATMENT</b>				



16.1	26.1.1	Pre construction anti - termite treatment at the bottom of foundation pits and walls on either side up to a height of 300mm from bottom of the excavation made for column plinth beam, wall, trenches etc. by applying the emulsion @ 5 (five litres per square meter of the surface area before starting construction work (supplying of necessary tools and accessories by the contractor) as per the direction of the Department complete.				
		a) with aqueous emulsion having concentration 1:19 with chlorophosphate solution (trical or equivalent) and water, i.e. 1% solution.	Sqm	72.00		
<b>TOTAL COST OF BUILDING CIVIL WORKS</b>					<b>SAY</b>	

## RECEIVING &amp; STORAGE (SPAWN SECTION)

1. Area of Ground floor = 51.61 M<sup>2</sup>.

Item No.		Description of work	Unit	Qty.	Rate in Rupees	Amount in Rupees
BOQ	APWD					
1	1.3	Earth/ sand filling in plinth in layers not more than 150mm thick including necessary carriage, watering, ramming etc. complete as directed and specified including payment of land compensation, forest royalty, sales tax and other duties and taxes as may be necessary.				
	(b)	With hill sand obtained by truck carriage loading and unloading, and carriage to the site of work.	Cum	25.44		
2	N.S.	Bhaluka bamboo dressed post 75mm to 100mm dia driven at least 750mm under ground and tied with wire or cane @ 1500 to 2000 c/c at least 3000 TO 4500 above plinth level.	Each	16.00		
3	N.S.	Spilt bamboo diagonally woven tarja wall with fair side exposed to weather, tied with necessary bamboo kamis on both sides @300mm apart tied with galvanised wire/cane slit and fixed to bamboo posts etc complete as directed including making provision for doors and windows of bamboo tarja on bamboo frames .	Sq.m	101.18		
4	8.1.11	Providing thatch roofing with sun grass (Ulllo) in layer of 75 mm thick with half spilt bamboo fillet and tying with galvd. wire complete.				
	(b)	150 mm thick.	Sqm	62.06		
5	8.1.12	Providing and laying thatching, capping to ridge and hip with new sun grass of 75 mm thick (fine work) stiffened with bamboo slips of size 30mm x 6mm and tied with galvd. tying wire complete.	RM	12.93		
6	8.1.15	Providing and laying bamboo slip jaffri of meshes not exceeding 63mm x 38mm including tying to the purlins and rafters with cane slip or galvd. tying wire.				
	(a)	Fine work	Sqm	62.06		
7	8.1.16	Providing single layer of bamboo mat lining over roof frame.	Sqm	62.06		
8	8.1.17	Providing bamboo maruli ties, purlins, rafters including tying with cane sling / Galvd. tying wire.				
	(a)	(a) With Bhaluka bamboo.	RM	155.16		
9	8.1.18	Providing bamboo roof truss with whole ruas bam boo and kamis, ruas placed at 150 mm apart and kamis 200mm to 230mm apart including tying all members with galvd tying wire.	Sqm	15.40		
10	8.1.19	Providing bamboo jaffri over thatch roof with 200mm sq mesh bamboo slips of 35mm width	Sqm	62.06		
11	8.1.21	Providing bamboo roof frame with kami of size 30mm x 6mm.	Sqm	62.06		
12	5.3.1	Brick-on-edge floor with 1st class brick and grouted with cement mortar in prop.1:4 (1 cement : 4 sand) including cement pointing in proportion 1:1 (1 cement :1 sand) finishing and curing complete.	Sq.m	51.61		
<b>TOTAL COST OF BUILDING CIVIL WORKS</b>						
					<b>SAY</b>	

SPAWN MAKING SECTION						
ITEM NO.		DESCRIPTION OF WORK	UNIT	QTY.	RATE IN RUPEES	AMOUNT IN
BOQ	APWD					
1.		Area of Ground floor = 247.50 M <sup>2</sup> .				
<b>A</b>		<b>CIVIL WORKS</b>				
<b>1</b>		<b>EARTH WORK</b>				
1.1	1.1	Earthwork in excavation 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 in the following classification of soils including bailing out water where necessary as directed and specified.				
	(A)	Up to a depth of 2.00m below the existing ground level.				
	(a)	In ordinary soil	cum	58.95		
1.2	1.3(c)	Earth / Sand filling in plinth in layer not more than 150 mm thick including necessary, carriage, watering, ramming etc. complete as directed and specified including payment of land compensation, Forest Royalty, Sales Tax and other duties and taxes as may be necessary. (c) with river sand or silt (predominantly non plastic) by truck carriage including loading and unloading	cum	111.38		
<b>2</b>		<b>NOMINAL MIX. ( P.C.C. WORKS )</b>				
2.1	2.1.1	Plain cement concrete works with coarse aggregate of sizes 13mm to 32mm in foundation bed for footings, tie beams, 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).				
2.1.1	a)	In prop. 1 cement : 3 sand : 6 coarse aggregate by volume	cum	23.35		
2.2	2.1.3	Providing and laying 25mm thick damp proof course with cement concrete in prop 1: 1.5: 3 with graded stone agg. Of 10mm down nominal size including providing approved damp proof admixture in proportion as recommended by the manufacturer including curing etc. complete as directed.	sqm	12.00		
<b>3</b>		<b>REINFORCED CEMENT CONCRETE WORKS</b>				
3.1	2.2.1	Providing and laying plain/reinforced cement concrete works cement, coarse sand & 20mm downgraded 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				
3.1.1	(A)	In substructure up to plinth level				
	(N)	Foundation, footing, columns with base tie and plinth beam, pile cap, base slab, retaining walls, walls of septic tank, inspection pit and the like and other works not less than 100mm thick up to plinth				
	(b)	M20 grade concrete	cum	19.72		

3.2	(B)	In super structure from plinth level up to 1st floor level.				
3.2.1	(ii)	Columns, pillars, posts, struts, suspended floor, roof, landing, shelf and support, balcony, lintel, sill band, beam, girder, bressumer, cantilever, staircase (except spiral staircase and landing ) including preparing the top surface and finishing of				
	N)	Without using admixture, plasticiser				
	(b)	M20 grade concrete	cum	20.12		
<b>4</b>		<b>PLYBOARDSHUTTERING (FORMWORK)</b>				
4.1	3.2.1	Providing form work of 12mm thick Plywood Board so as to give a rough finish including centering, shattering, 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:				
4.1.1	3.2.1.1	Columns, Pillars, Posts & Strut of square/ rectangular/ polygonal in plan or any shape like Tee/L etc. having plane vertical face	sqm	185.97		
4.1.2	3.2.1.2	Sides and Soffits of Beams, beam haunchings, cantilever girders, bressumers, lintels and horizontal ties.				
		(a) For depth not exceeding 1.0M.	sqm	177.36		
4.1.3	3.2.1.3	Flat Surfaces such as soffits of suspended floors, roofs, landings, cantilever slabs, chajjas, balconies and the like.				
		(a) Floors etc. upto 200mm in thickness.	sqm	75.03		
<b>5</b>		<b>MASONARY WORK</b>				
5.1	4.1.1	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.	sqm	311.39		
5.2	4.1.4	Brick work in cement mortar with 1st class brick including racking out joints and curing complete as directed.				
5.2.1		(I) In Sub-structure upto plinth level including dewatering if necessary				
		(d) In proportion 1:6	cum	20.25		
5.3	4.1.8	1st class brick nogged wall in cement mortar including racking out joints and curing complete as directed in super structure above plinth up to 1st floor level (protruding M.S rod/Tor steel of column to be embedded in cement mortar and will be measured and paid separately)				
		(A) 112 mm thick brick wall				
		(b) In cement mortar in proportion 1:5.(1 cement:5 sand)	sqm	253.93		
<b>6</b>		<b>FLOORING AND FLOOR FINISH</b>				
6.1	5.7.1.2	Providing polished ceramic wall tiles of approved quality, size, shape and thickness not less than 8mm on walls and skirtings over cement mortar bed 10 mm thick in prop. 1:3 (1 cement : 3 coarse sand ) including cutting where necessary finished with flush pointing with Fix-A-Tile (Choksey / Sika / Pedelite / Rouf) /white cement slurry mixed with approved pigment to match shade of tiles complete at all levels as specified and directed. (Cement plastering to be measured and paid separately). (Coloured pigment should be in conformity with colour of tiles and as approved and directed by the Department). (Walls means both interior and exterior walls).				
		b) Executive range Somany/ Orient/Nitco/Asian Make				
		i) Of size 200mmx300mm and above	sqm	9.14		

6.2	5.7.2.1	Providing VITRIFIED floor tiles of approved quality of specified size, shape and thickness not less than 18mm on floors, skirtings, risers and treads of steps over 15 mm thick base of cement mortar in prop. 1:3 (1 cement : 3 coarse sand) including cutting where necessary finished with flush pointing with Fix-A-Tile (Choksey/Sika/Pedelite/Rouf) / white cement slurry mixed with approved pigment to match shade of tiles, mixed with approved pigment to match the shade of the tiles, complete at all levels as specified and directed. (Coloured pigment should be in conformity with colour of tiles and as approved and directed by the Department)				
		a) Normal range Somany/ Orient/Nitco /Varmora/VITA/ Marbitto/ Make				
	(ii)	Of size 600mmx600mm and above	sqm	122.85		
6.3	5.3.2	Brick-on-flat floor with 1st class brick and grouted with cement mortar in prop. 1:4 (1 cement : 4 sand) including 15 mm thick cement plastering in proportion 1:2 (1 cement : 2 sand) finishing with a floating coat of neat cement finish using cement slurry @ 2.75 kg. per sq. metre of floor area and curing complete.	sqm	122.85		
6.4	5.11	<b>ANTISKID TILES</b>				
	5.11.1	Providing Antiskid Tiles of approved quality size, shape not less than 8mm on floor, skirting over a cement mortar bed 15mm thick of 1:3 (1 cement: 3 coarse sand), approved make fix with Fix-A-Tile (Choksey/Sika/Pedelite/Rouf)/ white cement complete at all level as specified and directed.				
		<b>(A) CERAMIC</b>				
		i) Normal range (Sizes 300 mm x 300mm and				
		(a) Orient made: Galaxy Brown, Galaxy creama, Galaxy Pink, Galaxy Green, Pulsar Beige, Pulsar Blue, Pulsar Dove, Pulsar Pink, Burj Brown, Burj Green, Burj Slate	sqm	1.80		
6.5	5.1	<b>CEMENT CONCRETE FLOORING</b>				
	5.1.4	65 mm thick cement concrete floor consisting of 50 mm under layer of cement concrete in prop. 1:3:6 (1 cement : 3 coarse sand : 6 coarse aggregate of 25mm and down) and 15 mm thick wearing layer in cement concrete in prop. 1:1:2 (1 cement : 1 coarse sand : 2 coarse aggregate of size 10mm down) laid in panels and finished with a floating coat of neat cement finish (using cement slurry for bond @ 2.75 kg. per square metre of floor area) including curing etc. complete as directed.	sqm	17.60		
<b>7</b>		<b>CEMENT PLASTERING</b>				
7.1	6.2.2	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	sqm	439.62		
7.2	6.2.3	20 mm thick Cement plaster in two coats on single or half brick walls for interior plastering up to 1st floor level including arises, internal rounded angles, chamfers and / or rounded angles not exceeding 80mm in girth and finished even and smooth including curing complete as directed.				
		A) On rough side (backing coat 15 mm and finishing coat 5mm thick)				
		b) In cement mortar 1:4	sqm	141.91		
7.3	6.2.5	Extra over item no 6.2.1 to 6.2.3 for plastering on ceiling and soffits of stairs up to 1st floor level (instead of plastering on walls) including curing complete as directed.	sqm	75.03		
<b>8</b>		<b>ROOFING</b>				

8.1	8.1.35	Providing Pre Painted Galvalume Sheet Roofing(PPGL) at all levels including fitting and fixing self drilling, self tapping screws complete (Roof trusses,purlins etc. to be measured and paid separately.) TATA Blue scope/ Dyna roof / Durakolor /Wonder Roof or equivalent as directed by the Departement			
		(ii) 0.45 mm thick	sqm	279.54	
8.2	8.1.36	Providing Pre Painted Galvalume Sheet (PPGL) accessories ( Ridges / Valley / Gutter / Flashing) at all levels including fitting and fixing self drilling, self tapping screws complete. TATA Blue scope/ Dyna roof / Durakolor /Wonder Roof or equivalent as directed by the Departement			
		(ii) 0.45 mm thick	R.m	24.66	
<b>9</b>	<b>WOODWORKS</b>				
9.1	9.18.1	Providing, fitting and fixing factory made Santro Flush door shutters having core & cross bands fabricated from seasoned 1st class timber, 25mm core battens, 2.5mm to 3.5mm uniformly thick crossbands, styles & rails made from hardwood timber ofwidth not less than 50mm, fixed to the door frames (chowkath) with necessary hinges, screws, bolts etc.as specified and directed at all levels (Door fixtures and fittings to be measured and paid seperately.)			
		(b) 35mm thick	sqm	26.78	
<b>10</b>	<b>GRILL</b>				
10.1	10.2	Providing, fitting and fixing M.S. grill of required pattern for windows/ clerestory windows/ openingwith M.S. flats at required spacing in frame all round, squre or round M.S. bars with round headed bolts and nuts or screws. I. Plain grill			
		(c) Fixed to Brickwork/P.C.C/R.C.C.	kg.	594.00	
<b>11</b>	<b>ALUMINIUM WINDOWS</b>				
11.1	11.1.2	Providing, fitting and fixing anodised aluminium sliding windows and ventilators of standard sections of approved brand without horizontal glazing bars, joints mitred and welded (manufactured to relevant IS specifications) and providing and fixing handles, angle cleat, rubber gasket, roller, bolting device, locking arrangements, screws etc as required complete as specified and directed for all levels.			
11.1.1	(a)	2 track sliding windows (i) 6mm clear glass	sqm	0.54	
11.1.2	(b)	3 Track sliding window (i) 6mm clear glass	Sq.m	29.16	
<b>12</b>	<b>PAINTING</b>				
12.1	<b>13.3</b>	<b>PLASTER OF PARIS &amp; WALL PUTTY</b>			
	13.3.4	Providing two coats of Birla White Wall Care Putty (Water Resistant White Cement based putty for concrete/ mortar walls and ceiling both internal and external) after removing all loosely adhering material from the wall surface with the help of emerystone, putty blade or wire brush and moisteningthe wall with sufficient quantity of clean water as specified and directed by the department. (Total thickness of two coats is maximum 1.5mm)			
	(i)	Thickness = 1.5 mm thick	sqm	581.53	
12.2	<b>13.4</b>	<b>WALL PAINTING</b>			
	13.4.1	Wall painting (two coats) with acrylic emulsion paint approved brand and manufacture (Asian paint/ Berger paint/ ICI paint/ J & N paint/ Nerolac) on newsurface to give an even shade after throughly brushing the surfaces free from mortar droppings and other foreign matter and sand papered smooth.			

