



AN ISO 9001 & 14001 COMPANY

TENDER DOCUMENT

TENDER No: WRO/CON/EMRS/867/335

FOR

Construction of Eklavya Model Residential School (EMRS) in Single- Phase comprise of school building, Boys hostel (240 students), Girls-hostel (240 students), Kitchen & Dinning block, 2 blocks of Type-III quarters including guest house (8+8 Nos), Type-II quarters (10 Nos), Principal Residence, Warden Residence (Boys & Girls), electrical provision, water supply and Sanitary installations, External sewerage system and Drainage facility, Campus development such as road, Compound wall (Civil, Electrical, Furniture & Kitchen Equipment) etc at Khedbrahma in Sabar Kantha District of Gujarat State."

VOLUME- I

EXECUTING AGENCY

Engineering Projects (India) Limited

Western Regional Office: Mumbai

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ENGINEERING PROJECTS (INDIA) LTD.

(A. Govt. of India Enterprise)

(Western Regional Office)**NIT No: WRO/CON/EMRS/867/335****Dated: 11.03.2024****NOTICE INVITING e- TENDER (NIT)**

Tender for “Construction of Eklavya Model Residential School (EMRS) in Single- Phase comprise of school building, Boys hostel (240 students), Girls-hostel (240 students), Kitchen & Dinning block, 2 blocks of Type-III quarters including guest house (8+8 Nos), Type-II quarters (10 Nos), Principal Residence, Warden Residence (Boys & Girls), electrical provision, water supply and Sanitary installations, External sewerage system and Drainage facility, Campus development such as road, Compound wall (Civil, Electrical, Furniture & Kitchen Equipment) etc. at **Khedbrahma in Sabar Kantha District of Gujarat State.**”

1.0 Engineering Projects (India) Ltd. invites the online Percentage rate tenders on behalf of “National Education Society for Tribal Students (NESTS)” through e-tendering from the eligible contractors/firms who fulfill the eligibility criteria as per the brief particulars of scope for the **“Construction of Eklavya Model Residential School (EMRS) in Single- Phase comprise of school building, Boys hostel (240 students), Girls-hostel (240 students), Kitchen & Dinning block, 2 blocks of Type-III quarters including guest house (8+8 Nos), Type-II quarters (10 Nos), Principal Residence, Warden Residence (Boys & Girls), electrical provision, water supply and Sanitary installations, External sewerage system and Drainage facility, Campus development such as road, Compound wall (Civil, Electrical, Furniture & Kitchen Equipment) etc at Khedbrahma in Sabar Kantha District of Gujarat State.”** in two bid system (Techno-commercial bid & Price Bid) for the following works:

Sr. No.	NAME OF WORK	ESTIMATED COST	TIME OF COMPLETION	EMD
1	“Construction of Eklavya Model Residential School (EMRS) in Single-Phase comprise of school building, Boys hostel (240 students), Girls-hostel (240 students), Kitchen & Dinning block, 2 blocks of Type-III quarters including guest house (8+8 Nos), Type-II quarters (10 Nos), Principal Residence, Warden Residence (Boys & Girls), electrical provision, water supply and Sanitary installations, External sewerage system and Drainage facility, Campus development such as road, Compound wall (Civil, Electrical, Furniture & Kitchen Equipment) etc at Khedbrahma in Sabar Kantha District of Gujarat State. ”	Rs.34,79,62,823/- (Including 18% GST) (Rupees Thirty-Four Crore Seventy-Nine Lakhs Sixty-Two Thousand Eight Hundred & Twenty-Three Only)	18 months	Rs.44,79,628 /- (Rupees Forty Four Lacs Seventy – Nine thousand Six Hundred Twenty-Eight Only)

Estimated cost is based on DSR – 2021 for scheduled items and prevailing market rate for Non-Scheduled items. Out of total duration of 18 months, the works to be executed on priority as specified in the Work Programme enclosed.

Scope of Work:

“The brief scope of work in this tender shall include (but not limited to) Civil Architectural & Structural, Sanitary, Plumbing, Electrical (internal & External) Mechanical (Firefighting), Water supply (Internal & External) Sanitary installation, drainage, Sewerage, STP, Pump House, Power Supply, Fire detection including fire alarm works, Sprinkler system, Signage’s, road network, Site development, landscaping work, Boundary wall, Rain water Harvesting, S & I of Furniture & Kitchen equipment etc. for “Construction of Eklavya Model Residential School Buildings, Residential facility including Principal and Warden Residence, Boys & Girls Hostels, Quarters, Kitchen and Dining Hall Buildings along with sport facilities including MEP works and other infrastructure Development work for the entire Plot.

Time schedule of Tender activities:

- (i) Start Date & Time for Downloading of tender documents: **11.03.2024 from 18:00 PM**
- (ii) Date of Pre-bid Meeting: NA - Bidders are requested to send their queries after visiting the site through email upto 05 days prior to due date of submission of tender and reply will be given accordingly.
- (iii) Last Date & Time of submission of Tender (online): **02.04.2024 up to 17:30 PM**
- (iv) Date & Time of online opening of tender (Techno-Commercial Bid): **03.04.2024 at 11:00 AM**
- (v) Date of Site Visit: **Upto submission date**
- (vi) Site visit for the bidders for Geo-tagging: - **Upto submission date**

2.0 Qualification Criteria:

Contractors/Bidders who fulfill the following requirements are eligible to participate in this tender. **The joint ventures/Consortium is not accepted.**

- a) The bidders must have experience of having successfully completed following similar works during the last seven (7) years ending last day of the month previous to the one in which tender invited and should be either of the following:
 - a. Three similar works, each costing not less than the amount equal to **FORTY PERCENT (40%)** of estimated cost put to tender
OR
 - b. Two similar works, each costing not less than the amount equal to **FIFTY PERCENT (50%)** of estimated cost put to tender
OR
 - c. One similar work of aggregate cost not less than the amount equal to **EIGHTY PERCENT (80%)** of estimated cost put to tender

The Similar work would mean “Construction of Residential / Non-Residential/ Institutional / Commercial Buildings successfully completed with RCC framed structure including Electrical, Plumbing, Fire Fighting Works during the last seven years.”

Note- The work order & Completion Certificate should clearly mention about the scope of work and all other allied work along with name, designation, email id, complete postal address, phone number etc. The experience certificate in this regard should be issued by officer not below the rank of Executive Engineer / Project Manager / Unit Officer. Credential submitted by bidders regarding qualifications documents are clearly mentioned the above and following paragraph.

For evaluation purpose, the completion cost of works mentioned in the Completion Certificate shall be enhanced by Seven Percent (7%) per annum till the end of month prior to date of NIT.

The cost of free issue materials shall not be included in the completion cost of works. The experience certificates issued by any Government Organizations / Semi Government Organizations / Autonomous Bodies / Municipal Bodies / Public Limited Companies listed on BSE / NSE and private party shall be accepted for assessing the eligibility of the tenderer. In case of experience certificate issued by private firm it should be supported with Form 26AS duly certified by CA. However, Bidder shall submit self-attested copies of Completion certificate issued by Client along with LOI, Contract agreement clearly mentioning the nature of work, value of work, date of start, time period as per LOI and actual date of completion with complete address and official mail id of issuing authority for Credential verification.

Relevant Experience certificates and other documents as mentioned above fulfill the qualifying criteria duly self-attested by the tenderer shall be uploaded on online submission, The Completion certificate from Clients shall be in the name of the company who is submitting the tender. The bidder has to produce original documents for verification at the time of opening of tender or as and when demanded. The tender of any bidder shall be rejected if on detailed scrutiny, documents submitted along with the tender are found to be unsatisfactory. The decision of EPI in this regard shall be final and binding on the bidder.

- b) Should have average annual financial turnover on works amounting at least 50% of the estimated cost of the work during the last three consecutive financial years ending on 31.03.2023. Turnover certificate duly certified by a Chartered Accountant along with UDIN issued by ICAI is also to be submitted.
- c) Should not have incurred any losses in more than two years during the immediate last Five consecutive financial years, ending 31.03.2023, Copies of Annual report/balance sheet and

a No loss Certificate duly certified by a Chartered Accountant along with UDIN issued by ICAI is also to be submitted.

- d) **Bid Capacity:** The bidding capacity of the contractor should be equal to or more than the estimated cost of the work put to Tender. The Bidding capacity shall be worked out by the following formula:

$$\text{Bidding Capacity} = [A \times N \times 1.5] - B$$

Where,

A = Maximum turnover in construction works executed in any one year during the last seven years considering the completed as well as works in progress. The value of completed works shall be brought to current costing level (ending last day of the month previous to the one in which tender invited) by enhancing at a simple rate of 7% per annum.

N = Number of years prescribed for completion of work for which bids have been invited.

B = Value of existing commitments and ongoing works to be completed during the period of completion of work for which bids have been invited. The Bidders are requested to furnish the existing commitments on Works under execution along with stipulated period for completion of remaining for each of the work should be furnished **in an affidavit on non-judicial stamp paper of value of Rupees 100/-** duly certified that the particulars furnished are corrected as per the Proforma in **Annexure-A**.

- e) Should submit a **Banker's Certificate** from Nationalized / Scheduled Bank Bank of the amount equal to 40% of the estimated cost put to tender. The banker's certificate should not have been issued earlier than three months of last date of submission of tender.

Or

Net Worth certificate of Minimum 10% of the estimated cost put to tender issued by certified Chartered Accountant with Unique Document Identification Number (UDIN). The net worth certificate shall be of the last financial year ending on 31st March 2023.

The Bankers certificate & net worth certificate shall be in the format prescribed in the enclosed **Annexure H**.

- f) Should have Goods and Service Tax (GST) Registration No. (Copy of GST Registration certificate to be enclosed).
- g) It is desired that the bidder should have valid PF Registration number, GST Registration number, ESI registration.
- h) Bidder has to note regarding applicability of Public Procurement Policy, 2012 to the Works Contracts: - "Policy is meant for procurement of only goods produced and services rendered by Micro Small Enterprises (MSEs). However, Works Contract is excluded from purview of Public Procurement Policy for MSEs Order, 2012". Henceforth, all the Bidders (including MSE/UDYAM Registration) has to submit Tender Fee & EMD as stated in the NIT.

- i) For Site Visit, bidders have to submit the Site Visit report along-with Geotagging photographs of self-mentioning with GPS coordinate, date and time and submit the same in online bid document. The site visit is mandatory & the bidder has to visit the site to assess the Ground condition and working conditions at site on date as mentioned above and submit Site visit undertaking (Annexure –C). EPIL engineer’s certification & presence is not required at site.
- j) **Subletting of works is not allowed.** 100% subletting (Back-to-back) is not allowed. However, for specialize and labour works (other than construction work) subletting is allowed with the prior approval from Engineer-in- Charge. Bidder should provide self-undertaking for the same.
- k) Bidder has to submit **undertaking** regarding details of Constitution of firm/Company along with the details of its directors as per enclosed **Annexure-D**. In case the bidder fails to submit Constitution of firms with the bid along with the details of its firm Directors as per Annexure-D their bid will be rejected.
- l) Even though an applicant may satisfy the eligibility criteria, EPI reserves the right to reject the tender documents if he has record of poor performance such as abandoning work, not properly completing the work, delay in completion of work, poor quality of work, financial failure / weakness etc.
- m) Notwithstanding anything stated in tender, EPI reserves the right to assess the capabilities and capacity of the tenderer to perform the contract, in the overall interest of EPI. In case, tenderer's capabilities and capacities are not found satisfactory, EPI reserves the right to reject the tender. If any credentials submitted by the bidder are found false/fraud, the bidder shall be debarred from future tender of EPI, besides rejection of bid and forfeit the full said Earnest Money absolutely.
- n) The Bidder should not have been blacklisted or Debarred in any State Govt./Municipal Corporations/Central Govt./any State Govt. Organizations, Urban Local Body and/or its Undertaking company during last 03 years ending last day of the previous month of date of NIT. Bidder has to submit a **notarized self-declaration** with the bid in respect of the same that **“He has not been reprimand in past 03 years for poor performance and also he has not been debarred by any of his client/ in any State Govt./Municipal Corporations/Central Govt./any State Govt. Organizations, Urban Local Body for poor performance, unprofessional/ slow work leading to cancellation of his ongoing assignment”**.

“Notwithstanding anything contained herein, EPI shall suspend / ban business dealings with any Tenderer/ Contractor/ Consultant/ Supplier who fail to implement business ethics, commitment and sincerity of highest standards for the tenders under bidding or the work being undertaken by them. EPI shall be bound to suspend/ban any such Tenderer/ Contractor who default/ deviate from the terms of tender/ contract, without any reasonable cause, is responsible for loss of reputation, finance and/or business to EPI and/or indulges in any kind of malpractice, cheating , bribery, fraud, misconduct or formations of cartels influencing tender process or influencing the price. The period of suspension/banning the

Tenderer/Contractor shall depend on the gravity of omission or commission which shall be not less than one year extending till maximum for a period of three years”

- o) The maximum two (2) numbers of EMRS works that can be awarded to the single contractor. If the bidders have already worked on EMRS for one or more PSU 's they have to give undertaking (as enclosed Annexure-I) for the same. In such case, EPIL reserve rights about qualification of bidder in terms of financial & technical capacities & in any case maximum two EMRS (Including ongoing EMRS work in any PSU's) can only be given to the bidder. If any time found that bidder has given wrong information, bidder shall be disqualified by EPIL and Blacklisted for any jobs from Government of India.
- p) Bidders must submit documentary evidences of having formally certified skilled workforce or commitment by the bidders/service providers to the effect that they would ensure that all their workers would be skilled through Recognition of Prior Learning (RPL) within two months from the date of commencement of work under the project, at the cost of the service provider/vendor.
- q) All the prospective MSME bidders are requested to get themselves registered on TReDS platform (www.rxil.in) to avail payment benefits.

2.1 Evaluation of the bidders:

Evaluation of the Bidders shall be subject to through verification of their documents related with credentials and BG and if required inspection of similar type works carried out / in progress by them, through a Technical Committee of experts to be constituted by EPIL. Price Bid is to be submitted in online mode separately, and price bid of technically qualified bidders will only be opened.

3.0 Tender documents comprising of the following are available on the website of EPI: www.epi.gov.in & CPP Portal: <https://etenders.gov.in/eprocure/app>

- **Volume I:** Notice Inviting Tender, Addendum to Instructions to Tenderers, Special instructions to Bidders for e-Tendering, Letter of Undertaking, Form of tender, Memorandum, Bidder Information, Affidavit non-judicial stamp paper of Rs.100 for Bidding Capacity (**Annexure-A**), Affidavit non-judicial stamp paper of Rs.100 for NIT (**Annexure-B**), Site Visit certification (**Annexure-C**), Letter of Undertaking for Constitution of Firm (**Annexure-D**) and Declaration for local content (**Annexure-E**), Integrity Pact Format (**Annexure-F**), Tender Acceptance Letter (**Annexure G**), Banker certificate / Net worth Certificate (**Annexure-H**) Undertaking for EMRS Work (**Annexure I**) and other documents as per qualification criteria.
- **Volume II:** Additional Conditions of Contract, General Conditions of Contract, Technical Specifications with Scope of Work and Drawings.
- **Volume III:** Price Bid & Bill of Quantities.

4.0 In order to participate, the bidder should have Digital Signature Certificate (DSC) from one of the authorized Certifying Authorities.

5.0 Interested bidders have to necessarily register themselves on the portal <https://etenders.gov.in/eprocure/app> to participate in the bidding under this invitation for bids. It shall be the sole responsibility of the interested bidders to get them registered at the aforesaid portal for which they are required to contact:

For any technical related queries please call at 24 x 7 Help Desk Number
0120-4001 002, 0120-4001 005, 0120-6277 787

International Bidders are requested to prefix +91 as country code

Technical - support-eproc@nic.in

Policy Related - cppp-doe@nic.in

They may obtain further information regarding this tender from **General Manager (Contracts)** at the address given at **Clause No. 21.0** below from 10:00 hours to 17:00 hours on all working days till the last date of online submission of Bidding Documents. **No special character like! @, #, \$, %, &, *, _ to be include while saving the file/uploading.**

For proper uploading of the bids on the portal namely <https://etenders.gov.in/eprocure/app> (hereinafter referred to as the 'portal'), it shall be the sole responsibility of the bidders to apprise themselves adequately regarding all the relevant procedures and provisions as detailed at the portal as well as by contacting M/s CPPP., directly, as and when required, for which contact details are mentioned above. The EPI in no case shall be responsible for any issues related to timely or properly uploading/submission of the bid in accordance with the relevant provisions of Section Instruction to Bidders of the Bidding Documents.

6.0 Bidders can download the bid document from the portal any time from **04:00 PM on 17/01/2024**. However, interested bidders have to pay tender fees for participating in the tendering and submitting the bid as per NIT format. For this purpose, the interested bidders shall be required to **pay Rs 29,500/- (Rs 25,000 + GST @ 18 %)** as non-refundable document fees.

7.0 E-Bids must be submitted/uploaded along with scanned copies of relevant documents pertaining to Clause no. 2 (a) to 2 (o) & Clause no. 18 under Single Stage Two Envelope Bidding Procedure on the CPPP portal on or before last date and time of online bid submission. Late bids will not be accepted. Under the above procedure, only the first envelope (Technical Part) shall be opened online in the presence of the bidders' representatives who choose to attend in person at the address given below on schedule date and time of bid opening or may be viewed by the bidders by logging in to the portal as per features available to them. Second envelope i.e., Price part shall be opened of technically qualified bidders only.

The bid must be accompanied by **Tender fee and Earnest Money Deposit (EMD)**.

Tender Fee - Interested bidders shall be required to **pay Rs 29,500/- (Rs 25,000 + GST @ 18 %)** as non-refundable in online NEFT/RTGS mode only on below mentioned account details and the scanned copy of Tender fee receipt after depositing the tender fee online in EPI's Bank Account is to be upload along with technical bid documents.

IndusInd Bank
Name of Branch: Greater Kailash II, New Delhi
IFSC Code: INDB0000012
Name of A/c Holder: EPI LTD
A/C Number: 200001601125
Account Type: Current

However, tenders submitted without or insufficient tender fees shall be rejected.

EMD - The bid must be accompanied by an Earnest Money Deposit (EMD) of Rs. 44,79,628/- (Rupees Forty Four Lacs Seventy – Nine thousand Six Hundred Twenty-Eight Only) This can be either in the form of Insurance Surety Bond or Account Payee Demand Draft or Fixed Deposit Receipt or Banker's cheque in an acceptable form for the full amount of EMD payable favouring "Engineering Projects (India) Limited" payable at New Delhi or Bank Guarantee of any Nationalized Bank/Scheduled Bank/Commercial bank supporting with SFMS conformation as per bank details mentioned below as per the enclosed format or payment online as below mentioned account details. The EMD shall be valid for minimum period of 150 days (One hundred fifty) from the last day of submission of tender. The earnest money (if any) will be forfeited without any prejudice to any right or remedy, in case the Bidder withdraws his Tender during the validity period or in case he changes his offer to his benefits, which are not acceptable to EPI. The bid shall be valid for 90 days from date of opening of Price Bid. The validity period may be extended on mutual consent.

IndusInd Bank
Name of Branch: Greater Kailash II, New Delhi
IFSC Code: INDB0000012
Name of A/c Holder: EPI LTD
A/C Number: 200001601125
Account Type: Current

If the bidder is submitted a scanned copy of EMD (Insurance Surety Bond, Bank Guarantee (With SFMS), DD, FDR, Bankers Cheque etc) with their online bid, then Physical submission of Original EMD is to be submitted by lowest bidder at later stage as and when required by EPI.

In case of EMD BG bidder must submit SFMS message sent by their issuing bank as a part of the bid with EMD.

8.0 Return of EMD

"The earnest money given by all the bidders except the lowest bidder should be refunded immediately after the expiry of stipulated bid validity period or immediately after acceptance of the successful bidder, whichever is earlier. However, in case of two bid system, earnest money deposit of bidders unsuccessful during technical bid evaluation etc. should be returned within 30 days of declaration of result of technical bid evaluation."

9.0 The Terms & Conditions contained in this NIT and tender documents shall be applicable. In case of any unscheduled holiday falling on the last day of submission of tender, the next working day will be treated as scheduled day and time for submission of Tender.

10.0 The rates quoted by the bidder shall be firm and fixed for the entire period of completion and till handing over of the work. No revision to rates or any escalation shall be allowed on account of any increase in prices of materials, labour, POL and Overheads etc. during the entire contract period or extended contract period.

The rates quoted by bidder shall be included all applicable taxes, duties, cess & GST etc. However, ESI, EPF will be payable at actual after receipt of deposited challans.

11.0 The corrigendum or addendum, extension, cancellation of this NIT, if any, shall be hosted on the EPI's website as well as CPP portal <https://etenders.gov.in/eprocure/app> the bidders are required to check these websites regularly for this purpose, to take into account before uploading/submission of tender. **All Corrigendum and addendum are to be uploaded duly signed & stamped with tender documents as bid Annexure.**

12.0 The offer of the L-1 bidders shall be accepted subject to the confirmation of authenticity of the PQ documents/BG from the concerned department/bank.

13.0 EPI reserves the right to extend the date of submission of the tender or cancel the tender or accept any tender or reject any or all tenders or split the work of tender or annul this tendering process without assigning any reason and liability whatsoever and to re-invite tender at its sole discretion even if an applicant may satisfy eligibility criteria.

14.0 a) In case of tie-tender, where two firms are bidding lowest, EPI reserves the right to split the work among these bidders and / or EPI will reserve the right to award the tender to any one of such bidders.

b) EPI reserves the right to delete any item while awarding the work.

15.0 Bidders to use as much as possible the material / services from MSME. Contractors to use as much as possible, the material/service from MSEs & Local suppliers/Manufacturers for promotion of Make in India. For Promotion of Public Procurement (Preference to Make in India) order 2017 (amended on 28.05.2018) GOI Guideline for procurement, the equivalent Indian makes of materials conforming to requisite quality in addition to List of Makes/Brands may be considered subject to approval of Client/Engineer.

All the bidders (Class-I local supplier, Class-II local Supplier, Non-Local Supplier) shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of supplies other than companies) giving the percentage of local content in their bid as per Annexure-E irrespective of whether they are availing or not availing purchase preference under public procurement (Preference to Make in India) Policy.

16.0 In case of any discrepancy between the downloaded tender documents from the website and the uploaded copy by the tenderer, the tender documents appearing in the website being uploaded by EPI with the tender shall hold good for contractual as well as legal purposes. The tenderer shall furnish a **declaration** to this effect that **“no addition/deletion/corrections have been made in the downloaded tender document being uploaded by him and it is identical to the tender document appearing on the Website. In case of any discrepancy between the downloaded tender documents from the website and the uploaded copy by me/us, the tender documents appearing in the website being uploaded by EPI with the tender shall hold good for contractual as well as legal purposes”**.

17.0 Disqualification

The tenderers may note that they are liable to be disqualified and not considered for the opening of Price Bid if;

- a) Non-Submission of Tender Fee and EMD as per NIT Condition.
- b) Representation in the forms, statements and attachments submitted in the pre-qualification document are proved to be incorrect, false and misleading.
- c) EPI reserves its right to take appropriate action including disqualification of tenderer(s) as may be deemed fit and proper by EPI at any time without giving any notice to the Bidder in this regard. The decision of EPI in the matter of disqualification shall be final and binding on the Bidders.
- d) If bidder have submitted incompletely filled in formats without attaching certified supporting documents and credentials to establish their eligibility to participate in the Tender.
- e) If the tenderers attempt to influence any member of the committee. EPI reserves its right to take appropriate action including disqualification of tenderer(s) as may be deemed fit and proper by EPI at any time without giving any notice to the contractor in this regard. The decision of EPI in the matter of disqualification shall be final and binding on the Tenderers.
- f) If documents are not uploaded by the bidder as per instructions/due to special characters while saving files the files are unable to download the bids will be disqualified.
- g) The Bidder is expected to examine all instructions, forms, terms and specifications in the bidding documents. Failure to furnish all information required by the bidding documents or submission of a bid not substantially responsive to the bidding documents in every respect will be at the bidder's risk and may result in the rejection of its bid.
- h) In case of existing contractors of EPI, if progress is not satisfactory in any of the project their bid will be rejected.

- i) The credentials of the Bidders with respect to Technical & Financial criteria shall be verified and inspection of the works, if required will be carried out by EPI. If not found satisfactory by EPI, their bid will be considered non-responsive and rejected.
- j) To the satisfaction of EPI / NESTS, they have record of poor performance during the past 5(five) years such as abandoning the work, rescinding of contract for which the reasons are attributable to the non - performance of the contract, inordinate delay in completion, consistent history of litigation / arbitration awarded against the contractor or any of its constituents or financial failures due to bankruptcy etc. in their on-going / past projects.

Note: If any tenderer withdraws his tender before the said period or issue of letter of acceptance/intent, whichever is earlier, or makes any modifications in the terms and conditions of the downloaded tender which are not acceptable to the EPIL, then the EPIL shall, without prejudice to any other right or remedy, be at liberty to forfeit entire amount of Earnest Money as aforesaid.

18.0 Tenderer shall submit the following documents duly signed and stamped a part of technical bid online. Only Online mode will be accepted for tender submission. No documents are required to be submitted offline by the bidders.

- a) Document evidence with regard to tender fees and EMD.
- b) Notarized Power of Attorney.
- c) Affidavit on **non-judicial stamp paper of Rs.100** of NIT (**Annexure-A and Annexure-B**) and Site Visit certification (**Annexure-C**)
- d) Undertaking regarding Constitution of Firm/Company (**Annexure-D**)
- e) Covering letter for participation in Bid with Bid name, number with All Corrigendum and addendum (if any).
- f) Details of similar works executed along with completion certificate & copy of Work order for qualification as per PQ criteria.
- g) List of works executed during the last 7 years indicating name of the Client, value, date of start and completion date.
- h) List of works under execution indicating name of the Client, Total Contract Value, Value of balance work in hand, date of start and completion.
- i) CA certified Annual Reports including Audited balance sheets, Financial Turnover and profit and loss accounts along with schedules for the last 5 years upto 31.03.2023 with UDIN issued by ICAI is to be submitted.
- j) Local Supplier Content certificate (**Annexure-E**)
- k) Integrity Pact (**Annexure-F**)
- l) Copy of Bankers certificate / Net worth certificate as per NIT condition (**Annexure-H**).
- m) **Declaration** in Letter Head in accordance to Clause no. 16.0 of this NIT for no addition/deletion/ corrections in the downloaded tender document.
- n) A notarized self-certification by bidder in accordance to Clause no. 2.0 (n) of this NIT for not blacklisted/debarred & reprimanded.
- o) Form of Tender and Letter of Undertaking
- p) Registration Certificate/Memorandum and Articles of Association/ Partnership Deed /Affidavit as proof of the organization set up.
- q) Details of manpower and equipment/plant machinery available with Bidder.

- r) Copy of valid PF Registration No.
- s) Memorandum and Bidder Information with banker details as per the format
- t) Copy of PAN Card and GST Registration Certificate.
- u) Tender Acceptance Letter (**Annexure G**).
- v) Undertaking for subletting as per NIT Cl 2(j)
- w) Undertaking for EMRS Work (**Annexure I**)

19.0 If any tenderer withdraws his tender before the said period or issue of letter of acceptance/intent, whichever is earlier, or makes any modifications in the terms and conditions of the downloaded tender which are not acceptable to the EPIL, then the EPIL shall, without prejudice to any other right or remedy, be at liberty to forfeit entire amount of Earnest Money as aforesaid.

20.0 In the event, this agreement with the NESTS is terminated or NESTS instruct to Cancel/terminate the Work Order the agreement between EPIL and Contractor will automatically stand terminated and that he should take away T&P and surplus materials from site of work after the joint measurements are taken of the same.

21.0 All correspondence with regard to the NIT shall be to the following address (By Post/In Person)

General Manager (Contracts)

Engineering Projects (India) Limited,
6A, Bakhtawar, Nariman Point, Mumbai 400021
Tel . 022 22027585
wro-contracts@engineeringprojects.com

22.0 Only Online mode will be accepted for tender submission. The bidders have to upload, the scanned copy of Tender fee receipt after depositing the tender fee/EMD online in EPI's Bank Account, Affidavit non-judicial stamp paper of Rs.100 for Bidding Capacity (Annexure-A), Affidavit non-judicial stamp paper of Rs.100 for NIT (Annexure-B), Site Visit certification (Annexure-C), Letter of Undertaking for Constitution of Firm (Annexure-D), Declaration for local content (Annexure-E). (Vol-I) and & Integrity Pact Format (Annexure-F), Tender Acceptance Letter (Annexure G) to be submitted Online in technical bid and Banker certificate / Net worth Certificate (Annexure-H) Undertaking for EMRS Work (Annexure I). In case, the above scan documents are not submitted as per schedule time, then Bid shall not be considered and EPI shall not be responsible for any online delay in respect of submission of the bids. No Documents is required to be submitted by the bidders in Physical form.

However, Physical submission of All Original Bid Documents, EMD, POA etc. to be submitted by lowest bidder at later stage as and when required by EPI.

23.0 Post tender clarification will not be sought in case of non-submission of Tender Fee or EMD of requisite amount as per NIT condition or unconditional letter of Acceptance or Affidavit for Correctness of documents/information or Basic Qualification Criteria Documents. In such case the bidder shall be rejected summarily without seeking any further clarification/documents.

24.0 Contact details for site related Queries / Visit:

Addl. General Manager (Tech)

Engineering Projects (India) Limited,
6A, Bakhtawar, Nariman Point, Mumbai 400021
Tele No. 022 22027585
Mob: 7738032265

For more information on EPI, visit our website at: <https://www.epi.gov.in>

For more information on the e-tender visit website <https://etenders.gov.in/eprocure/app>

25.0 This tender is covered under Integrity Pact. The particulars of IEM (independent External Monitor) of EPIL is as Under:

a) Shri Arun Kumar Sharma,
Email id: sharmaak6@gmail.com

b) Shri Animesh Chauhan,
Email id: animeshchau@gmail.com

Special instructions to Bidders for e-Tendering

Some Bidding Related Information for this Tender (Sealed Bid)

The entire bid-submission would be online only and submitted in CPP Portal i.e., <https://etenders.gov.in/eprocure/app>.

Broad outline of submissions are as follows:

- Submission of Bid-Parts/ Envelopes
 - *Technical-Part*
 - *Financial-Part*

Submission of Bid:

The Bidder should upload the scanned copies of all the original documents as mentioned in **NIT Clause No 18.0** and Bid-Annexures during Online Bid-Submission in addition to PQ documents listed in **NIT Clause No. 2.0**, However Physical submission of Original Bid Documents, EMD, POA for signing Bid, Form of tender, Letter of undertaking, Memorandum, Bidders Information, to be submitted by lowest bidder before award of LOI/LOA for successful Bidder.

Bidder's guide for CPP Portal:

Please refer

Appendix 1 - Bidder Registration Module &

Appendix 2 - Bid Submission Module for assistance in online bidding procedure.

Please note that at the end the bid must be final submit, otherwise the same will not be considered.

For any assistance regarding the Tender Document and/or term and conditions the bidders may contact at EPIL:

**Deputy General Manager (Tech)
Engineering Projects (India) Limited,
6A, Bakhtawar, Nariman Point, Mumbai 400021
wro-contracts@engineeringprojects.com**

For any assistance during bid submission, system settings etc. bidders may contact at CPPP:

For any technical related queries please call at 24 x 7 Help Desk Number

0120-4001 002, 0120-4001 005, 0120-6277 787

International Bidders are requested to prefix +91 as country code

Technical - support-eproc@nic.in

Policy Related - cphp-doe@nic.in

**LETTER OF UNDERTAKING
(TO BE ENCLOSED IN LETTER HEAD)**

To,
CONTRACTS DIVISION
ENGINEERING PROJECTS (INDIA) LTD.

REF: Tender for “Construction of Eklavya Model Residential School (EMRS) in Single- Phase comprise of school building, Boys hostel (240 students), Girls-hostel (240 students), Kitchen & Dinning block, 2 blocks of Type-III quarters including guest house (8+8 Nos), Type-II quarters (10 Nos), Principal Residence, Warden Residence (Boys & Girls), electrical provision, water supply and Sanitary installations, External sewerage system and Drainage facility, Campus development such as road, Compound wall (Civil, Electrical, Furniture & Kitchen equipment) etc at **Khedbrahma in Sabar Kantha** District of Gujarat State.”

NIT No: WRO/CON/EMRS/867/335

Dated: 11.03.2024

Sir,

UNDERTAKING FOR ACCEPTANCE OF TENDER CONDITIONS

1. The Tender Documents for the work as mentioned in “Memorandum” to “Form of Tender” have been issued to us by ENGINEERING PROJECTS (INDIA) LIMITED and we hereby unconditionally accept the tender conditions and Tender Documents in its entirety for the above work.
2. The contents of the Tender Documents (Instructions to Tenderers) have been noted wherein it is clarified that after unconditionally accepting the tender conditions in its entirety, it is not permissible to put any remarks(s) / condition(s) (except unconditional rebate on price, if any) in the ‘Price-Bid’ enclosed in “Envelope-2” and the same has been followed in the present case. In case this provision of the Tender is found violated at any time after opening “Envelope-2”, We agree that our tender shall be summarily rejected and EPI shall, without prejudice to any other right or remedy be at liberty to forfeit the full said Earnest Money absolutely.
3. The required Earnest Money for this work is enclosed herewith.

Yours faithfully,

(Signature of the Tenderer)

Seal of Tenderer

Dated:

FORM OF TENDER
(TO BE ENCLOSED IN LETTER HEAD)

To,
CONTRACTS DIVISION
ENGINEERING PROJECTS (INDIA) LTD.

REF: Tender for “Construction of Eklavya Model Residential School (EMRS) in Single- Phase comprise of school building, Boys hostel (240 students), Girls-hostel (240 students), Kitchen & Dinning block, 2 blocks of Type-III quarters including guest house (8+8 Nos), Type-II quarters (10 Nos), Principal Residence, Warden Residence (Boys & Girls), electrical provision, water supply and Sanitary installations, External sewerage system and Drainage facility, Campus development such as road, Compound wall (Civil, Electrical, Furniture & Kitchen equipment) etc at **Khedbrahma in Sabar Kantha District of Gujarat State.**”

NIT No: WRO/CON/EMRS/867/335

Dated: 11.03.2024

1. We hereby tender for execution of work as mentioned in “Memorandum” to this “Form of Tender” as per Tender Documents within the time schedule of completion of work as per separately signed and accepted rates in the Bill of Quantities quoted by us for the whole work in accordance with the Notice Inviting Tender, Conditions of Contract, Specifications of materials and workmanship, Bill of Quantities Drawings, Time Schedule for completion of jobs, and other documents and papers, all as detailed in Tender Documents.
2. It is agreed that the time stipulated for jobs and completion of work in all respects and in different stages mentioned in the “Time Schedule for completion of jobs” and signed and accepted by us is the essence of the contract. We agree that in case of failure on my/our part to strictly observe the time of completion mentioned for jobs and the final completion of work in all respects according to the schedule set out in the said “Time schedule for completion of jobs” and stipulations contained in the contract, the recovery shall be made from us as specified therein. In exceptional circumstances extension of time which shall always be in writing may, however be granted by EPI at its entire discretion for some items, and We agree that such extension of time will not be counted for the final completion of work as stipulated in the said “Time schedule of completion of jobs”.
3. We agree to pay the Security Deposit /Retention money, Performance Guarantee and accept the terms and conditions as laid down in the “Memorandum” to this “Form of Tender”.
4. Should this Tender be accepted, we agree to abide by and fulfill all terms and conditions referred to above and as conditioned in Tender Documents elsewhere and in default thereof, allow EPI to forfeit and pay EPI, or its successors or its authorized nominees such sums of money as are stipulated in the Tender Documents.

5. We hereby pay the earnest money amount as mentioned in the “Memorandum” to this “Form of Tender” in favour of Engineering Projects (India) Limited payable at place as mentioned in the “NIT/ITT”.
6. If we fail to commence the work within 10 days of the date of issue of Letter of intent and / or We fail to sign the agreement as per Clause 84 of General Conditions of Contract and/or We fail to submit Performance Guarantee as per Clause 9.0 & 9.1 of General Conditions of Contract, We agree that EPI shall, without prejudice to any other right or remedy, be at liberty to cancel the Letter of Intent and to forfeit the said earnest money as specified above.
7. We are also enclosing herewith the Letter of Undertaking on the prescribed proforma as referred to in condition of NIT.

Date the _____ day of _____

SIGNATURE OF TENDERER -----
NAME (CAPITAL LETTERS):
OCCUPATION -----
ADDRESS -----

SEAL OF TENDERER

MEMORANDUM

Name of Project: Tender for “Construction of Eklavya Model Residential School (EMRS) in Single-Phase comprise of school building, Boys hostel (240 students), Girls-hostel (240 students), Kitchen & Dinning block, 2 blocks of Type-III quarters including guest house (8+8 Nos), Type-II quarters (10 Nos), Principal Residence, Warden Residence (Boys & Girls), electrical provision, water supply and Sanitary installations, External sewerage system and Drainage facility, Campus development such as road, Compound wall (Civil, Electrical, Furniture & Kitchen Equipment) etc at **Khedbrahma in Sabar Kantha District of Gujarat State.**”

NIT No: WRO/CON/EMRS/867/335

Dated: 11.03.2024

S. NO.	Description	Cl. No.	Values/Description to be applicable for relevant clause(s)
i.	Name of work	NIT	Tender for “Construction of Eklavya Model Residential School (EMRS) in Single- Phase comprise of school building, Boys hostel (240 students), Girls-hostel (240 students), Kitchen & Dinning block, 2 blocks of Type-III quarters including guest house (8+8 Nos), Type-II quarters (10 Nos), Principal Residence, Warden Residence (Boys & Girls), electrical provision, water supply and Sanitary installations, External sewerage system and Drainage facility, Campus development such as road, Compound wall (Civil, Electrical, Furniture & Kitchen Equipment) etc. at Khedbrahma in Sabar Kantha District of Gujarat State. ”
ii.	Client	NIT	National Education Society for Tribal Students (NESTS)
iii.	Type of Tender	NIT	Percentage rate
iv.	Earnest Money Deposit	NIT	Rs.44,79,628 /- (Rupees Forty Four Lacs Seventy – Nine thousand Six Hundred Twenty-Eight Only)
v.	Estimated Cost	NIT	Rs.34,79,62,823/- (Including 18% GST) (Rupees Thirty-Four Crore Seventy-Nine Lakhs Sixty-Two Thousand Eight Hundred & Twenty-Three Only)
vi.	Time for completion of work	NIT	18 (Eighteen) months from the 10 th day of issue of LOI & Defect Liability Period is 12 months.
vii.	Mobilization Advance	7.0 of ACC and 8.00 of GCC	10% of Agreement value (Against Submission of B. G.)
viii.	Interest Rate on Mobilization Advance		Base rate of State Bank of India + 2% or 12% whichever is higher.
ix.	Number of Installments for recovery of Mobilization Advance		The mobilization advance will be recovered @25% (Twenty Five percent only) of the value of work done from each running bill till complete mobilization advance recovered.

x.	Schedule of Rates applicable	69.0 of GCC	DSR 2021 and prevailing Market Rate
xi.	Validity of Offer	4.0 of GCC	The validity of offer(s) submitted by Tenderer shall be ninety (90) days from the last date of submission of the Tender. The earnest money will be forfeited without any prejudice to any right or remedy, in case the Contractor withdraws his Offer(s) during the validity period or in case he changes his offer to his benefits, which are not acceptable to EPI. The validity period may be extended on mutual consent.
xii.	Security Deposit cum Performance Guarantee	9.0 of GCC	<p>NIT Condition: Security Deposit Cum Performance Bank Guarantee ACC Cl. No.3.0 (GCC Cl. No. 9.0):</p> <p>"The successful bidder shall have to submit SDPBG equivalent to 5.0% (Five Point Zero Percentage) of the contract value of the accepted tender within 21 (twenty-one) days from the date of issue of Letter of intent (LOI). If required, any extension of time beyond 21 days and upto 60 days may be granted by the Competent Authority. However, a penal rate of interest @12% per annum shall be charged for the delay in submission of SDPG after 21(twenty-one) days i.e., from 22nd day to the date of submission of SDPG but within 60 days after the date of issue of LOI. Further, if 60th day happens to be declared holiday in the concerned office of EPI, submission of SDPBG can be accepted on the next working day. The SDPBG shall be submitted in the form of Bank Guarantee (format enclosed), from any Nationalized bank / Scheduled Bank / Commercial Bank or in the form of insurance Security Bonds or Account Payee Demand Draft or Fixed Deposit Receipt or online Payment in an acceptable form. This SDPBG shall be initially remain valid upto 90 (ninety) days after the end of Defect Liability Period (DLP). In case, the time for completion of work gets extended the contractor shall get the validity of SDPBG extended to cover such extended time for completion of work plus DLP plus 90 days. In case, even after 60 days from the date of issue of LOI, the Bidder fails to submit the SDPBG of the requisite amount, LOI will stand withdrawn and EMD of the Bidder shall be forfeited."</p>
xiii.	Additional security for abnormally Low Bid		<p>NIT Condition: Additional Security for Abnormally Low Bid [S.No. (xiii)]</p> <p>1). During the process of bidding, if the lowest bid is less than that of 10% below to the estimated cost put to tender, then the authority inviting tenders/bids shall obtain from the concerned bidder/contractor, the detailed planning regarding execution of the work at such low rates. It shall be ensured that, the work can be executed by the lowest bidder based on the detailed planning of execution submitted by the contractor/bidder & same shall be release after Handing over complete site to Client NEST.</p> <p>(2). If the lowest bid is below up to 10% of the estimated cost put to tender, then the bidder or contractor shall submit Bank Guarantee or the Demand Draft of 1% of the cost put to tender as a Performance Security (e.g. from</p>

			<p>the bidder who has quoted 1% to 10% below to the estimated cost-1% of Bid cost).</p> <p>(3). If the cost bid/tender is less than 10% below of the estimated cost put to tender, then (A) Bank Guarantee/DD corresponding to the percentage over and above 10% and as per above (2) may be submitted (e.g. for Bid Offer of 14%, upto 10% below -1% and $14\%-10\%=4\%$, thus $\text{total}=1\%+4\%=5\%$), If this amount is less than Rs. 1000/-, then Bank Guarantee /DD of minimum Rs. 1000/- may be submitted. B) If bid/tender quoted is less than 15% below, then DD amount for the balance percentage over & above 15% be worked out at double rate and the same may be submitted (e.g. if the offer is 19% below, then $(19-15=4\% \times 2 + 1 = 9\%)$).</p> <p>(4) This Additional Security Deposit cum Performance Bank Guarantee shall be submitted along with 5% SDBG Cum PBG, within the stipulated time as mentioned, after placing of LOI.</p>
xiv.	Retention Money	10.0 of GCC	5% (Five percent only) of Basic contract value which shall be deducted from each RA Bill. The retention money shall be released after expiry of defect liability period.
xv.	Time allowed for starting the work	43.0 of GCC	10 (Ten) days from the date of issue of LOI.
xvi.	Defect Liability Period	74.0 of GCC	12 months after handing over to client.
xvii.	Arbitration	76.0 of GCC & A (21.0) of ACC	As per clause no. 76.0 of GCC & A (21.0) of ACC
xviii.	Jurisdiction	76.3 of GCC & A (21.0) of ACC	As per clause no. 76.0 of GCC & A (21.0) of ACC Courts in Mumbai .

SIGNATURE OF BIDDER :

NAME (CAPITAL LETTERS) : _____

OCCUPATION : _____

ADDRESS : _____

SEAL OF BIDDER :

ADDENDUM TO INSTRUCTIONS TO TENDERERS

Mode of submission of tender is through e-bids only. Hence clause no. 1 of ITT is deleted.

Kindly refer “Special instructions to Bidders for e-tendering” for downloading & uploading of tender documents as per NIT”.