		(a).Acrylic Emulsion Paint approved brand and manufacture (Asian paint/ Berger paint/ ICI paint/ J& N paint/ Nerolac)	sqm	439.62		
12.3	13.4.5	Extra over item no 13.4.1 above for painting with acrylic emulsion paint of approved brand and manufacture (Asian paint/ Berger paint/ ICI paint/ J & N paint/ Nerolac) on ceiling and on sloping roof.				
		(i).Acrylic Emulsion Paint approved brand and manufacture (Asian paint/ Berger paint/ ICI paint/ J& N paint/ Nerolac)	sqm	75.03		
12.4	<b>13.7</b>	<b>PAINTING ON STEEL AND OTHER METAL SURFACE</b>				
	13.7.2	Applying primary coat over new steel and other metal surface over 100m in width or girth after preparing the surface by thoroughly cleaning oil,grease, dirt and other foreign matter and scoured with wire brushes, fine steels, wood scrapers and sand paper.				
		a). With ready mixed "red-lead/ red oxide" primer.	sqm	59.40		
12.5	13.7.4	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.				
		(i).Surfaces over 100mm in width or girth.				
		a). General purpose (Asian paint/ Berger paint/ ICI paint/ J & N paint/ Nerolac).	sqm	59.40		
12.6	<b>13.9</b>	<b>SPECIAL WEATHER PROOF COLOURING</b>				
	13.9.5	Finishing wall with water proofing weather coat smooth anti-fungal exterior painting of Ace brand of Asian Paints and of required shade on old/new wall surface after cleaning and clearing the surface etc. including scaffolding complete as directed at all levels (two coats)	sqm	141.91		
<b>13</b>		<b>DOOR AND WINDOW FITTINGS</b>				
13.1	<b>15.2</b>	<b>ALUMINIUM FITTINGS</b>				
	15.2.1	Supplying, fitting, fixing anodised aluminium fittings of approved make, reasonably smooth, free from sharp edges and corners, flaws and other defects and with counter sunk holes for screws including necessary aluminium screws etc. complete.( anodised to bright natural matt & satin finished )				
13.1.1	A	Sliding door bolts				
	(ii)	250mm x 16mm sliding door bolt.	Each	6		
13.2	B	Tower bolt				
	(iii)	200mm x 10mm tower bolt.	Each	20		
13.3	C	Door handles				
		150 mm	Each	20		
13.4		l) Hydraulic door closure	Each			
13.5		t) Door stopper with rubber stopper	Each			
<b>14</b>		<b>STEEL AND IRON WORKS</b>				
14.1	<b>18.1</b>	<b>REINFORCEMENT</b>				
	18.1.1	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. (No extra measurement for lap, hook, chair, anchor etc. will be entertained in the measurement as they are included in the rate) (Upto 1st floor level)				
		b) Other ISI approved TMT reinforcement bar (SAI/BISCON/THERMAX)	Qty	40.96		
14.2	<b>18.3</b>	<b>ROOF TRUSS</b>				

	18.3.2	Providing, fitting, hoisting and fixing of roof trusses fabricated out of combination of any two or all of the following sections (i) Square section (ii) Rectangular Hollow section of specification RSH/SHS and (iii) M.S. circular hollow section of Grade 210 including purlins, bottom runners and providing M.S. cleat, M.S. angle base plank, bolts and nuts with red oxide primer including fitting bottom runner and cleat etc. for fixing ceiling joist as per design complete as directed as per specifications.				
	(b)	Using other ISI marked approved brand tube	Qtl	31.94		
14.3	<b>18.7</b>	<b>DOOR FRAMES</b>				
	18.7.2	Providing, fitting and fixing powder coated pressed steel door frame made of 1.25mm/ 1.6mm thick sheet of various sizes with necessary hinge jamb, lock jamb, head and steel base ties at the bottom of the frame. The whole frame shall be welded or rigidly fixed together by mechanical means with base ties of pressed mild steel angle of size 20x20x1.25mm thick. Frame to be filled up with 1:4:8 P.C.C. after fitting the frame with brick/concrete works etc. complete as directed by the department for all levels. (P.C.C. to be measured and paid for separately).				
		(a) 1.25mm thick sheet				
		(iii) Size 125mm x 60mm (Single rebate)	R.m	54.75		
<b>15</b>		<b>PLINTH PROTECTION WORKS AND PERIPHERY</b>				
15.1	19.2	Providing plinth protection with bricks flat laid in cement mortar 1: 4 and finished with 15mm thick cement plaster in prop. 1:2 with a floating coat of neat cement finish.	sqm	30.36		
15.2	19.5	Providing drain with brick work in cement mortar in proportion 1:5 with half brick thick side walls and 100mm thick C.C (1:3:6) base over one brick flat soling including 15mm thick cement plastering in prop. 1:3 finished with a floating coat of cement slurry as directed with necessary shuttering for sides and earth work in excavation of foundation trenches and refilling the sides after completion of work etc. as specified.				
		ii). 300mm wide and average 250mm deep with bed slope 1 in 150 with initial depth of 100mm.	R.m	71.66		
<b>16</b>		<b>ANTI TERMITE TREATMENT</b>				
16.1	<b>26</b>	<b>PRE CONSTRUCTION ANTI - TERMITE TREATMENT</b>				
	26.1.1	Pre construction anti - termite treatment at the bottom of foundation pits and walls on either side up to a height of 300mm from bottom of the excavation made for column plinth beam, wall, trenches etc. by applying the emulsion @ 5 (five) litres per square meter of the surface area before starting construction work (supplying of necessary tools and accessories by the contractor) as per the direction of the Department complete.				
		a) with aqueous emulsion having concentration 1:19 with chloropyrophose solution (trical or equivalent) and water, i.e. 1% solution.	Sqm	27.00		
<b>B</b>		<b>SANITARY WORKS</b>				
1	1.1	Providing fitting and fixing vitreous water closet squatting pan (Indian type W.C Orissa pattern) with all fittings and fixtures complete including cutting and making good to the walls and floors wherever required. (Flushing Cistern to be paid separately)				
	1.1.3	Vitreous water closet squatting pan Indian type W.C Orissa pattern of size 580 x 450 mm				
		a) White				
		ii) Hindware make	Each	1		
2	1.5	Supplying, fitting and fixing PVC flushing cistern with all internal fittings with CI brackets including fitting and fixing standard size CP flush pipe, union clamps etc. complete as directed and specified (pipes will be measured separately)				
		ii) Hindware make				



		a) White				
		(i) Sleek+ PVC cistern	Each	1		
3	1.13	Providing vitreous China wash basin with CI/MS brackets, C.P brass chain with plug,PVC waste pipe including painting of fittings and brackets, cutting and making good the walls wherever required. (Pillar cock stop cocks, waste coupling are to be paid separately)				
	1.13.2	BASIN (without pedestal)				
		(B) Hindware Make				
		(a) White				
		(i) Alto 510 x 400 (Cat. No.10091)	Each	1		
4	1.18	Providing fitting and fixing Mirror with plastic frame of size 500x400mm complete as directed and specified.	Each	1		
5	1.22	Providing, fitting and fixing CP soap tray / soap dish complete as directed and specified.				
		(i) Jaquar Make				
		(a) Continental (Cat.No.ACN-1331N)	Each	1		
6	1.24	Providing, fitting and fixing CP towel rail complete as directed and specified.				
		(b) Sona make				
		(iii) Towel rail diplomat 600mm long (Cat.No.TR-0605)	Each	1		
7	1.26	Providing, fitting and fixing Chrome Plated towel ring complete as directed and specified.				
		(b) Sona make				
		(i) Towel ring round (Cat.No.TR-06051)	Each	1		
8	1.27	Providing, fitting and fixing Chrome Plated robe hook complete as directed and specified.				
		(b) Agmecco make				
		(vi) Dolfee (Cat.No.DE-00211)	Each	1		
9	1.32	Providing, fitting and fixing Chrome Plated waste coupling complete as directed and specified.				
		(b) Sona				
		(i) Rupa 32mm (HT/ FT) (Cat.No.WS-0801)	Each	1		
10	1.34	Providing, fitting and fixing Chrome Plated bottle trap pipe complete as directed and specified.				
		(a) Sona make				
		(i) Pipe for bottle trap 300mm long (Cat. No.BT-0761)	Each	1		
11	1.37.1	Supplying, fitting and fixing PVC pipes of 6 Kg/cm <sup>2</sup> (Supreme/Prince) or other ISI approved including joining ,fitting and fixing wiyh clamps etc.as necessary complete at all levels including below G.L as directed and specified.				
	(a)	<b>In exposed surfaces or in trenches.</b>				
	(ii)	110mm dia.	R.m	8.00		
12	1.37.3	Supplying fitting and fixing 87.5 degree PVC bend with door of (Supreme/Prince) or other ISI approved including joining , fitting and fixing etc. as necessary complete at all levels including below G.L. as directed and specified.				
	(a)	<b>In exposed surfaces or in trenches.</b>				
	(ii)	110mm dia.	Each	2		
13	1.37.6	Supplying fitting and fixing PVC single tee with door of (Supreme/Prince) or other ISI approved including joining fitting and fixing etc. as necessary complete at all levels including below G.L. as directed and specified.				
		a) In exposed surfaces or in trenches.				
		(ii) 110mm dia.	Each	2		
14	1.39	Providing fitting and fixing PVC cowl of ISI make complete as directed and specified.				
	(ii)	110mm dia. PVC cowl of ISI make	Each	1		
15	1.42	C.P. Grating				
	(ii)	110 mm dia	Each	2		
<b>C</b>	<b>INTERNAL WATER SUPPLY WORKS</b>					

1	3.1.6	Providing and fixing Chlorinated Polyvinyle Chloride (CPVC) Pipes, having thermal stability for hot and cold water supply including all CPVC plain and brassthreaded fittings i/c fixing the pipe with clamps at 1.00m spacing. This includes jointing of pipe				
1.1	<b>A</b>	<b>In exposed surfaces or in trenches.</b>				
1.1.1	(c)	25 mm nominal outer dia pipe	R.m	6.00		
1.1.2	(f)	50 mm nominal outer dia pipe	R.m	6.00		
1.2	<b>B</b>	<b>Concealed pipe with cutting chases &amp; making good the walls</b>				
1.2.1	(a)	15 mm nominal outer dia pipe	R.m	4.00		
1.2.2	(b)	20 mm nominal outer dia pipe	R.m	4.00		
2	3.2.1	Supplying fitting and fixing C.P. bib cock 15mm dia of approved brand directed and specified. (G.I. & C.P pipes will be measured separately)				
	<b>(IV)</b>	<b>Agmeco brand</b>				
	(v)	Bib Cock Two way with Flange CAT No.CC 00203/CATNo.CN00203	Each	1		
3	3.3.2	Supplying fitting and fixing chrome plated (C.P.) stop-cock of approved brand and size as mentioned below as directed and specified.(G.I. & C.P pipes will be measured and paid separately)				
	<b>(II)</b>	<b>Agmeco Brand</b>				
3.1	(a)	15mm dia(Male/ Female )	Each	2		
3.2	(b)	15mm dia(Concealed )	Each	1		
4	3.5.1	Supplying and fitting fixing C.P. pillar cock of 15mmdia of approved brand as specified and directed.				
	<b>(III)</b>	<b>Agmeco (classic)</b>				
	(a)	Flat	Each	1		
<b>TOTAL COST OF BUILDING CIVIL WORKS</b>						
			<b>SAY</b>			

VALUE ADDITION BUILDING						
ITEM NO.		DESCRIPTION OF WORK	UNIT	QTY.	RATE IN RUPEES	AMOUNT IN
BOQ	APWD					
<b>1</b>		<b>EARTH WORK</b>				
1.1	1.1	Earthwork in excavation 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 in the following classification of soils including bailing out water where necessary as directed and specified.				
	(A)	Up to a depth of 2.00m below the existing ground level.				
	(a)	In ordinary soil	cum	57.62		
1.2	1.3(c)	Earth / Sand filling in plinth in layer not more than 150 mm thick including necessary, carriage, watering, ramming etc. complete as directed and specified including payment of land compensation, Forest Royalty, Sales Tax and other duties and taxes as may be necessary. (c) with river sand or silt (predominantly non plastic) by truck carriage including loading and unloading	cum	130.82		
<b>2</b>		<b>NOMINAL MIX. ( P.C.C. WORKS )</b>				
2.1	2.1.1	Plain cement concrete works with coarse aggregate of sizes 13mm to 32mm in foundation bed for footings, tie beams, 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).				
2.1.1	a)	In prop. 1 cement : 3 sand : 6 coarse aggregate by volume	cum	26.40		
2.2	2.1.3	Providing and laying 25mm thick damp proof course with cement concrete in prop 1: 1.5: 3 with graded stone agg. Of 10mm down nominal size including providing approved damp proof admixture in proportion as recommended by the manufacturer including curing etc. complete as directed.	sqm	10.55		
<b>3</b>		<b>REINFORCED CEMENT CONCRETE WORKS</b>				
3.1	2.2.1	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				
3.1.1	(A)	In substructure up to plinth level				
	(N)	Foundation, footing, columns with base tie and plinth beam, pile cap, base slab, retaining walls, walls of septic tank, inspection pit and the like and other works not less than 100mm thick up to plinth level.				
	(b)	Without using admixture, plasticiser				
	(b)	M20 grade concrete	cum	18.79		
3.2	(B)	In super structure from plinth level up to 1st floor level.				
3.2.1	(ii)	Columns, pillars, posts, struts, suspended floor, roof, landing, shelf and support, balcony, lintel, sill band, beam, girder, bressumer, cantilever, staircase (except spiral staircase and landing ) including preparing the top surface and finishing of nosing.				
	(N)	Without using admixture, plasticiser				
	(b)	M20 grade concrete	cum	22.87		
<b>4</b>		<b>PLYBOARD SHUTTERING (FORMWORK)</b>				
4.1	3.2.1	Providing form work of 12mm thick Plywood Board so as to give a rough finish including centering, shattering, 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:				

4.1.1	3.2.1.1	Columns, Pillars, Posts & Strut of square/ rectangular/ polygonal in plan or any shape like Tee/L etc. having plane vertical face	sqm	175.30		
4.1.2	3.2.1.2	Sides and Soffits of Beams, beam haunchings, cantilever girders, bressumers, lintels and horizontal ties. (a) For depth not exceeding 1.0M.	sqm	177.62		
4.1.3	3.2.1.3	Flat Surfaces such as soffits of suspended floors, roofs, landings, cantilever slabs, chajjas, balconies and the like. (a) Floors etc. upto 200mm in thickness.	sqm	99.12		
<b>5</b>	<b>MASONARY WORK</b>					
5.1	4.1.1	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.	sqm	351.94		
5.2	4.1.4	Brick work in cement mortar with 1st class brick including racking out joints and curing complete as directed. (I) In Sub-structure upto plinth level including dewatering if necessary (d) In proportion 1:6	cum	18.29		
5.3	4.1.8	1st class brick nogged wall in cement mortar including racking out joints and curing complete as directed in super structure above plinth up to 1st floor level (protruding M.S rod/Tor steel of column to be embedded in cement mortar and will be measured and paid separately) (A) 112 mm thick brick wall (b) In cement mortar in proportion 1:5.(1 cement:5 sand)	sqm	190.86		
<b>6</b>	<b>FLOORING</b>					
6.1	5.7.2.1	Providing VITRIFIED floor tiles of approved quality of specified size, shape and thickness not less than 18mm on floors, skirtings, risers and treads of steps over 15 mm thick base of cement mortar in prop. 1:3 (1 cement : 3 coarse sand ) including cutting where necessary finished with flush pointing with Fix-A-Tile (Choksey/Sika/Pedelite/Rouf) / white cement slurry mixed with approved pigment to match shade of tiles, mixed with approved pigment to match the shade of the tiles, complete at all levels as specified and directed. (Coloured pigment should be in conformity with colour of tiles and as approved and directed by the Department) a) Normal range Somany/ Orient/Nitco /Varmora/VITA/ Marbitto/ Make (ii) Of size 600mmx600mm and above	sqm	145.35		
6.2	5.3.2	Brick-on-flat floor with 1st class brick and grouted with cement mortar in prop. 1:4 (1 cement : 4 sand) including 15mm thick cement plastering in proportion 1:2 (1 cement : 2 sand) finishing with a floating coat of neat cement finish using cement slurry @ 2.75 kg. per sq. metre of floor area and curing complete.	sqm	145.35		
	5.1	<b>CEMENT CONCRETE FLOORING</b>				
6.3	5.1.4	65 mm thick cement concrete floor consisting of 50 mm under layer of cement concrete in prop. 1:3:6 (1 cement : 3 coarse sand : 6 coarse aggregate of 25mm and down) and 15 mm thick wearing layer in cement concrete in prop. 1:1:2 (1 cement : 1 coarse sand : 2 coarse aggregate of size 10mm down) laid in panels and finished with a floating coat of neat cement finish (using cement slurry for bond @ 2.75 kg. per square metre of floor area) including curing etc. complete as directed.	sqm	36.72		
<b>7</b>	<b>CEMENT PLASTERING</b>					
7.1	6.2.2	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	sqm	286.44		
7.2	6.2.3	20 mm thick Cement plaster in two coats on single or half brick walls for interior plastering up to 1st floor level including arises, internal rounded angles, chamfers and / or rounded angles not exceeding 80mm in girth and finished even and smooth including curing complete as directed. A) On rough side (backing coat 15 mm and finishing coat 5mm thick) b) In cement mortar 1:4	sqm	188.73		

7.3	6.2.5	Extra over item no 6.2.1 to 6.2.3 for plastering on ceiling and soffits of stairs up to 1st floor level (instead of plastering on walls) including curing complete as directed.	sqm	99.12		
<b>8</b>		<b>ROOFING</b>				
8.1	8.1.35	Providing Pre Painted Galvalume Sheet Roofing (PPGL) at all levels including fitting and fixing self drilling, self tapping screws complete (Roof trusses, purlins etc. to be measured and paid separately.) TATA Blue scope/ Dyna roof / Durakolor /Wonder Roof or equivalent as directed by the Departement				
		(ii) 0.45 mm thick	sqm	308.49		
8.2	8.1.36	Providing Pre Painted Galvalume Sheet (PPGL) accessories ( Ridges / Valley / Gutter / Flashing) at all levels including fitting and fixing self drilling, self tapping screws complete. TATA Blue scope/ Dyna roof / Durakolor /Wonder Roof or equivalent as directed by the Departement				
		(ii) 0.45 mm thick	R.m	31.80		
<b>9</b>		<b>WOOD WORKS</b>				
9.1	9.18.1	Providing, fitting and fixing factory made Santro Flush door shutters having core & cross bands fabricated from seasoned 1st class timber, 25mm core battens, 2.5mm to 3.5mm uniformly thick cross bands, styles & rails made from hardwood timber of width not less than 50mm, fixed to the door frames (chowkath) with necessary hinges, screws, bolts etc. as specified and directed at all levels (Door fixtures and fittings to be measured and paid separately.)				
		(b) 35mm thick	sqm	10.71		
<b>10</b>		<b>GRILL</b>				
10.1	10.2	Providing, fitting and fixing M.S. grill of required pattern for windows/ clerestory windows/ opening with M.S. flats at required spacing in frame all round, square or round M.S. bars with round headed bolts and nuts or screws.				
		I. Plain grill				
		(c) Fixed to Brickwork/P.C./R.C.C.	kg.	1,102.00		
<b>11</b>		<b>ALUMINIUM WINDOWS</b>				
11.1	11.1.2	Providing, fitting and fixing anodised aluminium sliding windows and ventilators of standard sections of approved brand without horizontal glazing bars, joints mitred and welded (manufactured to relevant IS specifications) and providing and fixing handles, angle cleat, rubber gasket, roller, bolting device, locking arrangements, screws etc as required complete as specified and directed for all levels.				
11.1.1	(a)	2 track sliding windows				
		(i) 6mm clear glass	sqm	0.00		
11.1.2	(b)	3 Track sliding window				
		(i) 6mm clear glass	Sq.m	55.08		
<b>12</b>		<b>PAINTING</b>				
	<b>13.3</b>	<b>PLASTER OF PARIS &amp; WALL PUTTY</b>				
12.1	13.3.4	Providing two coats of Birla White Wall Care Putty (Water Resistant White Cement based putty for concrete/ mortar walls and ceiling both internal and external) after removing all loosely adhering material from the wall surface with the help of emery stone, putty blade or wire brush and moistening the wall with sufficient quantity of clean water as specified and directed by the department. (Total thickness of two coats is maximum 1.5mm)				
		(i) Thickness = 1.5 mm thick	sqm	475.17		
	<b>13.4</b>					
12.2	13.4.1	Wall painting (two coats) with acrylic emulsion paint approved brand and manufacture (Asian paint/ Berger paint/ ICI paint/ J & N paint/ Nerolac) on new surface to give an even shade after thoroughly brushing the surfaces free from mortar droppings and other foreign matter and sand papered smooth.				
		(a).Acrylic Emulsion Paint approved brand and manufacture (Asian paint/ Berger paint/ ICI paint/ J & N paint/ Nerolac)	sqm	286.44		
12.3	13.4.5	Extra over item no 13.4.1 above for painting with acrylic emulsion paint of approved brand and manufacture (Asian paint/ Berger paint/ ICI paint/ J & N paint/ Nerolac) on ceiling and on sloping roof.				
		(i).Acrylic Emulsion Paint approved brand and manufacture (Asian paint/ Berger paint/ ICI paint/ J & N paint/ Nerolac)	sqm	99.12		
	<b>13.7</b>	<b>PAINTING ON STEEL AND OTHER METAL SURFACE</b>				

12.4	13.7.2	Applying primary coat over new steel and other metal surface over 100m in width or girth after preparing the surface by thoroughly cleaning oil,grease, dirt and other foreign matter and scoured with wire brushes, fine steels, wood scrapers and sand paper. a). With ready mixed "red-lead/ red oxide" primer.	sqm	110.16		
12.5	13.7.4	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. (i).Surfaces over 100mm in width or girth. a). General purpose (Asian paint/ Berger paint/ ICI paint/ J& N paint/ Nerolac).	sqm	110.16		
<b>13.9 SPECIAL WEATHER PROOF COLOURING</b>						
12.6	13.9.5	Finishing wall with water proofing weather coat smooth antifungal exterior painting of Ace brand of Asian Paints and ofrequired shade on old/new wall surface after cleaning and clearing the surface etc. including scaffolding complete as directed at all levels (two coats)	sqm	188.73		
<b>13 DOOR AND WINDOW FITTINGS</b>						
<b>15.2 ALUMINIUM FITTINGS</b>						
13.1	15.2.1	Supplying, fitting, fixing anodised aluminium fittings of approved make, resonably smooth, free from sharp edges and corners, flaws and other defects and with counter sunk holes for screws including necessary aluminium screws etc. complete.( anodised to bright natural matt & satin finished )				
13.1.1	A	Sliding door bolts				
	(ii)	250mm x16mm sliding door bolt.	Each	3		
13.2	B	Tower bolt				
	(iii)	200mm x 10mm tower bolt.	Each	8		
13.3	C	Door handles 150 mm	Each	8		
<b>14 STEEL AND IRON WORKS</b>						
<b>18.1 REINFORCEMENT</b>						
14.1	18.1.1	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. (No extra measurement for lap, hook, chair, anchor etc. will be entertained in the measurement as they are included in the rate) (Upto 1st floor level) b) Other ISI approved TMT reinforcement bar (SAI/BISCON/THERMAX)	Qtl	43.30		
<b>18.3 ROOF TRUSS</b>						
14.2	18.3.2	Providing, fitting, hoisting and fixing of roof trussesfabricated out of combination of any two or all of the following sections (i) Square section (ii) Rectangular Hollowsection ofspecification RSH/SHS and (iii) M.S. circular hollow section of Grade 210 including purlins, bottom runners and providing M.S. cleat, M.S. angle base plank, bolts and nuts with red oxide primer including fitting bottom runner and cleat etc. for fixing ceiling joist as per design complete as directed as per specifications. (b) Using other ISI marked approved brand tube	Qtl	40.59		
<b>18.7 DOOR FRAMES</b>						
14.3	18.7.2	Providing, fitting and fixing powder coated pressed steel door frame made of 1.25mm/ 1.6mm thick sheet of various sizes with necessary hinge jamb, lock jamb, head and steelbase ties at the bottom of the frame. The whole frame shall be welded or rigidly fixed together by mechanical means with base ties of pressed mild steel angle of size 20x20x1.25mmthick. Frame to be filled up with 1:4:8 P.C.C. after fitting the frame with brick/ concrete works etc.complete as directed by the department for all levels. (P.C.C. to be measured and paid for seperately). (a) 1.25mm thick sheet (iii) Size 125mm x 60mm (Single rebate)	R.m	21.90		
<b>15 PLINTH PROTECTION WORKS AND PERIPHERY</b>						
15.1	19.2	Providing plinth protection with bricks flat laid in cement mortar 1: 4 and finished with 15mm thick cement plaster inprop. 1:2 with a floating coat of neat cement finish.	sqm	31.68		

15.2	19.5	Providing drain with brick work in cement mortar in proportion 1:5 with half brick thick side walls and 100mm thick C.C (1:3:6) base over one brick flat soling including 15mm thick cement plastering in prop. 1:3 finished with a floating coat of cement slurry as directed with necessary shuttering for sides and earth work in excavation of foundation trenches and refilling the sides after completion of work etc. as specified.				
		ii). 300mm wide and average 250mm deep with bed slope 1 in 150 with initial depth of 100mm.	R.m	74.60		
<b>16</b>		<b>ANTI TERMITE TREATMENT</b>				
	<b>26</b>	<b>PRE CONSTRUCTION ANTI - TERMITE TREATMENT</b>				
16.1	26.1.1	Pre construction anti - termite treatment at the bottom of foundation pits and walls on either side up to a height of 300mm from bottom of the excavation made for column plinth beam, wall, trenches etc. by applying the emulsion @5 (five) litres per square meter of the surface area before starting construction work (supplying of necessary tools and accessories by the contractor) as per the direction of the Department complete.				
		a) with aqueous emulsion having concentration 1:19 with chloropirophose solution (trichel or euivalent) and water, i.e. 1% solution.	Sqm	27.00		
<b>TOTAL COST OF BUILDING CIVIL WORKS</b>						
					<b>SAY</b>	

## GROW HOUSE

1. Area of Ground floor = 31.00 M<sup>2</sup>.

Item No.		Description of work	Unit	Qty.	Rate in Rupees	Amount in Rupees
BOQ	APWD					
1	1.3	Earth/ sand filling in plinth in layers not more than 150mm thick including necessary carriage, watering, ramming etc. complete as directed and specified including payment of land compensation, forest royalty, sales tax and other duties and taxes as may be necessary.				
	(b)	With hill sand obtained by truck carriage loading and unloading, and carriage to the site of work.	Cum	15.58		
2	N.S.	Bhaluka bamboo dressed post 75mm to 100mm dia driven at least 750mm under ground and tied with wire or cane @ 1500 to 2000 c/c at least 3000 TO 4500 above plinth level.	Each	14.00		
3	N.S.	Spilt bamboo diagonally woven tarja wall with fair side exposed to weather, tied with necessary bamboo kamis on both sides @300mm apart tied with galvanised wire/cane slit and fixed to bamboo posts etc complete as directed including making provision for doors and windows of bamboo tarja on bamboo frames .	Sq.m	74.10		
4	8.1.11	Providing thatch roofing with sun grass (Ulllo) in layer of 75 mm thick with half spilt bamboo fillet and tying with galvd. wire complete.				
	(b)	150 mm thick.	Sqm	39.38		
5	8.1.12	Providing and laying thatching, capping to ridge and hip with new sun grass of 75 mm thick (fine work) stiffened with bamboo slips of size 30mm x 6mm and tied with galvd. tying wire complete.	RM	8.95		
6	8.1.15	Providing and laying bamboo slip jaffri of meshes not exceeding 63mm x 38mm including tying to the purlins and rafters with cane slip or galvd. tying wire.				
	(a)	Fine work	Sqm	39.38		
7	8.1.16	Providing single layer of bamboo mat lining over roof frame.	Sqm	39.38		
8	8.1.17	Providing bamboo maruli ties, purlins, rafters including tying with cane sling / Galvd. tying wire.				
	(a)	(a) With Bhaluka bamboo.	RM	107.40		
9	8.1.18	Providing bamboo roof truss with whole ruas bam boo and kamis, ruas placed at 150 mm apart and kamis 200mm to 230mm apart including tying all members with galvd tying wire.	Sqm	9.00		
10	8.1.19	Providing bamboo jaffri over thatch roof with 200mm sq mesh bamboo slips of 35mm width	Sqm	39.38		
11	8.1.21	Providing bamboo roof frame with kami of size 30mm x 6mm.	Sqm	39.38		
12	5.3.1	Brick-on-edge floor with 1st class brick and grouted with cement mortar in prop.1:4 (1 cement : 4 sand) including cement pointing in proportion 1:1 (1 cement :1 sand) finishing and curing complete.	Sq.m	31.00		
<b>TOTAL COST OF BUILDING CIVIL WORKS</b>						
					<b>SAY</b>	



## DEMO HALL

1. Area of Ground floor = 57.21 M<sup>2</sup>.

Item No.		Description of work	Unit	Qty.	Rate in Rupees	Amount in Rupees
BOQ	APWD					
1	1.3	Earth/ sand filling in plinth in layers not more than 150mm thick including necessary carriage, watering, ramming etc. complete as directed and specified including payment of land compensation, forest royalty, sales tax and other duties and taxes as may be necessary.				
	(b)	With hill sand obtained by truck carriage loading and unloading, and carriage to the site of work.	Cum	25.58		
2	N.S.	Bhaluka bamboo dressed post 75mm to 100mm dia driven at least 750mm under ground and tied with wire or cane @ 1500 to 2000 c/c at least 3000 TO 4500 above plinth level.	Each	24.00		
3	N.S.	Spilt bamboo diagonally woven tarja wall with fair side exposed to weather, tied with necessary bamboo kamis on both sides @300mm apart tied with galvanised wire/cane slit and fixed to bamboo posts etc complete as directed including making provision for doors and windows of bamboo tarja on bamboo frames .	Sq.m	94.44		
4	8.1.11	Providing thatch roofing with sun grass (Ullo) in layer of 75 mm thick with half spilt bamboo fillet and tying with galvd. wire complete.				
	(b)	150 mm thick.	Sqm	162.96		
5	8.1.12	Providing and laying thatching, capping to ridge and hip with new sun grass of 75 mm thick (fine work) stiffened with bamboo slips of size 30mmx 6mm and tied with galvd. tying wire complete.	RM	23.88		
6	8.1.15	Providing and laying bamboo slip jaffri of meshes not exceeding 63mm x 38mm including tying to the purlins and rafters with cane slip or galvd. tying wire.				
	(a)	Fine work	Sqm	162.96		
7	8.1.16	Providing single layer of bamboo mat lining over roof frame.	Sqm	162.96		
8	8.1.17	Providing bamboo maruli ties, purlins, rafters including tying with cane sling / Galvd. tying wire.				
	(a)	(a) With Bhaluka bamboo.	RM	210.48		
9	8.1.18	Providing bamboo roof truss with whole ruas bam boo and kamis, ruas placed at 150 mm apart and kamis 200mm to 230mm apart including tying all members with galvd tying wire.	Sqm	32.72		
10	8.1.19	Providing bamboo jaffri over thatch roof with 200mm sq mesh bamboo slips of 35mm width	Sqm	162.96		
11	8.1.21	Providing bamboo roof frame with kami of size 30mm x 6mm.	Sqm	162.96		
12	5.3.1	Brick-on-edge floor with 1st class brick and grouted with cement mortar in prop.1:4 (1 cement : 4 sand) including cement pointing in proportion 1:1 (1 cement :1 sand) finishing and curing complete.	Sq.m	57.21		
<b>TOTAL COST OF BUILDING CIVIL WORKS</b>						
					<b>SAY</b>	

TRAINING & OFFICE BUILDING						
ITEM NO.		DESCRIPTION OF WORK	UNIT	QTY.	RATE IN RUPEES	AMOUNT IN
BOQ	APWD					
1.		Area of Ground floor = 57.60 M <sup>2</sup> .				
<b>A</b>		<b>CIVIL WORKS</b>				
<b>1</b>		<b>EARTH WORK</b>				
1.1	1.1	Earthwork in excavation 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 in the following classification of soils including bailing out water where necessary as directed and specified.				
	(A)	Up to a depth of 2.00m below the existing ground level.				
	(a)	In ordinary soil	cum	25.63		
1.2	1.3(c)	Earth / Sand filling in plinth in layer not more than 150mm thick including necessary, carriage, watering, ramming etc. complete as directed and specified including payment of land compensation, Forest Royalty, Sales Tax and other duties and taxes as maybe necessary. (c) with river sand or silt (predominantly non plastic) by truck carriage including loading and unloading	cum	25.92		
<b>2</b>		<b>NOMINAL MIX. ( P.C.C. WORKS )</b>				
2.1	2.1.1	Plain cement concrete works with coarse aggregate of size 13mm to 32mm in foundation bed for footings, tie beams 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).				
2.1.1	a)	In prop. 1 cement : 3 sand : 6 coarse aggregate by volume	cum	6.14		
2.2	2.1.3	Providing and laying 25mm thick damp proof course with cement concrete in prop 1: 1.5: 3 with graded stone agg. Of 10mm down nominal size including providing approved damp proof admixture in proportion as recommended by the manufacturer including curing etc. complete as directed.	sqm	3.20		
<b>3</b>		<b>REINFORCED CEMENT CONCRETE WORKS</b>				
3.1	2.2.1	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				
3.1.1	(A)	In substructure up to plinth level				
	(N)	Foundation, footing, columns with base tie and plinth beam pile cap, base slab, retaining walls, walls of septic tank inspection pit and the like and other works not less than 100mm thick up to plinth level.				
	(b)	Without using admixture, plasticiser				
	(b)	M20 grade concrete	cum	7.17		
3.2	(B)	In super structure from plinth level up to 1st floor level.				
3.2.1	(ii)	Columns, pillars, posts, struts, suspended floor, roof, landing, shelf and support, balcony, lintel, sill band, beam, girder, bressumer, cantilever, staircase (except spiral staircase and landing ) including preparing the top surface and finishing of nosing.				
	(N)	Without using admixture, plasticiser				
	(b)	M20 grade concrete	cum	9.12		

4		PLYBOARD SHUTTERING (FORMWORK)			
4.1	3.2.1	Providing form work of 12mm thick Plywood Board so as to give a rough finish including centering, shattering, 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:			
4.1.1	3.2.1.1	Columns, Pillars, Posts & Strut of square/ rectangular/ polygonal in plan or any shape like Tee/L etc. having plane vertical face	sqm	69.15	
4.1.2	3.2.1.2	Sides and Soffits of Beams, beam haunchings, cantilever girders, bressumers, lintels and horizontal ties.			
		(a) For depth not exceeding 1.0M.	sqm	70.68	
4.1.3	3.2.1.3	Flat Surfaces such as soffits of suspended floors, roofs, landings, cantilever slabs, chajjas, balconies and the like.			
		(a) Floors etc. upto 200mm in thickness.	sqm	32.04	
5		MASONRY WORK			
5.1	4.1.1	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.	sqm	81.86	
5.2	4.1.4	Brick work in cement mortar with 1st class brick including racking out joints and curing complete as directed.			
5.2.1		(I) In Sub-structure upto plinth level including dewatering if necessary			
		(d) In proportion 1:4	cum	6.19	
5.3	4.1.8	1st class brick nogged wall in cement mortar including racking out joints and curing complete as directed in super structure above plinth up to 1st floor level (protruding M.S rod/Tor steel of column to be embedded in cement mortar and will be measured and paid separately)			
		(A) 112 mm thick brick wall			
		(b) In cement mortar in proportion 1:5.(1 cement:5 sand)	sqm	61.36	
6		FLOORING AND FLOOR FINISH			
6.1	5.7.1.2	Providing polished ceramic wall tiles of approved quality, size, shape and thickness not less than 8mm on walls and skirtings over cement mortar bed 10 mm thick in prop. 1:3 (1 cement : 3 coarse sand ) including cutting where necessary finished with flush pointing with Fix-A-Tile (Choksey / Sika / Pedelite / Rouf) /white cement slurry mixed with approved pigment to match shade of tiles complete at all levels as specified and directed (Cement plastering to be measured and paid separately) (Coloured pigment should be in conformity with colour of tiles and as approved and directed by the Department). (Wall means both interior and exterior walls).			
		b) Executive range Somany/Orient/Nitco/Asian Make			
		i) Of size 200mmx300mm and above	sqm	20.97	
6.2	5.7.2.1	Providing VITRIFIED floor tiles of approved quality of specified size, shape and thickness not less than 18mm on floors, skirtings, risers and treads of steps over 15 mm thick base of cement mortar in prop. 1:3 (1 cement : 3 coarse sand ) including cutting where necessary finished with flush pointing with Fix-A-Tile (Choksey/Sika/Pedelite/Rouf) / white cement slurry mixed with approved pigment to match shade of tiles, mixed with approved pigment to match the shade of the tiles, complete at all levels as specified and directed. (Coloured pigment should be in conformity with colour of tiles and as approved and directed by the Department)			
		a) Normal range Somany/Orient/Nitco/Varmora/VITA/ Marbitto/ Make			
	(ii)	Of size 600mmx600mm and above	sqm	53.10	
5.11	<b>ANTISKID TILES</b>				