Bidder Information
(To be submitted by Bidder on its company Letter Head)

Company Name*	
Registration Number*	
Registered Address*	
Name of Partners/Directors	
Bidder type* Indian/Foreign	
City*	
State*	
Country*	
Postal code*	
PAN/TAN /GST Number*	
Company's Establishment Year	
Company's Nature of business*	
Company's Legal status* Limited company/ Undertaking/Joint venture/Partnership/others	
Company Category* Micro unit as per MSME/ Small unit as per MSME/ Medium unit as per MSME/ Ancillary unit/Project of affected person of this company/SSI/others	
Contact Details	
Enter Company's Contact Person Details	
Title * Mr/Mrs/Dr/Shree/Ms	
Contact Name*	
Date of Birth* (DD/MM/YYYY)	
Correspondence Email*	(Correspondence Email ID can be same as your Login ID. All The mail correspondence will be sent only to the Correspondence Email ID.)
Designation	
Phone *	
Mobile*	

BANKER DETAILS

PAN NO*	
GST NO*	
NAME OF BANK*	
ACTIVE BANK A/C DETAILS*	
A/C NO*	
A/C TYPE*	
BRANCH ADDRESS*	
IFSC *	

*Mandatory information (must be filled by the bidders)

BID CAPACITY	
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Name of the Work: “Construction of Eklavya Model Residential School (EMRS) in Single- Phase comprise of school building, Boys hostel (240 students), Girls-hostel (240 students), Kitchen & Dinning block, 2 blocks of Type-III quarters including guest house (8+8 Nos), Type-II quarters (10 Nos), Principal Residence, Warden Residence (Boys & Girls), electrical provision, water supply and Sanitary installations, External sewerage system and Drainage facility, Campus development such as road, Compound wall (Civil, Electrical, Furniture & Kitchen Equipment) etc at **Khedbrahma in Sabar Kantha** District of Gujarat State”.

NIT No: WRO/CON/EMRS/867/335	Dated: 11.03.2024
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NIT No: WRO/CON/EMRS/867/335	Dated: 11.03.2024
------------------------------	-------------------

ESTIMATED COST PUT TO TENDER : Rs.34,79,62,823/- (Including 18% GST)

Bid Capacity: The bidding capacity of the contractor should be equal to or more than the estimated cost of the work put to Tender. The bidding capacity shall be worked out by the following formula :

Bidding Capacity = [A x N x 1.5] – B
--

Where,

A = Maximum turnover in construction works executed in any one year during the last seven years considering the completed as well as works in progress. The value of completed works shall be brought to current costing level by enhancing at a simple rate of 7% per annum.

N = Number of years prescribed for completion of work for which bids have been invited.

B = Value of existing commitments and ongoing works to be completed during the period of completion of work for which bids have been invited. The Bidders are requested to furnish the existing commitments on Works under execution along with stipulated period for completion of remaining for each of the work should be furnished **in an affidavit on non-judicial stamp paper of value of Rupees 100/-** duly certified that the particulars furnished are corrected as per the Proforma in Annexure-A. **(Format enclosed)**

BID CAPACITY CALCULATION BY BIDDER

SIGN & STAMP OF BIDDER

ANNEXURE-A

AFFIDAVIT

(To be typed on Rs. 100/- non-judicial stamp paper)

I/Weagedyears son ofdo
hereby solemnly affirm and declare as follows for and on behalf of the Firm :

LIST OF EXISTING COMMITMENT AND ONGOING WORKS

Sr. No.	Name of Works	Client Name & Address	Work Order Value (in Rs)	Work Executed till Date (Rs)	Balance Amount of work to be completed (Rs)	Balance period to complete the works (Total months)	Work to be completed in 18 months (Rs)
					(4 – 5)		
1	2	3	4	5	6	7	8
		Balance Commitments during 18 monthd as per NIT				Rs	

It is certify that the above particulars furnished are true and correct. If any information given is found to be concealed at a later date, the Contract will be terminated forthwith without prejudice to the rights thereon consequent on termination and the bidder will be blacklisted. I/We agree for debarring tendering for one year if any facts are suppressed.

SIGN AND STAMP OF BIDDER

Signature of Notary Public

AFFIDAVIT

**(To be submitted by bidder on non-judicial stamp paper of Rs.100/-(Rupees Hundred only)
duly attested by Notary Public)**

Affidavit of Mr ----- So ----- R/o -----.

I, the deponent above named do hereby solemnly affirm and declare as under :

1. That I am the Proprietor/Authorized signatory of M/shaving its Head / Regd. Office at.....
2. That the information / documents/Experience certificates submitted by M/s along with the tender for (Name of work).... To EPI are genuine, true and nothing has been concealed.
3. I shall have no objection in case EPI verifies them from issuing authority (ies). I shall also have no objection in providing the original copy of the document (s), in case EPI demand so for verification.
4. I hereby confirm that in case, any document, information & / or certificate submitted by me found to be incorrect / false / fabricated, EPI at its discretion may disqualify /reject/ terminate the bid / contract and also forfeit the EMD / All dues.
5. I shall have no objection in case EPI verifies any or all Bank Guarantee(s) under any of the clause (s) of Contract including those issued towards EMD and Performance Guarantee from the Zonal Branch / office issuing Bank and I / we shall have no right or claim on my submitted EMD before EPI receives said verification.
6. That the Bank Guarantee issued against the EMD issued by (name and address of the Bank) is genuine and if found at any stage to be incorrect / false/ fabricated, EPI shall reject my bid cancel pre-Qualification and Debar me from Participating in any future tender for three years.

I, -----, the Proprietor / Authorised signatory of M/s ----- do hereby confirm that the contents of the above Affidavit are true to my knowledge and nothing has been concealed there from ----- and that no part of it is false.

Verified at ----- this ----- day of -----

DEPONENT

ATTESTED BY (NOTARY PUBLIC)

Site Visit Certification

Tender for “Construction of Eklavya Model Residential School (EMRS) in Single- Phase comprise of school building, Boys hostel (240 students), Girls-hostel (240 students), Kitchen & Dinning block, 2 blocks of Type-III quarters including guest house (8+8 Nos), Type-II quarters (10 Nos), Principal Residence, Warden Residence (Boys & Girls), electrical provision, water supply and Sanitary installations, External sewerage system and Drainage facility, Campus development such as road, Compound wall (Civil, Electrical, Furniture & Kitchen Equipment)etc at **Khedbrahma in Sabar Kantha** District of Gujarat State”.

NIT No: WRO/CON/EMRS/867/335**Dated: 11.03.2024****SITE VISIT REPORT**

		Date: -
1	Name of the Bidder	
	Authorized Person's Name for Site Visit	
	Id Proof	
	Email-Id	
	Contact Details	
SI NO	DESCRIPTION	CONFIRMATION
2	Site Accessibility from Road is checked	
3	Water & Electricity Availability is checked	
4	UNDERTAKING: -Authorized person has visited site before submitting the bid to assess the ground condition & working condition at site. Bidder is quoting price & responsible for any further site related consequences thereof & it is to be considered as self-declaration.	
5	We have noted all local conditions & availability of raw material for construction.	

Authorized Person of Bidder
(Signed Off)
Seal of Tenderer:
Date:

UNDERTAKING
(To be submitted by Bidder on its company Letter Head)

NIT No: WRO/CON/EMRS/867/335

Dated: 11.03.2024

Ref: Tender for “Construction of Eklavya Model Residential School (EMRS) in Single- Phase comprise of school building, Boys hostel (240 students), Girls-hostel (240 students), Kitchen & Dinning block, 2 blocks of Type-III quarters including guest house (8+8 Nos), Type-II quarters (10 Nos), Principal Residence, Warden Residence (Boys & Girls), electrical provision, water supply and Sanitary installations, External sewerage system and Drainage facility, Campus development such as road, Compound wall (Civil, Electrical, Furniture & Kitchen Equipment) etc at **Khedbrahma in Sabar Kantha** District of Gujarat State”.

This is to confirm that the following persons are the present Directors of the company/firm:

- 1.
- 2.
- .
- .
- .

It is further confirmed that none of the above Directors is associated with any other company/firm which is quoting for the above referred tender of EPI.

The details of constitution of M/sis submitted along with this annexure.

In case, at any later stage the above information is found incorrect, EPI can cancel our BID/LOI/Contract Agreement and may take any suitable action deemed fit against our company.

Authorized Signatory
CEO/Proprietor/MD

Date:

Name & Seal of the Company

LOCAL CONTENT CERTIFICATE

(From Statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of supplies other than companies) giving the percentage of local content.

NIT No: WRO/CON/EMRS/867/335

Dated: 11.03.2024

Ref: Tender for "Construction of Eklavya Model Residential School (EMRS) in Single- Phase comprise of school building, Boys hostel (240 students), Girls-hostel (240 students), Kitchen & Dinning block, 2 blocks of Type-III quarters including guest house (8+8 Nos), Type-II quarters (10 Nos), Principal Residence, Warden Residence (Boys & Girls), electrical provision, water supply and Sanitary installations, External sewerage system and Drainage facility, Campus development such as road, Compound wall (Civil, Electrical, Furniture & Kitchen Equipment) etc at **Khedbrahma in Sabar Kantha** District of Gujarat State.

"We.....the statutory auditor (or as the case may be) of M/s. (Name of the bidder) hereby certify that M/s.....(Name of the bidder) meet the mandatory local content requirements of the tender as per Public Procurement (Preference to Make in India) - Local Content policy quoted vide offer no..... dated..... against EPI NIT No..... dated..... by M/s.....(Name of the bidder). The percentage of local content in the bid is... % and the items offered in the bid meets the minimum local content and party shall give details of the location (s) at which the local value addition is made".

Authorized Signatory

Name & Seal of the Issuing Authority

INTEGRITY PACT

Between

Engineering Projects (India) Limited (EPI) hereinafter referred to as “**The Principal**”, and

..... hereinafter referred to as “**The Bidder/ Contractor**”

Preamble

The principal intends to award, under laid down organizational procedures, contracts/s for The principal values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness / transparency in its relations with its Bidder(s) and / or Contractor(s).

In order to achieve these goals, the principal will appoint Independent External Monitors (IEMs) who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

Section 1 – Commitments of the Principal

- (1) The principal commits itself to take all measures necessary to prevent corruption and to observe the following principles: -
 - a. No employee of the principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
 - b. The principal will, during the tender process treat all Bidder(s) with equity and reason. The principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.
 - c. The principal will exclude from the process all known prejudiced persons.
- (2) If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the IPC/PC Act, or if there be a substantive suspicion in this regard, the principal will inform the Chief Vigilance Officer and in addition can initiate disciplinary actions.

Section 2 – Commitments of the Bidder(s)/ Contractor(s)

- (1) The Bidder(s)/ Contractor(s) commits themselves to take all measures necessary to prevent corruption. The Bidder(s)/ Contractor(s) commits themselves to observe the following principles during participation in the tender process and during the contract execution.
 - a. The Bidder(s)/ Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the principal's employees involved in the tender process or the execution of the contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.
 - b. The Bidder(s)/ Contractor(s) will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non- submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.
 - c. The Bidder(s)/ Contractor(s) will not commit any offence under the relevant IPC/PC Act; further the Bidder(s)/ Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
 - d. The Bidder(s)/Contractors(s) of foreign origin shall disclose the name and address of the Agents/representatives in India, if any. Similarly, the Bidder(s)/Contractors(s) of Indian Nationality shall furnish the name and address of the foreign principals, if any. Further details as mentioned in the "Guidelines on Indian Agents of Foreign Suppliers" shall be disclosed by the Bidder(s)/Contractor(s). Further, as mentioned in the Guidelines all the payments made to the Indian agent/representative must be in Indian Rupees only.
 - e. The Bidder(s)/ Contractor(s) will, when presenting their bid, disclose any and all payments made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
 - f. The Bidder(s)/ Contractor(s) will, when presenting their bid, disclose any transgressions with any other company that may impinge on the anticorruption principle.
 - g. Bidder(s) /Contractor(s) who have signed the Integrity Pact shall not approach the Courts while representing the matter to IEMs and shall wait for their decision in the matter.
- (2) The Bidder(s)/ Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

Section 3 - Disqualification from tender process and exclusion from future Contracts

- (1) If the Bidder(s)/Contractor(s), before award or during execution has committed a transgression through a violation of Section 2, above or in any other form such as to put their reliability or credibility in question, the principal is entitled to disqualify the Bidder(s)/Contractor(s) from the tender process or to terminate the contract, if already signed for such reason.
- (2) If the Bidder/ Contractor has committed a serious transgression through a violation of section – 2 such as to put his reliability or credibility into question, the principal is entitled also to exclude the Bidder/ Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of the transgression. The severity will be determined by the circumstances of the case, in particular the number of transgressions, the position of the transgressor with the company hierarchy of the Bidder and the amount of the damage. The exclusion will be imposed for a minimum of 6 months and maximum of 3 years.
- (3) If the Bidder/ Contractor can prove that he has restored/ recouped the damage caused by him and has installed a suitable corruption prevention system, the principal may revoke the exclusion prematurely.
- (4) A transgression is considered to have occurred if in light of available evidence, no reasonable doubt is possible.

Section 4 – Compensation for Damages

- (1) If the Principal has disqualified the Bidder(s) from the tender process prior to the award according to Section 3, the principal is entitled to demand and recover the damages equivalent to Earnest Money Deposit/ Bid Security.
- (2) If the Principal has terminated the contract according to Section 3, or if the principal is entitled to terminate the contract according to Section 3, the principal shall be entitled to demand and recover from the Contractor liquidated damages of the Contract value or the amount equivalent to Performance Bank Guarantee.

Section 5 – Previous transgression

- (1) The Bidder declares that no previous transgressions occurred in the last three years with any other Company in any country conforming to the anti-corruption approach or with any Public Sector Enterprise in India that could justify his exclusion from the tender process.
- (2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process.

Section 6 – Equal treatment of all Bidders / Contractors / Subcontractors

- (1) In case of joint venture, all the partners of the joint venture should sign the Integrity Pact.

In case of Sub-contracting, the Principal Contractor shall take the responsibility of the adoption of Integrity Pact by the sub-contractor and submit duly signed Integrity Pact by all the sub-contractors.

- (2) The principal will enter into agreements with identical conditions as this one with all Bidders and Contractors.
- (3) The principal will disqualify from the tender process all bidders who do not sign this Pact or violate its provisions.

Section 7 – Criminal charges against violating Bidder(s)/Contractor(s)/ Subcontractor(s)

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or if the principal has substantive suspicion in this regard, the principal will inform the same to the Chief Vigilance Officer.

Section 8 – Independent External Monitor

- (1) The principal appoints competent and credible Independent External Monitor for this Pact after approval by Central Vigilance Commission. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.
- (2) The Monitor is not subject to instructions by the representatives of the parties and performs his/ her functions neutrally and independently. The Monitor would have access to all Contract documents, whenever required. It will be obligatory for him / her to treat the information and documents of the Bidders/Contractors as confidential. He/ she reports to the Chairman, EPI.
- (3) The Bidder(s)/ Contractor(s) accepts that the Monitor has the right to access without restriction to all Project documentation of the principal including that provided by the Contractor. The Contractor will also grant the Monitor, upon his/her request and demonstration of a valid interest, unrestricted and unconditional access to their project documentation. The same is applicable to Sub-contractors.
- (4) The Monitor is under contractual obligation to treat the information and documents of the Bidder(s) / Contractor(s) / Sub-contractor(s) with confidentiality. The Monitor has also signed declarations on „Non-Disclosure of Confidential Information“ and of „Absence of Conflict of Interest“. In case of any conflict of interest arising at a later date, the IEM shall inform Chairman, EPI and recues himself / herself from that case.
- (5) The principal will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.
- (6) As soon as the Monitor notices, or believes to notice, a violation of this agreement, he/she will so inform the Management of the Principal and request the Management to discontinue or take corrective action, or to take other relevant action. The monitor can in

this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action. However, the independent External Monitor shall give an opportunity to the Bidder/ Contractor to present its case before making its recommendations to the principal.

- (7) The Monitor will submit a written report to the Chairman, EPI within 8 to 10 weeks from the date of reference or intimation to him by the principal and, should the occasion arise, submit proposals for correcting problematic situations.
- (8) Monitor shall be entitled to compensation on the same terms as being extended to / provided to Independent Directors on the EPI Board.
- (9) If the Monitor has reported to the Chairman EPI, a substantiated suspicion of an offence under relevant IPC/ PC Act, and the Chairman EPI has not, within the reasonable time taken visible action to proceed against such offence or reported it to the Chief Vigilance Officer, the Monitor may also transmit this information directly to the Central Vigilance Commissioner.
- (10) The word „**Monitor**“ would include both singular and plural.
- (11) Independent External Monitor shall be required to maintain confidentiality of the information acquired and gathered during their tenure/ role as independent Monitor. Any breach in this regard would be subject to the legal judicial system of India.

Section 9 – Pact Duration

This Pact begins when both parties have legally signed it. It expires for the Contractor 12 months after the last payment under the contract, and for all other Bidders 6 months after the contract has been awarded. Any violation of the same would entail disqualification of the bidders and exclusion from future business dealings.

If any claim is made / lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged / determined by Chairman of EPI.

Section 10 – Other provisions

- (1) This agreement is subject to Indian Law. Place of performance and jurisdiction is the Registered Office of the Principal, i.e. New Delhi.
- (2) Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.
- (3) If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.

(4) Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

(5) Issues like Warranty / Guarantee etc. shall be outside the purview of IEMs.

(For & On behalf of the Principal)

(For & On behalf of Bidder/ Contractor)

(Office Seal)

(Office Seal)

Place -----

Date -----

Witness 1:

(Name & Address)

Witness 2:

(Name & Address)

TENDER ACCEPTANCE LETTER
(To be given on Company Letter Head)

Date:

To,

Sub: Acceptance of Terms & Conditions of Tender.

NIT No: WRO/CON/EMRS/867/335

Dated: 11.03.2024

Name of Tender / Work: - "Tender for "Construction of Eklavya Model Residential School (EMRS) in Single- Phase comprise of school building, Boys hostel (240 students), Girls-hostel (240 students), Kitchen & Dinning block, 2 blocks of Type-III quarters including guest house (8+8 Nos), Type-II quarters (10 Nos), Principal Residence, Warden Residence (Boys & Girls), electrical provision, water supply and Sanitary installations, External sewerage system and Drainage facility, Campus development such as road, Compound wall (Civil, Electrical, Furniture & Kitchen Equipment) etc at **Khedbrahma in Sabar Kantha** District of Gujarat State".

Dear Sir,

1. I/ We have downloaded / obtained the tender document(s) for the above mentioned 'Tender/Work' from the web site(s) namely:

as per your advertisement, given in the above-mentioned website(s).

2. I / We hereby certify that I / we have read the entire terms and conditions of the tender documents from Page No. _____ to _____ (including all documents like annexure(s), schedule(s), etc.), which form part of the contract agreement and I / we shall abide hereby by the terms / conditions / clauses contained therein.

3. The corrigendum(s) issued from time to time by your department/ organisation too have also been taken into consideration, while submitting this acceptance letter.

4. I / We hereby unconditionally accept the tender conditions of above-mentioned tender document(s) / corrigendum(s) in its totality / entirety.

5. I / We do hereby declare that our Firm has not been blacklisted/ debarred by any Govt. Department/Public sector undertaking.

6. I / We certify that all information furnished by our Firm is true & correct and, in the event, that the information is found to be incorrect/untrue or found violated, then your department/ organisation shall without giving any notice or reason therefore or summarily reject the bid or terminate the contract, without prejudice to any other rights or remedy including the forfeiture of the full said earnest money deposit absolutely.

Yours Faithfully,

(Signature of the Bidder, with Official Seal)

BANKERS CERTIFICATE FROM A SCHEDULED BANK

This is to certify that to the best of our knowledge and information that M/s. / Sh. _____ having marginally noted address, _____ as a customer of our bank are / is respectable and can be treated as good for any engagement upto a limit of Rs. _____ (Rupees _____)

This certificate is issued without any guarantee or responsibility on the bank or any of the officers.

(Signature) For the Bank

NOTE

1. Bankers Certificate should be on letter head of the Bank, addressed to tendering authority.
2. In case of Partnership firm, certificate should include names of all partners as recorded with the Bank.

FORM FOR CERTIFICATE OF NET WORTH FROM CHARTERED ACCOUNTANT

“It is to certify that as per the audited balance sheet and profit & loss account during the financial year _____, the Net Worth of M/s. _____ (Name & Registered Address of individual/firm/company), as on _____ (the relevant date) is Rs. _____ after considering all liabilities. It is further certified that the Net Worth of the company has not eroded by more than 30% in the last three years ending on (the relevant date)”

Unique Document Identification Number (UDIN) _____

Signature of Chartered Accountant _____

Name of Chartered Accountant _____

Membership No. of ICAI

Date and Seal

UNDERTAKING FOR EXECUTION OF EMRS SCHOOL
(To be submitted by Bidder on its company Letter Head)

NIT No: WRO/CON/EMRS/867/335

Dated: 11.03.2024

Ref: Tender for “Construction of Eklavya Model Residential School (EMRS) in Single- Phase comprise of school building, Boys hostel (240 students), Girls-hostel (240 students), Kitchen & Dinning block, 2 blocks of Type-III quarters including guest house (8+8 Nos), Type-II quarters (10 Nos), Principal Residence, Warden Residence (Boys & Girls), electrical provision, water supply and Sanitary installations, External sewerage system and Drainage facility, Campus development such as road, Compound wall (Civil, Electrical, Furniture & Kitchen Equipment) etc. at **Khedbrahma** in **Sabar Kantha** District of Gujarat State”.


We(name of the bidder) undertake that following EMRS works are under execution by our Origination:

Sr. No.	Name of Work and Location	Name of CPSU/CPWD/State PWD

(To be self-certified by the Bidder)

Bidder Registration Module

To enroll as a bidder click on the **Online Bidder Enrollment** link.



Government E-PROCUREMENT System (Demo)

02-Apr-2020

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Welcome to eProcurement System

The eProcurement System enables the Tenderers to download the Tender Schedule free of cost and then submit the bids online through this portal.

Latest Tenders

Tender Title	Reference No	Closing Date	Bid Opening Date
1. OCB_CKICP_MC_1_EPC_12_01	OCB/ CKICP/ MC-1/EPC-12/01	13-May-2020 02:00 PM	13-May-2020 03:00 PM
2. Triple cell RCC Box culvert	Tender14201920CMDPDODated 03.03.2020	13-Apr-2020 03:00 PM	15-Apr-2020 03:00 PM


Latest Tenders updates every 15 mins.

Latest Corrigendums

Corrigendum Title	Reference No	Closing Date	Bid Opening Date
-------------------	--------------	--------------	------------------


Latest Corrigendum updates every 15 mins.

Certifying Agency



User Login

Login ID *

X7E5AF 

Captcha *


Login

Online Bidder Enrollment

[Generate / Forgot Password?](#)

[Find My Nodal Officer](#)

Search with ID/Title/Reference no

 Tender Search

Go

Advanced Search


[Help For Contractors](#)


[Information About DSC](#)

[FAQ](#)

[Feedback](#)

[Bidders Manual Kit](#)

 GePNIC
Simplified Procurement

 NIC
एन आई सी
National Informatics Centre

The system leads to the page where the details of the bidders are to be filled in. There are preferential categories for the preferential bidders who can avail the privileges that are provided. The Preferential categories are Make in India, MSME and STARTUP. The bidders first has to click on the check box of Preferential Bidder to select the Preferential Category.

The screenshot displays the Government E-Procurement System (Demo) interface. The header includes the system name, date (02-Apr-2020), and navigation links. A sidebar on the left contains various menu items. The main content area is titled "Online Enrollment of Corporate/Bidder" and contains a registration form. The form includes fields for Login Id, Correspondence Email, Mobile, Company Name, and BidderType. A dropdown menu for "Preference Category" is open, showing options: Make in India, -Select-, Make in India, MSME, and STARTUP. A "Preferential Bidder" checkbox is checked. A policy box on the right explains the requirements for Email ID and Mobile No. The footer features the GePNIC logo and the NIC logo.

Government E-PROCUREMENT System (Demo)

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Government eProcurement System

Online Enrollment of Corporate/Bidder

Login Id *

Enter email address for login id. eg: abc@nic.com
(Care may be taken to enter valid e-mail ID. This information will be kept confidential. The login ID cannot be modified once registered.)

Correspondence Email *

(Correspondence Email ID can be same as your Login ID.)

Mobile * -Select-

Email ID and Mobile No Policy

Email and mobile must comply following requisites,

1. As **Mobile** and **Email** are the modes of correspondence, ensure that mobile no and email id provided are correct.
2. The verification codes are valid for **900** seconds from the time **Send Verification Code** is clicked.

Company Details

Company Name *

Preferential Bidder: ☒ Yes

Preference Category *

Registration Number *

Registered Address *

Registered Address *

Name of Partners / Directors

BidderType * ☒ Indian ☐ Foreign

City *

State * -Select-

Postal Code *

The details of the bidder are entered in the Online Enrollment of Corporate/Bidder page. The Correspondence Email id and the Mobile Number should be a valid email id and a valid mobile number because further contacts will be only through this mobile number and correspondence email id.

Online Enrollment of Corporate/Bidder

Login Id *

Enter email address for login id. eg: abc@nic.com
(Care may be taken to enter valid e-mail ID. This information will be kept confidential. The login ID cannot be modified once registered.)

Correspondence Email*

(Correspondence Email ID can be same as your Login ID.)

Mobile*

Email ID and Mobile No Policy
Email and mobile must comply following requisites,

1. As **Mobile** and **Email** are the modes of correspondence, ensure that mobile no and email id provided are correct.
2. The verification codes are valid for **900** seconds from the time **Send Verification Code** is clicked.

Company Details

Company Name *

Preferential Bidder: ☒ Yes

Preference Category*

Registration Number *

Registered Address*

Name of Partners / Directors

BidderType* ☒ Indian ☐ Foreign

City *

State*

Postal Code*

PAN/TAN Number *

PAN/TAN number must have 10 characters. For eg: AESTG2458A

Page
1

Once after filling the details, the bidder enters the Captcha and clicks on the **Submit** Button to submit the provided details.

For Bidders who do not have PAN/TAN number may enter TEMPZ9999Z as the PAN/TAN number.

Establishment Year

Nature of Business*

Legal Status*

Company Category *

Contact Details

Enter Company's Contact Person Details

Title *


Contact Name*

Date Of Birth (DD/MM/YYYY)*

Designation

Phone Details eg: +91 044 22272449

Phone*

Enter Captcha 8 N J S 8 V  Refresh

Page
2

The Bidder enrollment Acknowledgement is displayed on the screen. The bidder Clicks on the **Send Verification Code** button to receive the verification code in the provided mobile number and the correspondence email id.

Bidder Enrollment Acknowledgement		Print
Login ID :	biddertest2@gmail.com	
User Type :	Corporate Tenderer	
Correspondence Email :	biddertest2@gmail.com	
Mobile :	91-9 [REDACTED] 8	
Company Details		
Company Name :	Sai Private Limited.	
Preferential Bidder :	Yes	
Preference Category :	Make in India	
Registration Number :	A123456Z	
Registered Address :	Chennai	
Name of Partners / Directors :	Nil	
City :	Chennai	
State :	Tamil Nadu	
Postal Code :	123456	
PAN/TAN Number :	AESTG2458A	
Company's Establishment Year :	2010	
Company's Nature of Business :	Nature of Business	
Company's Legal Status :	Limited Company	
Company Category :	Regd. with District Industries Centre(DIC)	
Contact Details		
Title :	Mr	
Contact Name :	Praveen Rawat	
DOB (Date Of Birth) :	12-Sep-1989	
Designation :	CEO	
Phone :	91 044 2 [REDACTED] 9	
Note: The verification codes are valid for 900 seconds from the time Send Verification code is clicked		
Send Verification Code		

The bidder enters the Mobile Verification Code, Mail Verification Code, enters the New Password, confirms the same, enters the Captcha and clicks on the **Submit** button to submit the entered details.

Generate password

Generate password

Generate password for the login id **biddertest2@gmail.com**

Provide the verification code received through Correspondence Email/
Registered Mobile Number.

Mobile Verification Code *

Mail Verification Code *

New Password *

Confirm Password *



New User who have not received Verification code, please click on 'Update Email ID/Mobile No' button provided in 'Generate/Forgot Password' link in the home page and ensure the provided email id and mobile no are correct.

Cancel

Submit

Email ID and Mobile No Policy

Verification code must comply following requisites,

1. Provide verification code sent to mobile in Mobile Verification code.
2. Provide verification code sent to email in Mail Verification code.

Password Policy

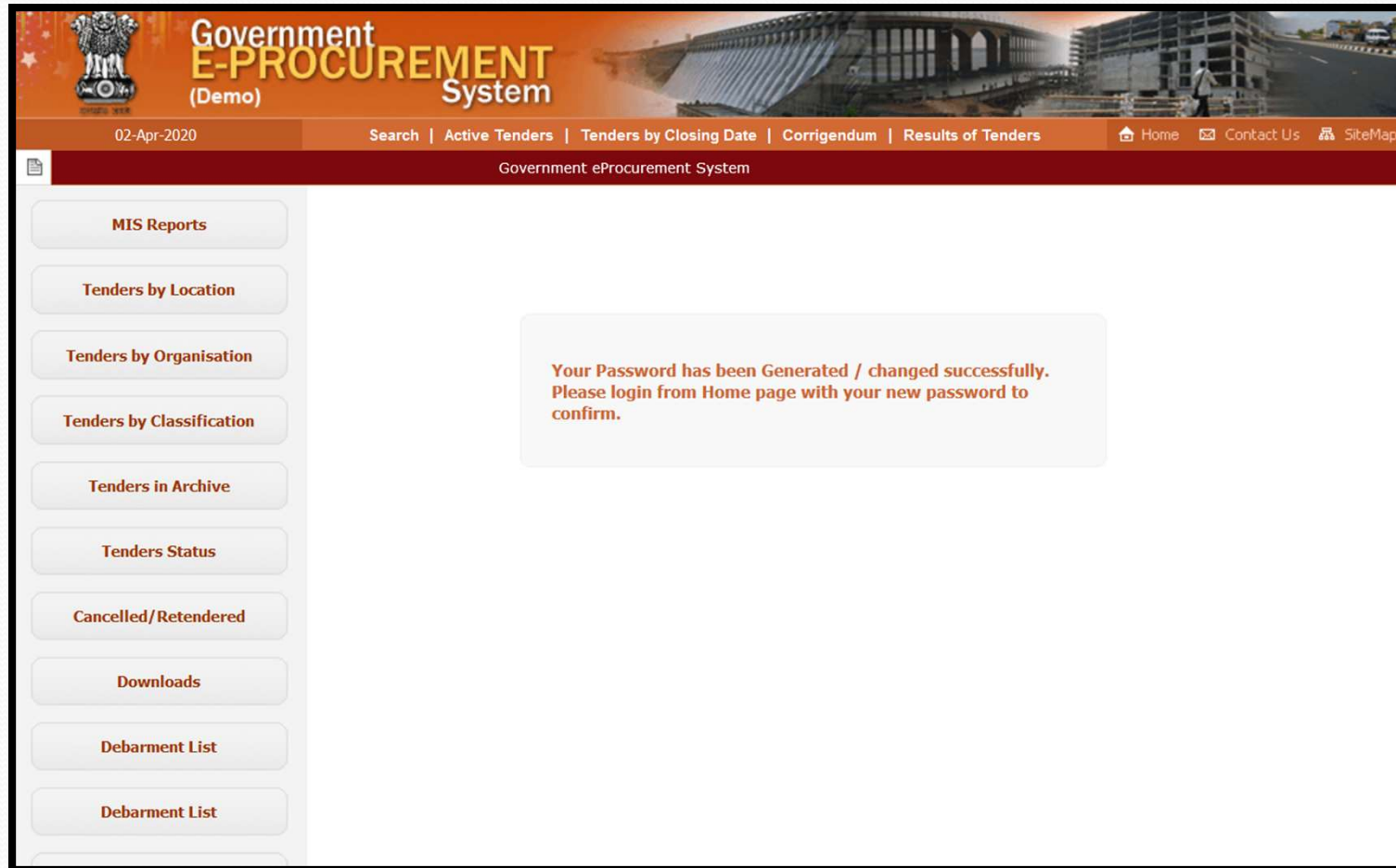
Your password must comply following requisites,

1. Length must be within **8 to 32** characters
2. Any **English lowercase and uppercase (a-z and A-Z)** characters
3. Any numbers between 0-9
4. Any special characters from the bracket [! @ # \$ ^ * _ ~]

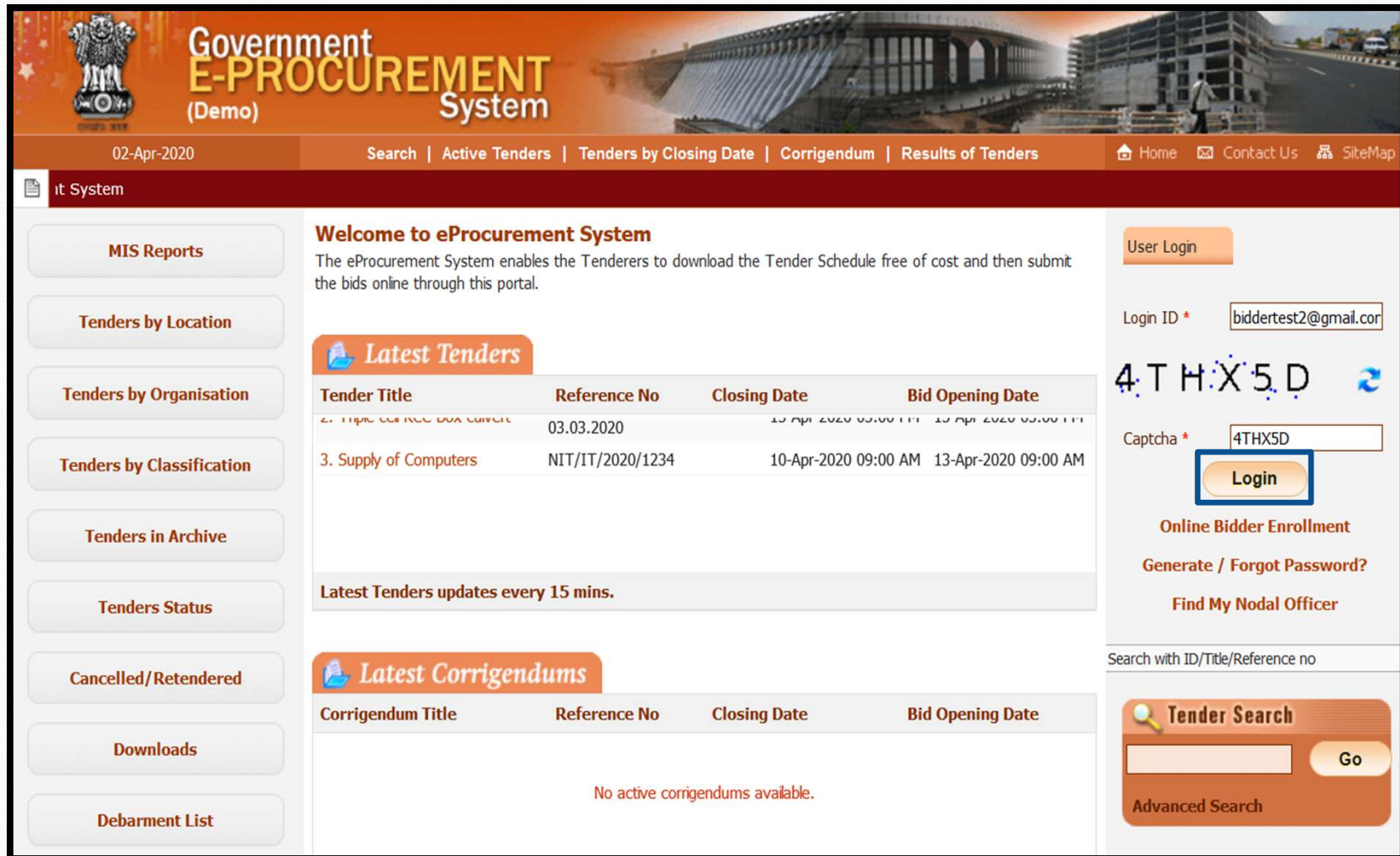
Good eg: Cric\$2009

Bad eg: cric2009

The success message is displayed on the screen.



The bidder enters the Login Id, Captcha and clicks on the **Login** button to login to the portal.



02-Apr-2020 Search | Active Tenders | Tenders by Closing Date | Corrigendum | Results of Tenders Home Contact Us SiteMap

it System

MIS Reports

Tenders by Location

Tenders by Organisation

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Tenders Status

Cancelled/Retendered

Downloads

Debarment List

Welcome to eProcurement System

The eProcurement System enables the Tenderers to download the Tender Schedule free of cost and then submit the bids online through this portal.

Latest Tenders

Tender Title	Reference No	Closing Date	Bid Opening Date
2. Supply of Computers	03.03.2020	10-Apr-2020 09:00 AM	13-Apr-2020 09:00 AM
3. Supply of Computers	NIT/IT/2020/1234	10-Apr-2020 09:00 AM	13-Apr-2020 09:00 AM

Latest Tenders updates every 15 mins.

Latest Corrigendums

Corrigendum Title	Reference No	Closing Date	Bid Opening Date
No active corrigendums available.			

User Login

Login ID * biddertest2@gmail.com

Captcha * 4THX5D

Login

Online Bidder Enrollment

Generate / Forgot Password?

Find My Nodal Officer

Search with ID/Title/Reference no

Tender Search

Go

Advanced Search

The bidder enters the password, captcha and clicks on the **Proceed** button to proceed further.

The screenshot shows the Government E-Procurement System (Demo) interface. The header includes the Government of India emblem, the system name, and a date of 02-Apr-2020. A navigation bar contains links for Search, Active Tenders, Tenders by Closing Date, Corrigendum, Results of Tenders, Home, Contact Us, and SiteMap. A sidebar on the left lists various menu items: MIS Reports, Tenders by Location, Tenders by Organisation, Tenders by Classification, Tenders in Archive, Tenders Status, Cancelled/Retendered, Downloads, and Debarment List. The main content area is titled 'User Login' and displays a welcome message for 'Sai Private Limited,'. It shows the Login ID as 'biddertest2@gmail.com' and the Password field filled with dots. The Captcha image displays 'E7S4NS' with a refresh icon. The Captcha Text field contains 'E7S4NS'. There are 'Cancel' and 'Proceed' buttons, with 'Proceed' being highlighted. A link for 'Generate / Forgot Password?' is also present.

Government E-PROCUREMENT System (Demo)

02-Apr-2020

Search | Active Tenders | Tenders by Closing Date | Corrigendum | Results of Tenders

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Government eProcurement System

MIS Reports

Tenders by Location

Tenders by Organisation

Tenders by Classification

Tenders in Archive

Tenders Status

Cancelled/Retendered

Downloads

Debarment List

User Login

Welcome Sai Private Limited,,

Login ID biddertest2@gmail.com

Password*


Captcha E7S4NS

Captcha Text* E7S4NS

Cancel Proceed

Generate / Forgot Password?

The Bidder registers the DSC by clicking on the **Signing Certificate** icon to register the signing certificate.

**Government
eProcurement
System**

Welcome : biddertest2@gmail.com
Last login : 02-Apr-2020 02:11 PM

Server Time
02-Apr-2020 14:12:06

[Home](#) [Logout](#)


Government eProcurement System


USER MANAGEMENT

User DSC Enrollment

Login Id : biddertest2@gmail.com
Roles : Tenderer

You have not registered with Digital Signature Certificate yet. Please click on Signing Certificate link below.

 Signing Certificate

 [View Existing Certificates](#)

Active Certificates Information

S.No	Certificate	Certificate Type	Type	Validity	Enroll Date	View
No certificates have been enrolled.						


The Bidder selects the Signing certificate and clicks on the **OK** button to map the signing certificate.

USER MANAGEMENT

DSC Enrollment

Login Id : biddertest2@gmail.com
Roles : Tenderer

Please go through the below points before registering the DSC card / e-Token:



1. User needs to properly install drivers for the DSC smart card or USB Token in the system before clicking the DSC enrollment menu (Signing Certificate).
2. DSC once registered to the login cannot be removed or reassigned.
3. User can access the 'Information about DSC' tab on the Homepage of the application to view the DSC certificate issuing authorities.
4. This screen lists the signing certificate available in the inserted DSC card / e-token, user needs to select the relevant DSC to register.
5. DSC registered user only can perform any action in the application.

Please insert your e-Token to read your Digital Signature Certificate information.

Refresh

Digital Certificate : Signing

DSC Enrollment			
Certificate	Issued By	Type	Expiry Date
Praveen Rawat	SafeSign2020	Signing	23-Jan-2022 04:32 PM

Ok

Back

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NIC
National
Informatics
Centre


The success message is displayed on the screen.

USER MANAGEMENT

DSC Enrollment

Login Id : biddertest2@gmail.com
Roles : Tenderer

Please go through the below points before registering the DSC card / e-Token:




1. User needs to properly install drivers for the DSC smart card or USB Token in the system before clicking the DSC enrollment menu (Signing Certificate).
2. DSC once registered to the login cannot be removed or reassigned.
3. User can access the 'Information about DSC' tab on the Homepage of the application to view the DSC certificate issuing authorities.
4. This screen lists the signing certificate available in the inserted DSC card / e-token, user needs to select the relevant DSC to register.
5. DSC registered user only can perform any action in the application.

Please insert your e-Token to read your Digital Message


Digital Certificate : Signing

Certificate	Issued By	Type	Expiry Date
Praveen Rawat	SafeSign2020	Signing	23-Jan-2022 04:32 PM

Ok

 DSC is enrolled successfully.

OK

 Refresh

Back

The successful enrollment of DSC is displayed on the screen. The Bidder clicks on the **Next** button to proceed further.

USER MANAGEMENT

User DSC Enrollment

Login Id : biddertest2@gmail.com
Roles : Tenderer

DSC is enrolled successfully.


[View Existing Certificates](#)

Active Certificates Information

S.No	Certificate	Certificate Type	Type	Validity	Enroll Date	View
1.	Praveen Rawat	Signing	Class 0	23-Jan-2022 04:32 PM	02-Apr-2020 02:15 PM	

Next >

The Dash Board of the Bidder is loaded where the Bidder can change the Mobile Number, E-Mail Address and clicks on the **Save** button to save the provided details. If the Bidder does not want to change the Mobile Number, E-Mail Address he/she can just click on the **Skip** button to proceed further.

**Government
eProcurement
System**

Welcome : biddertest2@gmail.com
Last login : 02-Apr-2020 02:16 PM

Server Time
02-Apr-2020 14:16:30 | [Home](#) [Logout](#)

Government eProcurement System

DASHBOARD

Welcome Sai Private Limited.,
Roles : Tenderer

In order to enable International SMS alerts facility, the eProcurement Application requires all the users to update their Mobile Number along with the Country Code.

In addition, the users are also required to update their email address

This is a one-time updation only. The benefits for the users include receipt of mobile and email alerts to the events such as;

- User Enrollment / Registration
- Tender related events
- Bid submission events
- Block / Debarred Notification

Mobile Number: *

E-Mail Address: *

By clicking on "Save" button, you would receive an OTP by SMS / e-mail on above number / e-mail within 10 seconds. If you have not received the messages on time, please recheck your details or contact help desk.


Click on "Skip" button to complete the activity later.

[Skip](#) [Save](#)

Once the Bidder clicks on the Save button, the system navigates to the page where OTP is to be entered, received through the changed E-Mail Id. The bidder enters the OTP and clicks on the **Verify** button to verify the entered OTP.

DASHBOARD

Welcome Sai Private Limited.,
Roles : Tenderer

 OTP has been sent to the entered Email ID and Mobile No.

Entered Email ID : biddertest2@gmail.com
Entered Mobile No : 91 - 9[REDACTED]8


OTP*

OTP will Expire in 04:44 minutes!

Verify **Resend OTP**

The bidder enters the 15 digit GSTN Number, Name as registered in GSTN Portal and clicks on the **Save** button to save the provided details.

DASHBOARD

 **Goods and Service Tax Network (GSTN) Registration Information**

Welcome Sai Private Limited.,
Roles : Tenderer

Goods and Service Tax Network (GSTN) Registration Information

Do You have a GSTN Registration Number * ☒ Yes ☐ No

GSTN Number eg: 99 AAAA9999A 9 Z Z

Please enter the 15 digit GSTN Number *

37

▼

AAAA9999A9Z Z

Name as Registered in GSTN Portal *

Praveen Rawat

Clear

Save

GePNIC
Simplified Procurement

NIC एन आई सी
National
Informatics
Centre

The bidder clicks on the **Next** button to proceed further.

DASHBOARD

Goods and Service Tax Network (GSTN) Registration Information

Welcome Sai Private Limited.,
Roles : Tenderer

Goods and Service Tax Network (GSTN) Registration Information

Do You have a GSTN Registration Number * ☒ Yes ☐ No

GSTN Number eg: 99 AAAAA9999A 9 Z Z

Please enter the 15 digit GSTN Number * .. Z

Name as Registered in GSTN Portal *

Clear Save

Bidder GSTN Registration Details

S.No	GSTN Number	GSTN Name	Created Date	Select
1	37AAAAA9999A9ZZ	Praveen Rawat	02-Apr-2020 02:21 PM	<input type="checkbox"/>

Delete **Next**

The system navigates to the page where Startup India Registration Details page, where the bidder can click on the Registered radio button to provide the registration details or click on the Not Registered radio button and click on the **Next** button to proceed further.

DASHBOARD

Startup India Registration Details

Startup India Registration

EProcurement portal is now integrated with Startup India. Bidders are now required to declare themselves, if they are registered/not registered as Startup India. If you are registered as Startup India, provide your Registration number and Mobile number as registered with the Startup India.

Consent from User
EProcurement portal will not share or disclose the Startup India Registration details with third party and will be used solely to establish and authenticate the details received from Startup India portal.

Startup * ☐ Registered ☒ Not Registered

Next

Once the process is over the left Menu for the Bidder is loaded. Click on the **My Accounts** left menu to view the account details.

The screenshot displays the Government eProcurement System interface. The top header includes the system logo, a map of India, and user information: 'Welcome : biddertest2@gmail.com' and 'Last login : 02-Apr-2020 02:11 PM'. The server time is shown as '02-Apr-2020 14:22:39|', with links for 'Home' and 'Logout'. The main navigation menu on the left is organized into three sections: 'User Management' (containing 'My Accounts' and 'My Documents'), 'Auction Management' (containing 'My Auctions', 'Live Auctions', and 'View Auction History'), and 'Bid Management' (containing 'Search Active Tenders', 'My Tenders', 'Clarification', 'My Active Bids', 'Bid Opening (Live)', 'Bidder Turnover Details', 'Awarded Bid Document', 'Techno Commercial Query', 'Confirmatory Documents', 'Techno Commercial Query History', and 'Short fall Documents'). The main content area, titled 'DASHBOARD', features a welcome message 'Welcome Sai Private Limited.,', the role 'Roles : Tenderer', and an 'Announcements' section with a megaphone icon.

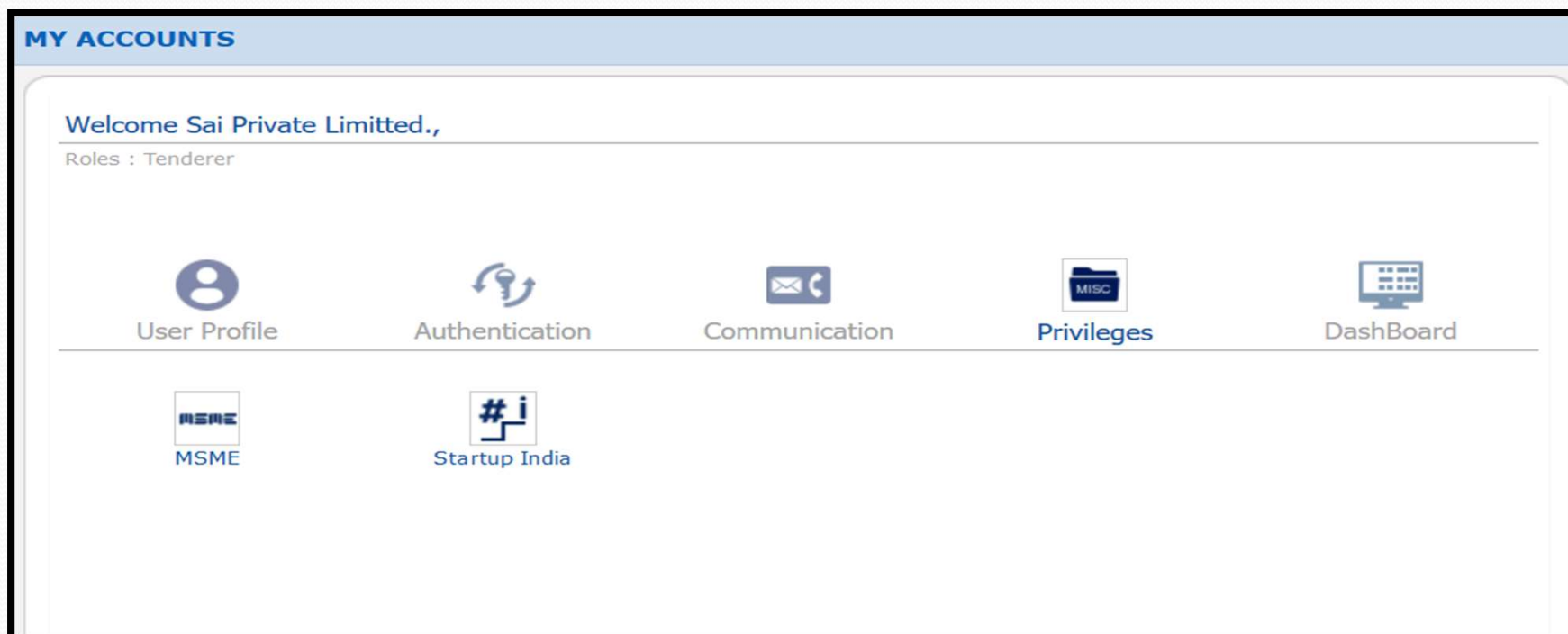
1.By Clicking the **User Profile** icon, The bidder can view the profile, Edit the profile, set the profile password which would be asked for editing the profile, the bidder can change the Email id & Mobile number and change the profile image.

2.By Clicking the **Authentication** icon, the bidder can change the password and activate & inactivate the active DSC.

3.On Clicking the **Communication** Ion, the bidder can select the product category for which the SMS and mail can be triggered if tenders are published under the selected product category and also the SMS and mail Notification can be selected by the bidder.

3.On selecting the **Privileges** icon, a provision for registering MSME and Startup India are provided.

4. On Clicking the **DashBoard**, the bidder can view the User Dash board.



Thank you



AN ISO 9001 & 14001 COMPANY

TENDER DOCUMENT

TENDER No: WRO/CON/EMRS/867/335

FOR

Construction of Eklavya Model Residential School (EMRS) in Single- Phase comprise of school building, Boys hostel (240 students), Girls-hostel (240 students), Kitchen & Dinning block, 2 blocks of Type-III quarters including guest house (8+8 Nos), Type-II quarters (10 Nos), Principal Residence, Warden Residence (Boys & Girls), electrical provision, water supply and Sanitary installations, External sewerage system and Drainage facility, Campus development such as road, Compound wall (Civil, Electrical, Furniture & Kitchen Equipment) etc at Khedbrahma in Sabar Kantha District of Gujarat State.”

VOLUME- II

EXECUTING AGENCY

Engineering Projects (India) Limited

Western Regional Office: Mumbai

ADDITIONAL CONDITIONS OF CONTRACT

The following Additional Conditions of Contract shall be read in conjunction with General Conditions of Contract of EPI. If there are any provisions in these Additional Conditions of Contract, which are at variance with the provisions of General Conditions of Contract, the provisions in these Additional Conditions of Contract shall take precedence.

INTRODUCTION

Construction “Eklavya Model Residential schools “(EMRS) at various locations as mentioned in NIT. The following clauses of Additional Conditions of Contract (ACC) shall be applicable for this contract. These Additional Conditions of Contract shall be read in conjunction with General Conditions of Contract, Instructions to Tenderers (ITT), Notice Inviting Tender (NIT), Bill of Quantities (BOQ), Tender conditions and Technical specifications & Other Tender Documents.

APPROACHES TO WORKSITE

The land is made available to the bidder(s)/contractor(s) free from all encumbrances as National Education Society for Tribal Students (NESTS)” provide to EPI. The contractor shall make his own arrangement for approach to work site including borrow/ disposal area and for movement of men, materials, machineries, other equipment etc. required for carrying out the work under this contract.

The access roads/ path to the work site may not be available at all places and at all time. The contractor shall plan his work as per the availability of access roads/ path at site. All drainage of works area and all-weather truck able haulage roads as required by the contractor shall be constructed and maintained during the construction period by the contractor at his own cost, including portions of the road already existing.

ORDER OF PRECEDENCE:

Clause 42.1 of GCC stands amended as under: In case of difference, contradiction, discrepancy, dispute with regard to Conditions of Contract, Specifications, Drawings, Bill of Quantities and Rates quoted by the Contractor and other documents forming part of the contract, the following shall prevail in order of precedence

- 1) Contract Agreement which includes NIT, Special Instructions to Tenderer, and Memorandum.
- 2) Letter of Intent / detailed letter of Work Order
- 3) Bill of Quantity / Schedule of Quantities
- 4) Additional Conditions of Contract (ACC)
- 5) General Conditions of Contract (EPI GCC).
- 6) Tender Drawings
- 7) Technical Condition of Contract (NESTS),
- 8) Technical Specification (NESTS)
- 9) Methodology for Civil Works
- 10) CPWD technical specifications & DSR latest edition
- 11) National Building Code (Latest Edition)
- 12) BIS specifications
- 13) Environmental, Social, Health and Safety (ESHS) Manuals & COVID-19 Manuals.

A) Provisions under General Conditions of Contract of EPI are modified/ amended as under:-

S. No.	GCC Clause No.	Modified/Amended provisions as per Additional Conditions of Contract
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1.0	1.0	<p>General</p> <p>In addition to Clause no 1.0 of GCC:</p> <p>The Additional Conditions shall be read in conjunction with General Conditions of Contract. Where the provisions of these Additional Conditions are at variance with the provision of the General Conditions of Contract, the provisions of these Additional Conditions shall take precedence.</p>
2.0	8.0	MOBILIZATION ADVANCE:
	8.2	<p>EPI GCC no 8.2 is modified under: Interest bearing advance for Mobilization, limited to 10% of the contract value</p> <p>a. The rate of interest Base rate of State Bank of India prevailing +2% (plus two percentage).</p> <p>b. Mobilization advance 10% of contract value with interest rate as per memorandum. The mobilization advance will be recovered @25% of the value of work done from each running bill till complete mobilization advance recovered.</p>
3.0	9.0	SECURITY DEPOSIT CUM PERFORMANCE BANK GUARANTEE
		<p>"The successful bidder shall have to submit SDPBG equivalent to 5.0% (Five Point Zero Percentage) of the contract value of the accepted tender within 21 (twenty-one) days from the date of issue of Letter of intent (LOI). If required, any extension of time beyond 21 days and upto 60 days may be granted by the Competent Authority. However, a penal rate of interest @12% per annum shall be charged for the delay in submission of SDPG after 21(twenty-one) days i.e., from 22nd day to the date of submission of SDPG but within 60 days after the date of issue of LOI. Further, if 60th day happens to be declared holiday in the concerned office of EPI, submission of SDPBG can be accepted on the next working day. The SDPBG shall be submitted in the form of Bank Guarantee (format enclosed), from any Nationalized bank / Scheduled Bank / Commercial Bank or in the form of insurance Security Bonds or Account Payee Demand Draft or Fixed Deposit Receipt or online Payment in an acceptable form. This SDPBG shall be initially remain valid upto 90 (ninety) days after the end of Defect Liability Period (DLP). In case, the time for completion of work gets extended the contractor shall get the validity of SDPBG extended to cover such extended time for completion of work plus DLP plus 90 days. In case, even after 60 days from the date of issue of LOI, the Bidder fails to submit the SDPBG of the requisite amount, LOI will stand withdrawn and EMD of the Bidder shall be forfeited."</p> <p>ADDITIONAL SECURITY DEPOSIT CUM PERFORMANCE BANK GUARANTEE</p> <p>NIT Condition: Additional Security for Abnormally Low Bid [S.No. (xiii)]</p> <p>1). During the process of bidding, if the lowest bid is less than that of 10% below to the estimated cost put to tender, then the authority inviting tenders/bids shall obtain from the concerned bidder/contractor, the detailed planning regarding execution of the work at such low rates. It shall be ensured that, the work can be executed by the lowest bidder based on the detailed planning of execution submitted by the contractor/bidder.</p> <p>(2). If the lowest bid is below up to 10% of the estimated cost put to tender, then the bidder or contractor shall submit Bank Guarantee or the Demand Draft of 1% of the cost put to tender as a Performance Security (e.g. from the bidder who has quoted 1% to 10% below to the estimated cost-1% of Bid cost).</p> <p>(3). If the cost bid/tender is less than 10% below of the estimated cost put to tender, then (A) Bank Guarantee/DD corresponding to the percentage over and above 10% and as per above (2) may be submitted (e.g. for Bid Offer of 14%, upto 10% below -1% and 14%-10%=4%, thus total=1%+4%=5%), If this amount is less than Rs. 1000/-, then Bank Guarantee /DD of minimum Rs. 1000/- may be submitted. B) If bid/tender quoted is less than 15% below, then DD amount for the balance percentage over & above 15% be worked out at double rate and the same may be submitted (e.g. if the offer is 19% below, then (19-15=4%\times2+1=9%).</p> <p>(4) This Additional Security Deposit cum Performance Bank Guarantee shall be submitted along with 5% SDBG Cum PBG, within the stipulated time as mentioned, after placing of LOI</p>

4.0	10.0	RETENTION MONEY
		<p>As per Memorandum in NIT (Vol I)</p> <p>The following clauses shall be read in conjunction with Clause no. 10.0 of GCC. 3.11.1 The Retention Money shall be deducted from each running bill of the Contractor at 5% (Five percent only) of the gross value of the Running Account bill. The Retention Money shall be refunded to the Contractor after successful Completion of the defect liability period & taking over by Client whichever is later.</p>
5.0	13.0	TAXES AND DUTIES
		<ul style="list-style-type: none"> a) The Bidder must be registered with GST in respective state and should have valid GST number. In case the bidder does not have valid GST registration number, the same shall be obtained by the successful bidder within one month from the date of LOI or before release of 1st R/A bill whichever is earlier. b) The Bidder must submit as a compliance of GST Act, the invoices in GST compliant format failing which the GST amount including interest and penalty if any shall be recovered/ adjusted by EPI without any prior notice from the next invoices or available dues with EPI. c) The Bidders are requested to update/ upload the GST/Taxes data periodically in proper format on GST portal so as to avail ITC credit by EPI failing which it shall be recovered / adjusted by EPI without any prior notice from the next invoices or available dues with EPI. d) Rates to be quoted in this tender inclusive of all taxes & duties including Labor cess, GST and all hidden costs like Labor camps with all Health Rules & Facilities, Cost involved in setting up the Site Office, Testing & Lab Charges, Transportation of Labor& Materials, Officials, all types of approvals from local authorities like Electrical, Water & Sewage disposals etc. GST to be disclosed separately in Price Bid /BOQ. e) Bidder while quoting the rates in the tender must also consider the ITC credit applicable for the works, if any. f) Royalty, Labour cess challans to be submitted along with running bills. Otherwise recovery will be done from respected RA Bills at applicable rates. ESI & EPF Shall be reimbursed against submission of Proof of Deposit Challan by Construction agency. g) Labour cess shall be deposited by contractor for the value of work done or as applicable from time to time as per the directions of Government authorities & Challan should be submitted along with each RA- Bills. If contractor fails to deposit labour cess to authority and does not submit the challan to EPI. then EPI shall deduct the same from each RA-Bill of contractor & deposit the same to the authority. All the documentations and labour records shall be maintained properly by the contractor. It shall be produced to EPI / NETS / Govt. Authorities as and when is required. h) Royalty Charges: The rate quoted by bidder inclusive of all Royalty if required. The Seigneur age charges will be recovered as per rules if applicable from the work bills of the contract or based on the theoretical requirement of material as per GO Ms. No 198 of Industries and commerce (MI) Dept. dated 13-08-2009 at the rates decided by Govt. from time to time i) The contractor shall keep necessary books of accounts and other documents as

		<p>per Govt. of India Guidelines for the purpose of this condition as may be necessary and shall allow inspection of the same by a duly authorized representative of EPI and shall also furnish such other information/document as EPI may require from time to time. In addition to the price bid format, an Annexure to indicate the “breakup of cost and levies such as GST and other taxes” considered in the quoted prices shall be annexed. This Annexure shall have breakup of all taxes/ duties relevant to the contract.</p> <p>In case of any reduction in rate of GST or other taxes in future or the project getting exemption status prior to the last date of bid submission or afterwards, the contractor shall pass on the benefit to EPI immediately, failing which EPI shall have the right to recover the differential amount from the amounts due to the sub-Bidder. Further, in case of any increase in rate of GST or other taxes in future or the project losing exemption status prior to last date of bid submission or afterwards, the said increase of taxes shall be paid / reimbursed to the sub- contractor, subject to the condition that the NESTS (National Education Society for Tribal Students) reimburses the said increased taxes to EPI”.</p>
6.0	16.0	Variation:
		<p>Clause 16.0 of GCC of EPI stands good.</p> <p>No price variation/Escalation is allowed in this contract till completion of work.</p>
7.0	17.0	INSURANCE OF WORKS ETC.
		<p>In addition to clause No.17: -</p> <p>Contractor is required to take Insurance coverage as stipulated in General Conditions of Contract (GCC) clause no. 17 (Insurance of works), clause no. 18 (Insurance under WCA) and clause no. 19 (Third Party Insurance), CAR policy and it shall be in the joint name of NESTS, EPI and the Contractor for the contract period including extended if any plus 12 months after Successful completion / handling over of work. The Insurance coverage shall be on the total value of work awarded to contractor by EPI. In case any delay in the work insurance should be extended time to time at his own cost.</p>
8.0	18.0	INSURANCE UNDER WORKMEN’S COMPENSATION ACT
		<p>The clause '18.0' (Insurance Under WCA) at page 26 of General Conditions of Contract (GCC) shall be replaced and read as under:</p> <p>Contractor is required to take insurance cover under the workmen compensation Act, 1923 amended from time to time from an approved insurance company and pay premium charges thereof. Wherever required by EPI, the contractor shall produce the policy or the policies of Insurance and the receipt of payment of current premium. In the event of an accident, any workmen employed by the contractor for execution of the works, suffers an injury or death and is to be compensated under the provisions sub-section (1) of section 12, of the workmen’s Compensation Act, 1923 by the contractor and if the contractor fails to compensate, the EPI, shall be entitled to recover from the contractor the amount of the compensation so paid, without prejudice to the rights of the EPI under section 12, sub-section (2), of the said Act.</p> <p>EPI / NESTS shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any sum due to the Contractor whether under this contract or otherwise. EPI / NESTS shall not be bound to contest any claim made against it under sub-section (1) Section 12, of the said Act, except security for all cost for which EPI / NESTS might become liable in consequence of contesting such claim.</p>
9.0	21.0	LABOUR LAWS TO BE COMPLIED WITH BY THE CONTRACTOR:
		<p>GCC Clause 21 is replaced as under</p> <p>The Contractor shall obtain a valid license under the Contract Labour (Regulation & Abolition) Act 1970 and the Contract Labour Act (R&A) Central Rules 1971 and amended</p>

		<p>from time to time, and continue to have a valid license until the completion of the work including defect liability period. The Contractor shall also abide by the provision of the Child Labour (Prohibition and Regulation) Act. 1986 and as amended from time to time. Any failure to fulfill this requirement shall attract the penal provisions of this contract arising out of the resultant non-execution of the work.</p> <p>The Contractor shall comply with the provisions of the Payment of Wages Act, 1936, Minimum Wages Act, 1948, Code of wage Act 2019, Employer's Liability Act, 1938, Employees Compensation Act, 1923, Maternity Benefit Act, 1961 and Mines Act, 1952, Industrial Disputes Act, 1947 or any modifications thereof or any other law relating thereto and rules made there under from, time to time.</p>
10.0		<p>COMPLIANCE WITH LABOUR REGULATIONS:</p> <p>During continuance of the contract, the Contractor and his sub-contractors shall abide at all times by all existing labour enactments and rules made there under, regulations, notifications and by e laws of the State or Central Government or local authority and any other labour law (including rules), regulations, bye-laws that may be passed or notification that may be issued under any labour law in future either by the State or the Central Government or the local authority. Salient features of some of the major labour laws that are applicable to construction industry are given below. The Contractor shall keep the Employer indemnified in case any action is taken against the Employer by the competent authority on account of contravention of any of the provisions of any Act or rules made there under, regulations or notifications including amendments. If the Employer is caused to pay or reimburse, such amounts as may be necessary to cause or observe, or for non-observance of the provisions stipulated in the notifications / bye laws / Acts / Rules / regulations including amendments, if any, on the part of the Contractor, the Engineer / Employer shall have the right to deduct any money due to the Contractor including his amount of performance security. The Employer / Engineer shall also have right to recover from the Contractor any sum required or estimated to be required for making good the loss or damage suffered by the Employer. The employees of the Contractor and the Sub-Contractor in no case shall be treated as the employees of the Employer at any point of time.</p>
11.0		<p>IN BUILDING AND OTHER CONSTRUCTION WORK.</p> <p>SALIENT FEATURES OF SOME MAJOR LABOUR LAWS APPLICABLE TO ESTABLISHMENTS</p> <p>ENGAGED IN BUILDING AND OTHER CONSTRUCTION WORK.</p> <ol style="list-style-type: none"> a) Workmen Compensation Act 1923: - The Act provides for compensation in case of injury by accident arising out of and during the course of employment. b) Payment of Gratuity Act 1972: - Gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if an employee has completed 5 years' service or more or on death the rate of 15 days wages for every completed year of service. The Act is applicable to all establishments employing 10 or more employees. c) Employees P.F. and Miscellaneous Provision Act 1952: The Act Provides for monthly contributions by the employer plus workers @ 10% or 8.33%. The benefits payable under the Act are: <ol style="list-style-type: none"> (i) Pension or family pension on retirement or death, as the case may be. (ii) Deposit linked insurance on the death in harness of the worker. (iii) Payment of P.F. accumulation on retirement/death etc. (iv) Contractors are assigned to submit copy of "ECR" Electronic challan fees of the PF Deposited by 20th of next month. d) Maternity Benefit Act 1951:- The Act provides for leave and some other benefits to women employees in case of confinement or miscarriage etc. e) Contract Labour (Regulation & Abolition) Act 1970: - The Act provides for certain

welfare measures to be provided by the Contractor to contract labour and in case the Contractor fails to provide, the same are required to be provided, by the Principal Employer by Law. The Principal Employer is required to take Certificate of Registration and the Contractor is required to take license from the designated Officer. The Act is applicable to the establishments or Contractor of Principal Employer if they employ 20 or more contract labour.

- f) Minimum Wages Act 1948: - The Employer is supposed to pay not less than the Minimum Wages fixed by appropriate Government as per provisions of the Act if the employment is a scheduled employment. Construction of Buildings, Roads, and Runways are scheduled employments.
- g) Payment of Wages Act 1936: - It lays down as to by what date the wages are to be paid, when it will be paid and what deductions can be made from the wages of the workers.
- h) Equal Remuneration Act 1979: - The Act provides for payment of equal wages for work of equal nature to Male and Female workers and for not making discrimination against Female employees in the matters of transfers, training and promotions etc.
- i) Payment of Bonus Act 1965: - The Act is applicable to all establishments employing 20 or more employees. The Act provides for payments of annual bonus subject to a minimum of 8.33% of wages and maximum of 20% of wages to employees drawing Rs.3500/-per month or less. The bonus to be paid to employees getting Rs.2500/- per month or above up to Rs.3500/- per month shall be worked out by taking wages as Rs.2500/-per month only. The Act does not apply to certain establishments. The newly set-up establishments are exempted for five years in certain circumstances. Some of the State Governments have reduced the employment size from 20 to 10 for the purpose of applicability of this Act.
- j) Industrial Disputes Act 1947: - The Act lays down the machinery and procedure for resolution of Industrial disputes, in what situations a strike or lock-out becomes illegal and what are the requirements for laying off or retrenching the employees or closing down the establishment.
- k) Industrial Employment (Standing Orders) Act 1946: - It is applicable to all establishments employing 100 or more workmen (employment size reduced by some of the States and Central Government to 50). The Act provides for laying down rules governing the conditions of employment by the Employer on matters provided in the Act and get the same certified by the designated Authority.
- l) Trade Unions Act 1926: - The Act lays down the procedure for registration of trade unions of workmen and employers. The Trade Unions registered under the Act have been given certain immunities from civil and criminal liabilities.
- m) Child Labour (Prohibition & Regulation) Act 1986: - The Act prohibits employment of children below 14 years of age in certain occupations and processes and provides for regulation of employment of children in all other occupations and processes. Employment of Child Labour is prohibited in Building and Construction Industry.
- n) Inter-State Migrant workmen's (Regulation of Employment & Conditions of Service) Act 1979: - The Act is applicable to an establishment which employs 5 or more inter-state migrant workmen through an intermediary (who has recruited workmen in one state for employment in the establishment situated in another state). The Inter-State migrant workmen, in an establishment to which this Act becomes applicable, are required to be provided certain facilities such as housing, medical aid, travelling expenses from home up to the establishment and back, etc
- o) The Building and Other Construction workers (Regulation of Employment and Conditions of Service) Act 1996 and the Cess Act of 1996: - All the establishments who carry on any building or other construction work and employs 10 or more workers are covered under this Act. All such establishments are required to pay cess at the rate not exceeding 2% of the cost of construction as may be modified by the Government. The Employer of the establishment is required to provide safety measures at the Building or construction work and other welfare measures, such as Canteens, First-Aid facilities, Ambulance, Housing accommodations for

		workers near the work place etc. The Employer to whom the Act applies has to obtain a registration certificate from the Registering Officer appointed by the Government. p) Factories Act 1948: - The Act lays down the procedure for approval at plans before setting up a factory, health and safety provisions, welfare provisions, working hours, annual earned leave and rendering information regarding accidents or dangerous occurrences to designated authorities. It is applicable to premises employing 10 persons or more with aid of power or 20 or more persons without the aid of power engaged in manufacturing process.																																				
12.0	28.1	LAND FOR LABOUR HUTS/ SITE OFFICE AND STORAGE ACCOMMODATION																																				
		In addition to GCC Clause no 28.1, It is bidder responsibility to acquire the land for on its own cost of following 1. Labour Hutment 2. Cement Godown 3. Storage unit 4. Site Establishment including conference room for review meeting.																																				
13.0	28.3	FACILITIES - GCC clause no. 28.3 is deleted. 1. The Contractor shall make all arrangements for ground breaking ceremony/inaugural functions etc. for the project as required and the cost towards it is deemed to be included in his rates/offer. 2. For Proper Coordination the successful bidder has to set up furnished site office including conference room for regular review meeting with Client/Consultant/Local Authorities/NEST etc. with screen & Projector for presentation, internet, photocopier machine, one computer & printer along with one operator, regular electricity & drinking water supply and one vehicle 24X7 as per the requirement of the project.																																				
14.0	35.0	Secured Advance against Non-Perishable items: - Deleted.																																				
15.0	37.0	PAYMENTS																																				
		<table><tr><td colspan="4">GCC Clause No: 37 Payment is modified as under</td></tr><tr><td>SI No.</td><td>Milestone</td><td>%Payment for Construction on (Project Cost)</td><td>Cumulative % payment for Construction (Project Cost)</td></tr><tr><td></td><td>Completion of Work</td><td></td><td></td></tr><tr><td>1</td><td>20% Completion of Work</td><td>17%</td><td>17%</td></tr><tr><td>2</td><td>40% Completion of Work</td><td>17%</td><td>34%</td></tr><tr><td>3</td><td>60% Completion of Work</td><td>22%</td><td>56%</td></tr><tr><td>4</td><td>80% Completion of Work</td><td>22%</td><td>78%</td></tr><tr><td>5</td><td>100% Completion including all clearances and approvals including occupancy certificates</td><td>20%</td><td>98%</td></tr><tr><td>6</td><td>Successful completion of Defect Liability period of 12 months (DLP)</td><td>2%</td><td>100%</td></tr></table> The Contractor shall periodically submit Running Account (RA) bills in the prescribed Performa for the work done provided it is not less than 1.50 crs. All RA -Bills payments will be released subject to receipt of payment from client/NESTS. All running bills shall be accompanied with the photographs in sufficient nos. and angles illustrating the progress of work and for which claims raised in RA bill is evident. The photographs shall be duly	GCC Clause No: 37 Payment is modified as under				SI No.	Milestone	%Payment for Construction on (Project Cost)	Cumulative % payment for Construction (Project Cost)		Completion of Work			1	20% Completion of Work	17%	17%	2	40% Completion of Work	17%	34%	3	60% Completion of Work	22%	56%	4	80% Completion of Work	22%	78%	5	100% Completion including all clearances and approvals including occupancy certificates	20%	98%	6	Successful completion of Defect Liability period of 12 months (DLP)	2%	100%
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5	100% Completion including all clearances and approvals including occupancy certificates	20%	98%																																			
6	Successful completion of Defect Liability period of 12 months (DLP)	2%	100%																																			

		<p>signed by the contractor. The RA bill shall also accompany the progress chart showing status of work against agreed schedule, delays and way to mitigate such delays. The payment against each RA-Bill shall only be released on receipt of corresponding bill payment from NESTS to EPI.</p> <p>a) The bills not submitted on the prescribed format may not be considered for payment. TDS shall be deducted on prescribed norms of the Govt. enforce time to time from the bills. In this regard, NESTS/EPIL Guidelines amended up to date for submission of RA Bills shall be followed.</p> <p>b) The maximum reimbursement of RA Bills/Final Bills on Completion of the project shall not be more than 98% of Gross work done executed. The remaining 2% payment shall be released only after the successful completion of defect liability period.</p> <p>c) The Contractor shall have no claim on EPI in case the payments are delayed by the client (NESTS) due to any reason whatsoever.</p>
16.0	44.0	WATER AND ELECTRICITY
		The Contractor shall make his own arrangement for Water & Electrical power for construction and other purposes at his own cost and if EPIL is providing necessary charges shall be deducted towards electricity and water. The Contractor shall also make standby arrangement for water & electricity to ensure un-interrupted supply.
17.0	47.0	ANTI-TERMITE TREATMENT & WATER PROOF TREATMENT
		<p>In addition to clause no. 47.0 of GCC:</p> <p>The contractor shall have to submit the 10 years Guarantee bond against leakages/dampness on Rs.100/- stamp paper to the EPIL/Client NESTS as per proforma specified during execution. 10% of the cost of anti-termite treatment and water proofing work shall be retained from Final bill as additional security deposit & would be released after ten years from the date of completion of the entire work under the agreement. If the performance of the work done is found unsatisfactory and any defects noticed during the guarantee period, same shall be rectified by the contractor within Ten days of receipt of intimation of defects in the work, if the defects pointed out are not attended to within the specified period, the same will be got done from another contractor at the risk & cost of the contractor & cost shall be recovered from the said retained amount.</p>
18.0	53.2	WORKS TO BE OPEN TO INSPECTION
		<p>The work executed by the CONTRACTOR shall be subject to audit and quality control checks from Quality Control Division & Technical audit of EPI/NESTS third party inspecting Agency of the Client and Chief Technical Examiner of Central Vigilance Commission, Govt. of India. In the eventuality of any defect/substandard works as brought out in the report or noticed otherwise at any time during execution, maintenance period etc., the same shall be made good by the CONTRACTOR without any extra cost. In case the CONTRACTOR fails to rectify the defect/sub- standard work within the time period stipulated by EPI/NESTS, necessary action as deemed fit shall be taken by EPI/NESTS and decision of EPI/NESTS, shall be final and binding on the contractor.</p> <p>Any recovery, penalty imposed by CTE due to non-performance, non-compliance of agreed condition or otherwise whatsoever the same shall be recovered from RA Bill of contractor.</p> <p>The contractor shall make necessary safety arrangement at site including as mentioned in GCC and indemnify EPI against any consequence of accident at site.</p>
19	72.0	COMPENSATION FOR DELAY AND REMEDIES
		If the contractor fails to maintain the required progress as per ACC Clause B. 10) "COMPLETION SCHEDULE FOR EACH SITE LOCATION" or to complete the work and

		clear the site on or before the contract or justified extended date of completion as well as any extension granted under relevant clause of the agreement, shall, without prejudice to any other right or remedy available under the law to the Government on account of such breach, pay as compensation the amount calculated at @ 1% (one percent) per month of delay to be computed on per day basis based on quantum of damage suffered due to sated delay on the part of contractor. Provided always that the total amount of compensation for delay to be paid under this condition shall not exceed 10% (ten percent) of the accepted Tendered Value of work”.
20.0	74	DEFECT LIABILITY PERIOD
		Clause no. 74.0 of GCC shall be read as for Defect Liability period of 12 months from the date of completion & handing over of the works to Client NESTS. Other condition of clause 74.0 of GCC will be same.
21.0	76.0	<p>GCC sub clause no. 76.1, 76.2 and 76.3 of Arbitration clause no. 76.0 are amended as given below.</p> <p>76.1 Before resorting to arbitration as per the clause given below, the parties if they so agree may explore the possibility of conciliation as per the provisions of Part III of the Arbitration and Conciliation Act, 1996 as amended by Arbitration and Conciliation (Amendment) Act, 2015. When such conciliation has failed, the parties shall adopt the following procedure for arbitration:</p> <p>i) Except where otherwise provided for in the contract, any disputes and differences relating to the meaning of the Specifications, Design, Drawing and Instructions herein before mentioned and as to the quality of workmanship or materials used in the work or as to any other questions, claim, right, matter or things whatsoever in any way arising out of or relating to the Contract, Designs, Drawings, Specifications, Estimates, Instructions, or these conditions or otherwise concerning the works of the execution or failure to execute the same whether arising during the progress of the work or after the completion or abandonment there of shall be referred to the Sole Arbitrator appointed mutually by both the parties as per the provision of Arbitration & Conciliation Act (as amended in 2015 & 2019).</p> <p>The Arbitrator shall be appointed within 30 days of the receipt of letter of invocation of arbitration duly satisfying the requirements of this clause.</p> <p>“In the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs) / Port Trusts inter se and also between CPSEs and Government Department/Organizations (excluding disputes relating to Railways, income Tax, Customs & Excise Departments), such dispute or difference shall be taken up by either party for its resolution through AMRCD as mentioned in DPE OM No. 05/0003/2019-FTS-10937 dated 14th December, 2022 and the decision of AMRCD on the said dispute will be binding on both the parties.”</p> <p>76.2 (ii) Subject to any amendment that may be carried out by the Government of India from to time, the procedure to be followed in the arbitration shall be as is contained in D.O. No. F. No. 4(1)/2013-DPE(GM)/FTS-1835 dated 22nd May 2018 of Department of Public Enterprises, Ministry of Heavy Industries and Public Enterprises, Government of India or any modification issued in this regard.</p>

	76.3 JURISDICTION:
	The courts in Mumbai alone will have jurisdiction to deal with matters arising from the contract.

B) ADDITIONAL CLAUSES OTHER THAN GCC

- 1) The Client/NESTS reserves the right to inspect the work through its Engineers/Officers of any other agency authorized by the Client/NESTS from time to time. The Client/NESTS shall communicate such observations, if any, for compliance by the Contractor.
- 2) The Client/NESTS reserves the right to get the work including measurement etc. checked with reference to the bills and accounts of contractor audited by its won officers or any other agency appointed by the Client/NESTS for this purpose. Results/findings of Client/NESTS on such checking shall be final and binding upon the contractor.
- 3) Finalization of Tenders - The Competent authority of Client/NESTS to accept the tender of contractor shall evaluate and shall accept the lowest tendered cost. After the approval for the same is conveyed by NESTS. In case the lowest tendered cost is higher than estimated cost, the NESTS to accept the tender with justification. The tender can be accepted only after the receipt of sanction by NESTS/Client.
- 4) The contractor shall be fully responsible for quality technical/structural soundness and effective & efficient construction management of the work. It shall ensure that all drawings issued by EPIL/Client are thoroughly examined as per the prevailing site conditions before actual execution and any deficiency /defect and/ or suggestions for improvement to suit the local conditions may be brought to the notice of EPIL/Client in writing and his approval shall be obtained before execution. No deviation from approved drawings/designs, specifications etc. shall be carried out without written approval of the EPIL. Any deviation from this shall make the contractor fully responsible to bear the extra cost involved, if any.
- 5) The CONTRACTOR shall be fully responsible to complete the "Works" in workmen like manner to the satisfaction of the Client and EPI by maintaining high standard of quality and precision as per 'Tender Documents,' Agreements, Terms & Conditions, Specifications, Drawings etc. within contractual completion period and within their quoted rates/ amount. The rates quoted/finalized shall remain firm throughout till completion of works including the extend period for which Extension shall be granted by EPI without Levy of L.D & in no case rate shall be revised.
- 6) The CONTRACTOR will not deal directly with Client and all the correspondence in matters regarding bills, claims, interpretation of the specifications, conditions and all matters related to the contract with Client, Client's Consultants, all other agencies including Government and Statutory bodies etc. shall be done through EPI only. CONTRACTOR shall prepare and submit expeditiously all bills, claims, details, clarifications, documents, information, etc. as required by EPI /Client for proper execution and successful completion of the "Works"

7) STATUTORY REQUIRMENTS –

- a. It is the responsibility of the contractor for getting the all approval from the local statutory authorities such as town planning / municipal authorities / electricity board / fire / forest department etc. and other department for the total / entire works executed at site / NESTS premises as per the approved plans and designs etc.

- b. The contractor is responsible for Liaison & obtaining the connection for water supply, sewer connection, electric connection and other connections if any from local authorities/state Electricity board. However, the statutory payments payable to Govt. department shall be paid by EPIL / NESTS directly to the concerned authorities. If any statutory charges/fee to be paid by contractor directly to the local/statutory authorities on behalf of client the same shall be reimbursed to contractor on submission of proper receipt upon reimbursement by client in case of lifts the statutory fees shall in scope of contractor and shall not be reimbursed.
- c. The contractor shall have to obtain all Approvals including excavation by blasting, Connections/ NOCs/Completion Certificates/ Occupancy Certificate, etc from the concerned Local/Statutory authorities for civil & electrical works, Sewerage works, Water Supply works, Fire Fighting work, Fire Alarm system work, DG set pollution control board, Passenger / Goods lifts etc. at his own cost and nothing extra other than statutory fee/charges shall be payable on this account to the contractor. However, the letters required from the client for the needful stated purposes will be arranged by EPIL from the client as per the request of contractor.
- d. The contractor is advised to quote his rates for different works considering the above factors and all conditions given in NIT and ACC, GCC.

8) SITE LABORATORY

- a) As part of the contract the contractor shall provide and maintain a site laboratory for the routine testing of construction material under the direction and general supervision of Engineer-in-charge. The laboratory room shall be constructed and installed with the appropriate facilities. Temperature and humidity controls shall be made available wherever necessary during the testing of samples.
- b) All equipment's shall be provided by the contractor so as to be compatible with the specified testing requirements. The contractor shall maintain the equipment in good working conditions for the duration of the contract.
- c) The Contractor shall provide approved qualified personnel to run the laboratory for the duration of the contract. The number of staff and equipment available must at all times be sufficient to keep pace with the sampling and testing programme as required by Engineer-in-charge. The laboratory Incharge of the contractor shall report to Engineer-in-charge.
- d) The Contractor shall fully service the site laboratory and shall supply everything necessary for its proper functioning, including all transport needed to move equipment and samples to and from sampling points on the site etc.
- e) The Contractor shall re – calibrate all measuring devices whenever so required by the Engineer-in-charge and shall submit the results of such measurements without delay.
- f) For all other tests as required by Engineer-in-charge, the Contractor shall get the same carried out / conducted by approved testing Laboratory. In addition if, EPI /NESTS feels, may direct the Contractor to conduct the tests in the presence of EPI/NESTS representative at site lab / outside labs. All expenses

payable for transport of samples and conduction of tests shall be borne by the contractor.

9) PLANT AND MACHINERY

All plant & machinery required for execution of work shall have to be arranged by the contractor at his own cost. It is desired that the contractor has to deploy following minimum plant & machinery in good condition as and when required at each site location immediately after award of work.

S. No.	Description	Minimum Number Required
1	Fully automatic computerized concrete batching and mixing plant as per the specifications with print outs for admixture, concrete batching and other items. (20 cum/Hr.) or Mobile Batching Plant as required	01 No
2	Transit Mixer	02 Nos
3	Total station for surveying work.	01 No.
4	Winch Machine	01 No.
5	Vibrators (Petrol / Electrical)	06 Nos
6	Needles of Vibrator	12 Nos.
7	Excavator/Poclain	02 No.
8	Tipper / Dumper (15 cum.)	04 Nos.
9	DG Set (63 KVA & 125 KVA)	01 No Each
10	Leveling Instruments	01 No.
11	Bar Cutting and Bending Machine	06 No
12	Welding Machine	02 No
13	Water Tanker with Sprinkler	01 No.
14	Roller/ Compactor	01 No
15	Shuttering Materials (Minimum 4000 sqm plates and staging material as per requirement)	4000 sqm
16	Tractor with trolley for transportation of material	01 No
17	Core Cutting Machine	1 Set
18	The contractor shall provide sufficient area lighting for the safe execution of works during night hours through static / mobile arrangements.	As per requirement of site
19	Laboratory equipment's	As required

ARRANGEMENT OF CONCRETE

All concrete Works shall be done with Fully automatic computerized concrete batching and mixing plant as per the specifications with printouts for admixture, concrete batching and other items (20cum/Hr.) only. Batching Plant shall be installed at site of work only. The Contractor has to submit the design mix for the work to be executed and other requirements will be as decided by Engineer in charge. Concrete mix design shall be carried out by the contractor at his own cost from IIT/NIT and reputed Government Engineering Colleges only with the approval of Engineer-in-charge before starting the work

Note:

- a) A successful bidder provides proof of ownership of above plant and equipment's or give lease agreement for the same at the time of signing of agreement with EPI.

- b) In addition to above contractor has to arrange sufficient plant & machineries to complete the work as per completion schedule.
- c) Any other equipment for site test as outlined in CPWD / BIS specification and as directed by the Engineer-in-charge.
- d) The quantities of equipment mentioned above are indicative only and can be increased as per the requirement of quantum work OR as per the direction of Engineer-in-Charge. The above equipment list is indicative and not complete. The contractor has to deploy all the required equipment to complete all the works within stipulated specifications and time period as per contract documents.
- e) The contractor will not be allowed to take out equipment from the site without the written permission of Engineer-in-charge.
- f) In the event of breakdown of any equipment the contractor should immediately mobilize replacement of the said equipment

10) COMPLETION SCHEDULE FOR EACH SITE LOCATION

S. N.	Description of Milestone (Physical)	Time Allowed (from date of start)	Amount to be with-held in case of non-achievement of mile stone
1	1/8 th of the whole of the work	Before 1/4 th of the time allowed	5% of un-completed amount as per MS
2	3/8 th of the whole of the work	Before ½ of the time allowed	5% of un-completed amount as per MS
3	3/4 th of the whole of the work	Before 3/4 th of the time allowed	5% of un-completed amount as per MS
4	Whole of the work	Full time allowed	As per GCC Clause No. 72.1

Failure to achieve one or more milestones or failure to complete the work within stipulated time period or justified extended time period, if any, shall invite action under relevant clauses of the agreement with contractor for delayed performance.

Further Project planning attached as Annexure-I (Project Planning) is part of this NIT and monthly progress both physical and financial is to be achieved as per the planning. Successful bidder has to give **undertaking** on non-judicial stamp paper of value of Rupees 100/- for completion of work as per the completion chart and the same undertaking is to be part of Agreement between EPI and successful bidder.

- 11)** The contractor shall comply with legal orders, directions and by laws of local bodies / authorities. The contractor shall give to the Municipality, Police, Local Bodies and concerned Governmental authorities all necessary notices relating to works that may be required under the law and obtain all requisite licenses, permissions for temporary obstructions, enclosures, collection and stacking of materials, etc.

The contractor shall pay at his own cost all fees, taxes and charges that may be liable on account of these operations in executing the contract. Nothing extra shall be paid by EPI on this account.

The contractor shall be bound to follow the instructions and restrictions imposed by the administration / Police authorities on the working and / or movement of labour,

materials etc. nothing extra shall be payable due to less / restricted working hours at site or any detours in movement of vehicles.