6.3	5.11.1	Providing Antiskid Tiles of approved quality size, shapenot less than 8mm on floor, skirting over a cement mortar bed 15mm thick of 1:3 (1 cement: 3 coarse sand)approved make fix with Fix-A-Tile (Choksey/Sika/Pedelite/Rouf)/ white cement complete at all level as specified and directed.				
		<b>(A) CERAMIC</b>				
		i)Normal range (Sizes 300 mm x 300mm and above)				
		(a)Orient made: Galaxy Brown, Galaxy crema,Galaxy Pink, Galaxy Green, Pulsar Beige, Pulsar Blue, Pulsar Dove, Pulsar Pink, Burj Brown, Burj Green, Burj Slate	sqm	4.50		
	5.1	<b>CEMENT CONCRETE FLOORING</b>				
6.4	5.1.4	65 mm thick cement concrete floor consisting of 50 mmunder layer of cement concrete in prop. 1:3:6 (1cement : 3 coarse sand : 6 coarse aggregate of 25mm and down) and 15 mm thick wearing layer in cement concrete in prop. 1:1:2 (1cement :1 coarse sand : 2 coarse aggregate of size 10mm down) laid in panels and finished with a floating coat of neat cement finish (using cement slurry for bond @ 2.75 kg. per square metre of floor area) including curing etc. complete as directed.	sqm	12.60		
<b>7</b>		<b>CEMENT PLASTERING</b>				
7.1	6.2.2	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	sqm	71.00		
7.2	6.2.3	20 mm thick Cement plaster in two coats on single or half brick walls for interior plastering up to 1st floor levelincluding arises, internal rounded angles,chamfers and / or rounded angles not exceeding 80mm in girth and finished even and smooth including curing complete as directed.				
		A) On rough side (backing coat 15 mm and finishingcoat 5mm thick)				
		b) In cement mortar 1:4	sqm	84.00		
7.3	6.2.5	Extra over item no 6.2.1 to 6.2.3 for plastering oncellingand soffits of stairs up to 1st floor level (instead of plastering on walls) including curing complete as directed.	sqm	33.00		
<b>8</b>		<b>ROOFING</b>				
8.1	8.1.35	Providing Pre Painted Galvalume Sheet Roofing(PPGL) at all levels including fitting and fixing selfdrilling, self tapping screws complete (Roof trusses,purlins etc. to be measured and paid separately.) TATABlue scope/ Dyna roof / Durakolor /Wonder Roof orequivalent as directed by the Departement				
		(ii) 0.45 mm thick	sqm	61.00		
8.2	8.1.36	Providing Pre Painted Galvalume Sheet (PPGL) accessories ( Ridges / Valley / Gutter / Flashing) at all levels including fitting and fixing self drilling, self tapping screws complete. TATA Blue scope/ Dyna roof / Durakolor /Wonder Roofor equivalent as directed by the Departement				
		(ii) 0.45 mm thick	R.m	21.00		
<b>9</b>		<b>WOOD WORKS</b>				
9.1	9.18.1	Providing, fitting and fixing factory made Santro Flush door shutters having core & cross bands fabricated fromseasoned 1st class timber, 25mm core battens, 2.5mm to 3.5mm uniformly thick cross bands, styles & rails made from hardwood timber of width not less than 50mm, fixed to the door frames (chowkath) with necessary hinges, screws, bolt etc. as specified and directed at all levels (Door fixtures and fittings to be measured and paid seperately.)				
		(b) 35mm thick	sqm	6.30		

ITEM NO.		DESCRIPTION OF WORK	UNIT	QTY.	RATE IN RUPEES	AMOUNT IN
BOQ	APWD					
<b>10</b>		<b>GRILL</b>				
10.1	10.2	Providing, fitting and fixing M.S. grill of required pattern for windows/ clerestory windows/ opening with M.S. flats at required spacing in frame all round, square or round M.S. bars with round headed bolts and nuts or screws. I. Plain grill (c) Fixed to Brickwork/P.C.C/R.C.C.	kg.	281.00		
<b>11</b>		<b>ALUMINIUM WINDOWS</b>				
11.1	11.1.2	Providing, fitting and fixing anodised aluminium sliding windows and ventilators of standard sections of approved brand without horizontal glazing bars, joints mitred and welded (manufactured to relevant IS specifications) and providing and fixing handles, angle cleat, rubber gasket roller, bolting device, locking arrangements, screws etc as required complete as specified and directed for all levels.				
11.1.1	(a)	2 track sliding windows (i) 6mm clear glass	sqm	1.08		
11.1.2	(b)	3 Track sliding window (i) 6mm clear glass	Sq.m	12.96		
<b>12</b>		<b>PAINTING</b>				
<b>13.3</b>		<b>PLASTER OF PARIS &amp; WALL PUTTY</b>				
12.1	13.3.4	Providing two coats of Birla White Wall Care Putty (Water Resistant White Cement based putty for concrete/ mortar walls and ceiling both internal and external) after removing all loosely adhering material from the wall surface with the help of emery stone, putty blade or wire brush and moistening the wall with sufficient quantity of clean water as specified and directed by the department. (Total thickness of two coats is maximum 1.5mm)				
	(i)	Thickness = 1.5 mm thick	sqm	84.00		
<b>13.4</b>		<b>WALL PAINTING</b>				
12.2	13.4.1	Wall painting (two coats) with acrylic emulsion paint approved brand and manufacture (Asian paint/ Berger paint/ ICI paint/ J & N paint/ Nerolac) on new surface to give an even shade after thoroughly brushing the surfaces free from mortar droppings and other foreign matter and sand papered smooth.				
	(a)	Acrylic Emulsion Paint approved brand and manufacture (Asian paint/ Berger paint/ ICI paint/ J & N paint/ Nerolac)	sqm	71.00		
12.3	13.4.5	Extra over item no 13.4.1 above for painting with acrylic emulsion paint of approved brand and manufacture (Asian paint/ Berger paint/ ICI paint/ J & N paint/ Nerolac) on ceiling and on sloping roof.				
	(i)	Acrylic Emulsion Paint approved brand and manufacture (Asian paint/ Berger paint/ ICI paint/ J & N paint/ Nerolac)	sqm	33.00		
<b>13.7</b>		<b>PAINTING ON STEEL AND OTHER METAL SURFACE</b>				
12.4	13.7.2	Applying primary coat over new steel and other metal surface over 100mm in width or girth after preparing the surface by thoroughly cleaning oil, grease, dirt and other foreign matter and scoured with wire brushes, fine steels, wood scrapers and sand paper.				
	a)	With ready mixed "red-lead/ red oxide" primer.	sqm	30.00		
12.5	13.7.4	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.				
	(i)	Surfaces over 100mm in width or girth.				
	a)	General purpose (Asian paint/ Berger paint/ ICI paint/ J & N paint/ Nerolac).	sqm	30.00		
<b>13.9</b>		<b>SPECIAL WEATHER PROOF COLOURING</b>				
12.6	13.9.5	Finishing wall with water proofing weather coat smooth anti-fungal exterior painting of Ace brand of Asian Paints and of required shade on old/new wall surface after cleaning and clearing the surface etc. including scaffolding complete as directed at all levels (two coats)	sqm	84.00		

ITEM NO.		DESCRIPTION OF WORK	UNIT	QTY.	RATE IN RUPEES	AMOUNT IN
BOQ	APWD					
<b>13</b>		<b>DOOR AND WINDOW FITTINGS</b>				
<b>15.2</b>		<b>ALUMINIUM FITTINGS</b>				
13.1	15.2.1	Supplying, fitting, fixing anodised aluminium fittings of approved make, reasonably smooth, free from sharp edges and corners, flaws and other defects and with counter sunk holes for screws including necessary aluminium screws etc. complete.( anodised to bright natural matt & satin finished )				
13.1.1	A	Sliding door bolts				
	(ii)	250mm x 16mm sliding door bolt.	Each	1		
13.2	B	Tower bolt				
	(iii)	200mm x 10mm tower bolt.	Each	6		
13.3	C	Door handles				
		150 mm	Each	6		
13.4		l) Hydraulic door closure	Each	2		
13.5		t) Door stopper with rubber stopper	Each	2		
<b>14</b>		<b>STEEL AND IRON WORKS</b>				
<b>18.1</b>		<b>REINFORCEMENT</b>				
14.1	18.1.1	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 blackwire and placing in position with proper blocks, supports, chairs, spacers etc complete. (No extra measurement for lap, hook, chair, anchor etc. will be entertained in the measurement as they are included in the rate) (Upto 1st floor level)				
		b) Other ISI approved TMT reinforcement bar (SAI/BISCON/THERMAX)	Qtl	5.82		
<b>18.3</b>		<b>ROOF TRUSS</b>				
14.2	18.3.2	Providing, fitting, hoisting and fixing of roof trusses fabricated out of combination of any two or all of the following sections (i) Square section (ii) Rectangular Hollow section of specification RSH/SHS and (iii) M.S. circular hollow section of Grade 210 including purlins, bottom runners and providing M.S. cleat, M.S. angle base plank, bolts and nuts with red oxide primer including fitting bottom runner and cleat etc. for fixing ceiling joist as per design complete as directed as per specifications.				
	(b)	Using other ISI marked approved brand tube	Qtl	17.00		
<b>18.7</b>		<b>DOOR FRAMES</b>				
14.3	18.7.2	Providing, fitting and fixing powder coated pressed steel door frame made of 1.25mm/ 1.6mm thick sheet of various size with necessary hinge jamb, lock jamb, head and steel base tie at the bottom of the frame. The whole frame shall be welded or rigidly fixed together by mechanical means with base ties or pressed mild steel angle of size 20x20x1.25mm thick. Frame to be filled up with 1:4:8 P.C.C. after fitting the frame with brick concrete works etc. complete as directed by the department for all levels. (P.C.C. to be measured and paid for separately).				
		(a) 1.25mm thick sheet				
		(iii) Size 125mm x 60mm (Single rebate)	R.m	16.00		
<b>15</b>		<b>PLINTH PROTECTION WORKS AND PERIPHERY</b>				
15.1	19.2	Providing plinth protection with bricks flat laid in cement mortar 1: 4 and finished with 15mm thick cement plaster in prop. 1:2 with a floating coat of neat cement finish.	sqm	40.00		
15.2	19.5	Providing drain with brick work in cement mortar in proportion 1:5 with half brick thick side walls and 100mm thick C.C (1:3:6) base over one brick flat soling including 15mm thick cement plastering in prop. 1:3 finished with a floating coat of cement slurry as directed with necessary shuttering for sides and earth work in excavation of foundation trenches and refilling the sides after completion of work etc. as specified.				
		ii). 300mm wide and average 250mm deep with bed slope 1 in 150 with initial depth of 100mm.	R.m	71.80		
ITEM NO.		DESCRIPTION OF WORK	UNIT	QTY.	RATE IN RUPEES	AMOUNT IN

BOQ	APWD				
<b>16</b>		<b>ANTI TERMITE TREATMENT</b>			
	<b>26</b>	<b>PRE CONSTRUCTION ANTI - TERMITE TREATMENT</b>			
16.1	26.1.1	Pre construction anti - termite treatment at the bottom of foundation pits and walls on either side up to a height of 300mm from bottom of the excavation made for column plinth beam, wall, trenches etc. by applying the emulsion @ 5 (five) litres per square meter of the surface area before starting construction work (supplying of necessary tools and accessories by the contractor) as per the direction of the Department complete.			
		a) with aqueous emulsion having concentration 1:19 with chloropiophose solution (trichel or euivalent) and water, i.e. 1% solution.	Sqm	14.00	
<b>17</b>		<b>FIRE EXTINGUISHER</b>			
17.1	29.2.2	Supply, Installation, Fixing of DRY CHEMICAL POWDER Fire Extinguisher confirming to IS: 2171 with ISI mark and CO2 cartridge will be confirming to IS: 4947 with ISI mark, Powder will be confirming to IS: 4308 with ISI Mark (10 kg)	Each	2.00	
<b>B</b>		<b>SANITARY WORKS</b>			
1	1.1	Providing fitting and fixing vitreous water closet squatting pan (Indian type W.C Orissa pattern) with all fittings and fixtures complete including cutting and making good to the walls and floors wherever required.(Flushing Cistern to be paid separately)			
	1.1.3	Vitreous water closet squatting pan Indian type W.COrrisa pattern of size 580 x 450 mm			
		a) White			
		ii)Hindware make	Each	2	
2	1.5	Supplying, fitting and fixing PVC flushing cistern with all internal fittings with CI brackets including fitting and fixing standard size CP flush pipe, union clamps etc. compete as directed and specified (pipes will be measured separately)			
		ii) Hindware make			
		a) White			
		(i) Sleek+ PVC cistern	Each	2	
3	1.13	Providing vitreous China wash basin with CI/MS brackets, C.P brass chain with plug,PVC waste pipe including painting of fittings and brackets, cutting and making good the walls wherever required. (Pillar cock, stop cocks, waste coupling are to be paid separately)			
	1.13.2	BASIN (without pedestal)			
		(B) Hindware Make			
		(a) White			
		(i) Alto 510 x 400 (Cat. No.10091)	Each	2	
4	1.18	Providing fitting and fixing Mirror with plastic frame of size 500x400mm complete as directed and specified.	Each	2	
5	1.22	Providing, fitting and fixing CP soap tray / soap dish complete as directed and specified.			
		(i) Jaquar Make			
		(a) Continental (Cat.No.ACN-1331N)	Each	2	
6	1.24	Providing, fitting and fixing CP towel rail complete as directed and specified.			
		(b) Sona make			
		(iii) Towel rail diplomat 600mm long (Cat.No.TR-0605)	Each	2	
7	1.26	Providing, fitting and fixing Chrome Plated towel ring complete as directed and specified.			
		(b) Sona make			
		(i) Towel ring round (Cat.No.TR-06051)	Each	2	
8	1.27	Providing, fitting and fixing Chrome Plated robe hook complete as directed and specified.			
		(b) Agmeco make			
		(vi) Dolfee (Cat.No.DE-00211)	Each	2	
9	1.32	Providing, fitting and fixing Chrome Plated wastecoupling complete as directed and specified.			
		(b) Sona			
		(i) Rupa 32mm (HT/ FT) (Cat.No.WS-0801)	Each	2	
10	1.34	Providing, fitting and fixing Chrome Plated bottle trap pipe complete as directed and specified.			

		(a) Sona make				
		(i) Pipe for bottle trap 300mm long (Cat. No.BT-0761)	Each	2		
11	1.37.1	Supplying, fitting and fixing PVC pipes of 6 Kg/cm <sup>2</sup> (Supreme/Prince) or other ISI approved including joining, fitting and fixing with clamps etc.as necessary complete at all levels including below G.L as directed and specified.				
	(a)	<b>In exposed surfaces or in trenches.</b>				
	(ii)	110mm dia.	R.m	15.00		
12	1.37.3	Supplying fitting and fixing 87.5 degree PVC bend with door of (Supreme/Prince) or other ISI approved including joining, fitting and fixing etc. as necessary complete at all levels including below G.L. as directed and specified.				
	(a)	<b>In exposed surfaces or in trenches.</b>				
	(ii)	110mm dia.	Each	4		
13	1.37.6	Supplying fitting and fixing PVC single tee with door of (Supreme/Prince) or other ISI approved including joining fitting and fixing etc. as necessary complete at all level including below G.L. as directed and specified.				
		a) In exposed surfaces or in trenches.				
		(ii) 110mm dia.	Each	4		
14	1.39	Providing fitting and fixing PVC cowl of ISI make complete as directed and specified.				
	(ii)	110mm dia. PVC cowl of ISI make	Each	2		
15	1.42	C.P. Grating				
	(ii)	110 mm dia	Each	4		
<b>C INTERNAL WATER SUPPLY WORKS</b>						
1	3.1.6	Providing and fixing Chlorinated Polyvinyle Chloride (CPVC) Pipes, having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings i/c fixing the pipe with clamps at 1.00m spacing. This includes jointing of pipe				
	<b>A</b>	<b>In exposed surfaces or in trenches.</b>				
1.1.1	(c)	25 mm nominal outer dia pipe	R.m	10.00		
1.1.2	(f)	50 mm nominal outer dia pipe	R.m	10.00		
1.2	<b>B</b>	<b>Concealed pipe with cutting chases &amp; making good the walls</b>				
1.2.1	(a)	15 mm nominal outer dia pipe	R.m	6.00		
1.2.2	(b)	20 mm nominal outer dia pipe	R.m	6.00		
2	3.2.1	Supplying fitting and fixing C.P. bib cock 15mm dia of approved brand directed and specified. (G.I. & C.P.pipes will be measured separately)				
	<b>(IV)</b>	<b>Agmeco brand</b>				
	(v)	Bib Cock Two way with Flange CAT No.CC 00203/CAT No.CN 00203	Each	2		
3	3.3.2	Supplying fitting and fixing chrome plated (C.P.) stop- cock of approved brand and size as mentioned below as directed and specified.(G.I. & C.P pipes will be measured and paid separately)				
	<b>(II)</b>	<b>Agmeco Brand</b>				
3.1	(a)	15mm dia(Male/ Female )	Each	4		
3.2	(b)	15mm dia(Concealed )	Each	2		
4	3.5.1	Supplying and fitting fixing C.P. pillar cock of 15mm dia of approved brand as specified and directed.				
	<b>(III)</b>	<b>Agmeco (classic)</b>				
	(a)	Flat	Each	2		
<b>TOTAL COST OF BUILDING CIVIL WORKS</b>						
						<b>SAY</b>