12) TEST CERTIFICATE

- a) All manufacturer's certificates of test showing that the all equipment / materials have been tested in accordance with the requirements of the relevant standard specification and the copy of the test certificate as well as standard shall be supplied free of cost to EPI / NESTS also all the required test as per NESTS/EPIL shall be carried out by contractor on his own cost
- b) Bidder has to conduct pile load test as per requirement in presence of Engineer in Charge.

13) LICENSES

The contractor shall arrange for obtaining the license and clearances for the operation. (If required) from the local authorities and statutory bodies at his own cost & nothing extra shall be payable. Certification of various equipment / installations from statutory bodies other agencies as required as per technical specifications, shall be arranged by contractor at his own cost before handing over.

14) SITE ENGINEER OF CONTRACTOR AT EACH SITE LOCATION

The Contractor shall employ at his cost the adequate number of technical staff during the execution of this work depending upon the requirement of work. For this purpose the number of staff to be deployed, their qualification, experience as decided by EPI shall be final and binding on Contractor. The Contractor shall not be entitled for any extra payment in this regard. The technical staff should be deployed on full time basis & available at Site, whenever required by EPI to take instructions. If contractors fails to appoint technical staff as mentioned below, the EPI shall deploy staff as per requirement and same shall be recovered from contractor.

However, Minimum qualifications and experience required for technical representative is given below:

S. No.	Qualification	No.	Minimum Experience	Rate at which recovery shall be made from the contractor in the event of not fulfilling
1.	Project Manager	1	Graduate Engineer at least 20 years' experience in execution of reputed project of multi-storey residential / commercial / institutional buildings / including external development work etc.	Rs. 60,000/- per month
2.	Deputy Project Manager	1	Graduate Engineer at least 12 years' experience of QA/QC of reputed project of multi-storey residential / commercial / institutional buildings /	Rs. 40,000/- per month per person

			including external development work etc.	
3.	Project/Site Engineer or Diploma Engineer	2 (1+1)	Graduate Engineer at least 5 years' and or Diploma Engineer at least 10 years' experience in execution of reputed project of multi-storey residential / commercial / institutional buildings / including external development work etc.	Rs. 25,000/- per month per person
4.	QA Engineer with degree in civil engineering	1	At least 5 years experience QA/QC work of reputed project of multi-story commercial institutional buildings / institutional etc	Rs. 25,000/- per month per person
5.	Billing Engineer with degree in civil engineering	1	Minimum 5 years experience billing work of reputed project of multi-story commercial institutional buildings / institutional etc.	Rs. 25,000/- per month per person
6.	Electrical Engineer with degree in electrical engineering	1	At least 5 years experience electrical work of reputed project of multi-story commercial/institutional buildings / institute etc.	Rs. 25,000/- per month per person
7.	Project/Site Engineer or Diploma Engineer	2 (1+1)	Graduate Engineer at least 2 years' and or Diploma Engineer at least 5 years' experience in execution of reputed project of multi-storey residential / commercial / institutional buildings / including external development work etc.	Rs. 15,000/- per month per person

15) COMPLIANCE OF CONSTRUCTION & DEMOLITION WASTES MANAGEMENT RULES 2016.

The contractor shall comply all the rules & regulation of Construction & Demolition waste Management Rules 2016 as notified by the Government of India as applicable for the said work and subsequent amendment if any, in the said act notified by the Government time to time. Nothing shall be paid extra.

16) FACILITIES TO BE PROVIDED AT SITE FOR LABOUR WELFARE

All facilities to be provided at site for fulfilling all statutory labour welfare schemes are included in contractor's scope which shall include the following but not limited to the same.

Separate provision / rooms for First Aid Centre & Reset room and for the safety officer, safety supervisors and other personnel to be engaged by the contractor for H.S.E aspects of the project

Erecting sufficient numbers of Urinals, WC's, drinking water, water supply and sanitary arrangements to the supervisory personnel and workmen engaged by them.

Canteen facility to workmen engaged by the contractor.

17) Final Bill: -

The final bill will be submitted by the contractor within 60 days from the date of acceptance of completion of work accompanied by the following documents:

- Completion certificate issued by the Engineer-in-Charge specifying the handing over of the work including list of inventories (fittings & fixtures)

- b) Computerized stage wise payment schedule.
- c) No claim certificate by the contactor.
- d) No claim certificate from the sub-agencies / venders engaged by the contractor.
- e) As built' drawings.
- f) Periodical services and measurement books.
- g) Drawings for layout of underground cables and details showing location of sluice valves, electric cable joints etc.
- h) All operation and maintenance manuals.
- i) All statutory approvals from various state / central govt. local bodies, if required for completion & handing over of the work as included in scope of Contractor.
- j) Manufacture's guarantee of various machines / equipment's installed as part of works.
- k) NOC from labour department, PF Department.

18) For items not covered under any of the specifications mentioned in Tender Documents, the works shall be carried out as per CPWD Specifications / manufacturer's specifications or as per directions of Engineer-in-Charge. The rate for such extra work shall be derived as follows:

- a) If the item is available in DSR 2019, contractor has to execute the item as per tender percentage.
- b) If the same item is not available in DSR 2019 and similar item is available, rate for such extra work shall be derived from the similar item.
- c) If the rate for any item is not possible to derive as mentioned above, the rate shall be derived by analyzing as per the prevailing market rates following CPWD norms.

19) Client's authorized Representative, Third party inspection

NESTS/EPI at his discretion may authorize their representative or appoint agency On behalf of them to supervise and monitor project related all activities. Contractor will extend all necessary assistance required and cooperate.

The Third Party Quality Assurance will be conducted by Client as per agreed plan with client & contractor has to submit the reports at regular intervals along with RA bill to EPIL.

Contractor will extend all necessary assistance required and cooperate.

Contractor will make sitting arrangements for owner's representative & third party inspector & for their staff if any.

20) All defect notice during the currency of the contract and also during the defect liability period of 12 months after completion of the work except those pertaining to leakage/dampness which are governed by clause mentioned above shall be got completely and satisfactorily rectified by the contractor immediately after notifying the defects without any extra payment for the same. In case the defects are such as cannot be rectified or the contractor fails to rectify these satisfactorily and completely, EPIL/Client reserves his right to accept the work at reduced rates (provided defects are non-structural) or to get the rectification work done at the risk and cost of the contractor.

The decision of the Client, in this regard, shall be final and binding on the contractor.

21) Alterations, Additions and Omissions

EPI/NESTS can make any variation of the form, quality or quantity of the works or any part thereof that may, in their opinion be necessary and for that purpose, or if for any other reason it shall in his opinion be desirable, they shall have power to order in writing to the contractor to do and the contractor shall do any of the following:

- i. Increase or decrease in the quantity of any work included in the contract in which case the value of contract may be increased or decreased.
- ii. Omit any such work.
- iii. Change the levels, .lines, position and dimension of any part of the works and
- iv. Execute additional work of any kind necessary for the completion of the works and no such variation shall in any way vitiate or invalidate the contract, but the value, if any of all such variations shall be taken into account to ascertain the amount of the Contract Price.
- v. The contractor shall not affect any of the aforementioned changes without the written order of EPI / NESTS.

22) Agency shall ensure strict Quality Control measures and monitoring to ensure quality and timely construction.

(i) TPQA (Third Party Quality Assurance) - The Construction Agency shall in consultation with NESTS/EPIL before commencement of work. TPQA shall be conducted by EPIL & NESTS appointed NIT as per TPQA Guidelines. No work shall be permitted without TPQA agency.

(ii) The Quality plan and Design Mix Shall be available before the time of commencement.

(iii) Agency shall ensure thorough checking/cross checking of reinforcements before casting of RCC, casting of all RCC work in presence of Site engineer, mandatory testing of materials at prescribed frequencies as per Quality Plan, etc. to ensure quality construction.

(iv) The important activities like layout and positioning of Columns, Beams, Brick Work shall be marked properly as per architectural drawings to avoid any deviation.

(v) The Critical Activities like DPC, water proofing for sunken portion of toilets and terrace must be done with specialized agency to avoid future leakage, water seepage, etc.

(vi) The regular monitoring and frequent site visit by engineering team including zonal head is absolutely necessary to ensure quality and reinforcement, structure is being done as per approved architectural and vetted structural drawings. Agency must ensure that the site engineer must be stationed at site.

(vii) Photograph of ongoing construction: - Agency shall continuously share the geotagged photographs of ongoing construction to EPIL. The photographs need to be shared in every stage of construction for important items and milestones like foundation reinforcement, RCC casting of foundations, columns, beams & Slab, masonry work, etc as well along with each running bill.

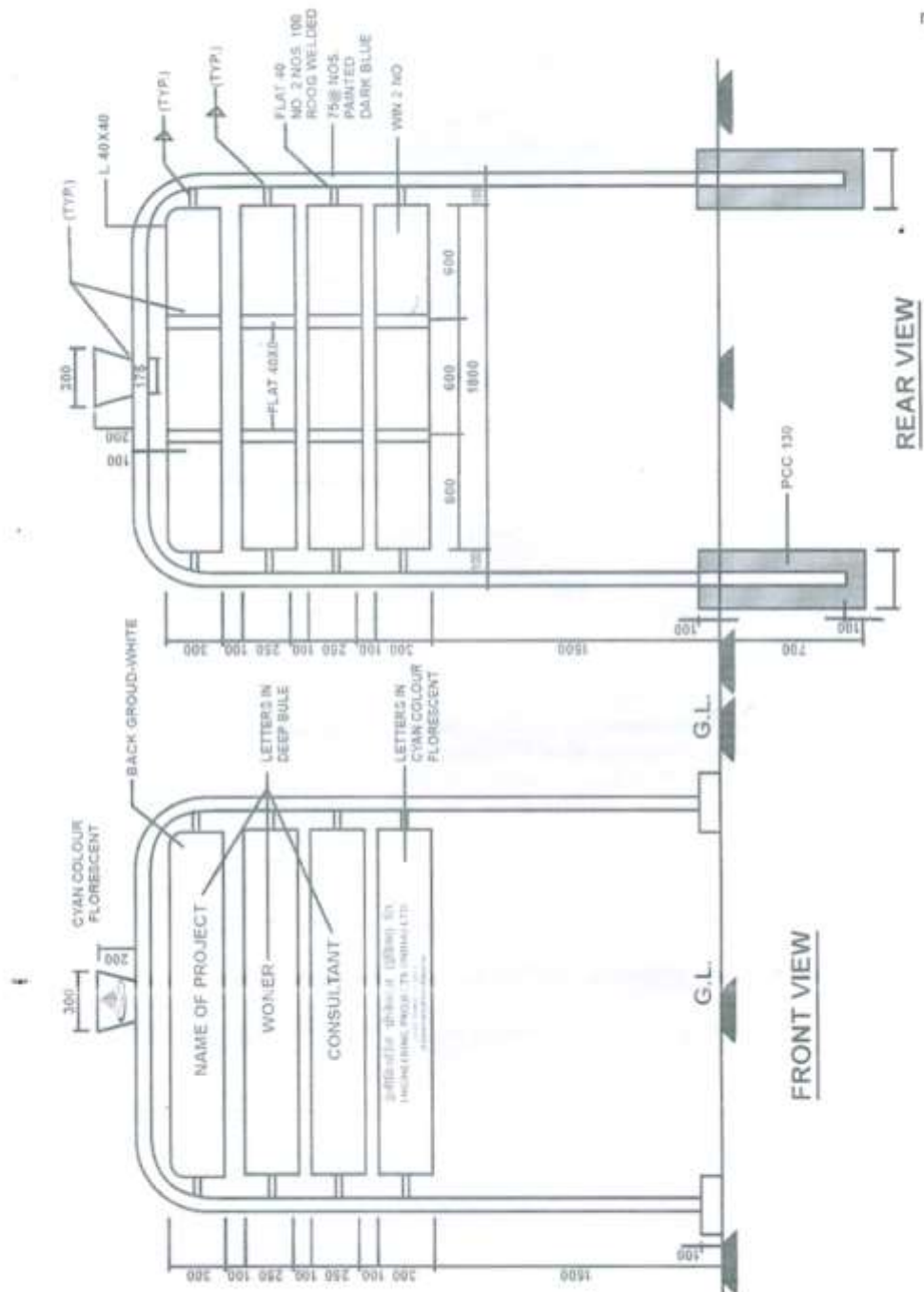
(viii) Manpower Deployment: Agency shall share the details of Site Engineers, project engineer for each location with name designation, experience immediately. No work shall be permitted without availability of a regular, technically qualified and experienced site engineer as per MoU.

23) Barricading: -The height of barricading should be mini. 2.0 M or more as per SPCB rules from the EGL on MS frame with G.I Sheet.

C) Provisions under Model Rules for the Protection of Health and Sanitary Arrangements for Workers of EPI are modified/ amended as under: -

S. No.	Clause No.	Modified/Amended provisions as per Additional Conditions of Contract
1		<p>Following clause shall be added in the Model Rules:</p> <p>11. Precautionary/Preventive Measures against dissemination/spread of COVID-19</p> <ul style="list-style-type: none"> A. Mandatory for every labourer/worker to undergo a health checkup and remain quarantined for a fortnight before beginning work at the site. B. All construction material entering the site would be left undisturbed for three days to eliminate the threat of COVID-19 Contamination. C. Keep in-person meetings (including toolbox talks and safety meetings) as short as possible, limit the number of workers in attendance, and use social distancing practices. D. Provide employees with access to soap, clean running water, and materials for drying their hands, or if soap and water are not readily available provide alcohol-based hand sanitizers containing at least 60% alcohol at stations around the establishment for use by workers. E. Coordinate site deliveries in line with the employer's minimal contact and cleaning protocols. Delivery personnel should remain in their vehicles if at all possible. F. Adopt staggered work schedules, e.g., provide alternating workdays or extra shifts, to reduce the total number of employees on a job site at any given time and to ensure physical distancing. G. Train construction workers on: <ul style="list-style-type: none"> I. The signs and symptoms of COVID-19 and an explanation of how the disease is potentially spread, including the fact that infected people can spread the virus even if they do not have symptoms. II. All policies and procedures that are applicable to the employee's duties as they relate to potential exposures to COVID-19. It is helpful to provide employees with a written copy of those standard operating procedures. III. Information on appropriate social distancing and hygiene practices, including: <ul style="list-style-type: none"> a. Avoiding physical contact with others and maintaining a distance of at least 6 feet from customers and other individuals, whenever possible, including inside work trailers. b. Appropriate cleaning practices (i.e., washing hands frequently with soap and water for at least 20 seconds, or, if soap and water are not immediately available, using alcohol-based hand sanitizer that contains at least 60% alcohol and rubbing hands until they are dry; sanitizing all surfaces workers will touch). c. The proper way to cover coughs and sneezes (i.e., sneezing or coughing into a tissue or into the upper sleeve). d. Importance of workers not touching their own faces (mouth, nose, eyes). e. The benefits of driving to work sites or parking areas individually, when possible, without passengers or carpools. IV. The importance of staying home if they are sick. V. Wearing masks over their noses and mouths to prevent them from spreading the virus. H. Ensure clean toilet and hand washing facilities. Clean and disinfect portable job site toilets regularly. Fill hand sanitizer dispensers regularly. Disinfect frequently touched items (i.e., door pulls and toilet seats) regularly.

		<ul style="list-style-type: none">I. Persons having flu-like symptoms should not come to work site and should seek medical attention from local health authorities. If they test positive for Covid-19, they should inform the authorities concerned in the office immediately.J. If one or two cases are reported in the office, places visited by the patient over the last 48 hours will be disinfected. Work will only be resumed after disinfection.K. Every construction site would have weekly doctor visits. An isolation facility would also be created at the work site in case a labourer develops cough, cold or other symptoms.
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**ADDITIONAL ITEM PREFERRED MAKE
LIST, AS PER GUIDELINES DATED-14.03.2023**

Additional Preferred Make List as per NESTS's EMRS Guidelines

Dated 14.03.2023

Sr. No.	Material/Article	Manufactures Agencies/ Brand make
1	Factory Made steel Glazed/Gauged windows& Ventilators	SKS Steel industries / Madhu Industries/MULTIWIN/M/s Classic Engineers and Fabricators/ Ajanta/ CPWD LATEST Approved Make of respective region.
2	Solar Lighting system	WIPRO/Panasonic/Phillips/ Crompton/CPWD LATEST Approved Make of respective region
3	CP Brass Fittings/Fixtures	JAQUAR, MARC, Hindware, Parryware, CERA /Parko CPWD LATEST Approved Make of respective region

Additional Preferred make list by PSU

Sr. No.	Material/Article	Relevant IS Code	Manufactures Agencies/ Brand make
1	Kitchen Machinery	As Applicable	R.R.R Total Kitchen Solution, Triune Kitchen Solution, Quandra Galley Private Limited OR Equivalent
2	Furniture	As Applicable	Godrej, Spacewood Office Solution Pvt. Ltd (SOS), Neelkamal., Methodex systems Pvt. Ltd.

Certified that the materials shall be confirm to relevant IS provisions, BISstandard and specifications.

**PREFERED MAKE LIST
ISSUED BY NESTS DATE
25.05.2022(R-2)**

राष्ट्रीय आदिवासी छात्र शिक्षा समिति

(जनजातीय कार्य मंत्रालय के अंतर्गत
एक स्वायत्त संस्थान, भारत सरकार)
भू-तल, गेट नंबर-3ए, जीवन तारा बिल्डिंग,
संसद मार्ग, नई दिल्ली-110001
दूर. 011-23340280



National Education Society for Tribal Students

(An Autonomous Organization under
Ministry of Tribal Affairs, Govt. of India)
Ground Floor, Gate No.3 A, Jeevan Tara Building,
Parliament Street, New Delhi-110001
Telephone No. 011-23340280
वेबसाइट/Website: www.tribal.nic.in
Email: nests-tribal@tribal.gov.in

F. No. NESTS/Civil/EMRS Order/140/2021-22

Date: 25.05.2022

To

MDs/CMDs/CEOs
(TCIL/WAPCOS/NPCC/MTDC/MANIDCO/HSCL/B&R and EPIL)

Subject: -List of preferred makes of materials to be used in EMRS/EMBDS works (R- 2) – reg.

Reference: -

1. Prefer make List vide NESTS order no. 18015/11/2019-EMRS(Pt.) dated 09/08/2021(R1)
2. D.O.No S-20027/13/2020-TECH Issued by Ministry of Steel dated 12th January, 2021
3. OM Issued by the authority of DG, CPWD dated 17-02-2021

Sir,

I am directed to convey the approval of the competent authority in respect of Revision-2 to the list of preferred makes of materials (Civil) issued by this office vide order no. 18015/11/2019-EMRS(Pt.) dated 09/08/2021.

1. **Reinforcement Steel (TMT- FE 500)** - "Thermo Mechanically Treated (TMT) bars Fe-500 Grade conforming to IS 1786:2008 shall only be permitted. The PSU may approve the make/brand for use of TMT bars in EMRS Construction Work in light of the guidelines issued by Ministry of Steel vide DO letter Nos S-20027/13/2020-TECH dated 12.01.2021 addressed to Secretaries of various Ministries for procurement of Steel. Further PSU shall refer subsequent orders issued & procedure followed by CPWD & other Central Government Department for approval of TMT bars in this regard. While approval PSU ensure that approved brands/ make shall meet all quality parameters on Chemical Properties including Phosphorous and Sulphur percentage, Strength, etc. confirming to IS 1786:2008. The brands with consistent production quality having sufficient production capacity and fulfilling the aforesaid norms shall only be approved."
2. **Miscellaneous Civil & Electrical item (Revision-R-2)** - Preferred make list dated 09.08.2021 have been modified based on materials/brands preferred by CPWD and other reputed infrastructure govt organization confirming to relevant IS Stannard following established standard procedure (Revised Preferred Make Enclosed)
3. Furthermore, the NIT approving authority or the competent authority of PSUs may approve the other brand/make based on requirement on case-to-case basis provided it confirm to relevant IS provision following established standard procedure and subject to full fill GOI norms, provisions and guidelines issued thereof.

This issues with the approval of the competent authority

Encls.: As Above

(K C Meena)

Additional Commissioner

Copy to:-

1. Nodal Officer HQ, EMRS Works TCIL/WAPCOS/NPCC/MTDC/MANIDCO/HSCL/B&R and EPIL
2. Nodal Officer Zone/ State, EMRS Works TCIL/ WAPCOS/ NPCC/ MTDC/ MANIDCO/ HSCL/ B&R and EPIL
3. PS to Commissioner, NESTS, New Delhi
4. Guard File

अलोक सी बटिया / ALOK C BHATIA
नॉडल ऑफिसर / Nodal Officer
ENGINEERING PROJECTS (INDIA) LTD.
(A Govt. of India Enterprise)
ई.एम.एस. गुजरात / EMRS, GUJARAT
510-511, 5th Floor, Vivanta Icon,
L P Savani Road, Adajan, SURAT

LIST OF PREFERRED MAKE OF MATERIALS (CIVIL)			
S. No.	Material /Article	Confirming IS Code	Manufacturers/ Agencies/ Brand make
1	Cement (OPC 43 grade)/PPC	IS 8112:1989/ IS 1489 (Part-1) 2015	A.C.C., Jaypee Cement, Ultratech, Shri Cement, Gujrat Ambuja Cement and cement Corporation of India., Dalmia InfraPro (Dalmia Bharat Cement)
2	Ready Mix Concrete	-	Ultra Tech (Ultra Tech Cement Ltd.), ACC (ACC Cements Ltd), RMC (India), RMC (India) Pvt. Ltd.
3	AAC Blocks	-	Xtralite (Ultra Tech Cement Ltd), Areocon (HIL), Nucon (Green Way building materials India Pvt. Ltd.), Magicrete (Magicrete Precast), NCL
4	Structural Steel	IS 2062:2011	SAIL, TISCO, RINL, JSW Steel Ltd, JINDAL
5	Stainless Steel	-	JINDAL SS Ltd (JSL), Salem (SAIL), SAIL (SAIL)
6	Corrugated GI Sheets	IS 277:2003	TATA, SAIL, JSW, JSPL, BHUSAN
7	Colour coated profile sheet	-	TATA, JINDAL
8	Aluminium extruded sections	IS 733:1983 & IS 1285:2002	Jindal, Hindalco, Indian Aluminium Co. NALCO
9	Aluminium plain sheets	IS 733:1983 & IS 1285:2002	Jindal, Hindalco, Indian Aluminium Co. NALCO
10	Factory made Machine pressed laminated flush door shutter	IS 2202 (Part 1) : 1999 and relevant IS code	Century, Greenply, Kitply, Duroply, Merino.
11	Block Board	IS 1659:2004	Century, Greenply, Kitply, Duroply, Merino.
12	Flush door shutter	IS 2202 (Part 1) : 1999	Greenply, Century, Kitply, Duroply Merino,
13	Boiling Water proof plywood, Block board, Commercial plywood	IS 303:1989	Greenply, Century, Kitply, Duroply Merino,
14	Aluminium door & window fittings	Relevant IS Code	Jyoti, Argent, Everest
15	PVC rigid foam sheet	-	Rajshri or equivalent
16	Hydraulic Floor Spring	IS 6315:1992	Dorma, Hardwin, Ozone, Dorset
17	Door Closure	IS : 3564	Dorma, Hardwin, Ozone, Dorset
18	Float Glass		Saint Gobain (Saint Gobain India Pvt. Ltd.), Modiguard (Gujarat Guardian Ltd.), Asahi (Asahi India Glass Ltd.)
19	SWR uPVC pipe & fitting	IS 4985:2000 & IS 14233:1999	Supreme, Finolex, Prince, Astral, Prakash, Ashirwad
20	CPVC Pipe & fittings	IS 16088: 2012, IS 15778:2007	Supreme, Finolex, Prince, Astral, Prakash, Ashirwad,
21	Ceramic glazed wall tiles	IS 13712:1993	Kajaria, Orientbell, Somany, NITCO, HR Johnson.
22	Vitrified Tiles	IS: 15622: 2006	Kajaria, Orientbell, Somany, NITCO, HR Johnson.
23	Bitumen VG-30, VG-10 etc.	IS:73:2013	As per particular specification of IOCL, BPCL, HPCL.
24	Admixtures	IS: 9103:1999	FOSROC, SIKKA, CICO Technologies Ltd., Pidilite
25	Mild Steel Tubes	IS: 1239:1990	As per IS Code
26	1st quality acrylic distemper (Ready mix)		Bison (Lewis Berger), Beauty (NEROLAC), Tractor Uno (Asian Paints)

Kumar

Sharma
श्री श्री श्री / ALOK C BHATIA
 ४११ १० १०१ / Addl General Manager
 ENGINEERING PROJECTS (INDIA) LTD.
 (A Govt. Of India Enterprise)
 १०१ १०१ १०१ / EMBR, GUJARAT
 १०१-१११, १११ Floor, Vivanta Icon,
 L P Savani Road, Adajan, SURAT.

S. No.	Material /Article	Confirming IS Code	Manufacturers/ Agencies/ Brand make
27	Premium Acrylic smooth exterior Paint with silicon additives		ULTIMA (Asian paint), Premium Exterior Emulsion (Dulux), Weather coat long life 7 (Berger)
28	Paints	IS:101:1986	Lewis Berger, Asian Paints, Nerolac, Dulux
29	Steel/Wood Primer paints	IS:14177:1994	Lewis Berger, Asian Paints, Nerolac, Dulux
30	Factory made C.C. Interlocking Paver Blocks	IS: 15658:2006	NITCO, KK, NTC
31	Bitumen 85/25	IS:702:1988	HPCI, IOCL
32	Water Proofing Compound	IS:2645:2003	FOSROC, Dr. FIXIT, BASF, CICO, SIKKA
33	Crystalline Waterproofing Compound	IS 2645:2003	FOSROC, Dr. FIXIT, BASF, SIKKA
34	G. I. Pipes	IS:1239	TATA, Jindal Hissar
35	PVC Water Storage Tanks	IS: 12701:1996	Sintex, Plasto
36	P.T.M.T. Accessories	IS:9763	Prayag, Prakash
37	Mirror		Saint Gobain (Saint Gobain India Pvt. Ltd.), Modiguard (Gujarat Guardian Ltd.), Asahi (Asahi India Glass Ltd.), Atul (Autl Glass Industries Ltd.)
38	Stainless Steel Sink	IS: 13983:1994	Hindware, NIRALI, CERA, JAYNA
39	Sanitaryware/ Chinaware	As per IS Code	Cera, Parryware, Hindware, Jaquar
40	C.P. Fittings and accessories for bathroom / toilets	IS:7784:1993	Jaquar, Gem, Parko, Hindware, Cera, Parryware
41	RCC Pipes	Confirming to IS Specification	Indian Hume Pipes (Indian Hume Pipe Ltd.), Jain & Co (Jain spun pipes Co)
42	SFRC Cover and grating	IS 12592(2002)	KK (KK Manhole and gratings Co Pvt Ltd.)
43	CI Manhole cover	IS 1726 (1991)	RPFM (M/s Raj Pattern Makers & founders Pvt. Ltd.), BIC (Bengal iron corporation), Neco (Jayaswal Neco Ltd)
44	Foot Rest (for manhole)		KGM (KGM Exports), Accurate Buildcon (AccurateBuildconcompany),Neco (Jayaswal Neco Ltd)
45	Water stops		Hydrotite (Sika India), Dr. Fixit (Pidilite industries), Ferrous Crete (Ferrous Crete (India) Pvt Ltd.)
46	Aluminium doors/windows sections	IS 733 & IS 1285	Hindalco (Hindalco Industries Ltd.), Jindal (jindal Aluminium Ltd.)
47	Glass Reinforced Concrete (GRC) Jali		Terrafirma (Terrafirma GRC Industries), Ecovision (Ecovision Industries Pvt ltd.), Mahesh GRC (Mahesh Prefab Pvt Ltd.)
48	SS Doors & Windows Hardware & Fittings.		JINDAL, Dorma, KICH, Godrej, Ozone
49	Wall Putty		Dalmia, JK , Birla, Asian

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LIST OF PREFERRED MAKE OF MATERIALS (ELECTRICAL)		
S. No.	Material /Article	Manufacturers/ Agencies/ Brand make
1	Engine	Ashok Leyland /Cummins/ Cater pillar /KOEL Mahindra & Mahindra /Escorts
2	Alternator	Kirloskar/KEL/Crompton Greaves (AL. series) / KEC / Stamford
3	Battery (Lead Acid /Mntc. Free)	Amara Raja / Exide/Crompton Greaves/Prestolite/Pace Setter/Standard/
4	HV Switchgear	Crompton / Kirloskar /Voltas/ C & S Electric
5	LT Switchgear	L&T/ Schneider Electric / Siemens//Legrand/Havells
6	Vaccum Circuit Breaker	GE/Siemens/ C & S Electric
7	Transformer (Oil filled / Dry type)	ABB / Crompton Greaves / /Kirloskar /Siemens/ Alstom/Uttam
8	HT Panels	ABB/Siemens/L&T/Schneider/Kirloskar
9	Air Circuit Breaker	L&T/ Schneider Electric / Siemens/Havells
10	MCCB (Ics=Icu)	L & T/ Schneider Electric / Siemens/Legrand/Havells
11	MV/LT Panels	TTA/CPRI Fabricators with panels cleared by CPRI
12	SDF units	L&T/ Schneider Electric / Siemens/ Havells/ Legrand
13	Power Contactors	L&T/ Schneider Electric / Siemens/BCH/GE/ Power Controls
14	Change Over Switch	L & T/ HPL / Havells / Standard/Control & Switch gears
15	Air Brake Switch	National/Kiran/Pactil/Atlas/Power grid switchgears
16	Pin and Disc Insulator	Jayshree/WS/IEC/BHEL/Bharat Industries
17	11 KV Horn Gap Arrestor	Sahal/Pactil/GEC/SEW
18	Lightning Arrestor	Atlas/GE/Elaro/Lamco/International/Oblum/Elpro
19	Drop out Fuses	National/Kiran/Pactil
20	GI/MS Pipe (ISI Marked)	ATC / ATL / BST / GSI / ITC / ITS / IIA /JST / Jindal /TTA / Tata/Zenith
21	APFC Relay	L&T/ Schneider Electric / Neptune Ducati/Synttron/Trinity Electronics
22	IDMT Relay	AVKC/SEGC
23	C.T./P.T.	AE/MP/Marshall/Pactil/Kappa/L&T/Ashmor/Waco/Meco/Gilbert/Trio/Indotech/Indo coil
24	Selector Switch	L&T/Kaycee/IMP/Vaishno/Seizer/rass control
25	Indicating Lamp (LED Type) and Push But	Vaishno/Siemens/L&T/AE/IMP/Rass
26	Power Capacitors (MPP/APP)	Khatau/Junkar/L&T/EPCOS(Siemens)/ABB/Crompton/Schneider Electric/Neptune Ducati
27	Digital Panel Meters i/c Multi Function Meter	Conzerv/Schneider Electric/ AE/ Digitron / IMP/Meco / Rishabh /Universal/HPL/L&T/ABB
28	Ammeter/Voltmeter	AE/Universal/Rishabh/Kaycee/Meco/Enercom
29	Cold shrink HT/LT Cable Joint Kit	Denson / 3M(M-Seal)/ Raychem
30	Rubber Matting (ISI Marked)	Jyoti Rubber Udyog/Raychem/Padmini/Dozz
31	AVM Pads	Dunlop/Poly Bond
32	MCB/ Isolator/ELCB/RCCB/ Distribution Board	Crompton / Havells / MDS Legrand/ L&T / Schneider Electric/Siemens / Polycab/ C&S/ (makes of DBs and circuit breakers shall be same)
33	TPN Switches & HRC Fuses	Crompton / Havells / MDS Legrand/ L&T / Schneider Electric/Siemens / Polycab/ C&S/ (makes of DBs and circuit breakers shall be same)
34	PVC Conduits (ISI Marked) Colour : Ivory/Grey	AKG/Polycab/Avon Plast/Precision

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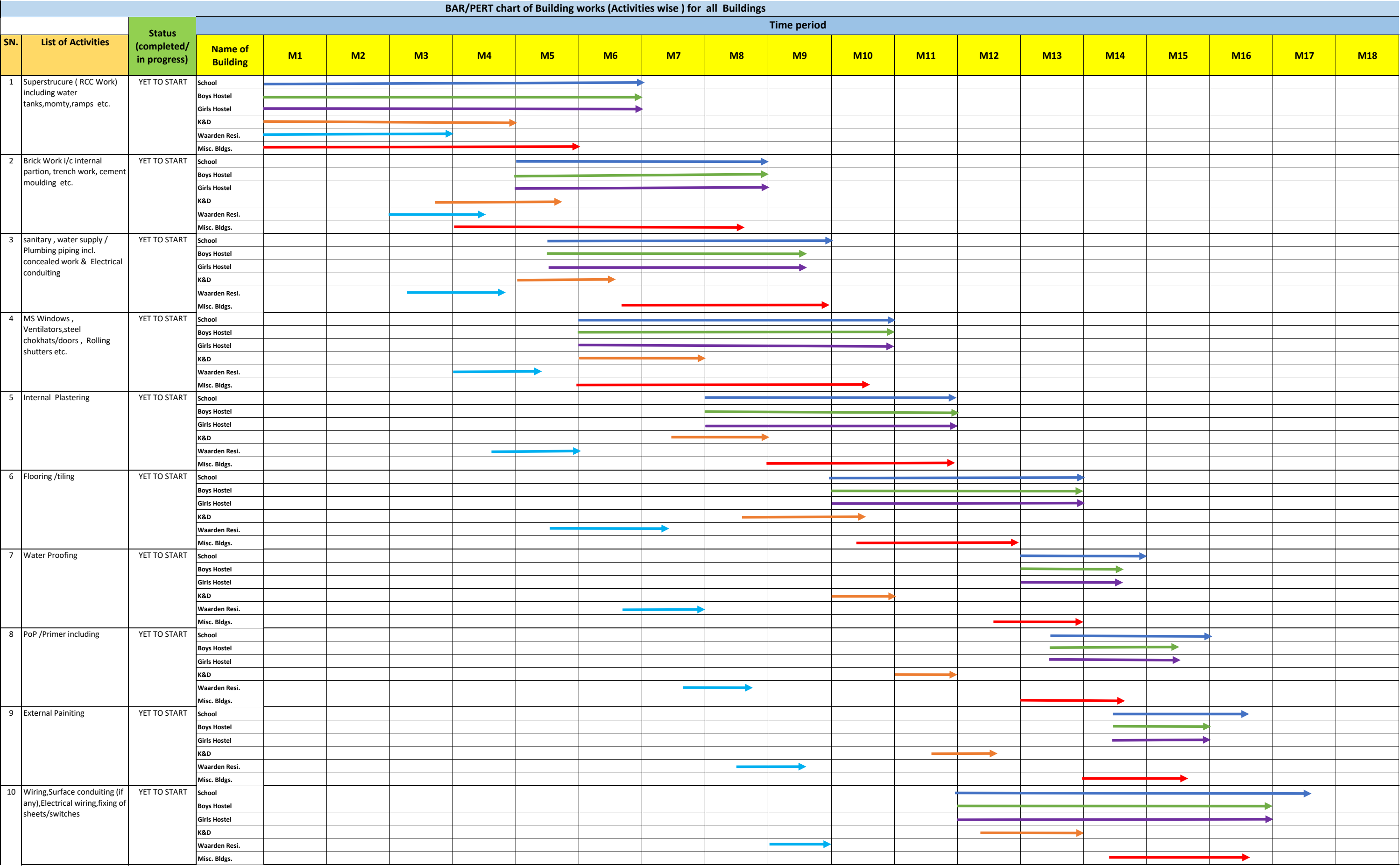
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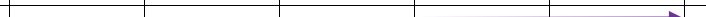
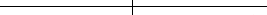
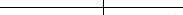


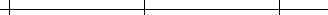



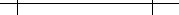

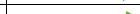




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35	Steel Conduits (ISI Marked)	BEC/Bharat/Gupta/AKG/RMCON/Steel Kraits
36	Piano/Modular Switches and Sockets	Legrand/Havells/Polycab/ Schneider/Anchor
37	Cable Tray	MEM/Bharti/Ratan/Slotco/Profab
38	Cable Glands	MCI, Comet/Jainson/Dowells
39	Thimbles/Lugs	Jainson/Dowells/Ascon
40	1.1 KV/11KV grade Al. Condr., XLPE insulated armoured cables (ISI Marked)	Finolex/Havells/Polycab/KEI
41	Fire Survival cable	Finolex/Havells/Polycab/KEI
42	Wires (PVC insulated copper conductor cable FRLS - ISI marked)/Telephone Cables / Submersible cables/Co-axial/TV cables	Finolex/Havells/Polycab/KEI
43	Fans and Exhaust fans (All Types)	Khaitan/Havells/Crompton/Orient/Bajaj/Usha/Polycab
44	LED Luminaries i/c street light fittings (ISI Marked)	Khaitan/Havells/Crompton/Orient/Bajaj/Usha/Polycab
45	LAN Cables	Panduit/Legrand/Schneider//Polycab
46	Centrifugal Pump	BE Power / Beacon /Crompton / Kirloskar / KSB
47	Submersible Pump	BE Power / Beacon /Crompton / Kirloskar / KSB
48	Motors	Crompton Greaves /Schneider Electric / Kirloskar/ Siemens
49	Motor Starter	L&T/Siemens/BCH/GE Power Control/Schneider Electric
50	Fresh Air Fans	Khaitan/Havells/Crompton/Orient/Bajaj/Usha/Polycab
51	Single Phase Preventer/Overload Unit	L&T / Minilec / Siemens
52	Timers	L&T / Minilec / Siemens /AE
53	Gate Valve/Foot Valve/NRV/Butter Fly Valve	Advance/Audco/Johnson Controls/Zoloto/Annapurna / Fountain /Kirloskar / Leader / Sant / Trishul/Kartar/Inter Valve
54	Single/Double Headed GM Landing Valve	New Age (Mumbai)/Safex/Ceasefire/Padmini/Life guard
55	Hydrant Valve	New Age (Mumbai)/Safex/Ceasefire/Kalpana/L&T valves Ltd./Life guard
56	Sprinkler/ Hose Reel & Hose Pipe (ISI Marked)	Safex/Agni/Newage/Ceasefire/Life Guard/Omex
57	Fire Extinguisher (ISI Marked)	Minimax/Lifeguard/Safeguard/Safex/Omex
58	Water Purifier	Eureka Forbes/Kent/Ion Exchange/LG
59	Inverter System	Sukam/Microtek/Luminous
60	Electrical Water Storage Heater	Racold/Crompton/Havells/Bajaj/Polycab

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PROJECT PLANNING



		Status (completed/ in progress)	Time period																						
SN.	List of Activities		Name of Building	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18				
11	Sanitary fixtures & water supply fittings Installtion	YET TO START	School																						
			Boys Hostel																						
			Girls Hostel																						
			K&D																						
			Waarden Resi.																						
			Misc. Bldgs.																						
12	Internal Electric fittings & fixtures,DBs, MCB ,Internal CCTV , Hosereel etc.	YET TO START	School																						
			Boys Hostel																						
			Girls Hostel																						
			K&D																						
			Waarden Resi.																						
			Misc. Bldgs.																						
13	Aluminium & Glass Works,SS hand rails ,building name signage ,plinth protection and other misc works .	YET TO START	School																						
			Boys Hostel																						
			Girls Hostel																						
			K&D																						
			Waarden Resi.																						
			Misc. Bldgs.																						
14	Physical completion i/c cleaning, removal of surplus materials etc.	YET TO START	School																						
			Boys Hostel																						
			Girls Hostel																						
			K&D																						
			Waarden Resi.																						
			Misc. Bldgs.																						

ANNEXURE-A

GENERAL SPECIFICATIONS OF EMRS BUILDINGS

General on MLP: -

- **Layout of Building:** All the building units shall be planned judiciously according to contours to minimise excess cutting and filling. The location of buildings shall be placed in such a way that internal road lengths shall be minimum.
- **Facing of Building:** Building shall be planned preferably facing North or East.
- **Kitchen and Dining** shall be planned preferably in between the Boys and Girls Hostels.
- **Archery Ground** shall preferably be aligned with face sighting towards North.
- **Pump Room** shall be centrally located in the campus. In case of hilly region, contours of the site should also be paid attention to take the benefit of flow of water under gravity & to minimise the pumping head.
- **Septic tank** shall be in the lower contour area near the building. The top level of septic tank shall preferably be 1.5 metre below the plinth level of the respective building, so that, due gradient can be maintained in laying the sewer pipe. Septic tank shall be of RCC with size designed as per IS 2470.1.1985 taking users as 200 nos & retention period as 2 years. Tentative size may be taken as 9.0 (L) x 2.70 (B) x 2.10 m (av.) (H) for the 1st Chamber & 4.50 (L) x 2.70 (B) x 1.70 m (H) for the 2nd Chamber both excluding free board.
- **Rain Water Harvesting (RWH) System** shall be near the Sump Well. Sump Well and RWH System shall not be in the vicinity of Septic tank and sewer chamber.
- **Internal Roads:** Level of CC Road at entry shall be raised by 150 mm w.r.t. the NGL at the entry gate and thereafter it will run in the campus 150 mm moderately or (av.) above the existing contour. Width of CC Road in front of School shall be 5.5 m and thereafter it will be 3.5 m.
- **Protection Work:** In case of construction in hilly region, due consideration should be given for safety of structures. If depth of cutting or filling is considerable then required protection measures in the form of retaining walls or stone pitching deemed necessary to be provided to maintain earth at its natural slope and avoid landslides during rains. If depth of cutting is moderate, stone pitching or random rubble masonry retaining wall may be provided as per site condition. When depth of cutting is more than 1.5 m suitable RCC retaining wall may be considered as per the site condition. Location and details of the same to be shown in the MLP.
- MLP shall be aligned as per contour indicating retaining walls, stone pitching, if any.
- **Sump & Pump:** Sump shall be provided for 50,000 litres capacity in Phase-I with a future provision of 50,000 Litres to be built in Phase-II. The Pump house shall



be single and will be planned over the sump in Phase I only. Rectangular size Sump should be considered. Pump room with 12.0 Sqm floor area shall be single and will be planned over the sump in Phase I only. The top slab of UG sump shall be minimum 150mm above the NGL/FGL.

- The MLP Checklist is enclosed for reference at Annexure-III

General on Detailed Project Report (DPR)

The draft detailed estimate shall be shared first and once it is scrutinized, then only the same may be finally submitted after incorporating corrections/suggestions for approval.

➤ The draft DPR shall be accompanied with

- Approved Master Layout Plan duly signed with compliance of pending observation, if any.
- Complete Architectural Drawings i.e. Floor plans, Elevations & Sections of the building units.
- Detailed Soil Investigation Report along with remarks of the construction agency along with feasibility of the structure corresponding to the soil investigation report. At least, one bore hole should be done near the tentative location of each building unit i.e., School building, Boys' Hostel, Girls' Hostel, Kitchen & Dining, Qtrs area. The location of bore pit shall be clearly marked in MLP and Soil Investigation Report.
- The DPR must include Structural Drawings of all the buildings including foundation proposal w.r.t. to bearing capacity of soil. The structural drawings of foundation, all structural members (Columns, beams, slabs, etc) of all EMRS buildings including sump, pump room, ESS, Septic Tank shall be shared with NESTS before sending the same for vetting. However, Only Vetted structural drawings shall be enclosed with the DPR only.
- Details of measurement and its proper linking to the respective heads in BOQ and then to the main Detailed Estimate sheet (DE).
- BOQ of EMRS Phase-II and Single-Phase shall be prepared on DSR 2019 with Item Sub-Head Wise (Vertically) and Heads Building & Service Wise (Horizontally). The applicable CPWD Cost Index shall be added as per relevant CPWD Cost Index order. A sample BOQ may be shared to PSUs for uniformity. The BOQ shall be divided into the approved Building & Service components such as School Building, Boys' Hostel, Girls' Hostel, Warden Residences (Boys'), Warden Residences (Girls'), Kitchen & Dining, Principal Quarter, Type III Quarter, Type II Quarter, Security Cabin & Entrance Gate, Electrical Sub Station (ESS), Sump & Pump Room, Septic Tank & Soak Pit, Site Development Cutting & Filling, retaining wall/Stone Pitching, Compound Wall and Roads and other Services such as Plumbing, Fire Fighting Electrical Internal and, Electrical External, etc.