<b>BOQ for Engineering, Design and Architect and Supervision Services</b>					
<b>S.No</b>	<b>Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Rate</b>	<b>Amount</b>
<b>1</b>	<p><b>Architectural Drawings, Design and Documentation Services;</b> based on the outline drawings provided consists of further design development drawings and Construction Documents culminating in the following (as applicable to the project):</p> <ul style="list-style-type: none"> <li>• Architectural Cover Sheet (Project Data, Maps, Notes, etc.)</li> <li>• Architectural Site Plan and Details</li> <li>• Architectural Floor Plan (Dimensioned with notes, wall types, key notes, etc.)</li> <li>• Door Types, Door &amp; Hardware Schedules, Interior Door and Window Details, etc.</li> <li>• Exterior Door and Window Details</li> <li>• Roof Plan and Details</li> <li>• Building Sections</li> <li>• Walls Sections</li> <li>• Building Elevations</li> <li>• Interior Elevations (Cabinet and Room)</li> <li>• Millwork Details</li> <li>• Reflected Ceiling Plan and Details</li> <li>• Equipment Plan and Notes</li> <li>• Project Manual/Specifications Book</li> </ul>				
<b>2</b>	<p><b>Civil Engineering Drawings:</b> Topographic and Tree Survey, plus Geotechnical Testing (Soils – if needed) to be performed prior to commencement of the work.</p>	<b>Lot</b>	<b>1</b>		
<b>3</b>	<p><b>Structural Engineering Drawings:</b></p> <ul style="list-style-type: none"> <li>• Foundation Plan (with Details and Notes)</li> <li>• Framing Plans (Details, Roof and Special Conditions)</li> </ul>				
<b>4</b>	<p><b>MEP Engineering Drawings (Mechanical, Electrical and Plumbing):</b></p> <ul style="list-style-type: none"> <li>• Mechanical Plan (HVAC with Equipment Schedules and Details)</li> <li>• Electrical Plans (Power, Lighting, Fixture Schedules, and Details)</li> <li>• Plumbing Plans (Wastewater, Venting, Domestic Water, Air, Vacuum and Medical Gases); also, Plumbing Riser Diagrams with Plumbing Notes and Schedules.</li> </ul>				
<b>5</b>	<p><b>Interior Design Drawings (Furniture, Art and Accessories):</b></p> <ul style="list-style-type: none"> <li>• Floor Finish Plan and Finish Schedule</li> </ul> <p><b>3D design of the final approved plan</b></p>				
<b>6.</b>	<p><b>CONSTRUCTION ADMINISTRATION &amp; OTHER REQUIREMENTS:</b></p> <ul style="list-style-type: none"> <li>• Initial Site Visit/Pre-Construction followed by regular Site Visits based on completion of work to be observed</li> <li>• Certificate of interim construction completion</li> <li>• Final Inspection (at completion of work)</li> <li>• Certificate of final completion of construction</li> <li>• The Consultant shall accept full responsibility to comprehend and verify the required Deliverables as stated in the Scope of Work and provide all information as described above. The Consultant shall be knowledgeable of the project site, its conditions, and all other constraints that may impact the fee.</li> </ul>	<b>Lot</b>	<b>1</b>		

	<ul style="list-style-type: none"> <li>• The Consultant shall understand all administrative approvals that will be required for the project.</li> <li>• The Consultant shall complete the Design and support in Bid Documents in accordance with the Scope of Work, Budget, and Schedule.</li> <li>• To minimize errors and omissions, the Consultant shall perform a comprehensive internal Quality Control (QC) of all design documents prior to the issuance of all Conceptual Plan for preparation of Bid Documents.</li> <li>• The Consultants design and construction administration team shall remain consistent throughout the duration of the project.</li> </ul> <p>All drawing and construction reports to be certified by a registered Architect</p>				
	<b>TOTAL</b>	<b>Lot</b>	<b>1</b>		

**SUMMARY OF ELECTRICAL WORKS FOR  
PROPOSED OYESTER MUSHROOM CLUSTER AT RESUBELPARA BLOCK, MENDIPATHAR,  
NORTH GARO HILLS Dist., Meghalaya based on Assam PWD Schedule of Rates for  
Electrical Works 2013-14**

	Amount
1	TOTAL INTERNAL ELECTRICAL WORKS OF OFFICE BUILDING
2	TOTAL INTERNAL ELECTRICAL WORKS OF VALUE ADDITION AREA BUILDING
3	TOTAL INTERNAL ELECTRICAL WORKS OF BAG MAKING SECTION BUILDING
4	TOTAL INTERNAL ELECTRICAL WORKS OF SPAWN MAKING SECTION BUILDING
5	TOTAL INTERNAL ELECTRICAL WORKS
6	TOTAL EXTERNAL ELECTRICAL WORKS
7	<b>Total Internal and External Electrical (Rs.)</b>

**Estimated cost of INTERNAL ELECTRICAL WORKS for PROPOSED OYESTER MUSHROOM CLUSTER AT RESUBELPARA BLOCK, MENDIPATHAR, NORTH GARO HILLS Dist., Meghalaya based on Assam PWD Schedule of Rates for Electrical Works 2013-14**

**BAG MAKING SECTION**

SI No.	APWD SL NO.	Description	Units	Qty	Rate	Amount
<b>A.</b>		<b>SCHEDULE ITEMS</b>				
<b>PART - 2</b>		<b>Wiring in surface/ recessed PVC conduit FR (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) cable</b>				
1	2.1	Wiring for light/fan/call bell point with 2x1.5 sq. mm. P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) in surface/ recessed conduit wiring system with 20mm dia 2mm thick / heavy rigid PVC IS: 9537 Part - III conduit (Berlia/ AKG / Precision/ Presto Plast/Polycab/ MW or equivalent make as approved by the Deptt.) including 6 Amp flush type switch/ bell push (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.) GI/MS switch board (ISI marked) with phenolic laminated sheet cover ,ceiling rose (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.) etc. complete				
	2.1.1	Short point up to 3.00 metre. length.	Each	12		
	2.1.2	Medium point up to 6.00 metre. Length.	Each	20		
	2.1.3	Long point up to 10.00 metre. Length.	Each	10		
2	2.2	Wiring to 5 a pin 6 Amps plug point with 1.5 sq. mm P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) in surface/ recessed 2 mm thick/ heavy rigid ISI marked IS: 9537 PART - III rigid PVC conduit (Berlia/ AKG / Precision/ Presto Plast/Polycab/ MW or equivalent make as approved by the Deptt.) wiring system including 5 pin 6 Amps flush type plug socket and 6 Amps F/T switch (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.), GI/ MS switch board (I.S.I. mark with phenolic laminated sheet cover including earth continuity with 1.5 sq. mm. cable to third pin of the plug socket etc. as required complete, when placed elsewhere.				
	2.2.2	Medium point up to 6.00 metre. Length.	Each			
3	2.4	Wiring for 5/6 pin 16 Amps power plug point with 4 sq. mm. P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) in surface/ recessed conduit wiring system including and fixing 5/6 pin 16 Amps flush type socket outlets and 16 Amps flush type switch (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt./ Havells make), GI/ MS switch board (I.S.I. mark with phenolic laminated sheet cover earth continuity with 2.5 sq. mm cable to the 3rd pin of the socket as required complete with 20 mm.dia. 2mm thick/ heavy rigid ISI marked IS: 9537 PART - III rigid PVC conduit (Berlia/ AKG / Precision/ Presto Plast/Polycab/ MW or equivalent make as approved by the Deptt.)				
	2.4.1	Extra long point up to 15.00 metre. length.	Each	4		
	2.4.2	Extra long point up to 20.00 metre. Length.	Each	2		
	2.4.3	Extra long point up to 25.00 metre. Length.	Each			

SI No.	APWD SL NO.	Description	Units	Qty	Rate	Amount
4	2.10	Wiring for 5 pin 6 amp plug with 1.5 sq mm P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) including 5 pin 6 amp socket outlet (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.)make and 6 amp flush typeswitch (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.)make earthing the 3rd pin of the socket as required on the switch board in surface/ recessed P.V.C. conduit wiring system. When fitted on same board of light and fan.	Each	1		
<b>CIRCUIT WIRING</b>						
5.	2.7	Wiring for drawing sub-main line with P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) PVC conduit (Berlia/ AKG / Precision/ Presto Plast/Polycab/ MW or equivalent make as approved by the Deptt.) including earth continuity in surface/ recessed 20 mm. dia. 2mm thick/ heavy ISI marked IS: 9537 PART - III rigid PVC conduit wiring system.				
	2.7.1	With 2 x 2.5 sq. mm. + earth continuity with 1x1.5 sq. mm. in 20 mm. dia. 2mm thick/ heavy rigid PVC IS: 9537 Part - III conduit.	RM	70		
	2.7.3	With 2 x 6 sq. mm. + earth continuity with 1x 4 sq. mm. cable in 25 mm. dia. 2mm thick/ heavy rigid PVC IS: 9537 Part - III conduit.	RM	130		
6.	2.9	Wiring for drawing sub-main line with P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) in surface/ recessed PVC 20 mm. dia. 2mm thick/ heavy ISI marked IS: 9537 PART - III rigid PVC conduit (Berlia AKG / Precision/ Presto Plast/Polycab/ MW or equivalent make as approved by the Deptt.) wiring system.				
	2.9.3	With 4x 6 sq. mm. + earth continuity with 2x4 sq. mm. cable in 32 mm. dia. 2mm thick/ heavy rigid PVC IS: 9537 Part - III conduit.	Metre.	90		
	2.9.4	With 4 x 10 sq. mm. + earth continuity with 2x6 sq. mm. cable in 40 mm. dia. 2mm thick/ heavy rigid PVC IS: 9537 Part - III conduit.	Metre.	85		
<b>PART-15</b>		<b>MCB DB (ABB, SCHNEIDER MG, LEGRAND, HAGER MAKE) &amp; (SCHNEIDER NEO BREAK, C&amp;S, Havells, INDOASIAN, HPL OR EQUIVALENT MAKE AS PPROVED BY THE DEPTT.)</b>				
		<b>MCB IN-comer TPN (Horizontal DB)</b>				
7.	15.8	Supplying with fitting and fixing sheet steel, phosphatised, powder painted dust & vermin proof Double door IP-43 double door surface mounting TPN MCB DB incorporated with bas-bar, Neutral link, Earth bar and din rail etc fitted on wall with grouting nuts & bolts as reqd. complete with making necessary connection as approved, specified and directed by the deptt.				
	15.8.1	ABB, Schneider MG, legrand, Hager make)				
	15.8.1.1	4 way TPN (4+12) double door	Each	1		
	15.8.1.3	8 way TPN (4+24) double door	Each			
<b>PART - 16</b>		<b>MCB, MCCB, RCCB, RCBO (ABB, SCHNEIDER MG, LEGRAND, AND HAGER MAKE) &amp; (SCHNEIDER NEO BREAK, C&amp;S, Havells, INDO ASIAN, HPL OR EQUIVALENT MAKE AS PPROVED BY THE DEPTT.) MCB (Conform to IS / IEC 60898-1:200/ MCCB (Conform to IS/IEC 60947- RCCB (Conform to IS/IEC 12640 / 61008)</b>				
8.	16.1	Supplying with fitting and fixing single Pole 10 KA 240/415V 50Hz MCB of the following capacity complete with making necessary connection as approved, specified and directed by the deptt.				
	16.1.2	C Series (Schneider MG, legrand, Hager make)				
	16.1.2.1	6 to 32A	Each	12		
	16.1.2.2	40A	Each	0		
9.	16.6	Supplying with fitting and fixing 4P 10 KA 240/415V 50Hz MCB of the following capacity complete with making necessary connection as approved, specified and directed by the deptt.				
	16.6.2	C Series (ABB, Schneider MG, legrand, Hager make)				
	16.6.2.2	40A	Each	1		

Sl No.	APWD SL NO.	Description	Units	Qty	Rate	Amount
<b>PART-22</b>		<b>EARTHING</b>				
10.	22.7	Supply, installation & testing of G.I. earth station with perforated 40 mm dia and 4.50 Metre long heavy duty G.I. pipe with necessary 40 mm dia. G.I. Fittings such as Socket, Tee, elbow, nipple and 50 mmx40 mm G.I. reducing socket for funnel including locking arrangement 300 mmx300 mmx6 mm hinged cover C.I. earth plate complete with digging of earth pit, construction of brick chamber and plastering of both inner & outer surface of wall as specified and directed by the deptt	Each	2		
11.	22.12	22.12	Extra for using salt (5 K and Charcoal (64 K in pipe Earth Station pitto provide low impedance ground in location of high soil resistivity as and when required and specified by the Deptt.	Each	2	
12.	22.20	Supplying & laying of 25X5mm size G.I. strips drawn on surface from earth electrode to Electrical switch gears, machineries etc complete with supply of G.I. nuts & bolts, screws etc including riveting, soldering & making necessary connection as approved, specified and directed by the deptt.	R.M.	20		
<b>PART -32</b>		<b>U. G. CABLE AND CABLE WORKS</b>				
13.	32.11	Supply and laying of following size Solid Aluminium conductor up to 10sq mm balance stranded conductor, XLPE Insulated, cores laid up, PVC tape inner sheathed, unarmoured/Armour (Aluminium for single core up to 70 sq mm balance Aluminium strip, Galvanised for cables up to 2x10 sq mm.3x10 sq mm,4x6 sq mm balance all galvanised steel strip) , extruded PVC Type ST2 sheathed, 650/1100V grade as per IS 7908(Part 1) 1988 laid in air or through existing cable trench/ duct/ cable tray/ HDPE pipe including fitting required size of lugs at the both end of the cable by using crimping tool and making good damaged done as specified and directed by the deptt. (Nicco/ Havells/ RPG/CCI/Polycab/Gloster/ Finolex make) .				
	32.11.4	<b>Core - 3.5A2XFY</b>				
	32.11.4.1	25 Sq.mm 3 and 1/2 core armoured cable	Metre	50		
<b>ITEMS APPROVED BY THE CHIEF ENGINEER P.W.D. (Bldg.), ASSAM, CHANDMARI, GUWAHATI-3 ON DATED 09-09-2019</b>						
14.		<b>4</b>	Supplying, installation, testing and Commission of the following indoor Decorative Recess mounted LED down lighter luminaries of model no- LESP01R009XC / LESP01R009XN /LESP01R009XW / L00957R000 / L00940R000 / L00930R000 /LD90-111 - XXX-65-XX complete with all accessories such as ballast, starter etc. In the false ceiling type Armstrong /Gypsum or similar ceiling mounting with necessary supportwith 1.5 sq.mm. P.V.C. insulated S.C.copper conductor as required and as directed by the department ( Jaquar / LT / Wipro make). [CL]	Each	2	
15.		<b>10</b>	Supplying, fitting fixing of LED Batten Tubes high quality aluminium extruded with decorative end caps connection with 1.5 Sq.mm 1 core PVC insulated round copper conductor as required and as directed by the department.			
		b)	BN021C LED 20 PSU CW GR S2 [TL]	Each	40	
			<b>Total of Schedule Items (A)</b>			
16.			Less 5% VAT added in SOR			
			<b>Total of Schedule Items less 5% VAT (B)</b>			
17.			Add 7% GST			
			<b>Total of Schedule Items (C)</b>			

Sl No.	APWD SL NO.	Description	Units	Qty	Rate	Amount
<b>B.</b>		<b>NON-SCHEDULE ITEMS</b>				
20.		<b>MAIN LT PANEL-[ BAG MAKING SECTION BUILDING ]</b>				
	Analysis	Supplying and installation of metal enclosed wall/floor mounted front operated cubical type switch gear panel suitable for indoor installation conforming to IS: 8623 (Part I & II). Panel should be made of sheet steel and thickness not less than 2mm and structural steel having light section. The panel shall be completely dust tight and vermin proof and shall be painted with anti corrosive and anti condensation type two coats of primer and two coats of paint. All wiring shall be PVC insulated and PVC sheathed of 1100 volt grade of required size. The panel should have provision of entry of cable at the bottom and also provision of out going feeders from the bottom of the panel. The panel shall be incorporated with double busbar system. The bus bar shall be of high quality copper of uniform cross section. The panel shall consist of the following items (viz. Voltmeter, Ammeter, CT, indicating lamps, selector switch etc.) connected as per drawing and shall be flush mounted on the front of the panel.	Set	1		
		<b>Incommer:</b>				
	a)	160 A ,4P, MCCB, 25 KA - 1 No.				
	b)	Digital Ammeter - 1 No.				
	c)	Digital Voltmeter - 1 No.				
	d)	CT 160/5 -1 Sets.				
	e)	Switch Fuse Unit - 3 Nos				
	f)	Selector Switch - 2 Nos				
	g)	LED Indicating Lamp 1 Set				
	h)	<b>Bus-Bars: 320 A TPN</b> electrolytic Copper Bus Bar of uniform cross-section (40mmx5mm) – 1 set				
		<b>Outgoing:</b>				
	i)	63A 4P MCCB 25 KA – 2 Nos.				
	j)	40 A 4P MCCB 25 KA – 2 Nos.				
	k)	40 A 4P MCB – 1 No.				
	l)	32 A 4P MCB – 4 Nos.				
	m)	32 A DP MCB – 8 Nos.				
	n)	25A DP MCB -1 No.				
21.		Supply, Installation antistatic rubber mat suitable for 1.1 KV Voltage grade	Sq.M	2		
22.		Supply, Fitting Fixing of Shock Treatment Chart	Each	2		
		<b>Total Non-Schedule (D)</b>				
<b>GRAND TOTAL [SCHEDULE ITEMS (A)+NON-SCHEDULE(B)]</b>					<b>Rs.</b>	