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- Cost Index in the estimate shall be supported by Documents from CPWD. In case the CPWD Cost index is not available for the particular location, the Detailed Estimate shall be submitted at par with DSR 2019 without considering Cost Index.
- The correctness in the quantities, rates and items are the responsibility of the concerned PSU. The quantities in the estimate are to be supported by details of measurements, MLP, designs, site conditions, approved drawings, inventories etc.
- The construction agency must ensure that the site is free from encroachment, HT Transmission lines/ HT Poles, forest cover/land etc. while submitting DPR.
- The DPR Checklist cum scrutiny sheet is enclosed at **Annexure-IV**

➤ **Soil Investigation**

- The soil investigation shall be conducted at the major building locations i.e., School Building, Boy's Hostel, Girls' Hostel, Type II/III Quarters etc.
- The location of building shall be clearly written in the report against each test pit.
- The N value in the Standard Penetration Test shall be obtained at every 0.5metre interval upto 3.0 metre, thereafter at the interval of 1.0 metre upto 10 metre depth or till it is required as per soil conditions.
- The soil strata (Type of Soil) shall be clearly marked in the report.
- The depth of water table shall be clearly indicated in the report.
- The safe bearing capacity of soil shall be calculated based on soil parameter applying proper correction factors & safety factor for settlement & shear.
- Recommendation of Type and Depth of foundation shall be provided by the Geo-Technical Consultant with name & designation in the summary of the soil report.
- The Construction Agency shall ensure that site engineer shall be available while taking reading & sample of soil.
- The Soil Laboratory testing shall be done in NABL accredited laboratory/Engineering College only.
- **The copy of the soil report shall be certified by Zonal Head of the PMC.**

➤ **Structure of Buildings**

- All structural drawings shall be prepared as per the approved plans, elevations and section of buildings considering the overall functionality of buildings. No deviation in approved plan areas/ facility areas shall be permitted in any case.

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- **Structural Members:** Size of structural member shall be taken as per the Architectural/structural requirement of the structure ensuring soundness and stability of RCC members.

➤ **Layout Planning & Foundation**

- Plinth of the Building shall be 600 mm to 750 mm above the ground level of the road (Finished Road Level) in its front which will be decided depending upon the terrain. Level of the Septic tank shall also be paid attention to while deciding the plinth.
- Foundation of each building unit shall be as per structural requirement based on the soil investigation report. Soil investigation shall be based on at least one bore hole located at the tentative location of each building i.e., School building, Boys Hostel Building, Girls Hostel Building, Staff Qtrs area, etc.
- Toe Wall: For toe wall purpose in external walls there will be Brick Work/ RR Masonry below the plinth beam if depth of foundation is shallow. If depth is greater than 1.50 m, RCC notch will be provided below the plinth beam. The brickwork will start on a base course of 100 mm thick PCC 1:5:10 mix, laid generally at 0.90 meter below the plinth level of the building. For internal walls the provision shall be restricted to 50% only. In case of Hilly areas, preference to be given to use locally available hard stones/RR Masonry for foundation works and protection works. In case the depth of foundation is more than 1.5 metre, RCC notch may be more appropriate instead of brickwork/RR.
- Waterproof bitumen painting above plinth beam: The Brick work above the plinth beam shall be started only after laying a coat of bitumen painting over the plinth beam.
- The locations where rock cutting etc. is unavoidable, the available stone recovered shall be utilized judiciously viz in foundations etc.

➤ **Celling Height of Buildings:** Clear Ceiling height of Buildings shall be as follows;

- School building - 3.60 metre
- Kitchen & Dinning - 3.45 metre
- Hostel - 3.15 metre
- Warden residence - 3.0 metre
- Ramp Mumty height- 2.4 metre
- Principal Quarter -3.00 metre
- Type III & Type -II Quarter -3.00 metre



➤ **External Cladding of Buildings from Ground Level**

- School Building: - Upto bottom of FF Level Beam Soffit (as per Drawings).
- Hostels' Building – Upto Window Sill Level.
- Dinning & Kitchen - Upto Window Sill Level.
- Principal Quarter – Upto Plinth Level

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- Type III & Type II Quarter – Upto Plinth Level.
- **Terrace parapet** of School Building and Hostel shall have height of 1200 mm i/c 50 mm CC coping. For Kitchen & Dining & Warden Residence being inaccessible, it will be 600 mm.
- **Locally available Materials:** The climatic conditions and locally available building materials may be considered for design purpose of buildings.
- **Water Tank on Terrace:** Domestic water tank shall be provided over the toilet block on a slab at least 750 mm above the toilet block roof slab for school and hostel building and it will be supported on columns. Water tank for fire purpose shall be provided over one of the toilet blocks with arrangement similar to that of the domestic water tank. Placing of water tank shall be such that the overflow water of fire tank shall feed the domestic water supply tank. In kitchen, only domestic tanks shall be provided over the toilet.

In kitchen, one number domestic water tank shall be provided over the toilet blocks located near the utensil washing area at least 750 mm above the toilet block roof slab and shall be supported on brick columns.

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School Building:

1. Facility area:

- Facility area of rooms, corridor and stairs shall be maintained same as per the standard drawing. Width of stair, corridor, ramp etc shall be maintained in full width without any restriction.
- Facility for Person with disabilities: The entire requirement like ramp, hand-rails, tactile flooring, toilets, signage etc. shall be provided to the infrastructure being constructed. They shall comply to the provisions as per guidelines issued for the person with disabilities.
- All the ramp floors will be provided with suitable anti-skid tiles with the provision of tactile tiles & handrails for person with disabilities.
- Width of Ramp shall be 1800 mm. Head Room anywhere shall not be less than 2.40 metre.
- Corridor Protection Railing of 1350 MM height with MS grill/railing in between the column as per approved drawings. The MS grill should be fixed Over 300 mm brick height wall throughout the corridor.
- Railing to front Ramp and internal stair case shall be outer 40 mm dia in SS 304 grade. The finished top height of the handrail shall be 950 mm.
- Rear Stair cases shall have no approach to terrace.

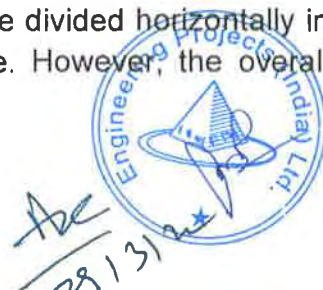
2. Doors and Windows:

- Entrance door of the building shall be provided with powder coated anodised aluminium glazed door with Floor Spring. Steel Collapsible Shutter will be provided additionally for safety purpose.
- All doors shall have T Iron frame 40 x 40 x 6mm.
- Single shutters with 35 mm thick factory-made exterior grade non-Decorative type flush door shutter with teak wood lipping on edges
- Doors of Principal, Vice Principal and Staff Rooms, Toilet Main Doors shall be provided with hydraulic door closer. All the doors shall have rubber floor door stoppers. No floor door stopper to WC doors.
- Toilets shall have 35 mm factory made machine pressed laminated flush door of exterior grade in single leaf.
- Class Room, Labs and Library shall have MS Glazed window and ventilator with plain glass panes and MS grills 12 mm square bars. The weight of window grill and MS window sections shall be considered @ 12 Kg/ Sqm of window area for estimate purpose. The Central 40% area of the windows shall be fixed and rest open able shutters on either side. There shall be fixed glazing above the window from lux-point of view. Bath room windows/ventilators shall be with frosted glass panes.
- External Windows in general will be of size 1950 (L) x 1500 (H) mm having top 300 mm portion fixed. The bottom portion shall be divided horizontally in three parts middle portion fixed and sides openable. However, the overall dimension and design as per approved drawings.

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- The corridor portion will have no windows except in administrative block Administrative Block Rooms like Principal Room, Vice Principal Room, Office, Staff Rooms; Recreation Room shall have windows of size 1950x1200 mm in the corridor. Other Rooms shall have ventilators in corridor of size equal to width of the external windows (1950 mm) and depth 600 mm. It will be placed opposite to external windows just below the floor beams (No separate lintels are required for ventilators). The top shall be divided in the same pattern provided in bottom

3. Flooring:

- Full body (homogeneous) Vitrified floor tile flooring with size not less than 600x600 mm shall be provided in Principal Room, Vice Principal Room and Staff Rooms.
- All other floors except WC area and ramp shall be with Kota Stone flooring as per the respective DSR item with marble strips (approximate @5% area) and skirting upto 100 mm height.
- Treads and risers of stair shall have Kota in single length.
- All the ramp floors will be provided with matt finish anti-skid vitrified tiles of size 300 x 300 mm with provision of tactile tiles.
- Toilet block shall be also be provided with anti-skid rectified ceramic floor tiles with size of 300mm x 300mm or more. The walls shall have glazed ceramic tiles dado, inside WC area upto 900mm height and for remaining area of toilet block upto 2100 mm height as per respective DSR items.
- Working platforms in labs shall be provided with Granite top with nosing and dado upto 100 mm height. The detailed drawings for Lab table shall be provided shortly.
- In toilet, oval shaped wash basin shall be provided on RCC platform finished with granite stone.

4. Finishing

- The external wall (excluding Brick Tile Cladding area) shall be plastered with 18 mm plaster as per respective DSR item and finished with 1 mm thick external white cement-based putty.
- The external surface including corridor walls shall be provided with Premium acrylic water proof exterior grade with silicon additive paint.
- Inside Walls shall have 12/15 mm plaster and 6 mm in ceiling as applicable.
- Internal Finishing: Walls and ceiling shall be provided with first quality acrylic distemper (ready-mix).
- All wood work & steel work shall be provided with synthetic enamel paint of the approved brand.

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Hostels:

1. Facility area:

- Facility area of rooms, corridor, stairs etc shall be maintained same as per the standard drawing. Width of stair & corridor etc shall be maintained in full without any restriction.
- Handicapped toilet shall be provided at ground floor only.
- Electrical shaft and FHP shafts shall be provided as applicable.

2. Doors & Windows:

- Entrance door shall be provided with powder coated anodised aluminium glazed door with hydraulic door closures. Steel Collapsible door will be provided additionally for safety purpose.
- Frame of doors shall consist of T-iron frames 40 x 40 x 6 mm as per respective DSR item.
- Hostel will have 35 mm thick non decorative flush doors in single leaf including teak wood edge lipping (except Wash area) with rubber floor door stoppers and synthetic enamel paints on both sides. The door closer will be provided in the warden office.
- Wash Area and Toilets shall have 35 mm factory made machine pressed laminated flush door of exterior grade in single leaf.
- Steel glazed windows and ventilator frame & shutters shall be factory made ISI marked with Z-section; etc with MS grills with 12 mm square bars 100-120 mm c/c. Window & ventilators except toilet portion shall be in plain glass panes. The Central 40% area of the windows shall be fixed and the rest with openable shutters on either side. Glazed window shutters shall open outside and the wire mesh shutters shall open inside. Toilet portion windows/ventilators shall be with frosted glass panes.
- The windows shall be fitted with the required fixtures like stays and fasteners.
- Railing to front Ramp and internal stair case stair shall be 40 mm outer dia in SS 304 grade. Finished railing height shall be 950 mm.

3. Flooring:

- Warden Room in Hostel shall be provided with Full body (homogeneous) Vitrified floor tile flooring with size 600x600 mm.
- Treads and risers of stair shall have Kota stone slab in single length.
- All other floors except WC area shall be in Kota Stone flooring with marble strips (approx. @ 5% area) and skirting upto 100 mm height. Treads and risers of stair shall have Kota in single length.
- Toilet block shall be also be provided with anti-skid rectified ceramic floor tiles with size of 300mm x 300mm or more. The walls shall have 1st quality glazed ceramic tiles dado, inside WC area upto 900mm height and for remaining area of toilet block upto 2100 mm height as per respective DSR items.
- Flat back wall mounted Wash basins shall be provided.

4. Finishing

- External Finishing: The external wall (excluding Brick Tile Cladding area) shall be plastered with 18 mm plaster as per respective DSR Item and to be finished with premium acrylic smooth paints with silicon additives.
- Internal Finishing: Walls and ceiling shall be provided with first quality acrylic distemper (ready-mix).
- All wood work & steel work shall be provided with synthetic enamel paint of the approved brand.

Kitchen & Dining:

1. Facility areas:

- Facility area of dining hall, kitchen, washing area, etc shall be maintained same as per the standard drawing.
- All the floors except WC area and ramp shall be in Polished Kota Stone flooring in the respective DSR items with marble strips (approx. @5% area) and skirting upto 100 mm height.
- Dining Hall shall be provided with 1200 mm height ceramic glazed wall tiles. In Kitchen Hall, wash area and utensil area shall have glazed wall tiles upto 2100 mm height.
- WC area shall be provided with anti-skid rectified ceramic floor tiles of size 300x300 mm or more and wall with glazed ceramic tiles upto 1200 mm as per respective DSR items.
- Kitchen platform, pantry shall be provided with pre-polished Kota stone topping with proper nosing.
- For hand washing, oval shaped wash basin shall be provided on RCC platform finished with granite stone.
- Floor of utensil washing area shall have anti-skid vitrified tiles of size not less than 300x300 mm. For washing of utensils, granite stone trough in full length along the counter of width 450 and depth 450 mm will be provided.
- Kitchen courtyard: Kota Stone flooring shall be provided as per the respective DSR item.
- Railing to Ramp at the entrance shall be of 950 mm height having 40 mm outer dia SS pipe handrail.
- Peripheral wall of the Kitchen Courtyard shall be of 1200 mm height with wicket gate.

2. Doors & Windows

- Powder coated aluminium door shutters at entry of the Dining Hall shall be in two leaves.
- Other doors of Kitchen and Dining will have 35 mm thick non decorative flush doors in single leaf with teak wood edge lipping all-round (except Wash area) with rubber floor door stoppers and synthetic enamel paints on both sides.



- Wash Area & toilets shall have 35 mm thick factory pressed Laminated flush doors shutter in exterior grade.
- Steel glazed/gauzed windows and ventilator frame & shutters shall be factory made ISI marked with Z-section, etc with MS grills with 12 mm square bars. Height of window shall generally be 1800 mm (Sill level being 750 mm) except Kitchen window on Courtyard side which will be 1650 mm. Top 600 mm height will be fixed and bottom horizontally divided into three parts middle one fixed and sides openable. Window & ventilators except toilet portion shall be in plain glass panes. The Central 40% area of the windows shall be fixed and the rest with openable shutters on either side. The glazed window shutters shall open outside and the wire mesh shutters shall open inside. Toilet portion windows/ventilators shall be with frosted glass panes. The windows shall be fitted with the required fixtures like stays and fasteners.
- Railing to Ramp at the entrance shall be of 950 mm height provided with 40 mm outer dia SS 304 grade.

3. Finishing

- External Finishing: The external facia (excluding Brick Tile Cladding area) shall be plastered with 18 mm plaster as per respective DSR item.
- The external surface shall be provided with premier acrylic water proof exterior grade paint. The external surface including courtyard walls shall be provided with premium acrylic water proof exterior grade with silicon additive paint.
- Internal Finishing: Walls and ceiling shall be provided with first quality acrylic distemper (ready-mix).
- All wood work & steel work shall be provided with synthetic enamel paint of the approved brand.

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Principal Quarter

1. Doors & Windows:

- Frame of doors shall consist of T-iron frames 40 x 40 x 6 mm as per respective DSR item.
- Single shutters with 35 mm thick factory-made exterior grade non-Decorative type flush door shutter with teak wood lipping on edges with rubber floor door stoppers and synthetic enamel paints on both sides.
- Entrance door shall be 35 mm factory made machine pressed laminated flush door of exterior grade in single leaf along with MS safety grill door opening outside.
- Toilets shall have 35 mm factory made machine pressed laminated flush door of exterior grade in single leaf.
- Steel glazed/gauzed windows and ventilator frame & shutters shall be factory made ISI marked with Z-section and MS grills 12 mm square bars. The rooms shall also be provided with stainless steel wire (for mosquito) mesh steel shutters fixed in the steel frame. The glazed window shutters shall open outside and the wire mesh shutters shall open inside. Toilet portion windows/ventilators shall be with frosted glass panes. The windows shall be fitted with the required fixtures like stays and fasteners.
- Balcony shall have MS Railing of 1050 metre height over 150 mm height brick wall finished with kota stone

2. Flooring:

- All Room except kitchen shall be provided with Vitrified Tiles of size 600x600 mm.
- Treads and risers of stair shall have Kota stone slab in single length.
- Kitchen including utility shall be provided with rectified glazed ceramic anti-skid floor tiles of size not less than 300 x 300 mm and 1st quality ceramic glazed wall tiles dado over kitchen platform upto 600mm height whereas in utility area shall be 2100mm height.
- Toilet/Bath shall be provided with anti-skid rectified ceramic floor tiles with size of 300mm x 300mm or more. The walls shall have glazed ceramic tiles dado, inside WC area upto 900mm height and for bath upto 2100 mm height as per respective DSR items.
- The Kitchen platform shall be with Granite Stone fixed over RCC slab.
- Flat back wall mounted Wash basins shall be provided.

3. Finishing

- External Finishing: The external face with 18 mm plaster as per respective DSR item and to be finished with premium acrylic water proof exterior grade with silicon additive paint.
- Internal Finishing: First quality acrylic distemper (ready-mix).

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- All wood work & steel work shall be provided with synthetic enamel paint of the approved brand.

Warden – Residences, Type III Quarter & Type II Quarter

1. Doors & Windows:

- Frame of doors shall consist of T-iron frames 40 x 40 x 6 mm as per respective DSR item.
- Single shutters with 35 mm thick factory-made exterior grade non-Decorative type flush door shutter with teak wood lipping on edges (except Wash area) with rubber floor door stoppers and synthetic enamel paints on both sides.
- Toilets shall have 35 mm factory made machine pressed laminated flush door of exterior grade in single leaf.
- Steel glazed/gauzed windows and ventilator frame & shutters shall be factory made ISI marked with Z-section and MS grills 12 mm square bars. The rooms shall also be provided with stainless steel wire (for mosquito) mesh steel shutters fixed in the steel frame. The glazed window shutters shall open outside and the wire mesh shutters shall open inside. Toilet portion windows/ventilators shall be with frosted glass panes. The windows shall be fitted with the required fixtures like stays and fasteners.
- Balcony shall have MS Railing of 1050 metre height over 150 mm height brick wall finished with kota stone
- Railing of internal stair case shall of MS of finished height 950 mm.

2. Flooring:

- All Rooms except kitchen shall be provided with Vitrified Tiles of size 600x600 mm.
- Treads and risers of stair shall have Kota stone slab in single length.
- Kitchen including utility shall be provided with rectified glazed ceramic anti-skid floor tiles of size not less than 300mm x 300mm and 1st quality ceramic glazed wall tiles dado over kitchen platform upto 600mm height whereas utility area shall be 2100mm height.
- Toilet block shall be provided with anti-skid rectified ceramic floor tiles with size of 300mm x 300mm or more. The walls shall have glazed ceramic tiles dado, inside WC area upto 900mm height and for bath upto 2100 mm height as per respective DSR items.
- The Kitchen platform shall be with Polished Kota Stone Slab fixed over RCC slab.
- Flat back wall mounted Wash basins shall be provided.

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3. Finishing

- External Finishing: The external face excluding Brick Tile Cladding shall be plastered with 18 mm and to be finished with premier acrylic water proof exterior grade with silicon additive paint.
- Internal Finishing: Walls and ceiling shall be provided with first quality acrylic distemper (ready-mix).
- All wood work & steel work shall be provided with synthetic enamel paint of the approved brand.

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EMRS ESSENTIAL FEATURES & STANDARDS				
Sl. No	EMRS Features	Plinth Area in Sq. Mt.		
		Unit	Area (in Sq.m)	Total Area (in Sq.m)
A	School Building (G+1)/G +2			
1	Class Room	16	40.58	649.28
2	Computer Lab	1	81.16	81.16
3	Science Labs	3	81.16	243.48
4	Maths Lab	1	40.58	40.58
5	Language Lab/Art and Craft Room	1	40.58	40.58
6	Recreation Room	1	40.58	40.58
7	Library	1	91.92	91.92
8	Boys Toilet	2	40.58	81.16
9	Girls Toilet	2	40.58	81.16
10	Principal Room	1	40.58	40.58
11	Vice Principal Room	1	20.58	20.58
12	Office Room	1	40.58	40.58
13	Medical Room	1	14.44	14.44
14	Staff Room (Male)	1	20.29	20.29
15	Staff Room (Female)	1	20.29	20.29
16	Staff Toilet (Male)	1	10.00	10.00
17	Staff Toilet (Female)	1	10.00	10.00
18	Physically Handicapped Toilet	4	0.00	13.23
19	Security Room	1	0.00	5.76
20	Store Room	1	20.29	20.29
21	Circulation Area			1014.06
	Total (School Building) Plinth Area			2580.00
B	Boys Hostel (G+1)/ G+2			
1	Dormitories	20	52.89	1057.80
2	Toilets	5	52.65	263.25
3	Warden Office	1	80.00	80.00
4	Common Room	1	48.50	48.50
5	Store Room	1	14.78	14.78
6	Physically Handicapped Toilet	1	0.00	4.28
7	Circulation Area			891.39
	Total Plinth Area (Boys Hostel)			2360.00
C	Girls Hostel (G+1)/G+2			
1	Dormitories	20	52.89	1057.80
2	Toilets i/c Physically Handicapped toilet	5	52.65	263.25
3	Warden Room cum Office	1	80.00	80.00
4	Common Room	1	48.50	48.50
5	Store Room	1	14.78	14.78
6	Circulation Area			895.67
	Total Plinth Area (Girls' Hostel)			2360.00
D	Kitchen & Dinning Hall			
1	Kitchen & Pantry	1	210.00	210.00
2	Store Room	1	0.00	0.00
3	Dinning Room (Boys)	1	150.00	150.00
4	Dinning Room (Girls)	1	150.00	150.00



5	Circulation Area			40.00
	Total Plinth Area (Kitchen & Dinning)			550.00
E	Principal Quarter	1		130.00
F	Type III Quarter 15 Nos			
1	Bed Rooms	2*15	11.02	330.45
2	Toilet	2*15	3.87	115.95
3	Kitchen	1*15	8.60	129.00
4	Dinning	1*15	17.28	259.20
5	Drawing Room	1*15	0.00	0.00
6	Balcony	1*15	6.50	97.50
7	Circulation Area			268.00
	Type III-Plinth Area (15 Unit)			1200.00
G	Type II Quarter (10 Units)			
1	Bed Rooms	2*10	9.75	195.00
2	Toilet	2*10	3.87	77.40
3	Kitchen	1*15	7.30	73.00
4	Dinning	1*15	13.62	136.20
5	Drawing Room	1*15	6.00	60.00
6	Balcony	1*15	6.50	65.00
7	Circulation Area			93.40
	Type II-Plinth Area (10 Unit)			700.00
H	Guest House			80
I	ESS, Security Room and Pump Room			80
J	Sports Facility			
1	Play Ground with 200/400 mt track	1	Mandatory	YES
2	Basketball	2	Mandatory	40 m x 30 m
3	Volley Ball	2	Mandatory	YES
4	Kho Kho	2	Optional	40 m x 30 m
5	Archery	1	Mandatory	2500 Sq. Mt.
K	Fire Fighting			
1	School		Mandatory	YES
2	Hostel		Mandatory	YES
3	Quarter		Mandatory	YES
L	Drinking Water			
1	Sump with Pump Room	RCC underground sump (1.0 lakh litre)		
2	Deep Boring	2 Nos		
3	Overhead Tank	50000 Litre on the terrace of buildings		
4	Water Treatment Plant	Case to Case Basis		
5	External Water Supply System			YES
M	Other Services			
1	Surface Drain including culvert		Mandatory	YES
2	External Sewrage system		Mandatory	YES
3	Storm Water Drain		Mandatory	YES



N	Electrical Works			
1	Electric Substation			YES
2	SITC of sub station equipments (200/250 KVA Transformer)		Mandatory	YES
3	SITC of DG set (62 KVA)		Mandatory	YES
4	SITC UPS (10 KVA)		Mandatory	YES
6	Street Lighting		Mandatory	YES
5	Payment to Local Electrical Supply Authority		Mandatory	YES
O	Campus Development			
1	Levelling/Cutting/ Filling	As per specific site requirement		
2	Protection Works - Retaining Walls , Stone Pitching	As per specific site requirement		
3	Boundary Wall (1.80 metre high masonry wall with 0.60 metre high corcentia coil fencing at top)			YES
4	Entry Gate with Security Room			YES
5	Flag Hoisting Stage			YES
6	Internal Roads			YES
7	Internal pathways			YES
P	Green Features			
1	Recharge Pit		Mandatory	YES
4	Kitchen Waste Disposal Unit		Mandatory	YES
5	Septic Tank with Soak Pit/ Compost Pit		Mandatory	YES
6	Dust Bins		Mandatory	YES
8	Solar Street Lights		Mandatory	YES
9	Rain Water Harvesting		Mandatory	YES
10	Storm Water drain & sewer		Mandatory	YES
Q	Horticulture / Landscaping			
1	Landscaping			YES
2	Herbal Garden			YES
3	Plantation			YES
4	RCC Benches			YES
6	Campus Development			YES
R	Furnishing			
1	School			480 Students
2	Hostel			480 Students
3	Guest House (accomodated in Type-III quarter at ground floor)			1 No.



SPECIFICATION : HOSTEL DORMITORY & RESIDENTIAL QUARTERS- Anexure-II (a)

SPECIFICATION OF CONSTRUCTION & RESIDENTIAL QUARTERS- Annexure-II (a)				
SN	Item	Hostel Dormitory	Warden Residence/ Type II & Type II Quarters	Principal Quarters & Guest House.
1	Foundation & Structure	As per structural requirements based on soil investigation report. The design shall vary as per soil conditions.		
2	Superstructure			
	(a) Structure	RCC framed & Filler walls of Aerated Cement Concrete (ACC) / Cellular Concrete Block (CLC) / Brick work / Fly-ash brick		
	(b) Internal Partition	Half brick thick masonry in ACC/CLC/Fly-ash Bricks		
	(c) Floor height	3.15 Mt	3.00 Mts	
	(d) Plinth Height	Plinth height of all the buildings shall be kept as 60 cm from the adjoining ground level/plinth protection level. Where plinth height becomes more than 60 cm special care shall be taken. If plinth height more than 1.20 mtrs., approval of the competent authority may be sought.		
3	DOORS & WINDOWS			
	(a) FRAME			
	(i) Door Frame	Providing and fixing T-iron frames of 40×40×6 mm with 15×3 mm lugs 10 cm long embedded in cement concrete block 15×10×10 cm of C C 1:3:6 (As per D S R -2019 item no. 10.13.1)		
	(ii) Window Frame & Ventilators	Providing and fixing factory made ISI marked steel glazed window (partly fixed and/or partly side hung/top hung) and side hung wire gauzed windows shutters with z- section, window grills fixing with 15×3 mm lugs 10 cm long embedded in cement concrete block 15×10×10 cm of C C 1:3:6 (As per D S R -2019 item no. 10.11.1)		
	(b) Shutters			
	(i) Main Doors	i) Double shutters for dormitory hall, one with stainless steel Mosquito Proof Jali with autospring door closer and other Factory made flush door 35 mm thick (i/c Teak Wood Edge Lipping) ii) M.S. collapsible steel shutters (for safety measure) to main entrance lounge at GF	Double shutters one with painted iron grill with 35mm thick MS tubular box section styles and rails frame I/C stainless steel Mosquito Proof Jali and other Factory made flush door 35mm thick	
	(ii) Other Doors	Single shutters with 35 mm thick factory made exterior grade Non- Decorative type flush door shutter with teak wood lipping on edges & finished with one coat of wood primer followed by two or more coat of synthetic enamel paints (As per D S R - item no. 9.21.1 & 9.23 for flush door)		
	(iii) Bath, WC, Toilets Doors	Factory made Machine pressed pre-laminated flush door exterior grade with teak wood lipping on edges. The lamination sheet used shall be decorative high pressure of plain / wood grain in gloss / matt/ suede finish with high density protective surface layer and reverse side of adhesive bonding quality conforming to IS : 2046 Type S. The door shall be fixed to T Iron frame with SS Hinges.		
	(iv) Windows & Ventilators	Z- Section Double shutter one with frosted glass panes and other with stainless steel wire mesh shutter. All windows and ventilator shall be provided with 12 mm square guard bars at 10 to 12 cms C/C spacing		
	(c) Hardware & Fittings	Powder coated/anodized Aluminum/ SS fittings		
4	FLOORING			
	(i) Living/Drawing Room, Bed Rooms, Dining & Family Lounge with matching grouting of joints	All flooring Kota stone combination with marble strip except WC/toilets area with matching grouting of joints	Ceramic Floor Tiles/ Vitrified Tile Flooring not less than 400mm x 400 mm laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand) jointing with grey cement slurry @ 3.3kg/sqm including grouting the joints with white cement and matching pigments etc., complete	600 mm x 600 mm Vitrified Tile Flooring laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand) jointing with grey cement slurry @ 3.3 kg/sqm including grouting the joints with white cement and matching pigments etc., complete (to be removed)

	(ii) Kitchen		Anti skid Ceramic/ vitrified tiles of size not less than 300 mm × 300 mm with water absorption less than 0.08% laid with 20mm thick cement mortar 1:4 (1 cement 4 coarse sand) jointing with grey cement slurry @ 3.3kg/sqm including grouting the joints with white cement and matching pigments etc. complete	Anti skid vitrified tiles of size not less than 400 mm × 400 mm with water absorption less than 0.08% laid with 20mm thick cement mortar 1:4 (1 cement 4 coarse sand) jointing with grey cement slurry @ 3.3kg/sqm including grouting the joints with white cement and matching pigments etc. complete
	(iii) Kitchen Counter study table top for dormitories	Udaipur green marble / granite stone with nosing with matching grouting of joints		
	(v) Common circulation area	Classroom – Mirror polished Kota stone with marble strip (to be removed) (Kota stone slab flooring with marble strips (upto 50mm width) in required pattern including rubbing and polishing complete)	NA	NA
	(vi) Staircase	Pre-polished (to be removed) Kota stone in single length up to 1.05 metre of treads & risers.		
	(vii) Toilets / Bathroom	Glazed ceramic anti-skid of size not less than 300×300 mm with matching grouting of joints		
	Dado & Skirting			
	(i) Skirting in rooms and other areas	100 to 150 mm height skirting matching with floor materials		
	(ii) Kitchen Dado	NA	Ceramic Glazed tiles of size not less than 200 × 300 mm as per design from floor up to full height.	Ceramic Glazed tiles of size not less than 300 × 450 mm as per design from floor up to full height. NA
	(iii) Toilets/bathrooms/ WC Dado	Ceramic Glazed tiles of size not less than 200 × 300 mm up to 2.10 metre height	Ceramic Glazed tiles of size not less than 200 × 300 mm up to 2.10 metre height	Ceramic Glazed tiles of size not less than 300 × 450 mm as per design from floor up to 2.10 metre height
5	FINISHES			
a)	Internal Walls	All walls to be painted with low VOC Acrylic washable distemper Synthetic enamel paint on all wood works and steel works	All walls to be treated with 2 mm thick POP (one time only) except ceiling, toilet and kitchen and painted with low VOC Acrylic washable distemper Synthetic enamel paint on all wood works and steel works	
b)	External Walls	Synthetic enamel paint on all wood work & steel work Premium Acrylic Smooth exterior paint with Silicone additives or its equivalent		
6	Hand Rail	Railing shall be of stainless steel		
7	Roof	RCC Slab brick with Koba treatment (Item No. 22.7.1 of DSR-10)		
8	Toilets for Physically disabled person	One each for boys and girls (specification as per NBC)	NA	NA

SPECIFICATION : HOSTEL DORMITORY & RESIDENTIAL QUARTERS - Annexure- II (b)

Sl. No.	Item	School Building	Kitchen & Dining
1	Foundation & Structure	As per structural requirements based on soil investigation report. The design shall vary as per soil conditions.	
2	Superstructure		
	a) Structure	RCC framed & Filler walls of Aerated Cement Concrete (ACC) / Cellular Concrete Block (CLC) / Brick work/Fly-ash brick	
	b) Internal Partition	Half brick thick masonry in ACC/CLC/Fly-ash Bricks	
	c) Ceiling height (Clear)	3.60 Mts	3.45 Mts
	d) Plinth Height	Plinth height of all the buildings shall be kept as 60 cm from the adjoining ground level/plinth protection level. Where plinth height becomes more than 60 cm special care shall be taken. In case plinth height more than 1.20 mtrs, approval of the competent authority may be sought.	
3	DOORS & WINDOWS		
	a) FRAME		
	(i) Door Frame	Providing and fixing T-iron frames of 40x40x6 mm with 15x3 mm lugs 10 cm long embedded in cement concrete block 15x10x10 cm of C.C. 1:3:6 (As per D.S.R. -2016 item no. 10.13.1)	
	(ii) Window Frame & Ventilators	Providing and fixing factory made ISI marked steel glazed windows (partly fixed and/or partly side hung/top hung) partly side hung/top hung and side hung wire gauzed windows shutter with z-section, with z-section, window grills fixing with 15x3 mm lugs 10 cm long embedded in cement concrete block 15x10x10 cm of C.C. 1:3:6 (As per D.S.R. -2016 item no. 10.11.1)	Providing and fixing factory made ISI marked steel glazed windows (partly fixed and/or partly side hung/top hung) partly side hung/top hung and side hung wire gauzed windows shutter with z-section, with z-section, window grills fixing with 15x3 mm lugs 10 cm long embedded in cement concrete block 15x10x10 cm of C.C. 1:3:6 (As per D.S.R. -2016 item no. 10.11.1)
	b) Shutters		
	(i) Main Doors	i) Single shutters with 35 mm thick factory made exterior grade Non- Decorative type flush door shutter with teak wood lipping on edges & finished with one coat of wood primer followed by two or more coat of synthetic enamel paints (As per D.S.R. - item no. 9.21.1 & 9.23 for flush door) 10 M.S. collapsible steel shutters at main entrance for safety measure only.	Powder coated Aluminium Double shutters - one fully glazed and other with SS wire mesh
	(ii) Other Doors	Single shutters with 35 mm thick factory made exterior grade Non- Decorative type flush door shutter with teak wood lipping on edges & finished with one coat of wood primer followed by two or more coat of synthetic enamel paints. (As per D.S.R. - item no. 9.21.1 & 9.23 for flush door)	
	(iii) Bath, WC, Toilets Doors	Factory made Machine pressed pre-laminated flush door exterior grade with teak wood lipping on edges. The lamination sheet used shall be decorative high pressure of plain / wood grain in gloss / matt/ suede finish with high density protective surface layer and reverse side of adhesive bonding quality conforming to IS - 2046 Type S. The door shall be fixed to T-Iron frame with SS Hinges.	
	(iv) All Window/ventilator Shutter (except WC, Toilets, Baths)	Z-section single shutter with plain glass panes windows and ventilator shall be provided with 12 mm square guard bars at 10 to 12 cms C/C spacing	Z-Section Double shutter one with frosted glass panes and other with stainless steel wire mesh shutter. All windows and ventilator shall be provided with 12 mm square guard bars at 10 to 12 cms C/C spacing
	(v) Windows/ventilators	Z-section single shutter with Frosted Glass	
	(c) Hardware & Fittings	Powder coated/anodized Aluminium/ SS fittings	
4	Flooring, Skirting, Dado, Counter/pantry, court yard		
	a) Flooring		
	(i) Main entrance hall, common circulation	Mirror polished Kota stone with marble strip	
	(ii) Other	Classroom - Kota stone slab flooring with marble strips (upto 50mm width) in required pattern including rubbing and polishing complete)	Dining Hall & Kitchen Area - Kota stone slab flooring with marble strips (upto 50mm width) in required pattern including rubbing and polishing complete)
	(iii) Toilet/WC/Bath (including common circulation area of toilet block)	Rectified Glazed ceramic anti-skid of size not less than 300x300 mm including grouting the joints	Rectified Glazed ceramic anti-skid of size not less than 300x300 mm including grouting the joints
	(iv) Staircase/steps	Kota stone in single length up to 1.05 metre of treads & risers	Kota stone in single length up to 1.05 metre of treads & risers
	(b) Skirting - In rooms and other area	100 to 150 mm height skirting matching with floor materials	
	(c) Dado		
	(i) In toilets/WC's/Baths (including common circulation area of toilet block)	Glazed Ceramic tiles not less than 200mm x 300mm as per design from floor up to 2.1 metre height	Glazed Ceramic tiles not less than 200mm x 300mm as per design from floor upto 2.1 metre height
	d) Counter/ pantry	At Laboratory platform Udaipur green marble/ granite stone with nosing	Kota stone for kitchen and pantry platform

4	Open Court Yard	Central court yard of School Building (i) Top Course 60 mm thick factory made cement concrete interlocking paver block of M-30 grade made by block making machine with strong vibratory compaction etc in required colour, pattern, 50 mm thick compacted bed of course sand etc (as per item no 16 68, DSR-14) (ii) Based course 750 mm thick CC (1:5:10) (iii) The top level of Court yard shall be (-) 30 cm from plinth level of School Building	Kitchen back courtyard with Kota Stone Slab flooring and front Dining courtyard with anti skid vitrified tile 300 x 300 mm flooring	
5	ROOFING	RCC Slab with Koba treatment (Item No 22 7 of DSR-14)	Kitchen back side courtyard and Dining Front Courtyard Precoated GI profilesheet roofing and	
6	FINISHING			
	a) External	Synthetic enamel paint on all wood work & steel work Premium Acrylic Smooth exterior paint with Silicone additives or its equivalent	Synthetic enamel paint on all wood work & steel work Premium Acrylic Smooth exterior paint with Silicone additives or its equivalent	Synthetic enamel paint on all wood work & steel work Premium Acrylic Smooth exterior paint with Silicone additives or its equivalent
	b) Internal	All walls & ceiling to be painted with low VOC Acrylic washable distemper Synthetic enamel paint on all wood works and steel works POP- Internal walls only of rooms except corridor, staircase toilets treated with 2 mm thick POP (No POP in Ceiling)	All walls & ceiling to be painted with low VOC Acrylic washable distemper POP shall be provided only over the tiles height in Dining Area. Synthetic enamel paint on all wood works and steel works	
8	Railing	Railing shall be of stainless steel, wherever required		
9	Roof Water Treatment	Brick Coba Treatment as per DSR-14, item No 22 7 1		Brick Coba Treatment as per DSR-14, item No 22 7 1
10	Roof Water Tank	Boys toilets 4000 ltrs Girls Toilets 2000 ltrs	500 litres for each toilets	(i) 10000 litres for Kitchen uses (ii) 500 litres for each toilets
11	Cooking platform			RCC as per design and drawings
12	Pantry			RCC as per design and drawings
13	Laboratories Counter/ Platform	RCC as per design and drawings		RCC as per design and drawings
14	Ramp for Physically disable person	One no (specification as per NBC)	One no (specification as per NBC)	Two nos (specification as per NBC)
15	Toilets for Physically disable person	One each for boys and girls (specification as per NBC)		

Details scope & specification of Development works and Campus Boundary wall		
(A) Development/external services work for EMRS/EMDBS Campus:-Annexure- II		
Sl. No.	Name of work	Details
1	Land development for buildings	The formation level of the land for building shall be developed considering the high floor level of the area, economic aspect. The quantities of earth filling/cutting shall be worked out in detailed calculation basis based on Initial level, contour plan
2	Preparation of play fields:	
	(i) Playfield of Size 190mx110m for foot ball, cricket, hockey etc including 400mtrs/200mtrs - running track: 1 no (Size may be vary as per availability of land)	Leveling with good earth after filling/cutting of earth. The quantities of earth filling/cutting shall be worked out in detailed calculation basis as per initial level, contour plan. Finished level shall be 30 cm higher than the adjoining ground level so that water logging can be avoided.
	(ii) Basket Ball fields -- 2 nos	(a) Size-40mx30m: Leveling with good earth after filling/cutting of earth. The quantities of earth filling/cutting shall be worked out in detailed calculation basis as per initial level, contour plan. Finished level shall be 30 cm higher than the adjoining ground level so that water logging can be avoided. (b) Size 30mx18m CC court with pole, board, basket etc. (i) Based on concrete (1:5:10) of 7.50 cm thick (ii) Top course Concreting (M-20 grade designed mix) of 10 cm thick. (iii) Pole, board, Basket: As per SAI standard.
	(iii) Khokho/ Volley Ball court: 2 nos (Size-40mx30m for each)	Leveling with good earth after filling/cutting of earth. The quantities of earth filling/cutting shall be worked out in detailed calculation basis as per initial level, contour plan. Finished level shall be 30 cm higher than the adjoining ground level so that water logging can be avoided
3	Internal roads, paths and culverts:	
	(i) Internal roads (Cement Concrete roads)	(i) Width: Shall be 3.50 mtrs + 1 mtrs. Shoulder/side berm of each side. (ii) Road shall be constructed up to all buildings (iii) Based Course (1:5:10) of 10 cm thick. (iv) Top Course (M-20 grade designed mix) of 15 cm thick (v) Finished/top level of the edge of the roads i.e. shoulder level shall be 15 cm. higher than the adjoining ground level
	(ii) Pathways:	(i) 2.00 mtrs. width + 1 mtrs. shoulder/side berm each side of the pathways. (ii) Pathways shall be provided to connect the buildings/ permanent infrastructure to nearby internal roads. (iii) No pathways shall be provided on side of the roads. (iv) Top Course: 60 mm thick factory made cement concrete interlocking paver block of M-30 grade made by block making machine with strong vibratory compaction etc. in required colour, pattern, 50 mm thick compacted bed of coarse sand etc (as per item no. 16.68, DSR-16) (v) Based course: 7.50 cm thick CC (1:5:10) (vi) Kerb stone on edge: 50 mm thick, 250 mm height (for which shall be embedded underground): Factory Made kerb stone of M 25 grade cement concrete (as per item no. 16.69, DSR-16). (vi) Finished/top level of the edge of the paths shall be 15 cm. higher than the adjoining ground level.
	(iii) Culverts:	As per actual requirement.
4	External water supply:	
	(i) Tube/open well i/c 2 Nos submersible pump 7.5 HP (preferably Solar Powered) & cabling etc. complete	Shall be executed as per availability of underground water after examination by the local PHED or any other related Govt. agencies i.e. Central Ground Water Board, Local PHED etc. The yield of water source shall be 15000 LPH or more.
	(ii) Overhead Tank	Required in all building
	(iii) Under Ground Sump:	100000 ltr. capacity with 2 nos. centrifugal pumps including one standby.

Minimum Quality Assurance (QA) Plans

Sl. No.	Tentative Date Planned for site visit	Target Activity *	Remarks of TPQA	
1	2	3	4	

*The visit shall be planned in such a manner so that the major milestones of building construction can be checked from quality point of view. The activities like layout of building components, retaining structures, marking of depth of foundation & centre of columns, foundation concreting, accuracy of plinth levels & lintel level, brickwork, slab casting, plastering, flooring, joinery, surface drains & sewerage planning, finishing works and all other relevant activities as considered necessary to be included in the **Quality Assurance Plan**.

Signature of TPQA



Annexure – I		
Sr. No.	List of Equipment available For Field Testing Laboratory	Comments of TPQA
A.	For Building Works	
1	Balances	
(i)	7 kg. to 10 kg. capacity, semi-self indicating type – accuracy 10 gm.	
(ii)	500 gm. capacity, semi-self indicating type – accuracy 1 gm.	
(iii)	Pan balance – 5 kg. capacity – accuracy 10 gms.	
2	Ovens-electrically operated, thermostatically controlled upto 110 C – sensitivity 1 C.	
3	Sieves: as per IS 460=1962.	
(i)	I.S. sieves – 450mm internal dia, of size 100 mm, 80 mm, 63 mm, 50 mm, 40 mm, 25 mm, 20 mm, 12.5 mm, 10 mm, 6.3 mm, 4.75 mm, complete with lid and pan.	
(ii)	I.S. sieves- 200mm internal dia (brass frame) consisting of 2.36mm, 1.18mm, 600 microns, 425 microns, 300 microns, 212 microns, 150 microns, 90 microns, 75 microns, with lid and pan.	
4	Sieve shaker capable of 200 mm and 300 mm dia sieves, manually operated with timing switch assembly.	
5	Equipment for slump test- Slump cone, steel plate, tamping rod, steel scale, scoop.	
6	Dial gauge, 25 mm travel – 0.01 mm/division least count - 2nos.	
7	100 tonnes compression testing machine, electrical-cum manually operated.	
8	Graduated measuring cylinders 200 ml capacity – 3 Nos.	
9	Enamel trays (for efflorescence test for bricks).	
(i)	300 mm x 250 mm x 40 mm- 2 nos.	
(ii)	Circular plates of 250 mm dia – 4 nos.	

Signature of TPQA



Annexure – II		
Sr. No.	Field Testing Instruments	Comments of TPQA
1	Steel tapes – 3 m	
2	Vernier calipers	
3	Micrometer screw 25 mm gauge	
4	A good quality plumb bob	
5	Spirit level, minimum 30 cms long with 3 bubbles for horizontal vertical	
6	Wire gauge (circular type) disc	
7	Foot rule	
8	Long nylon thread	
9	Rebound hammer for testing concrete	
10	Dynamic penetrometer	
11	Magnifying glass	
12	Screw driver 30 cms long	
13	Ball pin hammer, 100 gms	
14	Plastic bags for taking samples	
15	Moisture meter for timber	
16	Earth resistance tests (for Electrical Divisions)	
17	Megger (for Electrical Divisions)	

Signature of TPQA



Annexure – III

Proforma For Mandatory Tests To Be Attached With Running Bills

Name of the work Name of
Contractor..... Agreement No. and Date
R/A Bill No.

Sl. No.	Item	Quantities as per agreement	Frequency as per specification	No. of tests required	Upto date quantity	No. of tests required	No. of tests actually done	Remarks
1	2	3	4	5	6	7	8	9

Note: If the number is less than that required, then reasons shall be recorded.

Signature of TPQA



Annexure – IV
Check Lists For Various Items

PART – A
CHECK LIST FOR ITEMS OF FOUNDATION CONCRETE

Name of work

Name of contractor

Agreement No.

- | | |
|--|--------|
| 1. Date of inspection | |
| 2. Location | |
| 3. Material used for concrete whether tested | |
| (a) Sand | Yes/No |
| (b) Coarse aggregate | Yes/No |
| (c) Water | Yes/No |
| (d) Admixture, If any | Yes/No |
| 4. Raft top level, whether provided as per details | Yes/No |
| 5. Architectural/structural drawing correlated | Yes/No |
| 6. Whether location of construction joint has been discussed with Executive Engineer, and he has approved it | Yes/No |
| 7. Cleaning over water proofing surface and construction joint done | Yes/No |
| 8. CC cover blocks of 60 mm, thickness provided (min 2 in one square metre area) | Yes/No |
| 9. Reinforcement placement as per relevant structural drawing checked | Yes/No |
| 10. Layout of columns as per relevant structural drawing checked | Yes/No |
| 11. Placement of shuttering plates and key board for proper construction joint with shuttering oil | Yes/No |
| 12. Cement slurry applied on construction joint before pouring of concrete | Yes/No |
| 13. Trained mason available | Yes/No |
| 14. Concreting to start from farthest point to nearest point with respect of weight batching plant | Yes/No |
| 15. Concrete mix has been designed | Yes/No |
| 16. Plasticiser being used | Yes/No |
| 17. Adequate number of concrete vibrators in working condition available | Yes/No |
| 18. Slump checked | Yes/No |
| 19. Sample cubes taken | Yes/No |
| 20. Signature of Junior Engineer | |
| 21. Signature of Assistant Engineer | |
| 22. Signature of Executive Engineer | |

Signature of TPQA



PART – B

CHECK LIST FOR COLUMNS/BEAMS/SLABS

- | | |
|--|--------|
| 1. Date of inspection | |
| 2. Drawing No. | |
| 3. Location | |
| 4. Whether materials used conform to relevant Specifications | |
| (a) Sand | Yes/No |
| (b) Coarse aggregate | Yes/No |
| (c) Water | Yes/No |
| (d) Admixture, if any | Yes/No |
| 5. Whether structural drawings correlated with architectural drawings? | Yes/No |
| 6. Whether the centre line of column/beams checked with references to grid lines as per architectural drawings? | Yes/No |
| 7. Whether treatment of expansion joint, wherever required, is done? | Yes/No |
| 8. Whether cleaning, repairing and approval of shuttering plate, application of quality shuttering oil is done? | Yes/No |
| 9. Whether shuttering is in true plumb and vertical and properly done and maintained during concreting? | Yes/No |
| 10. Whether reinforcement detailing, their placement are as per structural drawings? | Yes/No |
| 11. Whether proper gauge binding wire is used and with full cross binding and tightening of reinforcement bars with stirrups? | Yes/No |
| 12. Whether required minimum cover to reinforcement is maintained? | Yes/No |
| 13. Whether stainless steel cramps, angle irons for holding stones and any holding arrangement for electrical/mechanical/fire fighting/other services have been seen and approved by JE (E)/AE (E) | Yes/No |
| 14. Whether conduits for various electrical/mechanical/fire fighting/other services have been seen and approved by JE (E)/AE (E) | Yes/No |
| 15. Whether concrete of approved design mix within maximum permissible water-cement ratio is used? | Yes/No |
| 16. Whether admixture of good brand quality approved by Engineer-In-charge is used? | Yes/No |
| 17. Whether technical supervision at batching plant/mixer and at point of concreting done? | Yes/No |
| 18. Whether concreting is placed within initial setting time of mixing? | Yes/No |
| 19. Whether proper compaction with vibrator is done? | Yes/No |
| 20. Whether the concreting has been done in a lift not exceeding 1.5 m? | Yes/No |
| 21. Whether cubes as per requirement filled for testing? | Yes/No |
| 22. Signature of Junior Engineer | |
| 23. Signature of Assistant Engineer | |
| 24. Signature of Executive Engineer | |

Post-concreting:

- | | |
|--|--------|
| 25. Whether shuttering stripped off as per specification, and laitance removed immediately thereafter? | Yes/No |
| 26. Whether proper arrangement of curing and curing period maintained as per specifications? | Yes/No |



27. Whether hacking of RCC surface by proper hacking tool for subsequent plastering/finishing is carried out?

Yes/No

28. Signature of Junior Engineer

29. Signature of Assistant Engineer

30. Signature of Executive Engineer

Signature of TPQA



PART – C

CHECK LIST FOR BRICK WORK

1. Date of Inspection
2. Drawing No.
3. Location
4. Whether materials used conform to relevant Specifications and whether mandatory tests
doen?
 (a) Sand Yes/No
 (b) Bricks Yes/No
 (c) Water Yes/No
5. Whether structural drawings co-related with architectural drawings? Yes/No
6. Whether the centre line of brickwork checked with reference to grid lines as per
architectural drawings? Yes/No
7. Whether bricks soaked in water before use for sufficient period? Yes/No
8. Whether queen closers are used at junction of walls? Yes/No
9. Whether brickwork is in true plumb and vertical and all layers truly horizontal? Yes/No
10. Whether graduated wooden straight edge storey rod being used for
keeping height of brick courses uniform? Yes/No
11. Whether wall height being constructed in a day is being restricted to 1 m height? Yes/No
12. Whether parts of wall left at different levels are raked back at an angle
of 45 degrees or less with the horizontal? (Toothing is not to be permitted) Yes/No
13. Whether top courses of all plinths, parapets, steps and top of walls below
floor and roof slabs laid with brick on edge? Whether marucona provided
at corners in such brickwork? Yes/No
14. Whether thickness of joints in brickwork is kept 1 cm +_ 20%? Yes/No
15. Whether mortar of approved mix within maximum permissible
water cement ratio is used? Yes/No
16. Whether all horizontal and vertical joints are being filled? Yes/No
17. Whether proper arrangement of curing and curing period maintained as per
specification? Yes/No
18. Whether date of work done written? Yes/No
19. Signature of Junior Engineer
20. Signature of Assistant Engineer
21. Signature of Executive Engineer

Signature of TPQA



PART – D

CHECK LIST FOR PLASTERING

1. Date of inspection
2. Drawing No.
3. Location
4. Whether materials used conform to relevant specifications and whether mandatory tests done? Yes/No
5. Whether surface cleaned of all loose mortar and efflorescence? Yes/No
6. Whether all conduiting and electrical piping done? Yes/No
7. Whether all doors, windows etc. fixed? Yes/No
8. Whether all defects of brickwork/CC/RCC rectified? Yes/No
9. Whether preparation of surface done? Yes/No
10. Whether 2.5 m long aluminium straight edge and plumb bob being used to check vertically and evenness of surface? Yes/No
11. Whether 15 cm x 15 cm bunda at every 2 m horizontally and vertically being provided to serve as gauges? Yes/No
12. Whether uniform groove provided at junctions of all plaster and ceiling plaster? Yes/No
13. Whether mortar of approved mix within maximum permissible water cement ratio is used? Yes/No
14. Whether proper arrangement of curing and curing period maintained as per specifications? Yes/No
15. Whether date of work done written? Yes/No
16. Signature of Junior Engineer
17. Signature of Assistant Engineer
18. Signature of Executive Engineer

Signature of TPQA



PART – E

CHECK LIST FOR WATER SUPPLY LINES

- | | |
|--|--------|
| 1. Date of inspection | |
| 2. Drawing No. | |
| 3. Location | |
| 4. Whether materials used conform to relevant specifications and whether mandatory tests done? | Yes/No |
| 5. Whether plumber employed is licensed plumber or not? | Yes/No |
| 6. Whether plan for piping system has been prepared and got approved? | Yes/No |
| 7. Whether all pipes and fittings are ISI marked? | Yes/No |
| 8. Whether a sample system has been prepared and got approved? | Yes/No |
| 9. Whether clamps provided at specified spacing? | Yes/No |
| 10. Whether pipe lines checked at required pressure before covering? | Yes/No |
| 11. Whether weight of flushing pipe checked? | Yes/No |
| 12. Whether flushing cistern is ISI marked and internally painted with bitumastic paint? | Yes/No |
| 13. Whether fittings like wash basin, sink pan, cistern, bib cock, stop cock, wheel valves, etc. are ISI marked? | Yes/No |
| 14. Whether PVC water storage tank is ISI marked? If not, whether sample sent for testing? | Yes/No |
| 15. Signature of Junior Engineer | |
| 16. Signature of Assistant Engineer | |
| 17. Signature of Executive Engineer | |

Signature of TPQA



SECTION 53

QUALITY ASSURANCE AND TECHNICAL AUDIT WING

53.1 Introduction

- (1) The Quality Assurance activity, in order to be truly effective has to ensure a progressively improved and uniform quality of the finished work. Experience gained over years indicate that "Process Control" is essential in building construction to ensure that the work in different phases is executed in a manner pre-determined and laid down in specifications. In order to achieve the above, the pre-requisites cover among other things, an inbuilt provision in the contract for a system of continuous check on quality by the field staff and the contractor for ensuring quality of work; availability of adequately manned and equipped agency for overseeing the quality aspects, and periodical appraisal of quality and a system of feed back for effecting possible improvements.
- (2) Maintenance of quality has to be imbibed in the minds of the contractor as well as the officials of the department. It is better to have a system in which the quality of work is achieved during the construction stage itself, rather than indulge in 'fire fighting' activities after the damage has been done by way of post-construction 'quality control'. Quality control does have a place in the system, but this has to be more by way of being a means of enforcement, to ensure that the quality of work is checked and controlled as a continuous process during the construction stage itself. The final output will then be satisfying both to structural as well as aesthetical sensibilities.

53.2 Minimum Quality Assurance Plan (Modified as per OM/MAN/233)

- (1) **Minimum Q.A. Plan shall have to be part of tendered document for all the works costing more than Rs. 1 Crore, and for works not exceeding Rs. 1 Crore, the Technical Sanctioning Authority may provide this clause in the NIT considering its necessity.** (Modified vide OM DG/ MAN/261 dt. 18.01.2014)
- (2) Lot size, number of required tests and frequency of testing needs to be clearly indicated in QA Plan. While deciding these criteria CPWD Specifications & Provisions of BIS Code and Standard Practices may be referred. Volume of work, Practical Difficulties and Site Conditions etc. may also be kept in view and lot size, number of tests and frequencies of testing may be varied suitably by NIT Approving Authority.
- (3) It should clearly indicate the Machinery and other Tool & Plants required to be deployed at site by the contractor. Entire Machinery and T&P may not be required at the start of work, therefore, a proper time schedule by which each Machinery & T&P is to be brought at site should also be indicated.
- (4) Requirement to setup field laboratory should be defined. All the testing equipments to be arranged by the contractor should be clearly mentioned. If field lab is to be setup by the Department the same may be indicated in the QA Plan.
- (5) All the relevant and applicable codes, specifications and standards, as well as the acceptance criteria for various items of work, workmanship, materials and process employed needs to be mentioned.
- (6) A proper shuttering schedule showing quantity of shuttering to be brought at site either in one lot or at different stages of work should form part of QA Plan.
- (7) Maintenance of Register of Tests -
 - (i) All the registers of tests carried out at Construction Site or in outside laboratories shall be maintained by the contractor which shall be issued to the contractor by Engineer-in-charge in the same manner as being issued to CPWD field staff.
 - (ii) All Samples of materials including Cement Concrete Cubes shall be taken jointly with Contractor by JE and out of this at least 50% samples shall be taken in presence of AE in charge. If there



is no JE, all Samples of materials including Cement Concrete Cubes shall be taken by AE jointly with Contractor. All the necessary assistance shall be provided by the contractor. Cost of sample materials is to be borne by the contractor and he shall be responsible for safe custody of samples to be tested at site.

- (iii) All the test in field lab setup at Construction Site shall be carried out by the Engineering Staff deployed by the contractor which shall be 100% witnessed by JE and 50% of tests shall be witnessed by AE-in-charge. At least 10% of the tests are to be witnessed by the Executive Engineer.

For outstations the percentage of tests to be witnessed by JE, AE & EE are to be decided by NIT Approving Authority and should form part of QA Plan.

(iv) All the entries in the registers will be made by the designated Engineering Staff of the contractor and same should be regularly reviewed by JE/AE/EE.

- (v) Contractor shall be responsible for safe custody of all the test registers.

- (8) Submission of copy of all test registers, Material at Site Register and hindrance register along with each alternate Running Account Bill and Final Bill shall be mandatory. These registers should be duly checked by AE(P) in Division Office and receipts of registers should also be acknowledged by Accounts Officer by signing the copies and register to confirm receipt in Division office.

If all the test registers and hindrance register is not submitted along with each alternate R/A Bill & Final Bill, it will be responsibility of EE & AAO that no payment is released to the contractor.

- (9) Maintenance of Material at Site (MAS) Register -

- (i) All the MAS Registers including Cement and Steel Registers shall be maintained by Contractor which shall be issued to the contractor by Engineer-in-charge in the same manner as being issued to CPWD field staff.
- (ii) Each of the entry of receipt of material at site shall be 100% test checked by JE or by AE if there is no JE.
- (iii) Each MAS Register shall be checked by JE at least twice a week and at least once a week by AE. If There is no JE then MAS registers will be checked by AE at least twice a week.
- (iv) Cement Register shall be reviewed by EE at least **once** in a month.

For outstations the frequency of checking the Registers by JE, AE & EE is to be decided by NIT Approving Authority and should form part of QA Plan.

- (10) It will be deemed that work so measured, checked and paid is of the required quality and standard, both in respect of Ingredients as well as the intended functions it is supposed to perform. In other words, the work would not only meet the required specifications but also the workmanship as per sound engineering practices.

- (11) Minimum QA plan may vary work to work basis depending upon nature and volume of work.

- (12) The Superintending Engineer shall also have to check and sign these reports at suitable intervals in token of his ensuring compliance of the 'Quality Assurance Plan' for the work. For major works costing above Rs. 10 crores, he shall check and sign these reports for works in his headquarter, before every alternate running account bill, beginning from the first bill, as well as before the final bill is paid to the contractor. For works outside his headquarter, he shall check and sign these reports whenever he goes on inspection. The Chief Engineer can waive this requirement in exceptional cases, and for recorded reasons. However, in any case, the Superintending Engineer shall not be absolved of his responsibility to ensure that the 'Quality Assurance Plan' is complied with in every work under his charge. It will be his responsibility to locate the lapses or deficiency and take suitable remedial action if the Quality Assurance Plan is not implemented in spirit and action by the field officers.



Quality Assurance & Quality Control Laboratory Test Program

A sample QA QC Lab test program is presented below, however, the testing program shall be as per the approved Project Quality Plan agreed between the Client, PMC and the Contracting agency.

Sr. No.	Material	Tests to be carried out	Reference I. S. Code	External/Site Lab Testing Frequency	TPI's Role	Code of Confirmation.
1.	Borrowed Soil, Natural Soil	<ul style="list-style-type: none"> ▪ MDD ▪ OMC ▪ Liquid Limit ▪ Plastic Limit ▪ Plasticity Index 	<ul style="list-style-type: none"> • IS: 2720 	<ul style="list-style-type: none"> ▪ Once per Source 	<ul style="list-style-type: none"> ▪ Review test reports 	IS: 2720
2.	Compacted Earth	<ul style="list-style-type: none"> ▪ FDD 	<ul style="list-style-type: none"> • IS: 2720 	<ul style="list-style-type: none"> ▪ Per 250 Sqm. ▪ Per layer 	<ul style="list-style-type: none"> ▪ Review test reports ▪ Randomly Witness 	IS: 2720/CPWD
3.	Cement (PPC)	<u>Physical Tests</u> <ul style="list-style-type: none"> ▪ Initial Setting time ▪ Final Setting Time ▪ Compressive Strength ▪ Fineness ▪ Soundness ▪ Consistency 	<ul style="list-style-type: none"> • IS: 4031 	<ul style="list-style-type: none"> ▪ Submission of MTC ▪ Per source of Brand ▪ Per Lot ▪ Per 50 Tonnes or part thereof 	<ul style="list-style-type: none"> ▪ Review of MTC & Test reports 	IS: 1489
		<u>Chemical Tests</u> <ul style="list-style-type: none"> ▪ % Insoluble Residue ▪ % magnesia ▪ % Sulphuric Anhydride ▪ % Loss on ignition ▪ Chloride 	<ul style="list-style-type: none"> • IS: 4032 	<ul style="list-style-type: none"> ▪ Submission of MTC ▪ Per Source of Brand 	<ul style="list-style-type: none"> ▪ Review of MTC & Test Reports 	IS: 1489
4.	Coarse Aggregate	Percentage of Soft or deleterious material Particle Size	<ul style="list-style-type: none"> • IS: 2386 	Once per Month Per Source Per 40 Cum. Per Source.	<ul style="list-style-type: none"> ▪ Review test reports ▪ Random Witness 	IS 383:2016



Sr. No.	Material	Tests to be carried out	Reference I. S. Code	Testing Frequency	TPI's Role	Code of Confirmation.
5.	Fine Aggregate	Organic Impurities	<ul style="list-style-type: none"> IS: 2386 	Per Source	<ul style="list-style-type: none"> Review reports Randomly Witness 	IS 383:2016
		Material Finer than 75 μ Sieve		Per Source		
		Sieve Analysis		Per 40 m ³ receiving		
		Bulking of Sand (only River Sand)		Per 20 m ³ receiving		
		Water Absorption		Per Month		
6.	Construction Water	Moisture Content	IS 3025	Per Day	<ul style="list-style-type: none"> Review reports 	IS: 456-2000
		pH Value. Limits of Acidity Limits of Alkalinity Percentage of Solids a) Chlorides b) Suspended Matter c) Sulphates d) Inorganic Solids e) Organic Solids		Each Source Every 3 month		
7.	Reinforced cement concrete (Design Mix & Ready mix)	Slump Test Cube Test	Appendix 'D' of Chapter 4 CPWD Spec IS 516	Per Day Per 50 cum of Concrete As per IS-456	As per Design Mix	IS : 456-2000
8.	Autoclaved cellular Aerated concrete blocks	Dimensional Tolerance	<ul style="list-style-type: none"> IS:6441 (part-1) 1972 (RA-2017) IS: 3346-1980 	<ul style="list-style-type: none"> Per source Per brand Per 10000 bricks 	<ul style="list-style-type: none"> Review of test report and MTC. 	IS: 2185 Part 3-2015
		Compressive Strength				
		Density				
		Thermal Conductivity				

9.	Reinforcement Steel	Drying Shrinkage	(RA-2017)	i) Under 10mm dia one sample for each 25 tonne or part thereof ii) 10mm to 16mm dia one sample for each 35 tonnes iii) over 16mm dia one sample for each 45 tonnes Per Brand/Source Per Diameter.	Review MTC & test reports	IS : 1786-2013
		Physical Test	IS: 1786:2008 (RA-2013) IS:1608(part-1) 2018 IS:1599:2012 (RA2017)			
10.	Bricks	Chemical Test	Chemical test ASTM-E415:2017	Per Brand. >=2000 2001-10000 10001-35000 35001-50000 Per Brand. >=2000	Review of Test reports Randomly Witness	IS : 1077-1992 (RA 2016)
		Dimensional Tolerance				
		Compressive Strength				



		Water Absorption	IS:3495(part-1) 1992 (RA2016)	2001-10000 10001-35000 35001-50000	5 Bricks 10 Bricks 15 Bricks	
		Efflorescence	IS:3495(part-3) 1992 (RA2016)			
11.	Structural Steel (Beam, Column, Channel & Angle Sections & Plates)	Tensile Strength	IS:599:2012(RA 2017)	<ul style="list-style-type: none"> To be Procured from approved make Submission of MTC Once Per 20 MT. 	<ul style="list-style-type: none"> Review MTC & test reports 	IS: 2062-2011 IS:808- 1989(RA 2014) IS:1852- 1985(RA 2013)
12.	Structural Steel (Hollow Sections)	Tensile Strength	IS 1608	<ul style="list-style-type: none"> To be Procured from approved make Submission of MTC Once Per 8 MT. 	<ul style="list-style-type: none"> Review MTC & test reports 	IS: 4923-2017
		Bend Test	IS 2329			
		Flattening Test	IS 2328			
13.	Anti Termite	All tests as per IS : 8944-2005	IS: 8944 IS:6940 IS:1448 IS:8963	<ul style="list-style-type: none"> To be procured from approved brand Submission of MTC Per Brand 	<ul style="list-style-type: none"> Review MTC & test reports 	IS: 8944-2005
14.	EPDM	<ul style="list-style-type: none"> Thickness Unit Weight Tensile Strength Elongation % Water Absorption Tearing resistance UV Resistance Minimum service temperature Maximum service temperature 	ASTM: D412 ASTM: D471 ASTM: D624 ASTM: D1204 ASTM: D2240 ASTM: E154	<ul style="list-style-type: none"> To be procured from approved brand. Submission of MTC Per Brand Per 1000 Sqm. 	<ul style="list-style-type: none"> Review MTC & Test reports 	ASTM: D412 ASTM: D471 ASTM: D624 ASTM: D1204 ASTM: D2240 ASTM: E154
15.	Admixture	<ul style="list-style-type: none"> Dry Content Ash content Relative Density 	IS: 9103-1999	<ul style="list-style-type: none"> To be procured from approved brand Submission of MTC Per 5 MT. 	<ul style="list-style-type: none"> Review of test reports & MTC 	IS: 9103-1999

		<ul style="list-style-type: none"> Chloride content pH 				
16.	Glazed Tiles/ Vitrified tiles	<ul style="list-style-type: none"> All test as per IS : 15622-2006 Water absorption Modulus of rupture Scratch hardness Crazing resistance 	<ul style="list-style-type: none"> IS: 13630part-1 & part-15 2006 (RA-2017) 	<ul style="list-style-type: none"> Per Batch Per 3000 Nos. To be procured from approved manufacturer 	<ul style="list-style-type: none"> Review of test reports 	IS: 15622-2006
17.	Marble	<ul style="list-style-type: none"> Moisture Absorption Hardness Specific Gravity 	<ul style="list-style-type: none"> IS: 1122-1974 IS: 1124-1974 	<ul style="list-style-type: none"> Per source Per 100 Sqm. or part thereof 	<ul style="list-style-type: none"> Review of test reports 	IS : 1130-1969
18.	Granite	<ul style="list-style-type: none"> Moisture Content Water Absorption Hardness Specific Gravity 	<ul style="list-style-type: none"> IS: 13030-1991 IS: 1124:1972 IS: 1122-1974 	<ul style="list-style-type: none"> Per source per 100 Sqm or part thereof 	<ul style="list-style-type: none"> Review of test reports 	IS-14223-1995 (Part-1)
19.	Kota Stone	<ul style="list-style-type: none"> Water Absorption Transverses Strength Durability 	<ul style="list-style-type: none"> IS: 1124-1974 IS: 1121 IS: 1126-2013 	<ul style="list-style-type: none"> Per source 100 Sqm or part thereof 	<ul style="list-style-type: none"> Review of test reports 	IS: 1128-1974
20.	Sand Stone	<ul style="list-style-type: none"> Water Absorption Transverses Strength Resistance to wear Durability 	<ul style="list-style-type: none"> IS: 1124 IS: 1121 IS: 1706-1974 IS: 1126-2013 	<ul style="list-style-type: none"> Per source 100 Sqm or part thereof 	<ul style="list-style-type: none"> Review of test reports 	IS: 3622-1977



21.	Cement concrete tiles	<ul style="list-style-type: none"> Dimension Water Absorption Wet Transverse Strength Resistance to wear 	IS:13801-2013 IS:1237-2012	<ul style="list-style-type: none"> Per Brand Per 1000 Sqm. 	<ul style="list-style-type: none"> Review of test reports 	IS: 13801-2013
22.	Concrete Paver Blocks	<ul style="list-style-type: none"> Dimension Water absorption Compressive strength Abrasion resistance 	IS: 15658-2006 RA-2011 IS: 15658-2006 RA-2011	<ul style="list-style-type: none"> Per Brand Per 10000 nos 	<ul style="list-style-type: none"> Review of test report 	IS: 15658-2006
23.	Wood	<ul style="list-style-type: none"> Moisture content 	As per CPWD specifications	<ul style="list-style-type: none"> Per Source Per 1 Cum or part thereof 	<ul style="list-style-type: none"> Review of Test reports 	As per CPWD specifications
24.	Aluminum Section	<ul style="list-style-type: none"> Thickness of anodic / powder coating 0.2% proof stress, Tensile strength Elongation Chemical Composition 	IS:504-1963 IS:1608-2005(part-1)2018	<ul style="list-style-type: none"> To be Procured from approved brand Per Brand Per Section Per 5 MT 	<ul style="list-style-type: none"> Review of Test Reports and MTC 	IS: 733-1983 IS: 1285-2002 IS: 6477-1983 IS: 2673-2002
25.	Gypsum Board	<ul style="list-style-type: none"> Transverse strength 	IS: 2542-1978	<ul style="list-style-type: none"> To be procured from approved brand. Once per 1000 Sqm. 	<ul style="list-style-type: none"> Review of test reports and MTC 	IS: 2095-2011



Sr. No.	Material	Tests to be carried out	Reference I. S. Code	Testing Frequency	TPP's Role	Code of Confirmation.
26.	Granular base sub	<ul style="list-style-type: none"> Gradation Combined Flakiness & Elongation Index Aggregate Impact Value/10% fine value / Los Angles Abrasion Test 	IS : 2386-1963 IS: 383-2016 BIS: 812 IS 2720	<ul style="list-style-type: none"> Per 100 Cum Per Source 	<ul style="list-style-type: none"> Review of Test reports Randomly witness 	As per CPWD specifications/ IRC/MoRTH
		<ul style="list-style-type: none"> Water absorption CBR Liquid Limit Plastic Limit MDD & OMC Deleterious Material 		<ul style="list-style-type: none"> Per Source 	<ul style="list-style-type: none"> Review of Test reports Randomly witness 	
		<ul style="list-style-type: none"> Density of Compacted Layer Moisture Content 		<ul style="list-style-type: none"> Per 500 sq. m 	<ul style="list-style-type: none"> Review of Test reports Randomly witness 	



Sr. No.	Material	Tests to be carried out	Reference I. S. Code	Testing Frequency	TPP's Role	Code of Confirmation.
27.	Wet Macadam Mix	<ul style="list-style-type: none"> Gradation Combined Flakiness & Elongation Index Aggregate Impact Value/10% fine value /Los Angles Abrasion Test 	IS : 2386-1963 IS: 383-2016 BIS: 812 IS 2720	<ul style="list-style-type: none"> Per 100 Cum Per Source 	<ul style="list-style-type: none"> Review of Test reports Randomly witness 	As per CPWD specifications/ IRC/MoRTH
				<ul style="list-style-type: none"> Per Source Per 200 Cum 	<ul style="list-style-type: none"> Review of Test reports Randomly witness 	
		<ul style="list-style-type: none"> Water absorption Liquid Limit Plastic Limit MDD & OMC 		<ul style="list-style-type: none"> Per Source 	<ul style="list-style-type: none"> Review of Test Report 	
		<ul style="list-style-type: none"> Density of Compacted Layer Moisture Content 		<ul style="list-style-type: none"> Per 500 sq. m 	<ul style="list-style-type: none"> Review of Test reports Randomly witness 	



Sr. No.	Material	Tests to be carried out	Reference I. S. Code	Testing Frequency	TPI's Role	Code of Confirmation.
28.	Bitumen	<ul style="list-style-type: none"> Penetration at 25°C Softening Point Absolute Viscosity at 60°C Kinematic Viscosity at 135 °C Flash Point Solubility in trichloroethylene Tests on residue from thin film oven test <ul style="list-style-type: none"> Viscosity Ratio at 60°C Ductility at 25°C 	<ul style="list-style-type: none"> IS 1203 IS 1205 IS 1206 IS 1206 IS 1448 IS 1216 IS 1206 IS 1208 	Upto 50 container - 3 Samples 51- 150 “ - 5 Samples 151-500 “ - 7 Samples 501-above “ - 10 Samples Upto 50 container - 3 Samples (Combined to form 1 Sample) 51- 150 “ - 5 Samples (Combined to form 1 Sample) 151-500 “ - 7 Samples (Combined to form 1 Sample) 501-above “ - 10 Samples (Combined to form 1 Sample)	<ul style="list-style-type: none"> Review of Test reports Review of Test reports 	IS 73-2013
29.	Bitumen Penetration Macadam/Premix Carpet	<ul style="list-style-type: none"> Binder Aggregate Impact Value/Los Angles Abrasion Test Combined Flakiness & Elongation Test Grading of Aggregate Stripping Value 	<ul style="list-style-type: none"> IS 73 IS 2386 IS 6241 	As per IS 73 <ul style="list-style-type: none"> Per 100 cum Per Source Two Test Per Day Per Plant Per 100 cum Per Source 	<ul style="list-style-type: none"> Review of Test reports Random Witness 	IS 73-2013 As per CPWD Specs/MoRTH



Sr. No.	Material	Tests to be carried out	Reference I. S. Code	Testing Frequency	TPP's Role	Code of Confirmation.
30.	Concrete Pavement (Tremix)	<ul style="list-style-type: none"> Flexural Strength 	IS 526	<ul style="list-style-type: none"> One test consisting of 8 specimens for 30 cum of Concrete. 	<ul style="list-style-type: none"> Review of Test reports Witness 	As per CPWD Specs.
31.	Kerb stone	<ul style="list-style-type: none"> Dimension Water absorption Compressive strength Transverse Strength 	IS:1578:1984	<ul style="list-style-type: none"> To be procured from approved brand Submission of MTC Per 500 Nos. 	<ul style="list-style-type: none"> Review MTC & test reports 	IS: 5758-1984
32.	Aluminum Composite Panels	<ul style="list-style-type: none"> Panel Thickness Aluminum Thickness Unit Weight Deflection Temperature Compressive strength Tensile strength Water resistance Flexural strength 	Relevant IS Code and ASTM codes	<ul style="list-style-type: none"> To be procured from approved brand Submission of MTC Per 500 Sqm. 	<ul style="list-style-type: none"> Review MTC & test reports 	Relevant IS and ASTM codes
33.	Stainless steel (Steel tubular pipes)	<ul style="list-style-type: none"> Tensile Strength Yield Stress Elongation Mass per meter Chemical Composition 	ASTME 1086 :2014	<ul style="list-style-type: none"> To be procured from approved brand Submission of MTC Per brand Per 8 MT. 	<ul style="list-style-type: none"> Review MTC & test reports 	IS: 6911:1992





ENGINEERING PROJECTS (INDIA) LIMITED

(A Govt. of India Enterprise)

INSTRUCTIONS TO TENDERERS AND GENERAL CONDITIONS OF CONTRACT DECEMBER, 2007

VOLUME-I

Issued to : M/s. _____



ENGINEERING PROJECTS (INDIA) LIMITED
(A Govt. of India Enterprise)

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**ENGINEERING PROJECTS (INDIA) LIMITED
(A Govt. of India Enterprise)**

INSTRUCTIONS TO TENDERERS

ENGINEERING PROJECTS (INDIA) LIMITED

(A Govt. of India Enterprise)

INSTRUCTIONS TO TENDERERS

1.0 **MODE OF SUBMISSION**

The Tender is to be submitted in two separate sealed covers marked as under :

ENVELOPE-1 :-

This ENVELOPE shall contain the following :

- i) Earnest Money Deposit as per clause 2.0 of 'Instructions to Tenderers' (ITT).
- ii) Letter of Undertaking for un-conditional acceptance of the tender conditions as per proforma given in ITT.
- iii) Pre-Qualification Documents and Credentials as per clause 19.0 of ITT.
- iv) Volume-I (ITT, General Conditions of Contract),
Volume-II (Notice Inviting Tender, Additional Conditions of Contract, Specifications, Drawings) and Corrigendum/ Addendum, if any, duly filled in, signed and stamped on each page by tenderer. Cutting or over-writing, if any, shall be signed and stamped by the person signing the Tender. All pro-forma forming part of Tender Documents shall be filled in, signed and stamped by the tenderer.
- v) Copy of power of attorney / partnership deed, duly attested by Notary Public authorizing the person who signs the Tender.
- vi) Any other information as required to be submitted along-with the Tender.

This envelope shall be marked as :

ENVELOPE-1 "TECHNO-COMMERCIAL BID" FOR (Name of work as mentioned in "Notice Inviting Tender")

NIT No. : _____
DUE ON : _____
FROM : (Name of the Contractor)

ENVELOPE – 2 :-

This ENVELOPE shall contain only the **Volume-III** comprising of **PRICE-BID**.

This envelope shall be marked as :

ENVELOPE-2 : 'PRICE-BID' FOR (Name of Work as mentioned in "Notice Inviting Tender")

NIT No. : _____
DUE ON : _____
FROM : (Name of the Contractor)

Both the envelopes / packets shall be individually sealed and kept in an outer envelope marked as :

TENDER FOR (Name of Work as mentioned in "Notice Inviting Tender")

NIT No. : _____

DUE ON : _____

FROM : (Name of the Contractor)

The outer envelope shall be duly sealed and shall be delivered at place of submission of Tender by the date and time fixed for receipt of Tender as mentioned in "Notice Inviting Tender". The Tenders received after the date and time of Tender receipt shall not be considered and shall be returned to the tenderer unopened. EPI shall not be responsible for any postal or other delays, whatsoever and tenderer should take care to ensure the submission of Tender at place of receipt of Tender by due date and time fixed for Tender receipt. **All the envelopes shall be addressed to the** authority who has invited the Tender as mentioned in "Notice Inviting Tender".

- 1.1 First the Envelope-1 of the tenderer shall be opened. Tenderers who unconditionally accept the tender conditions, deposit the required Earnest Money and whose Techno-Commercial Bid along with PQ Documents is found suitable shall be considered for the opening of their Price Bid and Envelope-2 of such tenderers shall only be opened. The Tenders not accompanied by requisite Earnest Money and / or not conveying un-conditional acceptance of tender conditions or whose Techno-Commercial Bid and PQ Documents are not found suitable, shall be rejected and such tenderer shall not be allowed to attend Price Bid opening i.e. opening of Envelope-2.
- 1.2 Once the tenderer has given an unconditional acceptance to the tender conditions in its entirety, he is not permitted to put any remark(s) / condition(s) (except unconditional rebate on price, if any) in / along with the 'Price-Bid' / Tender.
- 1.3 In case the condition 1.2 mentioned above is found violated at any time after opening of Tender, the Tender shall be summarily rejected and EPI shall, without prejudice to any other right or remedy, be at liberty to forfeit the full said Earnest Money absolutely.

2.0 **EARNEST MONEY DEPOSIT**

Earnest Money Deposit of amount as mentioned in "NIT/ITT/Memorandum" to "Form of Tender" required to be submitted alongwith the Tender shall be in the form of Demand Draft payable at place as mentioned in "NIT/ITT" in favour of EPI Limited from any Nationalized / Scheduled Bank or in the form of Bank Guarantee from any Nationalized / Scheduled Bank in enclosed format. The EMD Bank Guarantee shall be valid for a minimum period of 150 (One Hundred Fifty) days from last day of submission of Tender. The EMD shall be governed by Clause 7.0 of General Conditions of Contract.

- 3.0 EPI reserves the right to reject any or all the Tenders in part or full without assigning any reason whatsoever thereof. EPI does not bind themselves to

accept the lowest Tender. EPI reserves the right to award the work to a single party or to split the work amongst two or more parties as deemed necessary without assigning any reason thereof. The Contractor is bound to accept the portion of work as offered by EPI after split up at the quoted / negotiated rates.

4.1 FOR ITEM RATE TENDERS

- 4.1.1 The tenderers should quote the rates for items tendered by them in figures as well as in words and the amounts in figures only. The amount for each item should be worked out and the requisite totals and page totals given.
- 4.1.2 All corrections/cuttings should be signed by the tenderer. Each page of the Tender should be signed by the tenderer. In the event of discrepancy between rate in figures and words the rate quoted in words shall be treated as correct. In case there is discrepancy between rate and amount worked out, the rate quoted shall be taken as correct and not the amount.
- 4.1.3 Price shall be entered against each item in Bill of Quantities where quantities or LS (lump-sum) has been mentioned. The cost of item against which the Contractor has failed to enter a rate or price shall be deemed to be covered by rates and prices of other items in the Bill of Quantities and no payment shall be made for the quantities executed for items against which rate has not been quoted by Contractor. No rate is to be quoted against items for which no quantity is given. However, the Contractor has to quote rate against "LS" items.

4.2 FOR PERCENTAGE RATE TENDERS

- 4.2.1. In case of Percentage Rate Tenders, tenderer shall fill up in the Schedule / Bill of Quantities, percentage Below/Above/Par (in figures as well as in words) to total estimated cost given in Schedule / Bill of Quantities, he will be willing to execute the work. The tenderer should quote a unique single percentage plus / minus over the total estimated amount given in Schedule / Bill of Quantities. In case more than one schedule is given, stipulating quoting of separate percentages (plus or minus) over the estimated amount of each schedule, the tenderer can quote separate percentages for each such schedule. Under no circumstances, tenderer is allowed to quote separate percentages for individual items, trades or group of items. In case tenderer quotes separate percentages for individual items, trades or group of items instead of to the total amount of schedule(s), the Tender shall be rejected and earnest money of the tenderer shall be forfeited in totality.
- 4.2.2 In case of Percentage Rate Tenders, the tenderer shall also work out the total amount of his offer after adding percentage (plus or minus) over the total schedule amount and the same should be written in figures as well as in words in such a way that no interpolation is possible.
- 4.2.3 In case of Percentage Rate Tenders, only percentage quoted shall be considered. Any tender containing item rates is liable to be rejected. Percentage quoted by the tenderer in Percentage Rate Tender shall be accurately filled in figures and words. All corrections/cuttings should be signed by the tenderer. Each page of the Tender should be signed by the tenderer. In the event of discrepancy between percentage rate in figures and words, the percentage rate

- quoted in words shall be treated as correct. In case there is discrepancy between percentage rate and amount worked out the percentage rate quoted shall be taken as correct and not the amount. For any other discrepancy, the decision of Tender Scrutiny Committee of EPI shall be final & binding on the tenderer including rejection of Tender and forfeiture of EMD.
- 5.0 The Tenders shall be strictly as per the conditions of contract. Tenders with any additional condition(s)/modification(s) shall be rejected.
- 6.0 The witnesses to the Tender / Contract Agreement shall be other than the tenderer / tenderers competing for this work and must indicate full name, address, status/occupation with dated signatures.
- 7.0 The acceptance of Tender will rest with EPI. Tenders in which any of the prescribed conditions are not fulfilled or found incomplete in any respect are liable to be rejected.
- 8.0 Canvassing whether directly or indirectly in connection with Tenders is strictly prohibited and the Tenders submitted by the Contractors who resort to canvassing will be liable to rejection.
- 9.0 On acceptance of Tender, the name of the accredited representative(s) of the Contractor who would be responsible for taking instructions from Engineer-In-Charge or its authorised representative shall be intimated by the Contractor with in 07 days of issue date of telegram / letter / telex / fax of Intent by EPI.
- 10.0 The tenderer shall not be permitted to Tender for works if his near relative is posted as an Assistant Manager or any higher ranks in the concerned Regional Office of EPI. The Contractor shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to any of the officers in EPI. Any breach of this condition by the tenderer would render him liable to the withdrawal of the work awarded to him and forfeiture of Earnest Money and Security Deposit. This may also debar the Contractor from tendering for future works under EPI.
- 11.0 No employee of EPI of the rank of Assistant Manager and above is allowed to work as a Contractor or as an employee of a Contractor having interest in EPI for a period of two years after his retirement/relief from the service of EPI, without the prior permission of EPI in writing. This contract is liable to be cancelled if either the Contractor or any of his employee is found at any time to be such a person who had not obtained the permission of EPI as aforesaid before submission of the Tender or engagement in the Contractor's service.
- 12.0 The time of completion of the entire work, as contained in contract shall be as mentioned in "Memorandum" to "Form of Tender", which shall be reckoned from the 10th day from issue of the Letter / Telex / Telegram / Fax of Intent by the EPI.
- 13.0 The Tender award, execution and completion of work shall be governed by Tender Documents consisting of (but not limited to) Letter of Intent / Letter of work Order, Bill of Quantities, Additional Conditions of Contract, General Conditions of Contract, Specifications, Drawings, etc. The tenderers shall be

deemed to have gone through the various conditions and clauses of the Tender and visited the Site and satisfied itself with Site conditions including sub-soil water conditions, topography of the land, drainage and accessibility etc. or any other condition which in the opinion of Contractor will affect his price / rates before quoting their rates. No claim whatsoever against the foregoing shall be entertained by EPI.

- 14.0 The Drawings given with the Tender Documents are TENDER DRAWINGS and are indicative only.
- 15.0 Transfer of bid documents purchased by one intending bidder to another is not permissible.
- 16.0 Tenders must be duly signed with date and sealed. An attested copy of power of attorney/affidavit/Board Resolution executed as under shall accompany the 'Tender Documents'.
- a) In case of Sole Proprietorship, an affidavit of Sole Proprietorship and if the Tender is signed by any other person Power of Attorney by the Sole Proprietor in favour of signatory.
 - b) In case of Partnership firm, if Tender is not signed by all the partners, Power of Attorney in favour of the Partner/person signing the tender/documents by all the partners authorizing him to sign the tender/documents.
 - c) In case of Company, copy of the Board Resolution authorizing the signatory to sign on behalf of the Company.
- 17.0 Tenders with following discrepancies are liable for rejection:-
- a) Tenders with over-written or erased rates, percentages, amounts or rates, percentages not written in both figures and words.
 - b) Tender that is incomplete, ambiguous, and not accompanied by the documents asked for or submitted without EMD or with inadequate EMD.
 - c) Tender received after specified date/time whether due to postal or other delays.
 - d) Tender in respect of which canvassing in any form is resorted to by the tenderer whatsoever.
 - e) If the tenderer deliberately gives wrong information in his tender or resorts to unfair methods in creating circumstances for the acceptance of his tender, EPI reserves the right to reject such tender at any stage.
- 18.0 Submission of a tender by the tenderer implies that he has read the complete contract documents and has made himself aware of the scope, terms & conditions and specifications of the work to be done and of conditions at which stores, tools, plant, etc. will be issued to him by EPI (if any), local conditions and

political situations and other factors having bearing on the execution of the works. No claim of Contractor whatsoever, within the purview of this clause, shall be entertained at any stage of the project.