**Estimated cost of INTERNAL ELECTRICAL WORKS for PROPOSED OYESTER MUSHROOM CLUSTER AT RESUBELPARA BLOCK, MENDIPATHAR, NORTH GARO HILLS Dist., Meghalaya based on Assam PWD Schedule of Rates for Electrical Works 2013-14**

**SPAWN MAKING SECTION**

SI No.	APWD SL NO.	Description	Units	Qty	Rate	Amount
<b>A.</b>		<b>SCHEDULE ITEMS</b>				
<b>PART - 2</b>		<b>Wiring in surface/ recessed PVC conduit FR (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) cable</b>				
1	2.1	Wiring for light/fan/call bell point with 2x1.5 sq. mm. P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) in surface/ recessed conduit wiring system with 20mm dia 2mm thick / heavy rigid PVC IS: 9537 Part - III conduit (Berlia/ AKG / Precision/ Presto Plast/Polycab/MW or equivalent make as approved by the Deptt.) including 6 Amp flush type switch/ bell push (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.) GI/MS switch board (ISI marked) with phenolic laminated sheet cover ,ceiling rose (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.) etc. complete				
	2.1.1	Short point up to 3.00 metre. length.	Each	14		
	2.1.2	Medium point up to 6.00 metre. Length.	Each	19		
	2.1.3	Long point up to 10.00 metre. Length.	Each	12		
2	2.4	Wiring for 5/6 pin 16 Amps power plug point with 4 sq. mm. P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) in surface/ recessed conduit wiring system including and fixing 5/6 pin 16 Amps flush type socket outlets and 16 Amps flush type switch (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt./ Havells make), GI/ MS switch board (I.S.I. mark with phenolic laminated sheet cover earth continuity with 2.5 sq.mm cable to the 3rd pin of the socket as required complete with 20 mm. dia. 2mm thick/ heavy rigid ISI marked IS: 9537 PART - III rigid PVC conduit (Berlia/ AKG / Precision/ Presto Plast/Polycab/ MW or equivalent make as approved by the Deptt.)				
	2.4.1	Extra long point up to 15.00 metre. length.	Each	3		
	2.4.2	Extra long point up to 20.00 metre. Length.	Each			
3	2.10	Wiring for 5 pin 6 amp plug with 1.5 sq mm P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS- 694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) including 5 pin 6 amp socket outlet (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.)make) and 6 amp flush type switch (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.)make) earthing the 3rd pin of the socket as required on the switch board in surface/ recessed P.V.C. conduit wiring system. When fitted on same board of light and	Each	1		
<b>CIRCUIT WIRING</b>						
4.	2.7	Wiring for drawing sub-main line with P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) PVC conduit (Berlia/ AKG / Precision/ Presto Plast/Polycab/ MW or equivalent make as approved by the Deptt.) including earth continuity in surface/ recessed 20 mm. dia. 2mm thick/ heavy ISI marked IS: 9537 PART - III rigid PVC conduit wiring system.				
	2.7.1	With 2 x 2.5 sq. mm. + earth continuity with 1x1.5 sq. mm. in 20 mm. dia. 2mm thick/ heavy rigid PVC IS: 9537 Part - III conduit.	RM	70		
	2.7.3	With 2 x 6 sq. mm. + earth continuity with 1x 4 sq. mm. cable in 25 mm. dia. 2mm thick/ heavy rigid PVC IS: 9537 Part - III conduit.	RM			



SI No.	APWD SL NO.	Description	Units	Qty	Rate	Amount
5.	2.9	Wiring for drawing sub-main line with P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) in surface/ recessed PVC 20 mm. dia. 2mm thick/ heavy ISI marked IS: 9537 PART - III rigid PVC conduit (Berlia/ AKG / Precision/ Presto Plast/Polycab/ MW or equivalent make as approved by the Deptt.) wiring system.				
	2.9.3	With 4 x 6 sq. mm. + earth continuity with 2x4 sq. mm. cable in 32 mm. dia. 2mm thick/ heavy rigid PVC IS: 9537 Part - III conduit.	Metre.	200		
	2.9.4	With 4 x 10 sq. mm. + earth continuity with 2x6 sq. mm. cable in 40 mm. dia. 2mm thick/ heavy rigid PVC IS: 9537 Part - III conduit.	Metre.	200		
<b>PART-10</b>		<b>FITTINGS AND ACCESSORIES (ALL PRODUCTS SHOULD BE ENERGY EFFICIENT AND ENVIRONMENT FRIENDLY)</b>				
6.	11.12	Supplying and fixing of polished Brass Bracket of 18 S.W.G, 25 cm long cast back plate and brass lamp holder complete including connection as approved by the Deptt.)as required Without Lamp. [BK]	Each	1		
<b>PART- 14</b>		<b>SWITCH GEAR &amp; PROTECTION</b>				
		<b>INDUSTRIAL SOCKETS, DB WITHOUT MCB &amp; MCCB , MCB, RCCB, RCBO, SFU, CHANGE OVER ETC.</b> <b>(C&amp;S, Havells, INDOASIAN, HPL OR EQUIVALENT as approved by the Deptt.)MAKE</b>				
7.	14.1	Supplying fitting and fixing industrial Plug & Socket in surface mounting SPN sheet steel powder painted MCB DB incorporated with MCB DIN rail, neutral link Earth bar of the following rating of DP MCB complete with making necessary connection etc. as specified and directed by the Deptt.				
	14.1.1	20A Capacity. (C&S, Havells, INDOASIAN, HPL or equivalent as approved by the Deptt.)make)	Each	2		
<b>PART-15</b>		<b>MCB DB (ABB, SCHNEIDER MG, LEGRAND, HAGER MAKE) &amp; (SCHNEIDER NEO BREAK, C&amp;S, Havells, INDOASIAN, HPL OR EQUIVALENT MAKE AS PPROVED BY THE DEPTT.)</b>				
		<b>MCB IN-comer SPN DB</b>				
		<b>MCB IN-comer TPN (Horizontal DB)</b>				
8.	15.8	Supplying with fitting and fixing sheet steel, phosphatised, powderpainted dust & vermin proof Double door IP-43 double door surface mounting TPN MCB DB incorporated with bas-bar, Neutral link, Earth bar and din rail etc fitted on wall with grouting nuts & bolts as reqd. complete with making necessary connection as approved, specified and directed by the deptt.				
	15.8.1	ABB, Schneider MG, legrand, Hager make)				
	15.8.1.1	4 way TPN (4+12) double door	Each	1		
<b>PART - 16</b>		<b>MCB, MCCB, RCCB, RCBO (ABB, SCHNEIDER MG, LEGRAND, AND HAGER MAKE) &amp; (SCHNEIDER NEO BREAK, C&amp;S, Havells, INDO ASIAN, HPL OR EQUIVALENT MAKE AS PPROVED BY THE DEPTT.) MCB</b> <b>(Conform to IS / IEC 60898-1:200/ MCCB (Conform to IS/IEC 60947- RCCB (Conform to IS/IEC 12640 / 61008)</b>				
9.	16.1	Supplying with fitting and fixing single Pole 10 KA 240/415V 50Hz MCB of the following capacity complete with making necessary connection as approved, specified and directed by the deptt.				
	16.1.2	C Series (Schneider MG, legrand, Hager make)				
	16.1.2.1	6 to 32A	Each	12		
10.	16.3	Supplying with fitting and fixing DP 10 KA 240/415V 50Hz MCB of the following capacity complete with making necessary connection as approved, specified and directed by the deptt.				
	16.3.2	C Series (ABB, Schneider MG, legrand, Hager make)				
	16.6.2.2	40A	Each	1		
<b>PART-22</b>		<b>EARTHING</b>				
11.	22.7	Supply, installation & testing of G.I. earth station with perforated 40 mm dia and 4.50 Metre long heady duty G.I. pipe with necessary 40 mm dia. G.I. Fittings such as Socket, Tee, elbow, nipple and 50 mmx40 mm G.I. reducing socket for funnel including locking arrangement 300 mmx300 mmx6 mm hinged cover C.I. earth plate complete with digging of earth pit, construction of brick chamber and plastering of both inner & outer surface of wall as specified and directed by the deptt .	Each	2		
12.	22.12	22.12	Extra for using salt (5 K and Charcoal (64 K in pipe Earth Station pitto provide low impedance ground in location of high soil resistivity as and when required and specified by the Deptt.	Each	2	

SI No.	APWD SL NO.	Description	Units	Qty	Rate	Amount
13.	22.20	Supplying & laying of 25X5mm size G.I. strips drawn on surface from earth electrode to Electrical switch gears, machineries etc complete with supply of G.I. nuts & bolts, screws etc including riveting, soldering & making necessary connection as approved, specified and directed by the deptt.	R.M.	20		
<b>PART - 27</b>		<b>CEILING FAN, EXHAUST FAN AND AIR CURTAIN</b>				
14.	27.2	Supplying including fitting fixing of following A.C. Exhaust fan in the existing hole on the wall of following sweeps with making necessary connection as approved by the Deptt.)as required complete and as directed by the Department.				
	27.2.1	Domestic				
	27.2.1.12	Ventil Air DB 300 mm sweep (Havells make) [EF]	Each	1		
<b>ITEMS APPROVED BY THE CHIEF ENGINEER P.W.D. (Bldg.), ASSAM, CHANDMARI, GUWAHATI-3 ON DATED 09-09-2019</b>						
15.	4	Supplying, installation, testing and Commission of the following indoor Decorative Recess mounted LED down lighter luminaries of model no LESP01R009XC / LESP01R009XN / LESP01R009XW / L00957R000 / L00940R000 / L00930R000 / LD90-111 - XXX-65-XX complete with all accessories such as ballast, starter etc. In the false ceiling type Armstrong /Gypsum or similar ceiling mounting with necessary support with 1.5 sq.mm. P.V.C. insulated S.C.copper conductor as required and as directed by the department ( Jaquar / LT / Wipro make). [CL]	Each	8		
16.	10	Supplying, fitting fixing of LED Batten Tubes high quality aluminium extruded with decorative end caps connection with 1.5 Sq.mm 1 core PVC insulated round copper conductor as required and as directed by the department.				
	a)	B118601000 [FL]	Each	5		
17.	10	Supplying, fitting fixing of LED Batten Tubes high quality aluminium extruded with decorative end caps connection with 1.5 Sq.mm 1 core PVC insulated round copper conductor as required and as directed by the department.				
	b)	BN021C LED 20 PSU CW GR S2 [TL]	Each	21		
18.	6	Supplying fitting & fixing of LED Bulb non-dimmable in the existingbatten / angle holder as required and as directed by the department ( Jaquar or eqvt. make).				
	C)	Prima Series Bulb 9W	Each	1		
		<b>Total of Schedule Items(A)</b>				
19.		Less 5% VAT added in SOR				
		<b>Total of Schedule Items less 5% VAT (B)</b>				
20.		Add 7% GST				
		<b>Total of Schedule Items (C)</b>				

SI No.	APWD SL NO.	Description	Units	Qty	Rate	Amount
<b>B.</b>		<b>NON-SCHEDULE ITEMS</b>				
21.		<b>MAIN LT PANEL-[ SPAWN MAKING SECTION BUILDING ]</b>				
	Analysis	Supplying and installation of metal enclosed wall/floor mounted front operated cubical type switch gear panel suitable for indoor installation conforming to IS: 8623 (Part I & II). Panel should be made of sheet steel and thickness not less than 2mm and structural steel having light section. The panel shall be completely dust tight and vermin proof and shall be painted with anti corrosive and anti condensation type two coats of primer and two coats of paint. All wiring shall be PVC insulated and PVC sheathed of 1100 volt grade of required size. The panel should have provision of entry of cable at the bottom and also provision of out going feeders from the bottom of the panel. The panel shall be incorporated with double busbar system. The bus bar shall be of high quality copper of uniform cross section. The panel shall consist of the following items (viz. Voltmeter, Ammeter, CT, indicating lamps, selector switch etc.) connected as per drawing and shall be flush mounted on the front of the panel.	Set	1		
		<b>Incommer:</b>				
	a)	100 A ,4P, MCCB, 25 KA - 1 No.				
	b)	Digital Ammeter - 1 No.				
	c)	Digital Voltmeter - 1 No.				
	d)	CT 100/5 -1 Sets.				
	e)	Switch Fuse Unit - 3 Nos				
	f)	Selector Switch - 2 Nos				
	g)	LED Indicating Lamp 1 Set				
	h)	<b>Bus-Bars: 220 A TPN electrolytic Copper Bus Bar of uniform cross-section (25mmx4mm) – 1 set</b>				
		<b>Outgoing:</b>				
	i)	40 A 4P MCCB 25 KA – 1 No.				
	j)	40 A 4P MCB – 1 No.				
	k)	32 A 4P MCB – 12 Nos.				
	l)	25A DP MCB -3 Nos.				
22.		Supply, Installation antistatic rubber mat suitable for 1.1 KV Voltage grade	Sq.M	2		
23.		Supply, Fitting Fixing of Shock Treatment Chart	Each	2		
		<b>Total of Non-Schedule Item (B)</b>				
<b>GRAND TOTAL [SCHEDULE ITEMS (C)+NON-SCHEDULE(D)]</b>					<b>Rs.</b>	

Estimated cost of <b>INTERNAL ELECTRICAL WORKS for PROPOSED OYESTER MUSHROOM CLUSTER AT RESUBELPARA BLOCK, MENDIPATHAR, NORTH GARO HILLS Dist., Meghalaya</b> based on Assam PWD Schedule of Rates for Electrical Works 2013-14						
VALUE ADDITION AREA						
Sl No.	APWD SL NO.	Description	Units	Qty	Rate	Amount
A.		<b>SCHEDULE ITEMS</b>				
PART - 2		<b>Wiring in surface/ recessed PVC conduit FR (Finolex /RR Kabel /Nikko / Anchor or Equivalent Make as approved by the Deptt.) cable</b>				
1	2.1	Wiring for light/fan/call bell point with 2x1.5 sq. mm. P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nikko / Anchor or Equivalent Make as approved by the Deptt.) in surface/ recessed conduit wiring system with 20mm dia 2mm thick / heavy rigid PVC IS: 9537 Part - III conduit (Berlia/ AKG / Precision/ Presto Plast/Polycab/MW or equivalent make as approved by the Deptt.) including 6 Amp flush type switch/ bell push (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.) GI/ MS switch board (ISI marked) with phenolic laminated sheet cover ,ceiling rose (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.) etc. complete				
	2.1.1	Short point up to 3.00 metre. length.	Each	8		
	2.1.2	Medium point up to 6.00 metre. Length.	Each	11		
	2.1.3	Long point up to 10.00 metre. Length.	Each	9		
2	2.4	Wiring for 5/6 pin 16 Amps power plug point with 4 sq. mm. P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nikko / Anchor or Equivalent Make as approved by the Deptt.) in surface/ recessed conduit wiring system including and fixing 5/6 pin 16 Amps flush type socket outlets and 16 Amps flush type switch (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt./ Havells make), GI/ MS switch board (I.S.I. mark with phenolic laminated sheet cover earth continuity with 2.5 sq. mm cable to the 3rd pin of the socket as required complete with 20 mm. dia. 2mm thick/ heavy rigid ISI marked IS: 9537 PART - III rigid PVC conduit (Berlia/ AKG / Precision Presto Plast/Polycab/ MW or equivalent make as approved by the Deptt.)				
	2.4.1	Extra long point up to 15.00 metre. length.	Each	3		
	2.4.2	Extra long point up to 20.00 metre. Length.	Each			
3	2.10	Wiring for 5 pin 6 amp plug with 1.5 sq mm P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS- 694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nikko / Anchor or Equivalent Make as approved by the Deptt.) including 5 pin 6 amp socket outlet (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.)make) and 6 amp flush type switch (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.)make) earthing the 3rd pin of the socket as required on the switch board in surface/ recessed P.V.C. conduit wiring system. When fitted on same board of light and	Each	1		
<b>CIRCUIT WIRING</b>						
4.	2.7	Wiring for drawing sub-main line with P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nikko / Anchor or Equivalent Make as approved by the Deptt.) PVC conduit (Berlia/ AKG / Precision/ Presto Plast/Polycab/ MW or equivalent make as approved by the Deptt.) including earth continuity in surface/ recessed 20 mm. dia. 2mm thick/ heavy ISI marked IS: 9537 PART - III rigid PVC conduit wiring system.				
	2.7.1	With 2 x 2.5 sq. mm. + earth continuity with 1x1.5 sq. mm. in 20 mm. dia. 2mm thick/ heavy rigid PVC IS: 9537 Part - III conduit.	RM	90		
	2.7.3	With 2 x 6 sq. mm. + earth continuity with 1x 4 sq. mm. cable in 25 mm. dia. 2mm thick/ heavy rigid PVC IS: 9537 Part - III conduit.	RM			