19.0 Tenderer shall submit the following documents along with their Tenders in the first envelope (Techno-Commercial Bid) :-

- a) List of works executed during the last 5 years indicating name of the Client, value, date of start and completion.
- b) List of works under execution indicating name of the Client, Total Contract Value, Value of balance work in hand, date of start and completion.
- c) Details of similar works executed.
- d) Audited balance sheets and profit and loss accounts alongwith schedules for the last 3 years.
- e) Copy of latest income-tax returns filed along with PAN.
- f) Details of manpower available.
- g) Details of equipments, tools and plant available.
- h) Credentials and completion certificates.
- i) Registration Certificate/Memorandum and Articles of Association/Partnership Deed/ Affidavit.
- j) Copy of Provident Fund Number allotted by PF authorities.
- k) Copy of letters of registration with various authorities like CPWD, State PWD, MES and Public Sector Undertakings, etc.
- l) Latest Solvency certificate from Nationalised/Scheduled Bank.
- m) Latest Sales Tax Registratin and Clearance Certificate.
- n) Any other document as stipulated above and in "Tender Documents"

20. Purchase Preference may be granted to the Central Public Sector Enterprises as per the applicable guidelines in force in this regard issued by the Government of India.

LETTER OF UNDERTAKING

(TO BE ENCLOSED IN ENVELOPE-1 ALONGWITH EMD)

ENGINEERING PROJECTS (INDIA) LIMITED

(Address of submission as mentioned in "Notice Inviting Tender")

REF. : TENDER FOR (Name of Work as mentioned in "Notice Inviting Tender")

NIT No. : _____

Sir,

UNDERTAKING FOR ACCEPTANCE OF TENDER CONDITIONS

1. The Tender Documents for the work as mentioned in "Memorandum" to "Form of Tender" have been issued to me / us by ENGINEERING PROJECTS (INDIA) LIMITED and I / We hereby unconditionally accept the tender conditions and Tender Documents in its entirety for the above work.
2. The contents of clause 1.2 and 1.3 of the Tender Documents (Instructions to Tenderers) have been noted wherein it is clarified that after unconditionally accepting the tender conditions in its entirety, it is not permissible to put any remark(s) / condition(s) (except unconditional rebate on price, if any) in the 'Price-Bid' enclosed in "Envelope-2" and the same has been followed in the present case. In case this provision of the Tender is found violated at any time after opening "Envelope-2", I / We agree that my/our tender shall be summarily rejected and EPI shall, without prejudice to any other right or remedy be at liberty to forfeit the full said Earnest Money absolutely.
3. The required Earnest Money for this work is enclosed herewith.

Yours faithfully,

(Signature of the Tenderer)

Seal of Tenderer

Dated : _____

FORM OF TENDER

To,

Engineering Projects (India) Limited
(Address of submission as mentioned in "Notice Inviting Tender")

REF. : TENDER FOR (Name of Work as mentioned in "Notice Inviting Tender")

NIT No. : _____

1. I/We hereby tender for execution of work as mentioned in "Memorandum" to this "Form of Tender" as per Tender Documents within the time schedule of completion of work as per separately signed and accepted rates in the Bill of Quantities quoted by me / us for the whole work in accordance with the Notice Inviting Tender, Conditions of Contract, Specifications of materials and workmanship, Bill of Quantities Drawings, Time Schedule for completion of jobs, and other documents and papers, all as detailed in Tender Documents.
2. It is agreed that the time stipulated for jobs and completion of works in all respects and in different stages mentioned in the "Time Schedule for completion of jobs" and signed and accepted by me/us is the essence of the contract. I/We agree that in case of failure on my/our part to strictly observe the time of completion mentioned for jobs and the final completion of works in all respects according to the schedule set out in the said "Time Schedule for completion of jobs" and stipulations contained in the contract, the recovery shall be made from me/us as specified therein. In exceptional circumstances extension of time which shall always be in writing may, however be granted by EPI at its entire discretion for some items, and I/We agree that such extension of time will not be counted for the final completion of work as stipulated in the said "Time schedule of completion of jobs".
3. I/We agree to pay the Earnest Money, Security Deposit cum Performance Guarantee, Retention Money and accept the terms and conditions as laid down in the "Memorandum" to this "Form of Tender".
4. Should this Tender be accepted, I/We agree to abide by and fulfill all terms and conditions referred to above and as contained in Tender Documents elsewhere and in default thereof, allow EPI to forfeit and pay EPI, or its successors or its authorized nominees such sums of money as are stipulated in the Tender Documents.
5. I/We hereby pay the earnest money amount as mentioned in the "Memorandum" to this "Form of Tender" in favour of Engineering Projects (India) Limited payable at place as mentioned in the "NIT/ITT".

6. If I/we fail to commence the work within 10 days of the date of issue of Letter of Intent and / or I/We fail to sign the agreement as per Clause 84 of General Conditions of Contract and/or I/We fail to submit Security Deposit cum Performance Guarantee as per Clause 9.0 & 9.1 of General Conditions of Contract, I/We agree that EPI shall, without prejudice to any other right or remedy, be at liberty to cancel the Letter of Intent and to forfeit the said earnest money as specified above.
7. I/We are also enclosing herewith the Letter of Undertaking on the prescribed pro-forma as referred to in condition of NIT.

Date the _____ day of _____

SIGNATURE OF TENDERER

NAME (CAPITAL LETTERS) : _____

OCCUPATION _____

ADDRESS _____

SEAL OF TENDERER

MEMORANDUM

(ENCLOSURE TO FORM OF TENDER)

REF. : **TENDER FOR** (Name of Work as mentioned in "Notice Inviting Tender")

NIT No. : _____

Sl. No.	Description	Cl. No.	Values / Description to be applicable for relevant clause(s)
i)	Name of work		_____ _____
ii)	Owner/Client / Employer		_____
iii)	Type of Tender		_____
iv)	Earnest Money Deposit	NIT	Rs. _____ (Rupees _____ only).
v)	Estimated Cost	NIT	Rs. _____ (Rupees _____ only).
vi)	Time for completion of work	NIT	Total work to be completed in _____ (_____) in accordance with the time schedule of completion of work in the Tender Documents.
vii)	Mobilization Advance	8.0	_____ % (_____ Percent) of Contract Value.
viii)	Interest Rate on Mobilization Advance	8.0	Simple Interest Rate of _____ % (_____ percent only) per annum.
ix)	Number of Instalments for recovery of Mobilisation Advance	8.0	_____
x)	Schedule of Rates applicable	69.0	Civil Works : _____ Sanitary Works : _____ Electrical Works : _____
xi)	Validity of Tender	4.0	90 (Ninety) Days
xii)	Security Deposit cum Performance Guarantee	9.0	5.00% (Five Percent only) of Contract Value within 10 days from the date of issue of telegram / letter / telex / FAX of Intent of acceptance of Tender.

- | | | | |
|-------|------------------------------------|------|--|
| xiii) | Retention Money | 10.0 | 5.00% (Five percent only) of the contract amount, which shall be deducted in the manner set out in this contract. |
| xiv) | Time allowed for starting the work | 43.0 | The date of start of contract shall be reckoned 10 days from the date of issue of telegram / letter / telex / FAX of Intent of acceptance of Tender. |
| xv) | Defect Liability Period | 74.0 | 12 (Twelve) Months from the date of taking over of works. |
| xvi) | Arbitration | 76 | Arbitration shall be as per provisions of Clause no.76 of GCC. The Venue of Arbitration shall be |
| xvii) | Jurisdiction | 76.3 | Courts in ----- |

SIGNATURE OF TENDERER

NAME (CAPITAL LETTERS) :

OCCUPATION

ADDRESS

SEAL OF TENDERER



**ENGINEERING PROJECTS (INDIA) LIMITED
(A Govt. of India Enterprise)**

**GENERAL CONDITIONS OF CONTRACT
AND
LABOUR SAFETY PROVISIONS, MODEL RULES
CONTRACTOR'S LABOUR REGULATIONS
& PRESCRIBED PROFORMAS**

GENERAL CONDITIONS OF CONTRACT

1.0 GENERAL

The Contract means the documents forming the Tender and acceptance thereof and the formal agreement executed between the competent authority on behalf of EPI and the Contractor, together with the documents referred to therein including these conditions, the Specifications, Designs, Drawings and Instructions issued from time to time by the Engineer-In-Charge and all these documents taken together, shall be deemed to form one contract and shall be complementary to one another.

- 1.1 In the contract, the following expressions shall, unless the context otherwise requires, have the meanings, hereby respectively assigned to them.
- 1.2 Engineering Projects (India) Limited, hereinafter called 'EPI' proposes to get the works executed as mentioned in the Contract on behalf of Owner/ Client.
- 1.3 The work will be executed as per Drawings "GOOD FOR CONSTRUCTION" to be released by EPI unless otherwise specified elsewhere in the Tender Documents.

1.4 OTHER DEFINITIONS

- a) **ENGINEER-IN-CHARGE** means the Regional Office In-Charge of EPI himself or an engineer of EPI nominated by the Regional Office In-Charge for supervision and/or project management of the project from time to time.
- b) **WORKS OR WORK** The expression works or work shall unless there be something either in the subject or context repugnant to such construction, be construed and taken to mean the works by or by virtue of the contract contracted to be executed whether temporary or permanent, and whether original, altered, substituted or additional.
- c) **CONTRACTOR** The Contractor shall mean the individual, firm or company, whether incorporated or not, undertaking the works and shall include the legal personal representative of such individual or the persons composing such firm or company, or the successors of such firm or company and the permitted assignees of such individual, firm or company.
- d) **DRAWINGS** mean the Drawings referred to in the Bill of Quantities, specifications and any modifications of such Drawings or such other Drawings as may from time to time be approved or furnished by EPI.
- e) **SITE** means the lands and other places on, under, in or through which the works are to be executed or carried out and any other lands or places provided by EPI or used for the purpose of the agreement.
- f) **APPROVAL** means approved in writing including subsequent written confirmation of previous verbal approval.

- g) WRITING means any manuscript typed, written or printed statement under or over signature and/or seal as the case may be.
- h) MONTH means English Calendar month. 'Day' means a Calendar day of 24 Hrs each.
- i) CONTRACT VALUE means the sum for which the Tender is accepted as per the Agreement/ Letter of Acceptance/ Letter of Intent.
- j) LANGUAGE: All documents and correspondence in respect of this contract shall be in English Language. In case of any discrepancy between the English version and the Hindi version of these documents, the provisions contained in the English version shall be applicable.
- k) BILL OF QUANTITIES or SCHEDULE OF QUANTITIES means the priced and completed Bill of Quantities or Schedule of Quantities forming part of the Tender.
- l) OWNER/ CLIENT / EMPLOYER means the Government, Organization, Authority, Company, Ministry, Department, Society, Cooperative etc. who has awarded the work/ project to EPI and/ or appointed EPI as Implementing / Executing Agency/ Project Manager and/ or for whom EPI is acting as an agent and on whose behalf EPI is entering into the contract and getting the work executed.
- m) IMPLEMENTING/ EXECUTING AGENCY means EPI
- n) TENDER means the Contractor's priced offer to EPI for the execution and completion of the work and the remedying of any defects therein in accordance with the provisions of the Contract, as accepted by the Letter of Intent or Award letter. The word TENDER is synonymous with Bid and the word TENDER DOCUMENTS with "Bidding Documents" or "offer documents".
- o) The headings in the clauses/ conditions of Tender Documents are for convenience only and shall not be used for interpretation of the clause/ condition.
- p) Words imparting the singular meaning only also include the plurals and vice versa where the context requires. Words imparting persons or parties shall include firms and corporations and organizations having legal capacities.
- q) APPROVED INSURANCE COMPANY means any Insurance Company registered with 'Insurance Regulatory & Development Authority' (IRDA) of India and meeting insurance needs of the projects of EPI.

2.0 SITE VISIT AND COLLECTING LOCAL INFORMATION

Before tendering, the tenderer is advised to visit the Site, its surroundings to assess and satisfy themselves about the local conditions such as the working and other constraints at Site, approach roads to the Site, availability of water & power supply, applicability of taxes, duties and levies etc., nature of ground, soil and sub-soil condition, underground water table level, accommodations they may

require etc., river regime, river water levels, other details of river, streams & any other relevant information required by them to execute the complete scope of work. The tenderer may obtain all necessary information as to risks, weather conditions, contingencies & other circumstances (insurgencies etc.) which may influence or affect their tender prices. Tenderer shall be deemed to have considered Site conditions whether he has inspected it or not and to have satisfied himself in all respects before quoting his rates and no claim or extra charges whatsoever in this regard shall be entertained / payable by EPI at a later date.

2.1 ACCESS BY ROAD

Contractor, if necessary, shall build temporary access roads to the actual Site of construction for the works at his own cost to make the Site accessible. The Contractor shall maintain the same in motorable condition at all times as directed by Engineer-In-Charge at his own cost. The Contractor shall be required to permit the use of any roads so constructed by him for vehicles of EPI or any other agencies/ Contractors who may be engaged on the project Site, free of cost.

Non-availability of access roads or approach to Site, for the use of the Contractor shall in no case condone any delay in the execution of work nor be the cause for any claim for compensation.

2.2 HANDING OVER & CLEARING OF SITE

- 2.2.1 The Contractor should note that area for construction may be made available in phases as per availability and in conjunction with pace of actual progress of work at Site. The work may be required to be carried out in constrained situations. The work is to be carried out in such a way that the traffic, people movement, if any, is kept operative and nothing extra shall be payable to the Contractor due to this phasing / sequencing of the work. The Contractor is required to arrange the resources to complete the entire project within total stipulated time. Traffic diversion, if required, is to be done and maintained as per specification by the Contractor at his own cost and the Contractor shall not be entitled for any extra payment, whatsoever, in this regard.
- 2.2.2 Efforts will be made by EPI to handover the Site to the Contractor free of encumbrances. However, in case of any delay in handing over of the Site to the Contractor, EPI shall only consider suitable extension of time for the execution of the work. It should be clearly understood that EPI shall not consider any revision in contract price or any other compensation whatsoever viz. towards idleness of Contractor's labour, equipment etc.
- 2.2.3 The Contractor shall be responsible for removal of all over-ground and underground structures (permanent, semi-permanent and temporary) and constructions from the Site. The cost to be incurred in this regard shall be deemed to be included in the quoted rates of Bill of Quantities items and Contractor shall not be entitled for any extra payment whatsoever, in this regard. Old structures on the proposed Site, if required, shall be demolished by the Contractor properly. The useful material obtained from demolition of structures &

services shall be the property of the Owner/EPI and these materials shall be stacked in workmanship like manner at the place specified by the Engineer- in-charge.

- 2.2.4 If required, the Contractor has to do site clearance, enabling work, barricading, diversion of Roads, shifting/ realignment of existing utility services, drains, nallahs etc. at his own cost as per direction of Engineer-In-Charge and the Contractor shall not be entitled for any extra payment whatsoever in this regard.
- 2.2.5 Necessary arrangements including its maintenance are to be made by the Contractor for temporary diversion of flow of existing drain and road, as the case may be. The existing drain, road would be demolished, wherever required, with the progress of work under the scope of proposed project. The existing Road and Drain, which are not in the alignment of the said project but are affected and/ or need to be demolished during execution for smooth progress of the project, shall be restored to its original status and condition (including black topping) by the Contractor at his own. The cost to be incurred by Contractor in these regards shall be deemed to be included in the quoted rates of the Bill of Quantities items and Contractor shall not be entitled for any extra payment whatsoever, in these regards.
- 2.2.6 The Contractor shall be responsible to co-ordinate with service provider/ concerned authorities for cutting of trees, shifting of utilities and removal of encroachments etc. and making the Site unhindered for completion of work. This shall include initial and frequent follow up meetings/ actions/ discussions with each involved service provider/ concerned authorities. The Contractor shall not be entitled for any additional compensation for delay in cutting of trees, shifting of utilities and removal of encroachments by the service provider/ concerned authorities.
- 2.2.7 The information about the public utilities (whether over ground or underground) like electrical/ telephone/ water supply lines, OFC Cables, sewer lines, open drains etc. is the responsibility of Contractor who has to ascertain the utilities that are to be affected by the works through the site investigation and collection of information from the concerned utility Owners.
- 2.2.8 The Contractor shall be responsible to obtain necessary approval from the respective authorities for shifting/ re-alignment of existing public utilities. EPI shall only provide necessary letters required for liaisoning by the Contractor in obtaining the approval from the concerned authorities.
- 2.2.9 Any services affected by the works must be temporarily supported by the Contractor who must also take all measures reasonably required by the various bodies to protect their services and property during the progress of works. It shall be deemed to be the part of the contract and no extra payment shall be made to the Contractor for the same. Shifting/ re-alignment of public utilities should be done without disturbing the existing one. New service lines should be laid and connected before dismantling the existing one.
- 2.2.10 Shifting/ re-alignment of existing public utilities shall be done by the Contractor as per technical requirement of respective bodies or as per direction of Engineer-In-Charge. Shifting/ re-alignment of public utilities includes all materials, labours,

tools and plants and any other expenses whatsoever for the same. The cost to be incurred in this regard shall be deemed to be included in his quoted rates of BOQ items and the Contractor shall not be entitled for any extra payment, whatsoever, in this regard. In case any of these services are shifted by the State Govt/ local authorities themselves for which deposit as per their estimates is to be made to them, the Contractor shall deposit the same and the Contractor shall be paid only at the rates quoted by him in BOQ for quantity specified in the BOQ, if such items are included in the BOQ irrespective of amount paid by him to the State Govt./ local authorities for execution of these works. In case such provision is not made in the BOQ or the quantity exceeds those specified in the BOQ, the same is deemed to be included in the rates quoted by him for other items in BOQ and nothing extra shall be payable to Contractor on this account.

3.0 SCOPE OF WORK

- 3.1 The scope of work covered in this Tender shall be as per the Bill of Quantities, Specifications, Drawings, Instructions, Orders issued to the Contractor from time to time during the pendency of work. The Drawings for this work, which may be referred for tendering, provide general idea only about the work to be performed under the scope of this contract. These may not be the final drawings and may not indicate the full range of the work under the scope of this contract. The work will be executed according to the Drawings to be released as "GOOD FOR CONSTRUCTION" from time to time by the Engineer-In-Charge of EPI and according to any additions/ modifications/ alterations/deletions made from time to time, as required by any other drawings that would be issued to the Contractor progressively during execution of work. It shall be the responsibility of the Contractor to incorporate the changes that may be in the scope of work, envisaged at the time of tendering and as actually required to be executed.
- 3.2 The quantities of various items as entered in the "BILL OF QUANTITIES" are indicative only and may vary depending upon the actual requirement. The Contractor shall be bound to carry out and complete the stipulated work irrespective of the variation in individual items specified in the Bill of Quantities. The variation of quantities will be governed as per clause No.69 of GCC.

4.0 VALIDITY OF TENDER

The Tender for the works shall remain open for acceptance for a period of ninety days from the date of opening of Price Bid of Tenders. The earnest money will be forfeited without any prejudice to any right or remedy, in case the Contractor withdraws his Tender during the validity period or in case he changes his offer to his benefits, which are not acceptable to EPI. The validity period may be extended on mutual consent.

5.0 ACCEPTANCE OF TENDER

EPI reserves to itself the authority to reject any or all the Tenders received without assigning any reason. The acceptance of a Tender shall be effective w.e.f. the date on which the telegram/ letter of intent or acceptance of the Tender is put in the communication by EPI. EPI also reserves the right to split the work

among two or more parties at lowest negotiated rate without assigning any reason thereof. The Contractor is bound to accept the portion of work as offered by EPI after split up at the quoted/ negotiated rates.

6.0 SET OF TENDER DOCUMENTS:

The following documents will complete a set of Tender Documents.

A) VOLUME I :

- a) Instructions to tenderers
- b) General Conditions of Contract

B) VOLUME II :

- a) Notice Inviting Tenders
- b) Additional Conditions of Contract
- c) Technical Specifications (General, Additional & Technical specifications)
- d) Tender Drawings

C) VOLUME III :

- a) Schedule of Rates/ Bills of quantities (Price-Bid)

7.0 EARNEST MONEY DEPOSIT

Earnest Money Deposit (EMD) of amount as mentioned in “Memorandum” to “Form of Tender” required to be submitted along with the Tender shall be in the form of Demand Draft payable at place as mentioned in “Notice Inviting Tender”/ “Instructions to Tenderers” in favour of ‘Engineering Projects (India) Limited’ from any Nationalised bank / Scheduled Bank or in the form of Bank Guarantee from any Nationalised bank / Scheduled Bank as per the enclosed format. The EMD shall be valid for minimum period of 150 days (One hundred fifty Days) from last day of submission of Tender.

- 7.1 EMD shall accompany the offer and placed in the sealed envelope cover of the offer as detailed in Instructions to Tenderer. Any tender not accompanied with the requisite Earnest Money Deposit alongwith ‘Letter of Undertaking’ shall be rejected and such tenderer(s) will not be allowed to attend the opening of bids.
- 7.2 The EMD of all unsuccessful tenderers (i.e. except evaluated lowest tenderer) shall be returned within Seven (7) days of the opening of price bids by EPI. Subject to clause 7.6 herein below, EMD of successful tenderer shall be refunded after submission of Security Deposit cum Performance Guarantee by him.
- 7.3 Once the tenderer has given an unconditional acceptance to the tender conditions in its entirety, he is not permitted to put any remark(s)/conditions(s) (except unconditional rebate on price, if any) in/ along-with the Tender.
- 7.4 In case the condition 7.3 mentioned above is found violated at any time after opening of Tender, the Tender shall be summarily rejected and EPI shall, without

- prejudice to any other right or remedy, be at liberty to forfeit the full said Earnest Money absolutely.
- 7.5 No interest will be payable by EPI on the said amount covered under EMD/Other security documents.
- 7.6 EMD of successful tenderer, if deposited in the form of Demand Draft, shall be treated as part of Retention Money.
- 7.7 At any time after the due date of the Tender, if any tenderer alters /modifies/withdraws his tender within the validity period (or the extended validity period) of his tender or fails to furnish the "Security Deposit cum Performance Guarantee" or the "Additional Performance Guarantee" or fails to execute the "Contract Agreement" within the prescribed time period after the placement of LOI on him, EPI without prejudice to any other rights or remedies shall be at liberty to forfeit the Earnest Money deposited by the tenderer. In the event of re-tender, such tenderer shall not be allowed to submit tender

8.0 MOBILIZATION ADVANCE

- 8.1 Mobilization advance up to maximum of amount as mentioned in the "Memorandum" to the "Form of Tender" shall be paid to the Contractor on submission of non-revocable and unconditional Bank Guarantee of an equivalent amount in case of interest free Mobilization Advance or for an amount equal to 110% of the Mobilization Advance in case of interest bearing Mobilization Advance, from a Nationalized Bank / Scheduled Bank as per the enclosed Performa subject to conditions given hereunder. The Mobilization Advance shall be at the Interest Rate as mentioned in the "Memorandum" to the "Form of Tender". This advance shall be paid in three installments as follows: -
- i) First Installment of fifty percent of total mobilization advance shall be paid after fulfillment of the following conditions:
 - a) Signing of the agreement.
 - b) Submission of Security Deposit cum Performance Guarantee as per Clause No. 9.
 - ii) Second installment of twenty five percent of total mobilization advance will be paid after the setting up of site office and providing facilities to EPI as per contract, and completion of enabling works required for taking up the construction. These include construction of store, labour hutments, etc.
 - iii) The balance twenty five percent of total mobilization advance shall be paid on mobilization of manpower, plant & equipment etc. to the satisfaction of Engineer-In-Charge of EPI.
- 8.2 The Advance shall be recovered on monthly installment basis. The installments shall commence when 20% of the scheduled contract period has elapsed and fully recovered when 80% of the scheduled contract period is over, both from

date of start. (The month of start & completion of recovery of mobilization advance to be rounded off to nearest full month).

- 8.3 Part 'Bank Guarantees' (BGs) against mobilization advance shall be furnished in as many numbers as the number of recovery installments as given in "Memorandum" to the "Form of Tender" and should be equivalent to the amount of each recovery installment. At any point of time, if the Contractor's payable amount on account of work done is not available with EPI or the amount payable is less than the recovery installment, recovery of such advance shall be effected by encashing the BG of equivalent recovery amount. The decision of EPI in this regard shall be final and binding on the Contractor. The validity period for the part BGs shall be till three months after the end of the month in which instalment is due to be recovered with further three months claim period.
- 8.4 In case recovery of Mobilization Advance is delayed, interest shall be charged @12% (Twelve percent) per annum on delayed recoveries due to late submission of bills by the Contractor or due to delayed encashment of Bank Guarantee, as stated above or due to any other reasons whatsoever.
- 8.5 Contractor is required to furnish the Utilization Certificate for each installment of mobilization advance to the satisfaction of Engineer-In-Charge. Subsequent installments of mobilization advance shall be released only after getting satisfactory utilisation certificate from the Contractor for the earlier released installment.
- 8.6 Notwithstanding what is contained in aforesaid clauses, no mobilization advance whatsoever shall be payable, if payment of mobilization advance is not mentioned in the "Memorandum" to the "Form of Tender".

9.0 SECURITY DEPOSIT CUM PERFORMANCE GUARANTEE

"Within 10 (ten) days from the date of issue of letter of Intent or within such extended time as may be granted by EPI in writing, the Contractor shall submit to EPI a Security Deposit cum Performance Bank Guarantee in the form appended, from any Nationalised bank / Scheduled Bank equivalent to 5% (five percent only) of the Contract Value for the due and proper execution of the contract. This bank guarantee shall remain valid up to 90 (ninety) days after the end of defects liability period.

In case the Contractor fails to submit the Security Deposit cum Performance Guarantee of the requisite amount within the stipulated period or extended period, letter of intent will stand withdrawn and EMD of Contractor shall be forfeited.

9.1 ADDITIONAL PERFORMANCE GUARANTEE FOR EXISTING CONTRACTORS

In case bidder is a working Contractor of EPI at the time of issuance of Letter of Intent (LOI) for the work, the bidder has to furnish an additional Performance Guarantee of 1% (One Percent) of the Contract Value of the work, in case working capacity of the bidder is less than the aggregate of balance work-load of all the works of the bidder with EPI as on date of placement of LOI for this work. The balance workload shall also include the value of work awarded but not yet

started and finally approved value of this work. This additional Performance Guarantee shall be in addition to the Security Deposit cum Performance Guarantee of the works to be furnished by the bidder as specified in the clause no. 9 of General Conditions of Contract. Further, no relaxation in Security Deposit cum Performance Guarantee as in clause no. 9 of General Conditions of Contract shall be made in case working capacity works-out to be more than the balance value of works as mentioned above. The working capacity of the Contractor shall be calculated as under:

WORKING CAPACITY = 2.5 X (Average Turnover of the party as per latest three audited Balance Sheets).

NOTE: The decision of amount of additional Performance Guarantee as above shall be taken by EPI and shall be final & binding to the Contractor.

In case the Contractor fails to submit the additional performance guarantee of the requisite amount within 10 days from the date of issue of letter of Intent or within such extended time as may be granted by EPI in writing, the letter of intent will stand withdrawn and EMD of the Contractor shall be forfeited.

9.2 ABNORMALLY HIGH AND LOW RATED ITEMS

For item rate tenders if, the rates quoted by the lowest bidder for certain items of the Bill of Quantities of the Tender are found to be abnormally high or low in comparison to the Market Rate analysis of the item done by EPI and/or in comparison to EPI's method of working out market rate justification for the items, the same shall be governed as under: -

For Abnormally High Rated items (AHR), the progressive payment shall be 80% (Eighty percent) of the payment due to the Contractor against execution of the AHR items. The balance withheld 20% (twenty percent) payment shall be released after 80% of total value of the original contract is completed in financial terms in order to ensure that the Abnormally Low Rated (ALR) items identified at the time of Award of work have been executed as per requirement of project and as per terms of Contract. Further, deviation limit for AHR items shall be nil on plus side and 100% on minus side. The provision of deviation limit of clause 69.1(v) shall not apply to AHR items. In case of deviation of quantities given in schedule of quantities for AHR items on plus side, the same shall be governed by clause 69.2. The decision of Engineer-In-Charge of EPI in this regard shall be final and binding on the Contractor.

The provision of para 9.2 shall not be applicable on tenders invited on Percentage Rate/lump Sum basis.

The decision of EPI on identification/marketing of AHR and ALR items is final and binding on the Contractor. In case the Contractor does not agree to the identified AHR and ALR items, at the time of award of works, the EMD/Security Deposit cum Performance Guarantee of the Contractor shall be forfeited and decision of EPI in this regard shall be final & binding on the Contractor.

10.0 RETENTION MONEY

The Retention Money shall be deducted from each running bill of the Contractor at 5% (five percent only) of the gross value of the Running Account bill. The Earnest Money Deposited by the tenderer in the form of Demand Draft will be treated as part of the Retention Money. The Retention Money shall be refunded to the Contractor after expiry of defects liability period (referred to in Clause No. 74) or on payment of the amount of the final bill whichever is later. If the amount of Retention Money deduction in cash is more than Rs.10.00 lakhs (Rupees Ten lakhs only), the excess amount can be refunded to Contractor against submission of Bank Guarantee of equivalent amount from a Nationalised bank / Scheduled Bank in the prescribed proforma of Performance Guarantee of EPI.

11.0 MOBILIZATION OF MEN, MATERIALS AND MACHINERY:

- 11.1 All expenses towards mobilization at Site and de-mobilization including bringing in equipment, work force, materials, dismantling the equipments, clearing the Site etc. shall be deemed to be included in prices quoted and no separate payment on account of such expenses shall be entertained.
- 11.2 It shall be entirely the Contractor's responsibility to provide, operate and maintain all necessary construction equipments, scaffoldings and safety gadget, lifting tackles, tools and appliances to perform the work in a workman like and efficient manner and complete all jobs as per the specifications and within the schedule time of completion of work. Further, Contractor shall also be responsible for obtaining temporary electric and water connection for all purposes. The Contractor shall also make standby arrangement for water & electricity to ensure un-interrupted supply.
- 11.3 It shall be the responsibility of the Contractor to obtain the approval for any revision and/ or modification desired by him from EPI before implementation. Also such revisions and/or modifications if accepted / approved by EPI shall be carried at no extra cost to EPI.
- 11.4 The procurement and supply in sequence and at the appropriate time of all materials and consumable shall be entirely the Contractor's responsibility and his rates for execution of work shall be inclusive of supply of all these items.

- 11.5 It is mandatory for the Contractor to provide safety equipments and gadgets to its all workers, supervisory and Technical staff engaged in the execution of the work while working. The minimum requirement (but not limited to) shall be gumboots, safety helmets, Rubber hand gloves, facemasks, safety nets, belts, goggles etc. as per work requirements. Sufficient nos. of these equipments and gadgets shall also be provided to EPI by the Contractor at his own cost for use of EPI Officials and/ or workforce while working/ supervision at Site. No staff/ worker shall be allowed to enter the Site without these equipments/ gadgets. The cost of the above equipments/ gadgets are deemed to be included in the rates quoted by the Contractor for the items & works as per Bill of Quantities and Contractor shall not be entitled for any extra cost in these regard. The above norm is to be strictly complied with at Site. In case the Contractor is found to be deficient in providing Safety Equipments/ Gadgets in the opinion of Engineer-In-Charge, the Engineer-In-Charge at his option can procure the same at the risk & cost of Contractor and provide the same for the use of worksite and shall make the recoveries from the bills of the Contractor for the same. The decision of the Engineer-In-Charge shall be final and binding on Contractor in this regard.
- 11.6 All Designs, Drawings, Bill of Quantities, etc. (except Bar Bending Schedule, Shop & Fabrication Drawings) for all works shall be supplied to the Contractor for all buildings services and development works by EPI in phased manner as the works progress. However it shall be the duty and responsibility of the Contractor to bring to the notice of EPI in writing as to any variation, discrepancy or any other changes required and to obtain revised drawings and designs and / or approval of EPI in writing for the same.
- 11.7 One copy of contract documents including Drawings furnished to the Contractor shall be kept at the Site and the same shall at all reasonable times be available for inspection.
- 11.8 All materials, construction plants and equipments etc. once brought by the Contractor within the project area, will not be allowed to be removed from the premises without the written permission of EPI. Similarly all enabling works built by the Contractor for the main construction undertaken by him, shall not be dismantled and removed without the written authority of EPI.
- 11.9 Contractor shall have to prepare the Bar Bending Schedule, Shop and Fabrication Drawings free of cost, if required for any of the items of work. Five copies of these Drawings each including for revision will be submitted to EPI for approval. Before executing the item, Bar Bending Schedule, Shop & Fabrication Drawings should be got approved from EPI.

12.0 INCOME TAX DEDUCTION

Income tax deductions shall be made from all payments made to the Contractor including advances against work done, in accordance with the Income Tax act prevailing from time to time.

13.0 TAXES AND DUTIES

- 13.1 The Contractor shall be responsible for the payment, wherever payable, at his own cost of all taxes such as excise duty, custom duty, sales tax, including the purchase tax, consignment tax, work contract tax, service tax, VAT or any other similar tax in the state concerned, turnover tax, toll tax, octroi charges, royalty, cess, levy and other tax (es) or duty (ies) which may be specified by local/ state/ central government from time to time on all materials, articles which may be used for this work. The rates quoted by him in the Tender in Bill of Quantities shall be inclusive of all such taxes, duties, etc. The imposition of any new and/ or increase in the aforesaid taxes, duties, levies (including fresh imposition of Work Contract Tax, Turnover Tax, Sales Tax on Work Contract, VAT or any other similar Tax) etc. during the currency of the contract shall be borne by Contractor and shall not be paid or reimbursed to the Contractor by EPI. In the event of non-payment/default in payment of any octroi, royalty, cess, turnover tax, sales tax, including the purchase tax, consignment tax, work contract tax, VAT, Service Tax or any other similar tax in the state concerned, customs, excise or any other levy/tax including labour dues etc. by Contractor, EPI reserves the right to withhold the dues/ payments of Contractor and make payment to local/state/ Central Government authorities or to labourers as may be applicable. The Contractor should submit along with the Tender Registration Certificates with Sales Tax on works contract authority etc. other wise appropriate recovery shall be made from his bills.
- 13.2 The rate quoted by the Contractor shall be deemed to be inclusive of all Taxes and duties as mentioned in clause no.13.1 given above or any other tax as applicable and the same shall not be reimbursed by EPI. Tax deductions at source shall be made as per laws prevalent in the State.
- 13.3 The stamp duty and registration charges, if any, on the contract agreement levied by the Government or any other statutory body, shall be paid by the Contractor.
- 13.4 It will be incumbent upon the Contractor to obtain a registration certificate as a dealer under the Local Sales Tax Act and the Central Sales Tax Act, Service Tax, etc. and necessary evidence to this effect shall be furnished by the Contractor to EPI. Sales Tax on the transactions between the Contractor and his Sub-Contractor/Vendors etc. shall be borne by the Contractor. The Contractor shall be responsible for any taxes that may be levied hereunder on the transaction between Contractor and EPI.
- 13.5 The bidder shall quote his rates inclusive of Turnover Tax/ Sales Tax on Works Contract payable to State Govt. along-with other taxes, duties, levies etc. in conjunction with other terms and conditions. In case, the Turnover Tax/ Sales Tax on Works Contract on execution of works is waived off by the State Govt. at later stage for this project, the equivalent amount from the date of waiver of such tax (as per prevailing rate as on the date of waiver of Turnover Tax/ Sales Tax on Works Contract) shall be deducted from the amount payable to the Contractor from subsequent RA Bills.

13.6 VALUE ADDED TAX (VAT)

The consideration agreed for the execution of said contract shall include the taxes, duties, cess, etc. such as excise duty, service tax, VAT, which is leviable or may be levied in future under any State Law or the Central Law on execution of said contract, such taxes shall be borne by the Contractor and shall not be reimbursed by EPI. Further, if due to any variance in such tax, duties, cess etc. there is any increase in the taxes, the same shall also be borne by the Contractor. Where under any of the State or the Central Law, there is requirement of deduction of tax at source, the same shall be deducted from the amount paid or payable to the Contractor pursuant to this contract and shall be deposited to the Government authorities by EPI. EPI shall issue the documents/forms/ certificate as prescribed under the relevant law, in respect of the amount so deducted from the amount paid or payable to the Contractor. EPI shall have full rights to withhold the amount payable to the Contractor in pursuant to this contract, if Contractor does not fulfill his obligation under any State or Central Law relating to execution of said contract, in case the amount has already been paid by EPI, EPI has the right to recover such payments from the Contractor.

14.0 ROYALTY ON MATERIALS:

The Contractor shall deposit royalty and obtain necessary permit for supply of bajri, stone, kankar, sand, etc. from the local authorities and quoted rates shall be inclusive of royalty.

15.0 RATES TO BE FIRM

- 15.1 The rates quoted by the tenderer shall be firm and fixed for the entire period of completion and till handing over of the work. No revision to rates or any escalation shall be allowed on account of any increase in prices of materials, labour, POL and Overheads etc or any other statutory increase during the entire contract period or extended contract period.
- 15.2 The Contractor shall be deemed to have inspected the Site, its surrounding and acquainted itself with the nature of the ground, accessibility of the Site and full extent and nature of all operations necessary for the full and proper execution of the contract, space for storage of materials, construction plant, temporary works, restrictions of working time, restrictions on the plying of heavy vehicles in area, supply and use of labour, materials, plant, equipment and laws, rules and regulations, if any, imposed by the local authorities.
- 15.3 The rates and prices to be tendered in the Bill of Quantities are for completed and finished items of works complete in all respects. It will be deemed to include all construction plant, labour, supervision, materials, transport, all temporary works, erection, maintenance, Contractor's profit and establishment/ overheads, together with preparation of designs & drawings pertaining to casting yard, shop drawing, fabrication drawing (if required), staging form work, stacking yard, etc. all general risk, taxes, royalty, duties, cess, octroi and other levies, insurance,

liabilities and obligations set out or implied in the Tender Documents and contract.

- 15.4 Unless otherwise specified in the Bill of Quantities (BOQ), the Contractor has to make his own arrangement for dewatering/ bailing out of water, effluent including strutting, shoring etc at every stage of work wherever required (including Tunnel work) including working under foul condition as per direction of Engineer-In-Charge at his own cost and the Contractor shall not be entitled for any extra payment, whatsoever, in this regard.
- 15.5 If required to make work site suitable for execution, Contractor shall have to clear jungle including of rank vegetation, grass, trees etc., clear & clean existing drains/ canals (including strutting, shoring and packing cavities) and dispose them out of the Site up-to any lead and lift as per direction of Engineer-In-Charge. The Contractor should inspect the Site of work from this point of view. Unless otherwise specified in the Bill of Quantities, the cost to be incurred in this regard shall be deemed to be included in his quoted rates of BOQ items and the Contractor shall not be entitled for any extra payment in this regard.
- 15.6 If any temporary/ permanent structure is encountered or safety of such structure in the vicinity is endangered due to execution of the project, the Contractor has to protect the structures by any means as per direction of Engineer - in – Charge. If any damage caused to any temporary or permanent structure(s) in the vicinity is caused due to execution of the project, the Contractor has to make good the same by any means as per direction of Engineer - in – Charge. The Contractor should inspect the Site of work from this point of view. The cost to be incurred in this regard shall be deemed to be included in his quoted rates of BOQ items and the Contractor shall not be entitled for any extra payment in this regard.

16.0 ESCALATION / PRICE VARIATION

No claim on account of any Price Variation / Escalation on whatsoever ground shall be entertained at any stage of works. All rates as per Bill of Quantities (BOQ)/Price-Bid quoted by Contractor shall be firm and fixed for entire contract period as well as extended period for completion of the works. No escalation/price variation clause shall be applicable on this contract.

17.0 INSURANCE OF WORKS ETC.

Contractor is required to take Contractor's All Risk Policy or Erection All Risk Policy (as the case may be) including Marine Insurance from an Approved Insurance Company in the joint name with EPI and bear all costs towards the same for the full period of execution of works including the defect liability period for the full amount of contract against all loss or damage from whatever cause arising for which he is responsible under the terms of the contract and in such manner that EPI and the Contractor are covered during the period of construction of works and/or also covered during the period of defect liability for the loss or damage as under:

- a. The work and the temporary works to the full value of such works.

- b. The materials, construction plant, centering, shuttering and scaffolding materials and other things brought to the Site for their full value. Whenever required by EPI, the Contractor shall produce the policy or the policies of insurance and the receipts for payment of the current premiums.

18.0 INSURANCE UNDER WORKMEN'S COMPENSATION ACT

Contractor is required to take insurance cover as per requirement of the Workmen's Compensation Act, 1923 amended from time to time from an Approved Insurance Company and pay premium charges thereof. Wherever required by EPI the Contractor shall produce the policy or the policies of Insurance and the receipt of payment of the current premiums.

19.0 THIRD PARTY INSURANCE

Contractor is required to take third party insurance cover for an amount of 5% (five percent) of Contract Value from an Approved Insurance Company for insurance against any damage, injury or loss which may occur to any person or property including that of EPI, arising out of the execution of the works or temporary works. Wherever required by EPI the Contractor shall produce the policy or the policies of Insurance and the receipt of payment of the current premiums.

In case of failure of the Contractor to obtain insurance for works, insurance under Workman Compensation Act and Third Party insurance as described above within one month from the date of commencement of work, running account payments of the Contractor shall be withheld till such time the aforesaid insurance covers are obtained by the Contractor.

20.0 INDEMNITY AGAINST PATENT RIGHTS

The Contractor shall fully indemnify EPI from and against all claims and proceedings for or on account of any infringement of any patent rights, design, trademark or name or other protected rights in respect of any construction plant, machine, work or material used for in connection with the works or temporary works.

21.0 LABOUR LAWS TO BE COMPLIED WITH BY THE CONTRACTOR

The Contractor shall obtain a valid licence under the contract labour (Regulation & Abolition) Act 1970 and the Contract Labour Act (R&A) Central Rules 1971 and amended from time to time, and continue to have a valid licence until the completion of the work including defect liability period. The Contractor shall also abide by the provision of the child labour (Prohibition and Regulation) Act. 1986 and as amended from time to time. Any failure to fulfill this requirement shall attract the penal provisions of this contract arising out of the resultant non-execution of the work.

The Contractor shall comply with the provisions of the payment of Wages Act, 1936, Minimum Wages Act, 1948, Employer's Liability Act, 1938, Workmen's Compensation Act, 1923, Maternity Benefit Act, 1961 and Mines Act -1932, Industrial Disputes Act, 1947 or any modifications thereof or any other law relating thereto and rules made there under from, time to time.

- 21.1 No labour below the age of 18 years shall be employed on the work.

22.0 LABOUR SAFETY PROVISION

The Contractor shall be fully responsible to observe the labour safety provisions.

23.0 OBSERVANCE OF LABOUR LAWS

- 23.1 The Contractor shall be fully responsible for observance of all labour laws applicable including local laws and other laws applicable in this matter and shall Indemnify and keep indemnified EPI against effect of non observance of any such laws. The Contractor shall be liable to make payment to all its employees, workers and sub-Contractors and make compliance with labour laws. If EPI or the Client/ Owner/ Employer is held liable as "Principal Employer" to pay any amount or contributions etc. under legislation of Govt. or Court decision in respect of the employees of the Contractor, then the Contractor would reimburse the amount of such payments, contribution etc. to EPI and/ or same shall be deducted from the payments, Retention Money etc. of the Contractor.
- 23.2 The Contractor shall submit proof of having valid EPF registration certificate. In absence of the said certificate payment to the extent of 4.70% (four point seven percent) of the value of all the Running Account bills may be withheld by EPI and shall be released only after the production of the EPF registration certificate from the concerned authorities. If it is incumbent upon EPI to deposit withheld amount with EPF authorities, the withheld amount shall be deposited by EPI with EPF authorities. In such a case EPI shall not refund this withheld amount to the Contractor even after the production of EPF registration certificate.
- 23.3 The Contractor shall be liable to pay cess levied under the Building and other Construction Workers Welfare Cess Act, 1996, at such rates as may be notified by the Government from time to time. EPI shall deduct at source from every Running Account Bill of the Contractor, the said cess, at such rates for the time being prevailing, which shall not exceed 2% (two percent) but not be less than 1% (one percent) of the cost of construction incurred by EPI.

24.0 LAWS GOVERNING THE CONTRACT

This contract shall be governed by the Indian Laws for the time being in force and amended from time to time.

25.0 LAWS, BYE LAWS RELATING TO THE WORK

The Contractor shall strictly abide by the provisions, for the time being in force, of law relating to works or any regulations and bye laws made by any local authority or any water & lighting agencies or any undertakings within the limits of the

jurisdiction of which the work is proposed to be executed. The Contractor shall be bound to give to the authorities concerned such notices and take all approvals as may be provided in the law, regulations or bye laws as aforesaid, and to pay all fees and taxes payable to such authorities in respect thereof.