SI No.	APWD SL NO.	Description	Units	Qty	Rate	Amount
5.	2.9	Wiring for drawing sub-main line with P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) in surface/ recessed PVC 20 mm. dia. 2mm thick/ heavy ISI marked IS: 9537 PART - III rigidPVC conduit (Berlia/ AKG / Precision Presto Plast/Polycab/ MW or equivalent make as approved by the Deptt.) wiring system.				
	2.9.3	With 4x 6 sq. mm. + earth continuity with 2x4 sq. mm. cable in 32 mm. dia. 2mm thick/ heavy rigid PVC IS: 9537 Part - III conduit.	Metre.	80		
	2.9.4	With 4 x 10 sq. mm. + earth continuity with 2x6 sq. mm. cable in 40 mm. dia. 2mm thick/ heavy rigid PVC IS: 9537 Part - III conduit.	Metre.	100		
<b>PART-15</b>		<b>MCB DB (ABB, SCHNEIDER MG, LEGRAND, HAGER MAKE) &amp; (SCHNEIDER NEO BREAK, C&amp;S, Havells, INDOASIAN, HPL OR EQUIVALENT MAKE AS PPROVED BY THE DEPTT.)</b>				
		<b>MCB IN-comer TPN (Horizontal DB)</b>				
6.	15.8	Supplying with fitting and fixing sheet steel, phosphatised, powder painted dust & vermin proof Double door IP-43 double door surface mounting TPN MCB DB incorporated with bas-bar, Neutral link, Earth bar and din rail etc fitted on wall with grouting nuts & bolts as reqd. complete with making necessary connection as approved, specified and directed by the deptt.				
	15.8.1	ABB, Schneider MG, legrand, Hager make)				
	15.8.1.1	4 way TPN (4+12) double door	Each	1		
	15.8.1.3	8 way TPN (4+24) Double Door	Each			
<b>PART - 16</b>		<b>MCB, MCCB, RCCB, RCBO (ABB, SCHNEIDER MG, LEGRAND, AND HAGER MAKE) &amp; (SCHNEIDER NEO BREAK, C&amp;S, Havells, INDO ASIAN, HPL OR EQUIVALENT MAKE AS PPROVED BY THE DEPTT.) MCB (Conform to IS / IEC 60898-1:200/ MCCB (Conform to IS/IEC 60947- RCCB (Conform to IS/IEC 12640 / 61008)</b>				
7.	16.1	Supplying with fitting and fixing single Pole 10 KA 240/415V 50Hz MCB of the following capacity complete with making necessary connection as approved, specified and directed by the deptt.				
	16.1.2	C Series (Schneider MG, legrand, Hager make)				
	16.1.2.1	6 to 32A	Each	12		
	16.1.2.2	40A	Each	0		
8.	16.6	Supplying with fitting and fixing 4P 10 KA 240/415V 50Hz MCB of the following capacity complete with making necessary connection as approved, specified and directed by the deptt.				
	16.6.2	C Series (ABB, Schneider MG, legrand, Hager make)				
	16.6.2.2	40A	Each	1		
<b>PART-22</b>		<b>EARTHING</b>				
9.	22.7	Supply, installation & testing of G.I. earth station with perforated 40 mm dia and 4.50 Metre long heady duty G.I. pipe with necessary 40 mm dia. G.I. Fittings such as Socket, Tee, elbow, nipple and 50 mmx40mm G.I. reducing socket for funnel including locking arrangement 300 mmx300 mmx6 mm hinged cover C.I. earth plate complete with digging of earth pit, construction of brick chamber and plastering of both inner & outer surface of wall as specified and directed by the deptt .	Each	2		
10.	22.12	22.12	Extra for using salt (5 K and Charcoal (64 K in pipe Earth Station pitto provide low impedance ground in location of high soil resistivity as and when required and specified by the Deptt.	Each	2	
11.	22.20	Supplying & laying of 25X5mm size G.I. strips drawn on surface from earth electrode to Electrical switch gears, machineries etc complete with supply of G.I. nuts & bolts, screws etc including riveting, soldering & making necessary connection as approved, specified and directed by the deptt.	R.M.	20		
<b>PART -32</b>		<b>U. G. CABLE AND CABLE WORKS</b>				
12.	32.11	Supply and laying of following size Solid Aluminium conductor up to 10 sq mm balance stranded conductor, XLPE Insulated, cores laid up, PVC tape inner sheathed, unarmoured/Armour (Aluminium for singlecore up to 70 sq mm balance Aluminium strip, Galvanised for cables up to 2x10 sq mm.3x10 sq mm,4x6 sq mm balance all galvanised steelstrip) , extruded PVC Type ST2 sheathed, 650/1100V grade as per IS 7908(Part 1) 1988 laid in air or through existing cable trench/ duct/cable tray/ HDPE pipe including fitting required size of lugs at the both end of the cable by using crimping tool and making good damageddone as specified and directed by the deptt. (Nicco/ Havells/ RPG/CCI/Polycab/Gloster/ Finolex make) .				
	32.11.4	<b>Core - 3.5A2XFY</b>				
	32.11.4.1	25 Sq.mm 3 and 1/2 core armoured cable	Metre	70		
	32.11.4.5	95 Sq.mm 3 and 1/2 core armoured cable	Metre	30		

SI No.	APWD SL NO.	Description	Units	Qty	Rate	Amount
<b>ITEMS APPROVED BY THE CHIEF ENGINEER P.W.D. (Bldg.), ASSAM, CHANDMARI, GUWAHATI-3 ON DATED 09-09-2019</b>						
13.	10	Supplying, fitting fixing of LED Batten Tubes high quality aluminium extruded with decorative end caps connection with 1.5 Sq.mm 1 core PVC insulated round copper conductor as required and as directed by the department.				
	b)	BN021C LED 20 PSU CW GR S2 [TL]	Each	28		
<b>Total of Schedule Items (A)</b>						
25.		Less 5% VAT added in SOR				
<b>Total of Schedule Items less 5% VAT (B)</b>						
26.		Add 7% GST				
<b>Total of Schedule Items (C)</b>						
<b>B. NON-SCHEDULE ITEMS</b>						
27.		<b>MAIN LT PANEL-[ VALUE ADDITION BUILDING ]</b>				
	Analysis	Supplying and installation of metal enclosed wall/floor mounted front operated cubical type switch gear panel suitable for indoor installation conforming to IS: 8623 (Part I & II). Panel should be made of sheet steel and thickness not less than 2mm and structural steel having light section. The panel shall be completely dust tight and vermin proof and shall be painted with anti corrosive and anti condensation type two coats of primer and two coats of paint. All wiring shall be PVC insulated and PVC sheathed of 1100 volt grade of required size. The panel should have provision of entry of cable at the bottom and also provision of out going feeders from the bottom of the panel. The panel shall be incorporated with double busbar system. The bus bar shall be of high quality copper of uniform cross section. The panel shall consist of the following items (viz. Voltmeter, Ammeter, CT, indicating lamps, selector switch etc.) connected as per drawing and shall be flush mounted on the front of the panel.	Set	1		
<b>Incommer:</b>						
	a)	250 A ,4P, MCCB, 36 KA - 1 No.				
	b)	Digital Ammeter - 1 No.				
	c)	Digital Voltmeter - 1 No.				
	d)	CT 250/5 -1 Sets.				
	e)	Switch Fuse Unit - 3 Nos				
	f)	Selector Switch - 2 Nos				
	g)	LED Indicating Lamp 1 Set				
	h)	<b>Bus-Bars: 480 A TPN electrolytic Copper Bus Bar of uniform cross-section (30mmx10mm) – 1 set</b>				
<b>Outgoing:</b>						
	i)	125A 4P MCCB 25 KA – 1 No.				
	j)	63A 4P MCCB 25 KA – 2 Nos.				
	k)	40 A 4P MCCB 25 KA – 2 Nos.				
	l)	40 A 4P MCB – 3 Nos.				
	m)	32 A 4P MCB – 2 Nos.				
	n)	25A DP MCB -3 Nos.				
28.		Supply, Installation antistatic rubber mat suitable for 1.1 KV Voltage grade	Sq.M	2		
29.		Supply, Fitting Fixing of Shock Treatment Chart	Each	2		
<b>Total of Non-Schedule Items (D)</b>						
<b>GRAND TOTAL [SCHEDULE ITEMS (C)+NON-SCHEDULE(D)]</b>						<b>Rs.</b>

Estimated cost of ELECTRICAL WORKS for PROPOSED OYESTER MUSHROOM CLUSTER AT RESUBELPARA BLOCK, MENDIPATHAR, NORTH GARO HILLS Dist., Meghalaya based on Assam PWD Schedule of Rates for Electrical Works 2013-14						
EXTERNAL ELECTRICAL WORKS						
Sl No.	APWD SL NO.	Description	Units	Qty	Rate	Amount
<b>A.</b>		<b>SCHEDULE ITEMS</b>				
<b>PART-22</b>		<b>EARTHING</b>				
1.	22.7	Supply, installation & testing of G.I. earth station with perforated 40 mm dia and 4.50 Metre long heavy duty G.I. pipe with necessary 40 mm dia. G.I. Fittings such as Socket, Tee, elbow, nipple and 50 mmx40 mm G.I. reducing socket for funnel including locking arrangement 300 mmx300 mmx6 mm hinged cover C.I. earth plate complete with digging of earth pit, construction of brick chamber and plastering of both inner & outer surface of wall as specified and directed by the deptt .	Each	6		
2.	22.12	22.12	Extra for using salt (5 K and Charcoal (64 K in pipe Earth Station pit to provide low impedance ground in location of high soil resistivity asand when required and specified by the Deptt.	Each	6	
3.	22.10	Supply, installation & testing of Copper Plate earth station with 600 mmx600 mmx3 mm copper earth plate with necessary 40 mm dia. G.I. medium duty watering pipe with G.I. Fittings such as Socket, Tee, elbow, nipple and 50 mmx40 mm G.I. reducing socket for funnel including locking arrangement with 300 mmx300 mmx6 mm C.I. hinged cover plate complete with digging of earth pit, construction of brick chamber and plastering of both inner & outer surface of wall as specified and directed by the deptt .	Set	4		
4.	22.13	Extra for using salt (5 K and Charcoal (96 K in G.I./Copper plate Earth Station pit to provide low impedance ground in location of highsoil resistivity as and when required and specified by the deptt .	Set	4		
5.	22.15	Supplying & laying of 6 SWG G.I. earth from Earth Electrode (below G.L.) to electrical switch gears or electrical machineries including making necessary connection as approved, specified and directed by the deptt.	Metre.	150		
6.	22.20	Supplying & laying of 25X5mm size G.I. strips drawn on surface from earth electrode to Electrical switch gears, machineries etc complete with supply of G.I. nuts & bolts, screws etc including riveting, soldering & making necessary connection as approved, specified and directed by the deptt.	R.M.	120		
7.	22.24	Supplying & laying of 25X5mm size Copper strips drawn on surface from earth electrode to Electrical switch gears, machineries etc complete with supply of Brass nuts & bolts, screws etc including riveting, soldering & making necessary connection as approved, specified and directed by the deptt.	R.M.	60		
<b>PART -32</b>		<b>U. G. CABLE AND CABLE WORKS</b>				
8.	32.1	Supply and laying of following size PVC/XLPE insulated and PVC sheathed 1.1 KV G Solid Aluminium conductor up to 10 sq mm balance stranded conductor, XLPE Insulated, cores laid up, PVC tape inner sheathed, Armour (Aluminium for single core up to 70 sq mm balance Aluminium strip, Galvanised for cables up to 2x10 sq mm.3x10sq mm,4x6 sq mm balance all galvanised steel strip) , extruded PVC Type ST2 sheathed, 650/1100V grade as per IS 7908(Part 1) 1988 armoured U.G. cable U.G. cable laid in ground/partially in air (as required for termination over ground including excavation of cable trench up to depth of 75cm, refilling, protective brick covering, Sand cushioning etc complete handling of surplus spoil, debris et to proper place as specified and directed by the deptt. (Nicco/ Havells/ RPG/CCI/Polycab/Gloster/ Finolex make) .				
	32.1.2	3 Core A2XWY A2XFY				
	32.1.2.2	6.00 Sq.mm 3 Core armoured U.G. cable	Metre	60		
	32.1.3	3 & 1/2 Core A2XFY				
	32.1.3.4	70.00 Sq. mm.3 & 1/2 Core armoured U.G. cable	Metre	40		
	32.1.3.6	120.00 Sq. mm.3 & 1/2 Core armoured U.G. cable	Metre	40		
	32.1.3.10	300.00 Sq. mm.3 & 1/2 Core armoured U.G. cable	Metre	160		
	32.01.04	4 Core A2XWY A2XFY				
	32.1.4.4	16.00 sq mm 4 Core armoured UG cable	Metre	130		

SI No.	APWD SL NO.	Description	Units	Qty	Rate	Amount
9.	32.5	Supply and laying of following size Solid Aluminium conductor up to 10sq mm balance stranded conductor, XLPE Insulated, cores laid up, PVC tape inner sheathed, Armour (Aluminium for single core up to 70 sq mm balance Aluminium strip, Galvanised for cables up to 2x10 sq mm.3x10 sq mm,4x6 sq mm balance all galvanised steel strip) , extruded PVC Type ST2 sheathed, 650/1100V grade as per IS 7908(Part 1) 1988, LT armoured U.G. cable laid in pucca flooring, roadcrossing, drain crossing as per site requirement and partially in air to connection as approved by the Depts. the control switch, through medium duty G.I. pipe (Tata/ Nezone make or equivalent as approved by the Deptt) bend and socket including excavation and refilling the trench and making good damage done as specified and directed by the deptt. (Nicco/ Havells/ RPG/CCIPolycab/Gloster/ Finolex make)				
	32.5.2	Core - 3 A2XWY A2XFY				
	32.5.2.1	4.00 Sq.mm 3 Core U.G. cable in 25mm dia medium duty G.I. pipe	Metre	0		
	32.5.2.2	6.00 Sq.mm 3 Core U.G. cable in 32mm dia medium duty G.I. pipe	Metre	20		
	32.5.3	Core - 3 & 1/2 A2XWY A2XFY				
	32.5.3.4	70.00 Sq.mm 3&1/2 Core U.G. cable in 50mm dia medium duty hot dip galvanised pipe (AKG or equivalent as approved by the Deptt.)	Metre	5		
	32.5.3.6	120.00 Sq.mm 3&1/2 Core U.G. cable in 65mm dia medium duty hot dip galvanised pipe (AKG or equivalent as approved by the Deptt.)	Metre	5		
	32.5.4.14	300.00 Sq.mm 4 Core U.G. cable in 100mm dia medium duty hot dip galvanised pipe (AKG or equivalent as approved by the Deptt.)	Metre	30		
	32.05.04	Core - 4 A2XWY A2XFY				
	32.5.4.4	16.00 Sq.mm 4 Core U.G. cable in 40mm dia medium duty hot dip galvanised pipe (AKG or equivalent as approved by the Deptt.)	Metre	10		
10.	32.18	Supplying including installation of cast iron cable marker as specified and directed by the deptt.	Each	20		
<b>PART - 34</b>		<b>CABLE KITS</b>				
11.	34.28	Supply including fitting and fixing of 1.1 KV PVC/XLPE cable INDOOR/OUTDOOR end termination Kits (Raychem RPG make) HEAT SHRINK TYPE including all accessories for the following sizes including testing and commissioning as specified and directed by the Deptt.				
	34.28.4	185-300 Sq.mm., 3/ 3.5/ 4 Core cable.	Set	2.00		
<b>PART - 36</b>		<b>OVER HEAD LINE</b>				
12.	36.33	Supplying and fitting fixing of H.T. danger plate complete as required and as directed by the department.	Each	4		
<b>PART - ECBC 6</b>		<b>SOLAR POWER</b>				
13.	ECBC 6.2	Supplying including installation, testing and commissioning of Solar Street light as per following specification and as directed by the Department.				
		15 W LED SOLAR STREET LIGHT[Confirming RDSO Specification No: RDSO/PE/SPEC/PS/0093-2008(Rev 0)]				
		SYSTEM SPECIFICATION				
		15 W LED based luminaries/fixture (1500 Lumens –typical).				
		LED Type: White High Powered LED's 5500-6500 K temperature.				
		Automatic Dusk to Dawn Operate ion. Independent standalone Solar Street Lighting System.				
		Powered by a 12V, 80 Wp Solar PV Module confirming RDSO Part-I Approval & IEC: 61215				
		Certification. (Model: TBP 1280/ 1280M). (make: TATA BP SOLAR or equivalent)				
		12V, 75Ah @ C10, Tubular Plate Lead Acid Low Maintenance Battery with PP Container				
		(make: TATA BP SOLAR or equivalent).				
		Battery Box made of M.S fabricated with corrosion resistance paint.				
		6m height MS Pole with corrosion resistance paint.				
		Manufacturers Criteria:				
		Must have ISO: 9001 & ISO: 14001 Certification.				
		(As per Annexure A: Clause no: b, Page 10)				
		Must have integrated production capacity of Solar PV Cell & Module.				
		(As per Annexure A: Clause no: d, Page: 10)				
		<b>SUGGESTED UNIT PRICE</b>				
		Unit Cost Without Installation & Commissioning)	Each			
		Installation & Commissioning Charges	Each			
		<b>Total of Schedule Items (A)</b>				
14.		Less 5% VAT added in SOR				
		<b>Total of Schedule Items less 5% VAT (B)</b>				
15.		Add 7% GST				
		<b>Total of Schedule Items (C)</b>				



SI No.	APWD SL NO.	Description	Units	Qty	Rate	Amount
<b>B.</b>		<b>NON-SCHEDULE ITEMS</b>				
16.		<b>MAIN LT FEEDER PANEL</b>				
	Analysis	Supplying and installation of metal enclosed free standing floor readable mounted front operated cubical type switch gear panel suitable for OUTDOOR Type installation conforming to IS: 8623 (Part I & II). Panel should be made of sheet steel and thickness not less than 2mm and structural steel having light section with arrangement for sealing the covers and lockable doors. The panel shall be completely dust tight and vermin proof and shall be painted with anti corrosive and anti condensation type two coats of primer and two coats of paint conforming to Degree of Protection for enclosure shall be IP-55. All wiring shall be PVC insulated and PVC sheathed of 1100 volt grade of required size. The panel should have provision of entry of cable at the bottom and also provision of out going feeders from the bottom of the panel. The panel shall be incorporated with single copper busbar system. The bus bar shall be of high quality copper of uniform cross section. The panel shall consist of the following items (viz. Voltmeter, Ammeter, CT, indicating lamps, selector switch etc.) connected as per drawing and shall be flush mounted on the front of the panel.	Set	1		
		<b>Incommer:</b>				
	a)	500 A ,4P, MCCB, 36 KA - 2 Nos.				
	b)	500 A, 4P, on-load Changeover switch - 1 No.				
	c)	Digital Ammeter - 2 Nos.				
	d)	Digital Voltmeter - 2 Nos.				
	e)	CT 500/5 -1 Sets.				
	f)	CT 500 -1 Sets.				
	g)	Switch Fuse Unit - 6 Nos				
	h)	Selector Switch - 4 Nos				
	i)	LED Indicating Lamp 2 Sets				
	j)	<b>Bus-Bars: 960 A TPN electrolytic Copper Bus Bar of uniform cross-section (60mmx10mm) – 1 set</b>				
		<b>Outgoing:</b>				
	k)	250 A 4P MCCB 36 KA – 1 No.				
	l)	40 A 4P MCCB 25 KA – 1 No.				
	m)	100 A 4P MCCB 25 KA – 1No.				
	n)	63 A 4P MCCB 25 KA – 1No.				
	o)	160 A 4P MCCB 25 KA – 2Nos.				
	p)	40 A 4P MCB – 2 Nos.				
17.		Supply, Installation antistatic rubber mat suitable for 1.1 KV Voltage grade	Sq.M	2		
18.		Supply, Fitting Fixing of Shock Treatment Chart	Each	4		
		<b>Total of Non-Schedule Items (B)</b>				
<b>GRAND TOTAL [SCHEDULE ITEMS (C)+NON-SCHEDULE(D)]</b>					<b>Rs.</b>	

Esti mat ed						
OFFICE BUILDING						
SI No.	APWD SL NO.	Description	Units	Qty	Rate	Amount
A.						
PART - 2						
<b>SCHEDULE ITEMS</b>						
<b>Wiring in surface/ recessed PVC conduit FR (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) cable</b>						
1	2.1	Wiring for light/fan/call bell point with 2x1.5 sq. mm. P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) in surface/ recessed conduit wiring system with 20mm dia 2mm thick / heavy rigid PVC IS: 9537 Part - III conduit (Berlia/ AKG / Precision/ Presto Plast/Polycab/ MW or equivalent make as approved by the Deptt.) including 6 Amp flush type switch/ bell push (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.) GI/ MS switch board (ISI marked) with phenolic laminated sheet cover ,ceiling rose (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.) etc. complete				
	2.1.1	Short point up to 3.00 metre. length.	Each	5		
	2.1.2	Medium point up to 6.00 metre. Length.	Each	9		
	2.1.3	Long point up to 10.00 metre. Length.	Each	5		
2	2.2	Wiring to 5 a pin 6 Amps plug point with 1.5 sq. mm P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) in surface/ recessed 2 mm thick/ heavy rigid ISI marked IS: 9537 PART - III rigid PVC conduit (Berlia/ AKG / Precision/ Presto Plast/Polycab/ MW or equivalent make as approved by the Deptt.) wiring system including 5 pin 6 Amps flush type plug socket and 6 Amps FT switch (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.), GI/ MS switch board (I.S.I. mark with phenolic laminated sheet cover including earth continuity with 1.5 sq. mm. cable to third pin of the plug socket etc. as required complete, when placed elsewhere.				
	2.2.1	Short point up to 3.00 metre. length.	Each	1		
	2.2.2	Medium point up to 6.00 metre. Length.	Each	2		
	2.2.3	Long point up to 10.00 metre. Length.	Each	1		
3	2.4	Wiring for 5/6 pin 16 Amps power plug point with 4 sq. mm. P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) in surface/ recessed conduit wiring system including and fixing 5/6 pin 16 Amps flush type socket outlets and 16 Amps flush type switch (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt./ Havells make), GI/ MS switch board (I.S.I. mark with phenolic laminated sheet cover earth continuity with 2.5 sq. mm cable to the 3rd pin of the socket as required complete with 20 mm. dia. 2mm thick/ heavy rigid ISI marked IS: 9537 PART - III rigid PVC conduit (Berlia/ AKG / Precision/ Presto Plast/Polycab/ MW or equivalent make as approved by the Deptt.)				
	2.4.1	Extra long point up to 15.00 metre. length.	Each	2		
	2.4.2	Extra long point up to 20.00 metre. Length.	Each			

SI No.	APWD SL NO.	Description	Units	Qty	Rate	Amount
4	2.10	Wiring for 5 pin 6 amp plug with 1.5 sq mm P.V.C. insulated singlecore unsheathed industrial (Multistrand) cable FR conforming to IS- 694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nikko / Anchor or Equivalent Make as approved by the Deptt.) including 5 pin 6 amp socket outlet (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.)make and 6 amp flush type switch (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.)make) earthing the 3rdpin of the socket as required on the switch board in surface/ recessed P.V.C. conduit wiring system. When fitted on same board of light and	Each	5		
<b>CIRCUIT WIRING</b>						
5.	2.7	Wiring for drawing sub-main line with P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nikko / Anchor or Equivalent Make as approved by the Deptt.) PVC conduit (Berlia/ AKG / Precision/ Presto Plast/Polycab/ MW or equivalent make as approved by the Deptt.) including earth continuity in surface/ recessed 20 mm. dia. 2mm thick/ heavy ISI marked IS: 9537 PART III rigid PVC conduit wiring system.				
	2.7.1	With 2 x 2.5 sq. mm. + earth continuity with 1x1.5 sq. mm. in 20 mm. dia. 2mm thick/ heavy rigid PVC IS: 9537 Part - III conduit.	RM	80		
	2.7.3	With 2 x 6 sq. mm. + earth continuity with 1x 4 sq. mm. cable in 25 mm. dia. 2mm thick/ heavy rigid PVC IS: 9537 Part - III conduit.	RM			
<b>PART-10 FITTINGS AND ACCESSORIES (ALL PRODUCTS SHOULD BE ENERGY EFFICIENT AND ENVIRONMENT FRIENDLY)</b>						
6.	11.12	Supplying and fixing of polished Brass Bracket of 18 S.W.G, 25 cm long cast back plate and brass lamp holder complete including connection as approved by the Deptt.)as required Without Lamp. [BK]	Each	2		
7.	11.28	Supplying and fixing of Frosted glass shade of 100 mm dia (Nominal Size as required.	Each	2		
8.	11.32	Supplying and fixing of Call bell ( Buzzer ) including 5/ 6 ampcapacity button piano type bell push switch including connection as approved by the Deptt.)as required.	Each	1		
<b>PART-15 MCB DB (ABB, SCHNEIDER MG, LEGRAND, HAGER MAKE) &amp; (SCHNEIDER NEO BREAK, C&amp;S, Havells, INDOASIAN, HPL OR EQUIVALENT MAKE AS PPROVED BY THE DEPTT.)</b>						
<b>MCB IN-comer SPN DB</b>						
<b>MCB IN-comer (TPN VERTICAL DB)</b>						
9.	15.22	Supplying with fitting and fixing MCCB income and MCB outgoing sheet steel, phosphatised, powder painted double door IP-43 surface mounting vertical TPN MCB DB incorporated with bas-bar up to 250A, Neutral link, Earth bar and din rail etc fitted on wall with grouting nuts & bolts as reqd. complete with making necessary connection as approved, specified and directed by the deptt.				
	15.22.1	ABB, Schneider MG, legrand, Hager make)				
	15.22.1.1	4 way TPN (4+12) double door	Each	1		
	15.22.1.2	8 way TPN (4+18) double door	Each			
<b>PART - 16 MCB, MCCB, RCCB, RCBO (ABB, SCHNEIDER MG, LEGRAND, AND HAGER MAKE) &amp; (SCHNEIDER NEO BREAK, C&amp;S, Havells, INDO ASIAN, HPL OR EQUIVALENT MAKE AS PPROVED BY THE DEPTT.)</b>						
<b>MCB (Conform to IS / IEC 60898-1:200/ MCCB (Conform to IS/IEC 60947- RCCB (Conform to IS/IEC 12640 / 61008)</b>						
10.	16.1	Supplying with fitting and fixing single Pole 10 KA 240/415V 50Hz MCB of the following capacity complete with making necessary connection as approved, specified and directed by the deptt.				
	16.1.2	C Series (Schneider MG, legrand, Hager make)				
	16.1.2.1	6 to 32A	Each	12		
	16.1.2.2	40 A	Each			
11.	16.16	Supplying with fitting and fixing panel mounting open execution 25KA 415V 50Hz 4P MCCB (Ics=Icu, adjustable Ir setting 0.7) without enclosure of the following capacity complete with making necessary connection as approved by the Deptt. as specified and directed by the deptt.				
	16.16.1	25 KA 415V 50 Hz 4P MCCB (Schneider, legrand, Siemens make)				
	16.13.1.4	63A	Each	1		
<b>PART-22 EARTHING</b>						

SI No.	APWD SL NO.	Description	Units	Qty	Rate	Amount
12.	22.7	Supply, installation & testing of G.I. earth station with perforated 40 mm dia and 4.50 Metre long heavy duty G.I. pipe with necessary 40 mm dia. G.I. Fittings such as Socket, Tee, elbow, nipple and 50 mmx40 mm G.I. reducing socket for funnel including locking arrangement 300 mmx300 mmx6 mm hinged cover C.I. earth plate complete with digging of earth pit, construction of brick chamber and plastering of both inner & outer surface of wall as specified and directed by the deptt .	Each	2		
13.	22.12	22.12	Extra for using salt (5 K and Charcoal (64 K in pipe Earth Station) pit to provide low impedance ground in location of high soil resistivity as and when required and specified by the Deptt.	Each	2	
14.	22.20	Supplying & laying of 25X5mm size G.I. strips drawn on surface from earth electrode to Electrical switch gears, machineries etc complete with supply of G.I. nuts & bolts, screws etc including riveting, soldering & making necessary connection as approved, specified and directed by the deptt.	R.M.	20		
PART - 27		<b>CEILING FAN, EXHAUST FAN AND AIR CURTAIN</b>				
15.	27.1	Supplying including fitting fixing of following A.C. Ceiling fan complete with all accessories like down rod, canopy etc. of following sweeps with making necessary connection as approved by the Deptt.)as required complete and as directed by the Department [Without regulator].				
	27.1.2	Premium model 1200 mm Sweep (ORIENT PSPO make) / Premium model 1050 / 1200 mm Sweep SS-390 Deco Havells make) [ F ]	Each	2		
16.	27.2	Supplying including fitting fixing of following A.C. Exhaust fan in the existing hole on the wall of following sweeps with making necessary connection as approved by the Deptt.)as required complete and as directed by the Department.				
	27.2.1	Domestic				
	27.2.1.12	Ventil Air DB 300 mm sweep (Havells make) [EF]	Each	2		
<b>ITEMS APPROVED BY THE CHIEF ENGINEER P.W.D. (Bldg.), ASSAM, CHANDMARI, GUWAHATI-3 ON DATED 09-09-2019</b>						
17.	4	Supplying, installation, testing and Commission of the following indoor Decorative Recess mounted LED down lighter luminaries of model no- LESP01R009XC / LESP01R009XN / LESP01R009XW / L00957R000 / L00940R000 / L00930R000 / LD90-111 - XXX-65-XX complete with all accessories such as ballast, starter etc. In the false ceiling type Armstrong /Gypsum or similar ceiling mounting with necessary support with 1.5 sq.mm. P.V.C. insulated S.C.copper conductor as required and as directed by the department ( Jaquar / LT / Wipro make). [CL]	Each	3		
18.	10	Supplying, fitting fixing of LED Batten Tubes high quality aluminium extruded with decorative end caps connection with 1.5 Sq.mm 1 core PVC insulated round copper conductor as required and as directed by the department.				
	a)	B118601000 [FL]	Each	5		
19.	10	Supplying, fitting fixing of LED Batten Tubes high quality aluminium extruded with decorative end caps connection with 1.5 Sq.mm 1 core PVC insulated round copper conductor as required and as directed by the department.				
	b)	BN021C LED 20 PSU CW GR S2 [TL]	Each	5		
20.	6	Supplying fitting & fixing of LED Bulb non-dimmable in the existing batten / angle holder as required and as directed by the department ( Jaquar or eqvt. make).				
	C)	Prima Series Bulb 9W	Each	2		
<b>Total of Schedule Items (A)</b>						
29.		Less 5% VAT added in SOR				
<b>Total of Schedule Items less 5% VAT (B)</b>						
30.		Add 7% GST				
<b>Total of Schedule Items (C)</b>						
<b>B. NON-SCHEDULE ITEMS</b>						
31.		Supply, Installation antistatic rubber mat suitable for 1.1 KV Voltage grade	Sq.M	2		
32.		Supply, Fitting Fixing of Shock Treatment Chart	Each	2		
<b>Total of Non-Schedule Items inclusive of GST (D)</b>						
<b>GRAND TOTAL [SCHEDULE ITEMS (C)+NON-SCHEDULE(D)]</b>						<b>Rs.</b>

**ANNEXURE – X  
COMPREHENSIVE PRICE BID**

DESCRIPTION	BASIC AMOUNT	SGST	CGST	IGST	TOTAL PRICE (INCL. TAXES)
Construction of work shed building and amenities for the common facility centre of Oyster Mushroom Cluster as per drawing and BoQ given in Annexure I (including all electrical works)					
Design, Engineering and supervision services					
Electrical works					

Amount in Words: Rupees \_\_\_\_\_ only

Note:

- a) The Bidder shall quote the Lump sum costs in the above given format.
- b) The lump sum offer shall provide for all superintendence, labour, technical assistance, material, plant, equipment and all other things required for executing and completing all the works as per defined Scope of Work.

SIGNATURE OF THE TENDERER  
(with seal and address)

## ANNEXURE – XI

## CHECKLIST OF DOCUMENTS

**Documents to be enclosed in Part-I:**

S. No.	CHECKLIST	ENCLOSED (YES/ NO)	REFERENCE IN THE BID (PAGE NO.)
1.	A covering letter on your letter head addressed to: The Secretary, M/s. Mendipathar Multipurpose Cooperative Society, P.O. Mendipathar, North Garo Hills, Meghalaya – 794110 (as per Annexure-II)		
2.	Tender conditions duly signed in each page and enclosed in token of accepting the Tender conditions		
3.	Authorization letter from the Company for the person to sign the tender		
4.	Details of the Tenderer (as per Annexure-III)		
5.	Average annual turnover statement duly certified by a Chartered Accountant (as per Annexure-IV)		
6.	List of Building construction works executed in last 3 years as per (Annexure-V)		
7.	Declaration for not having black listed by any Govt. agencies (as per Annexure-VI)		
8.	Declaration for not having tampered the Tender documents downloaded from the websites (Annexure-VII).		
9.	Bid Security Declaration form (as per Annexure VIII)		
10.	The copy of certificate of incorporation/ registration		
11.	Copy of Memorandum and Articles of Association		
12.	Copy of Registered Partnership deed, in case of Partnership Firm		
13.	Copy of Udyog Aadhaar, GST Registration Certificate & PAN Card		
14.	Work Orders issued by the clients		
15.	Performance certificate issued by the client		
16.	The Annual Report / certified copies of Balance Sheet, Profit & Loss statement along with schedules for the last 5 consecutive financial years FY 2016-17, 2017-18, 2018-19, 2019-20 and 2020-21		
17.	Latest I.T return		
18.	Notarized translated English version of the documents in a language other than		

	English/ Assamese/ Garo/ Khasi, if any		
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**Documents to be enclosed in Part-II**

S. No.	CHECKLIST	ENCLOSED (YES/ NO)
1.	A covering letter on your letter head addressed to: The Secretary, M/s. Mendipathar Multipurpose Cooperative Society, P.O. Mendipathar, North Garo Hills, Meghalaya – 794110 (as per Annexure-IX)	
2.	Price Bid as per Annexure- X of the Tender document	

Both '**Part I – Technical bid**' cover and '**Part II – Price bid**' cover must be placed in a separate sealed cover superscripted as "**Tender for the construction of Work shed buildings and amenities for Oyster Mushroom Cluster**" and addressed to "Mendipathar Multipurpose Cooperative Society, P.O. Mendipathar, North Garo Hills, Meghalaya – 794110", or addressed to " Indian Institute of Entrepreneurship, Near Games Village, Lalmati, Guwahati – 781029" containing the name and address of the Tenderer.

**Note: Tenders submitted in unsealed cover would summarily be rejected.**