26.0 EMPLOYMENT OF PERSONNEL

- 26.1 The Contractor shall employ only Indian Nationals as his representatives, servants and workmen after verifying their antecedents and loyalty. He shall ensure that no personnel of doubtful antecedents & integrity and any other nationality in any way are associated with the works.
- 26.2 EPI shall have full power to get removed immediately any representative, agent, servant and workmen or employees of the Contractor on account of misconduct, negligence or incompetence or whose continued employment may in the opinion of the Engineer-In-Charge be undesirable without assigning any reason for the removal. The Contractor shall not be allowed any compensation on this account whatsoever.

27.0 TECHNICAL STAFF FOR WORK

- 27.1 The Contractor shall employ at his cost the adequate number of technical staff during the execution of this work depending upon the requirement of work. For this purpose the numbers to be deployed, their qualification, experience as decided by EPI shall be final and binding on Contractor. The Contractor shall not be entitled for any extra payment in this regard. The technical staff should be available at Site, whenever required by EPI to take instructions.
- 27.2 Within 15 days from the date of letter of intent, the Contractor shall submit a site organizational chart and Resume including details of experience of the Project-in-Charge and other staff proposed by him and shall depute them on the Project after getting approval from Engineer-In-Charge. If desired by the Contractor at later date, the Project-in-Charge and other staff whose resume is approved by EPI can be replaced with prior written approval of EPI and replacement shall be with equivalent or superior candidate only. Decision of Engineer-In-Charge shall be final and binding on the Contractor.

Even after approving the site organizational chart, the Engineer-In-Charge due to nature and exigency of work can direct the Contractor to depute such additional staff as in view of Engineer-In-Charge is necessary and having qualification and experience as approved by the Engineer-In-Charge. The removal of such additional staff from the Site shall only be with the prior written approval of Engineer-In-Charge. The Contractor shall not be paid anything extra whatsoever on account of deployment of additional staff and decision of the Engineer-In-Charge shall be final and binding on the Contractor.

- 27.3 In case the Contractor fails to employ the staff as aforesaid, he shall be liable to pay a reasonable amount not exceeding a sum of Rs. 25,000 (Rupees Twenty Five Thousand only) for each month of default in the case of each person. The

decision of the Engineer-In-Charge as to number of Technical Staff to be adequate for the project and the period for which the required technical staff was not employed by the Contractor and as to the reasonableness of the amount to be deducted on this account shall be final and binding on the Contractor.

28.0 LAND FOR LABOUR HUTS/ SITE OFFICE AND STORAGE ACCOMMODATION

28.1 The Contractor shall arrange the land for temporary office, storage accommodation and labour huts at his own cost and get the clearance of local authorities for setting up of labour camp and cost of same is deemed to be included in the rates quoted by the Contractor for the works. The Contractor shall ensure that the area of labour huts is kept clean and sanitary conditions are maintained as laid down by the local authorities controlling the area. The labour huts shall be so placed that it does not hinder the progress of work or access to the worksite. The vacant possession of the land used, for the purpose shall be given back by Contractor after completion of the work. The Retention Money of the Contractor shall be released only after Contractor demolishes all structures including foundations and gives back clear vacant possession of this land.

28.2 In the event the Contractor has to shift his labour camp at any time during execution of the work on the Instructions of local authorities or as per the requirement of the work progress or as may be required by EPI, he shall comply with such instructions at his cost and no claim whatsoever shall be entertained on this account.

28.3 FURNISHED OFFICE ACCOMMODATION & MOBILITY AND COMMUNICATION TO BE PROVIDED BY CONTRACTOR TO EPI

On acceptance of Tender, the Contractor at his own cost will construct a suitable furnished office at Site equipped with basic facilities such as telephone(s), fax, internet, photocopier, computer(s) & printer(s) alongwith operator(s), regular electricity & drinking water supply and vehicles for staff etc. as per the requirement of the project. The Contractor shall provide consumable as required and maintain the aforesaid facilities intact/operational during the currency of the contract including the defects liability period. The Contractor shall also make sufficient arrangement for photography/ videography preferably by maintaining a camera/video camera at Site so that photographs video can be taken of any specific activity at any point of time. The Contractor shall also provide software like MS Project etc. for the purpose of preparing progress report, etc.

28.4 The Contractor shall make all arrangements for ground breaking ceremony/ inaugural function etc for the project as required and the cost towards it is deemed to be included in his rates/offer. Any expenditure already incurred/to be incurred by EPI, shall be recovered from the Contractor.

28.5 PROTECTION OF TREES

Trees designated by the Engineer-In-Charge shall be protected from damage during the course of the works and earth level within one meter of each such tree shall not

be changed. Where necessary, such trees shall be protected by providing temporary fencing.

29.0 WATCH & WARD AND LIGHTING

The Contractor shall at his own cost take all precautions to ensure safety of life and property by providing necessary barriers, lights, watchmen etc. during the progress of work as directed by Engineer-In-Charge.

30.0 HEALTH & SANITARY ARRANGEMENTS

In case of all labour directly or indirectly employed in work for the performance on the Contractor's part of this contract, the Contractor shall comply with all rules and regulations framed by Govt. from time to time for the protection of health and sanitary arrangements for workers.

31.0 WORKMEN'S COMPENSATION ACT

The Contractor shall at all times indemnify EPI and Owner against all claims for compensation under the provision of Workmen's Compensation Act, 1923 or any other law in force, for any workmen employed by the Contractor or his sub-Contractor in carrying out the contract and against all costs and expenses incurred by EPI therewith.

32.0 MINIMUM WAGES ACT

The Contractor shall comply with all the provisions of the Minimum Wages Act, 1948, Contract Labour Act (R&A) 1970, and rules framed thereunder and other labour laws/local laws affecting contract labour that may be brought into force from time to time.

33.0 LABOUR RECORDS

The Contractor shall submit by the 4th & 19th of every month to the Engineer-In-Charge of EPI a true statement, showing in respect of the second half of the preceding month and the first half of the current month, respectively, of the following data :-

- a) The number of the labour employed by him (category-wise).
- b) Their working hours.
- c) The wages paid to them.
- d) The accidents that occurred during the said fortnight showing the circumstances under which they happened and the extent of damage and injury caused.

- e) The number of female workers who have been allowed Maternity Benefits under the Maternity Benefit Act, 1962 and the amount paid to them.
- f) Any other information required by Engineer-In-Charge.

34.0 RELEASE OF RETENTION MONEY AFTER LABOUR CLEARANCE

Retention Money of the work shall not be refunded till the Contractor produces a clearance certificate from the concerned Labour Officer. As soon as the work is virtually complete, the Contractor shall apply for the clearance certificate to the concerned Labour Officer under intimation to the Engineer-In-Charge. The Engineer-In-Charge, on receipt of the said communication, shall write to the Labour Officer to intimate if any complaint is pending against the Contractor in respect of the work. If no complaint is pending, on record till three months after completion of the work and/or no communication is received from the Labour Officer to this effect till six months after the date of completion, it will be deemed to have received the clearance certificate and the Retention Money will be released if otherwise due.

35.0 SECURED ADVANCE AGAINST NON-PERISHABLE MATERIALS

Interest free secured advance up-to a maximum of 75 % (seventy five percent) of the Market Value of the materials or the cost of materials as derived from the tendered item rate of the Contractor, whichever is less, required for incorporation in the permanent works and brought to Site and duly certified by EPI Site Engineer shall be paid to the Contractor for all non-perishable items as per CPWD/ MORTH (as the case may be) norms. The advance will be paid only on submission of Indemnity Bond in the prescribed pro-forma. The advance shall be recovered in full from next Running Account bill and fresh advance paid for the balance quantities of materials. The Contractor shall construct suitable godown at the Site of work for safe storage of the materials against any possible damages due to sun, rain, dampness, fire, theft etc. at his own cost. He shall also employ necessary watch & ward establishment for the purpose at his costs and risks. Such secured advance shall be payable on other items of perishable nature, fragile and combustible with the approval of the Engineer-In-Charge provided the Contractor provides a comprehensive insurance cover for the full cost of such materials. The decision of the Engineer-In-Charge shall be final and binding on the Contractor in this matter. No secured advance shall however, be paid on high-risk materials such as ordinary glass, sand, petrol, diesel etc.

36.0 MEASUREMENTS OF WORKS

- 36.1 Unless otherwise mentioned in the Bill of Quantities the measurements of works shall be done as per CPWD/MORTH specifications (as specified in Technical Specification of the Tender) and if the same is not given in the CPWD/MORTH Specifications, the same shall be measured as per latest relevant BIS codes in force. The quantity of steel reinforcement and the structural steel sections incorporated in the work shall be measured & paid on the basis of standard coefficients of sections as per BIS Codes of practice.

- 36.2 The Engineer-In-Charge shall except as otherwise stated ascertain and determine by measurement the value of work done in accordance with the contract.
- 36.3 All items having financial value shall be entered in Measurement Book, level book, etc. prescribed by EPI so that a complete record is obtained of all work performed under the contract. Items of non-financial value (which are not payable) may also be entered in Measurement Book at the sole discretion of the Engineer-In-Charge.
- 36.4 Measurements shall be taken jointly by the Engineer-In-Charge or his authorized representative and by the Contractor or his authorized representative.
- 36.5 Before taking measurements of any work the Engineer-In-Charge or the authorized person deputed by him for the purpose shall give a reasonable notice to the Contractor. If the Contractor fails to attend or send an authorized representative for measurement after such a notice or fails to countersign or to record the objection within a week from the date of measurement, then in any such event measurement taken by the Engineer-In-Charge or by the person deputed by him shall be taken to be correct measurements of the work.
- 36.6 The Contractor shall, without extra charge provide assistance with every appliance, labour and other things necessary for measurement.

Measurements shall be signed and dated by both parties each day on the Site on completion of measurement.

37.0 PAYMENTS

- 37.1 The bill shall be submitted by Contractor each month on or before the date fixed by the ENGINEER-IN-CHARGE for all works executed in previous months. The Contractor shall prepare computerized bills using the program as approved by Engineer-In-Charge as per prescribed format/ pro-forma. The Contractor shall submit five numbers of hard copies and one soft copy of floppy/ CD for all bills. Subject to clause 37.3 herein below, the payment due to the Contractor shall be made within fifteen days of getting the measurements verified from the Engineer-In-Charge or his subordinate/ representative and certification of bill by the Engineer-In-Charge.
- 37.2 All running payments shall be regarded as 'on account' payments against the final payment only and not as payments for work actually done and completed and / or accepted by EPI and shall not preclude the recovery for bad, unsound and imperfect or unskilled work to be removed and taken away and reconstructed or re-erected or be considered as an admission of the due performance of the Contract, or any part thereof, in this respect, or the accruing of any claim, nor shall it conclude, determine or affect in any way the powers of EPI under these conditions or any of them as to the final settlement and adjustments of the accounts or otherwise, or in any other way vary/ affect the contract. The final bill shall be submitted by the Contractor within three months of

the completion of work, otherwise EPI's certificate of the measurement and of the total amount payable for the work accordingly shall be final and binding on Contractor. Each Running Bill should be accompanied by two sets of at-least 20 (twenty) photographs as per direction of Engineer-In-Charge taken from various points depicting status of work as on Report/ Bill date along with Monthly Progress Report for the concerned month in the pro-forma to be given/ approved by Engineer-In-Charge. Intermittent progress photographs as and when required shall also be provided by the Contractor at his own cost as per direction of Engineer-In-Charge. No payment of running account bill shall be released unless it is accompanied by progress photographs and Monthly Progress Report as above.

37.3 It is clearly agreed and understood by the Contractor that notwithstanding anything to the contrary that may be stated in the agreement between EPI and the Contractor, the Contractor shall become entitled to payment only after EPI has received the corresponding payment(s) from the Client/ Owner for the work done by the Contractor. Any delay in the release of payment by the Client/ Owner to EPI leading to delay in the release of the corresponding payment by EPI to the Contractor shall not entitle the Contractor to any compensation/ interest from EPI.

37.4 All payments shall be released by EPI by Account Payee Cheque from any of its offices in India directly at the address notified by the Contractor (Postage charges shall be charged to the Contractor's account). In case of Payments is made by Demand Draft at the request of the Contractor, Bank Commission charges shall be debited to the account of Contractor.

38.0 WORK ON SUNDAYS, HOLIDAYS AND DURING NIGHT

For carrying out work on Sunday and Holidays or during night, the Contractor will approach the Engineer-In-Charge or his representative at least two days in advance and obtain his permission. The Engineer-In-Charge at his discretion can refuse such permission. The Contractor shall have no claim on this account whatsoever. If work demand, the Contractor shall make arrangements to carry out the work on Sundays, Holidays and in two, three shifts with the approval of Engineer-in- Charge at no extra cost to EPI.

39.0 NO IDLE CHARGES TOWARDS LABOUR OR PLANT & MACHINERY ETC.

No idle charges or compensation shall be paid for idling of the Contractor's labour, staff or Plant & Machinery etc. on any ground or due to any reason whatsoever. EPI will not entertain any claim in this respect.

40.0 WORK TO BE EXECUTED IN ACCORDANCE WITH SPECIFICATIONS, DRAWINGS, ORDERS, ETC.

The Contractor shall execute the whole and every part of the work in the most substantial and workman like manner both as regards materials and otherwise in every respect in strict accordance with the specifications. The Contractor shall also conform exactly, fully and faithfully to the Design, Drawings and Instructions

in writing in respect of the work assigned by the Engineer-In-Charge and the Contractor shall be furnished free of charge one copy of the Contract Documents together with Specifications, Designs, Drawings.

The Contractor shall comply with the provisions of the contract and execute the works with care and diligence and maintain the works and provide all labour and materials, tools and plants including for measurements and supervision of all works, structural plans and other things of temporary or permanent nature required for such execution and maintenance in so far as the necessity for providing these is specified or is reasonably inferred from the contract. The Contractor shall take full responsibility for adequacy, suitability and safety of all the works and methods of construction.

41.0 DIRECTION FOR WORKS

- 41.1 All works to be executed under the contract shall be executed under the direction and subject to approval in all respect of the Engineer-In-Charge of EPI who shall be entitled to direct at what point or points and in what manner works are to be commenced and executed.
- 41.2 The Engineer-In-Charge and his representative shall communicate or confirm their instructions to the Contractor in respect of the execution of work during their Site inspection in a 'Works Site Order Book' maintained at the site office of Engineer-In-Charge. The Contractor or his authorized representative shall confirm receipt of such instructions by signing against the relevant orders in the book. The Contractor shall be bound to sign the site order book as and when required by Engineer-In-Charge and carry out compliance of instructions promptly to the satisfaction of Engineer-In-Charge.

42.0 ORDER OF PRECEDENCE OF DOCUMENTS

- 42.1 In case of difference, contradiction, discrepancy, dispute with regard to Conditions of Contract, Specifications, Drawings, Bill of Quantities and Rates quoted by the Contractor and other documents forming part of the contract, the following shall prevail in order of precedence.
- i) Contract Agreement
 - ii) Fax, Telegram or Letter of Intent, detailed letter of Work Order along with statement of agreed variations and its enclosures.
 - iii) Description in Bill of Quantity / Schedule of Quantities
 - iv) Additional Conditions of Contract.
 - v) Technical specifications (General / Special Technical Specification) as given in the Tender Documents.
 - vi) General Conditions of Contract.
 - vii) Drawings
 - viii) CPWD/ MORTH specifications (as specified in Technical Specification of the Tender) update with correction slips issued up to last date of receipt of Tenders.

ix) Relevant B.I.S. Codes.

- 42.2 If there are varying or conflicting provisions made in any one document forming part of the contract, the Engineer-In-Charge shall be the deciding authority with regard to the intention of the document which shall be final and binding on the Contractor.
- 42.3 Any error in description, quantity or rate in the Schedule of Quantities/items or Bill of Quantities or any omission there from shall not vitiate the contract or release the Contractor from the execution of the whole or any part of the works comprised therein according to the Drawings and Specifications or from any of his obligations under the contract.

43.0 TIME SCHEDULE & PROGRESS

- 43.1 Time allowed for carrying out all the works as entered in the Tender shall be as mentioned in the "Memorandum" to the "Form of Tender" which shall be reckoned from the 10th day from the date on which the letter/ telegram of Intent is issued to the Contractor. Time shall be the essence of the contract and Contractor shall ensure the completion of the entire work within the stipulated time of completion.
- 43.2 The Contractor shall also furnish within 10 days from the date of letter/ telegram of Intent, a CPM network/ PERT chart/ Bar Chart for completion of work within stipulated time. This will be duly got approved from EPI. This approved Network/ PERT Chart shall form a part of the agreement. Achievement of milestones as well as total completion has to be within the time period allowed.
- 43.3 Contractor shall mobilize and employ sufficient resources for completion of all the works as indicated in the agreed BAR CHART/Network. No additional payment will be made to the Contractor for any multiple shift work or other incentive methods contemplated by him in his work schedule even though the time schedule is approved by the Engineer-In-Charge.
- 43.4 During the currency of the work the Contractor is expected to adhere to the time schedule on miles stone and total completion and this adherence will be a part of Contractor's performance under the contract. During the execution of the work Contractor is expected to participate in the review and updating of the Network/ BAR CHART undertaken by EPI. These reviews may be undertaken at the discretion of EPI either as a periodical appraisal measure or when the quantum of work order on the Contractor is substantially changed through deviation orders or amendments. The review shall be held at Site or any of the offices of EPI/ Owner or Consultant of EPI/ Owner at the sole discretion of EPI.
- 43.5 If at any time, it appears to the Engineer-In-Charge that the actual progress of work does not conform to the approved programme referred above, the Contractor shall produce a revised programme showing the modifications to the approved programme by additional inputs to ensure completion of the work within the stipulated time. The Contractor will adhere to the revised schedule thereafter. The approval to the revised schedule resulting in a completion date beyond the

stipulated date of completion shall not automatically amount to a grant of extension of time to the Contractor.

- 43.6 Contractor shall submit fortnightly/ Monthly (as directed by Engineer-In-Charge) progress reports (5 copies) on a computer based program (program and software to be approved by Engineer-In-Charge) highlighting status of various activities and physical completion of work.
- 43.7 The Contractor shall send completion report along with as built drawings and maintenance schedule to the office of Engineer-In-Charge, of EPI in writing within a period of 30 days of completion of work.

44.0 WATER AND ELECTRICITY

The Contractor shall make his own arrangement for Water & Electrical power for construction and other purposes at his own cost and pay requisite electricity and water charges. The Contractor shall also make standby arrangement for water & electricity to ensure un-interrupted supply.

45.0 MATERIALS TO BE PROVIDED BY THE CONTRACTOR

The Contractor shall, at his own expense, provide all materials, required including Cement & Steel for the works.

The Contractor shall at his own expense and without delay, supply to the Engineer-in- Charge samples of materials to be used on the work and shall get the same approved in advance. All such materials to be provided by the Contractor shall be in conformity with the specifications laid down or referred to in the contract. The Contractor shall, if requested by the Engineer-in- Charge furnish proof, to the satisfaction of the Engineer-In-Charge that the materials so comply.

The Contractor shall at his risk and cost submit the samples of materials to be tested or analyzed and bear all charges and cost of testing unless specifically provided for otherwise elsewhere in the contract or specifications. The Engineer-In-Charge or his authorized representative shall at all times have access to the works and to all workshops and places where work is being prepared or from where materials, manufactured articles or machinery are being obtained for the works and the Contractor shall afford every facility and every assistance and cost in obtaining the right and visit to such access.

The Engineer-In-Charge shall have full powers to require the removal from the premises of all materials which in his opinion are not in accordance with the specifications and in case of default, the Engineer-In-Charge shall be at liberty to employ at the expense of the Contractor, other persons to remove the same without being answerable or accountable for any loss or damage that may happen or arise to such materials. The Engineer-In-Charge shall also have full power to require other proper materials to be substituted thereof and in case of default, the Engineer-In-Charge may cause the same to the supplies and all

costs which may require such removal and substitution shall be borne by the Contractor.

45.1 CEMENT AND CEMENT GODOWN

Cement shall be procured by Contractor of 43 Grade conforming to BIS : 8112 Specification latest edition or higher Grade as directed by the Engineer-In-Charge. The cement shall be procured directly from the reputed manufacturers/stockist, which will have to be got approved from EPI in advance. Relevant vouchers and test certificates will be produced as and when required. The cement shall be stored by the Contractor in such suitable covered and lockable stores, well protected from climate and atmospheric effect. The cement godown shall be constructed by the Contractor as per CPWD specifications at his own cost. The cement will remain under double lock, one from EPI and other from Contractor. The cement in bags shall be stored in godowns in easy countable position. Cement bags shall be used on first in first out basis. Cement stored for beyond 90 days will be required to be tested at Contractors cost, before use in works.

45.2 STEEL & STEEL STOCKYARD

Steel conforming to BIS specifications (latest edition) shall be procured by the Contractor directly from reputed manufacturers/producers as approved by EPI. The manufacturer has to give a certificate that the material supplied is not a re-rolled product. Relevant vouchers & test certificates will be produced by the Contractor. Re-rolled sections will not be allowed.

Reinforcement steel, structural steel shall be stored and stacked in such manner so as to facilitate easy identification, removal etc. The Contractor shall take proper care to prevent direct contact between the steel and the ground/ water for which he shall provide necessary arrangement at his own cost including ensuring proper drainage of area to prevent water logging as per directions of the Engineer-In-Charge. If required, the reinforcement steel shall also be protected, by applying a coat of neat cement slurry over the bars for which no extra payment shall be made.

Test certificates for each consignment of steel shall be furnished and tests to be got carried out by the Contractor at his own cost from the authorized laboratory as per the directions of Engineer-In-Charge, before incorporating the materials in the work.

46.0 SCHEDULE OF QUANTITIES / BILL OF QUANTITIES

- 46.1 The quantities shown against the various items of work are only approximate quantities, which may vary as per the actual requirement at Site.
- 46.2 All items of work in the Bill of Quantities/ schedule of quantities shall be carried out as per the CPWD/ MORTH (as the case may be) specifications, drawings and instructions of the ENGINEER-IN-CHARGE of EPI and the rates shall include for supply of required materials including proper storage, consumables, skilled & unskilled labour, supervision, tools, tackles, plant & machinery complete

as called for in the detailed specifications and conditions of the contract. No item, which is not covered in the Bill of Quantities, shall be executed by the Contractor without the approval of EPI. In case any Extra/Substituted item is carried out without specific-approval, the same will not be paid.

47.0 ANTI-TERMITE TREATMENT & WATER PROOF TREATMENT

- 47.1 Pre-construction treatment shall be carried out in co-ordination with the building work and shall be executed in such a manner that the civil works are not hampered or delayed by the anti-termite treatment. The treatment shall be carried out as detailed in BIS: 6313 (Part-II) latest revision. The waterproof treatment shall be of type and specifications as given in the schedule of quantities.
- 47.2 The treatment against water-proofing of basement, roofs, water retaining areas and termite infestation shall be and remain fully effective for a period of not less than 10(Ten) years to be reckoned from the date of expiry of the Defect Liability period, prescribed in the contract. At any time during the said guarantee period if EPI finds any defects in the said treatment or any evidence of re-infestation, dampness, leakage in any part of buildings or structure and notifies the Contractor of the same, the Contractor shall be liable to rectify the defect or give re-treatment at his own cost and shall commence the work or such rectification or re-treatment within seven days from the date of issue of such letter to him. If the Contractor fails to commence such work within the stipulated period, EPI may get the same done by another agency at the Contractor's cost and risk and the decision of the Engineer-In-Charge of EPI for the cost payable by the Contractor shall be final and binding upon him.
- 47.3 Re-treatment if required shall be attended to and carried out by the Contractor within seven days of the notice from Engineer-In-Charge of EPI.
- 47.4 EPI reserves the right to get the quality of treatment checked in accordance with recognized test methods and in case it is found that the chemicals with the required concentration and rate of application have not been applied, or the water proof treatment is not done as per specifications, the Contractor will be required to do the re-treatment in accordance with the required concentration & specifications at no extra cost failing which no payment for such work will be made. The extent of work thus rejected shall be determined by EPI.
- 47.5 Water proofing and anti-termite treatment shall be got done through approved / specialized agencies only with prior approval of Engineer-In-Charge.
- 47.6 The Contractor shall make such arrangement as may be necessary to safeguard the workers and residents of the building against any poisonous effect of the chemicals used during the execution of the work.
- 47.7 During the execution of work, if any damage shall occur to the treatment already done, either due to rain or any other circumstances, the same shall be rectified and made good to the entire satisfaction of Engineer-In-Charge by the Contractor at his cost.

- 47.8 The Contractor shall make his own arrangement for all equipments required for the execution of the job.
- 47.9 The Contractor shall execute Guarantee Bond in the prescribed form as appended for guaranteeing the anti-termite treatment and waterproof treatment.

48.0 INDIAN STANDARDS

Wherever any reference is made to any IS in any particular specifications, Drawings or Bill of Quantities, it means the Indian Standards editions with the amendments current at the last date of receipt of Tender Documents.

49.0 CENTERING & SHUTTERING

Marine plywood only or steel plates of minimum thickness as approved by Engineer-In-Charge shall be used for formwork. The shuttering plates shall be cleaned and oiled after every repetition and shall be used only after obtaining approval of EPI's Engineers at Site. The number of repetitions allowed for plywood and steel shuttering shall be at the discretion of Engineer-In-Charge of EPI depending upon the condition of shuttering surface after each use and the decision of ENGINEER-IN-CHARGE in this regard shall be final and binding on the Contractor. No claim whatsoever on this account shall be admissible.

50.0 CONTROLLED MATERIALS

- 50.1 The following Controlled materials shall be brought to Site after the approval of EPI.
- a) Water proofing compound.
 - b) Cement
 - c) Steel
 - d) Primer/ Paints/ Varnish etc.
 - e) Bitumen
 - f) Chemical for anti termite treatment
 - g) Any other materials as per discretion of EPI.
- 50.2 The quantity of Controlled materials shall be measured and recorded in the Measurement books and signed by the Contractor and the Engineer-In-Charge as a check to ensure that the required quantities as required for execution of works as per specifications have been brought to Site for incorporation in the work.
- 50.3 Controlled materials brought at Site shall be stored as directed by EPI and those already recorded in Measurement book, shall be suitably marked for identification.
- 50.4 The Contractor shall ensure that the Controlled materials are brought to Site in original sealed containers or packing bearing manufacturer's markings and

- brands (except where the quantity required is a fraction of the smallest packing). Materials not complying with this requirement shall be rejected. The empty containers of such Controlled materials shall not be destroyed/ disposed-off without the written permission of EPI.
- 50.5 The Contractor shall produce receipted vouchers showing quantities of the materials to satisfy Engineer-In-Charge that the materials comply with the specifications. These vouchers shall be endorsed, dated and initialed by Engineer-In-Charge giving the contract number and name of work and a certified copy of each such voucher signed both by EPI and the Contractor shall be kept on record.
- 50.6 When the cost of each category of materials is less than Rs.5000/- production of vouchers may not be insisted upon if EPI is otherwise satisfied with the quality and quantity of materials.

51.0 RECORDS OF CONSUMPTION OF CEMENT & STEEL

- 51.1 For the purpose of keeping a record of cement and steel received at Site and consumption in works, the Contractor shall maintain a properly bound register in the form approved by EPI, showing columns like quantity received and used in work and balance in hand etc. This register shall be signed daily by the Contractor's representative and EPI's representative.
- 51.2 The register of cement & steel shall be kept at Site in the safe custody of EPI's Engineer during progress of the work. This provision will not, however, absolve the Contractor from the quality of the final product.
- 51.3 In case cement or steel quantity consumed is lesser as compared to the theoretical requirement of the same as per CPWD/MORTH (as the case may be) specifications/ norms, the work will be devalued and/ or a penal rate (i.e. double the rate at which cement/ steel purchased last) recovery for lesser consumption of cement/ steel shall be made in the item rates of the work done subject to the condition that the tests results fall within the acceptable criteria as per CPWD/MORTH (as the case may be) specifications otherwise the work shall have to be dismantled and redone by the Contractor at no extra cost.

In case of cement, if actual consumption is less than 98% of the theoretical consumption, a recovery shall be effected from the Contractor's dues at the penal rate for the actual quantity that is lower than 98% of theoretical consumption.

52.0 MATERIALS AND SAMPLES

- 52.1 The materials/ products used on the works shall be one of the approved make/ brands out of list of manufacturers/ brands/ makes given in the Tender Documents. The Contractor shall submit samples/ specimens out of approved makes of materials/ products to the Engineer-In-Charge for prior approval. In

exceptional circumstances Engineer-In-Charge may allow alternate equivalent makes/ brands of products/ materials at his sole discretion. The final choice of brand/ make shall remain with the Engineer-In-Charge, whose decision in this matter shall be final and binding and nothing extra on this account shall be payable to the Contractor.

In case single brand/ make is mentioned, other equivalent makes/ brands may be considered by the Engineer-In-Charge with prior approval. In case of variance in CPWD/ IS/BIS Specifications from approved products/ makes specification, the specification of approved product/ make shall prevail for which nothing shall be paid extra to the Contractor.

In case no make or brand of any materials, articles, fittings and accessories etc. is specified, the same shall comply with the relevant Indian Standard Specifications and shall bear the ISI/BIS mark. The Engineer of EPI and the Owner shall have the discretion to check quality of materials and equipments to be incorporated in the work, at source of supply or site of work and even after incorporation in the work. They shall also have the discretion to check the workmanship of various items of work to be executed in this work. The Contractor shall provide the necessary facilities and assistance for this purpose.

- 52.2 The above provisions shall not absolve the Contractor from the quality of final product and in getting the material and workmanship quality checked and approved from the Engineer-In-Charge of EPI.
- 52.3 The Contractor shall well in advance, produce samples of all materials, articles, fittings, accessories etc. that he proposes to use and get them approved in writing by EPI. The materials articles etc. as approved shall be labelled as such and shall be signed by EPI and the Contractor's representative.
- 52.4 The approved samples shall be kept in the custody of the Engineer- in-Charge of EPI till completion of the work. Thereafter the samples except those destroyed during testing shall be returned to the Contractor. No payment will be made to the Contractor for the samples or samples destroyed in testing.
- 52.5 The brands of all materials, articles fittings etc. approved together with the names of the manufacturers and firms from which supplies have been arranged shall be recorded in the Site Order Book.
- 52.6 The Contractor shall set up and maintain at his cost, a field testing laboratory for all day-to-day tests at his own cost to the satisfaction of the Engineer-In-Charge. This field testing laboratory shall be provided with equipment and facilities to carry out all mandatory field tests as per CPWD/MORTH (as the case may be) specifications. The laboratory building shall be constructed and installed with the appropriate facilities; Temperature and humidity controls shall be available wherever necessary during testing of samples.

All equipments shall be provided by the Contractor so as to be compatible with the testing requirements specified. The Contractor shall maintain all the equipments in good working condition for the duration of the contract.

The Contractor shall provide approved qualified personnel to run the laboratory for the duration of the Contract. The number of staff and equipment available must at all times be sufficient to keep pace with the sampling and testing programme as required by the Engineer-In-Charge.

The Contractor shall fully service the site laboratory and shall supply everything necessary for its proper functioning, including all transport needed to move equipment and samples to and from sampling points on the Site, etc.

The Contractor shall re-calibrate all measuring devices whenever so required by the Engineer-In-Charge and shall submit the results of such measurements without delay.

All field tests shall be carried out in the presence of EPI's representative. All costs towards samples, materials, collection, transport, manpower, testing, including concrete mix-design etc. shall be borne by the Contractor and are deemed to be included in the rates quoted by him in the Bill of Quantities.

53.0 TESTS AND INSPECTION

53.1 The Contractor shall carry out the various mandatory tests as per specifications and the technical documents that will be furnished to him during the performance of the work. All the tests on materials, as recommended by CPWD, MORTH (as the case may be) and relevant Indian Standard Codes or other standard specifications (including all amendments current at the last date of submission of Tender Documents) shall be got carried out by the Contractor at the field testing laboratory or any other recognized institution/ laboratory, at the direction of EPI. All testing charges, expenses etc. shall be borne by the Contractor. All the tests, either on the field or outside laboratories concerning the execution of the work and supply of materials shall be got carried out by the Contractor or EPI at the cost of the Contractor.

53.2 WORKS TO BE OPEN TO INSPECTION

All works executed or under the course of execution in pursuance of this contract shall at all times be open to inspection and supervision of EPI. The work during its progress or after its completion may also be inspected, by Chief Technical Examiner of Government of India (CTE) and/ or an inspecting authority of State Government of State in which work is executed and/or by third party checks by Owner/ Clients. The compliance of observations/ improvements as suggested by the inspecting officers of EPI/CTE/ State authorities/ Owners shall be obligatory on the part of the Contractor at the cost of Contractor.

54.0 BORROW AREAS

The Contractor shall make his own arrangements for borrow pits and borrow disposal areas including their approaches and space for movement of men, machinery, other equipments as required for carrying out the works. The Contractor shall be responsible for taking all safety measures, getting approval,

making payment of royalties, charges etc. and nothing extra shall be paid to the Contractor on this account and unit rates quoted by the Contractor for various items of Bill of Quantities shall be deemed to include the same.

55.0 BITUMEN WORK

The Contractor shall be responsible for arranging Bitumen/Tar of required grade from source to be approved by the Engineer-In-Charge. No Bitumen work shall be carried out on wet surface or in rainy conditions.

56.0 CARE OF WORKS

From the commencement to the completion of works and handing over, the Contractor shall take full responsibility for care of all the works and in case of any damage/loss to the works or to any part thereof or to any temporary works due to lack of precautions or due to negligence on part of Contractor, the same shall be made good by the Contractor at his own cost.

57.0 WORK IN MONSOON AND DEWATERING

The execution of the work may entail working in the monsoon also. The Contractor must maintain labour force as may be required for the job and plan and execute the construction and erection according to the prescribed schedule. No special/ extra rate will be considered for such work in monsoon. The Contractor's rate shall be considered inclusive of cost of dewatering required, if any and no extra rate shall be payable on this account.

58.0 NO COMPENSATION FOR FORECLOSURE/CANCELLATION/ REDUCTION OF WORKS

If at any time after the commencement of the work EPI shall for any reason whatsoever is required to abandon the work or does not require the whole work thereof as specified in the Tender to be carried out, the Engineer-In-Charge shall give notice in writing of the fact to the Contractor, who shall have no claim to any payment of compensation whatsoever on account of any profit or advantage which he might have derived from the execution of the work in full, but which he did not derive in consequence of the full amount of the work not having been carried out or on foreclosure, neither shall he have any claim for compensation by reason of any alterations having been made in the original Specifications, Drawings, Designs and Instructions which shall involve any curtailment of the work as originally contemplated.

Provided that the Contractor shall be paid the charges on the cartage only of materials actually and bonafide brought to the Site of the work by the Contractor and rendered surplus as a result of the abandonment or curtailment of the work or any portion thereof and then taken back by the Contractor, provided however, that the Engineer-In-Charge shall have in all such cases the option of taking over all or any such materials at their purchase price or at local current rates whichever may be less. In the case of such stores having been issued by EPI

and returned by the Contractor to EPI, credit will be given to him by the Engineer-In-Charge at rates not exceeding those at which they were originally issued to him after taking into consideration any deduction for claims on account of any deterioration or damage while in the custody of the Contractor and in this respect the decision of the Engineer-In-Charge shall be final.

59.0 RESTRICTION ON SUBLETTING

59.1 The Contractor shall not sublet or assign the whole or part of the works except where otherwise provided, by the contract and even then only with the prior written consent of EPI and such consent if given shall not relieve the Contractor from any liability or obligation under the contract and he shall be responsible for the acts, defaults or neglects of any sub-Contractor, his agents, servants or workmen as full as if they were the acts, defaults or neglects of the Contractor, his agent, servants or workmen provided always that the provision of labour on piece work basis shall not be deemed to be a subletting under this clause.

59.2 The Contractor may entrust specialist items of works to the agencies specialized in the specific trade. The Contractor shall give the names and details of such firm whom he is going to employ for approval of EPI. These details shall include the expertise, financial status, technical manpower, equipment, resources and list of works executed and on hand of the specialist agency. Specialist agency shall be engaged only after obtaining written approval of the Engineer-In-Charge.

60.0 PROHIBITION OF UNAUTHORISED CONSTRUCTION & OCCUPATION

No unauthorized buildings, structures should be put up by the Contractor anywhere on the project Site, neither any building built by him shall be unauthorizedly occupied by him or his staff.

61.0 CO-ORDINATION WITH OTHER AGENCIES

Work shall be carried out in such a manner that the work of other Agencies operating at the Site is not hampered due to any action of the Contractor. Proper Co-ordination with other Agencies will be Contractor's responsibility. In case of any dispute the decision of EPI shall be final and binding on the Contractor. No claim whatsoever shall be admissible on this account.

62.0 SETTING OUT OF THE WORKS

62.1 The Contractor shall be responsible for the true and proper setting out of the works and for the correctness of the position, levels, dimensions and alignment of all parts of the works. If at any time during the progress of works, shall any error appear or arise in the position, levels, dimensions or alignment of any part of the works, the Contractor shall at his own expenses rectify such error to the satisfaction of Engineer-in-charge. The checking of any setting out or of any line or level by the engineers of EPI shall not in any way relieve the Contractor of his responsibility for the correctness.

- 62.2 Contractor shall provide permanent bench marks, flag tops and other reference points for the proper execution of work and these shall be preserved till the end of work. All such reference points shall be in relation to the levels and locations, given in the Architectural, Plumbing and other services Drawings.

63.0 NOTICE BEFORE COVERING UP THE WORK

The Contractor shall give not less than seven days notice before covering up or otherwise placing beyond the reach of measurement any work, to the Engineer-In-Charge in order that the same may be inspected and measured. If any work is covered up or placed beyond the reach of inspection/ measurement without such notice to the Engineer-In-Charge or his consent being obtained, the same shall be uncovered at the Contractors expenses and he shall have to make it good at his own expenses.

64.0 SITE CLEARANCE

- 64.1 The Contractor shall ensure that the working Site is kept clean and free of obstructions for easy access to job Site and also from safety point of view. Before handing over the work to EPI the Contractor shall remove all temporary structures like the site offices, cement godown, stores, labour hutments etc., scaffolding rubbish, left over materials tools and plants, equipments etc., clean and grade the Site to the entire satisfaction of the Engineer-In-Charge. If this is not done the same will be got done by EPI at his risk and cost.
- 64.2 The Contractor shall clean all floors, remove cement/ lime/ paint drops and deposits, clean joinery, glass panes etc., touching all painter's works and carry out all other necessary items of works to make the premises clean and tidy before handing over the building, and the rates quoted by the Contractor shall be deemed to have included the same.

65.0 VALUABLE ARTICLES FOUND AT SITE

All gold, silver and other minerals of any description and all precious stones, coins, treasure, relics, antiques and all other similar things which shall be found in, under or upon the Site, shall be the property of the Owner/ Government and the Contractor shall duly preserve the same to the satisfaction of Engineer-In-Charge and shall from time to time deliver the same to such person or persons indicated by EPI.

66.0 MATERIALS OBTAINED FROM DISMANTLEMENT TO BE OWNER'S PROPERTY

All materials like stone, boulders and other materials obtained in the work of dismantling, excavation etc. will be considered Owner/ government property and may be issued to the Contractor by the Owner/ EPI, if required for use in this work at rates approved by EPI or the Contractor may be asked to dispose off these items at his cost.

67.0 SET-OFF OF CONTRACTOR'S LIABILITIES

EPI shall have the right to deduct or set off the expenses incurred or likely to be incurred by it in rectifying the defects and/or any claim under this agreement

against the Contractor from any or against any amount payable to the Contractor under this agreement including Retention Money and proceeds of Security Deposit cum Performance Guarantee and from any other contract being executed by the Contractor for EPI.

68.0 MATERIALS PROCURED WITH THE ASSISTANCE OF EPI

If any material for the execution of this contract is procured with the assistance of EPI either by issue from its stores or purchase made under orders or permits or licences obtained by EPI, the Contractor shall hold and use the said materials economically and solely for the purpose of this contract and shall not dispose them without the written permission of Engineer-In-Charge. The Contractor, if required by EPI, shall return all such surplus or unserviceable materials that may be left with him after the completion of the contract or at its termination on whatsoever reason, on being paid or credited such price as EPI shall determine having due regard to the conditions of materials.

69.0 ALTERATION IN SPECIFICATION, DESIGN & DRAWING

69.1 The Engineer-In-Charge shall have power to make any alterations in, omissions from, additions to or substitutions for, the original Specifications, Drawings, Designs and Instructions that may appear to him to be necessary during the progress of the work, and the Contractor shall carry out the work in accordance with any instructions which may be given to him in writing signed by the Engineer-In-Charge and such alterations, omissions, additions, or substitutions shall not invalidate the contract and any altered, additional or substituted work which the Contractor may be directed to do in the manner above specified as part of the work shall be carried out by the Contractor on the same conditions in all respects on which he agreed to do the main work.

The time for the completion of the work shall be extended in the proportion that the altered, additional or substituted work price bears to the original contract work price, and the certificate of the Engineer-In-Charge shall be conclusive as to such proportion. Over and above this, a further period to the extent of 25 percent of such extension shall be allowed to the Contractor.

The rates for such additional, altered or substituted work under this clause shall be worked out in accordance with the following provisions in their respective order :

- i) If the rates for the additional, altered or substituted work are specified in the contract for the work, the Contractor is bound to carry out the additional, altered or substituted work at the same rates as are specified in the contract for the work.
- ii) If the rates for the additional, altered or substituted work are not specifically provided in the contract for the work, the rates will be derived from the rates for a nearest similar item of work as are specified in the contract for the work. In case of composite tenders where two or more

schedule of quantities/ Bill of Quantities form part of the contract, the rates shall be derived from the nearest similar item in the schedule of quantities/Bill of Quantities of the particular part of work in which the deviation is involved failing that from the lowest of the nearest similar item in other schedule of quantity. The opinion of the Engineer-In-Charge as to whether or not the rate can be reasonably so derived from the item in this contract will be final and binding on the Contractor.

- iii) If the altered, additional or substituted work includes any work for which no rate is specified in the contract for the work and which cannot be derived in the manner specified in sub para (i) and (ii) above from the similar class of work in the contract then such work shall be carried out at the rates entered in the Schedule of Rates (as mentioned in "Memorandum" to the "Form of Tender" for Civil/ Sanitary Works) minus/plus the percentage which the tendered amount of scheduled items bears with the estimated amount of schedule items based on the Schedule of Rates (as mentioned in "Memorandum" to the "Form of Tender" for Civil/ Sanitary Works). The scheduled items mean the items appearing in the Schedule of Rates (as mentioned in "Memorandum" to the "Form of Tender" for Civil/ Sanitary Works), which shall be applicable in this clause. This clause will apply mutatis mutandis to electrical work except that Electrical Schedule of Rates as mentioned in "Memorandum" to the "Form of Tender" will be considered in place of Civil/ Sanitary works Schedule of rates as mentioned in "Memorandum" to the "Form of Tender".
- iv) If the rates for the altered, additional or substituted work cannot be determined in the manner specified in sub-clauses (i) to (iii) above, then the Contractor shall, within 7 days of the date of receipt of order to carry out the work, inform the Engineer-In-Charge the rates which he intends to charge for such class of work, supported by analysis of the rate or rates claimed, and the Engineer-In-Charge shall determine the rate or rates on the basis of prevailing market rates of the material, Labour, T&P etc. plus 10% (Ten percent) to cover the Contractors supervision, overheads and profit and pay the Contractor accordingly. The opinion of the Engineer-In-Charge as to the current market rates of materials and quantum of labour involved per unit of measurements will be final and binding on the Contractor.

However, the Engineer-In-Charge, by notice in writing, will be at liberty to cancel his order to carry out such class of work and arrange to carry it out in such manner, as he may consider advisable. But under no circumstances, the Contractor shall suspend the work on the plea of non-settlement of rates of items falling under the clause.

- v) Except in case of items relating to foundations, provisions contained in sub clauses (i) to (iv) above shall not apply to contract, altered or substituted items as individually exceed the 'deviation limit' of plus/minus 25% (Twenty Five Percent) subject to the following:-
 - (a) Deviation limit shall apply to individual items.

- (b) The value of additions of items, of any individual trade not already included in the contract, shall not exceed 20% of the Tendered value of work, subject to overall deviation limit as given above.

Provided further that in case where the original item is substituted, the Substituted Item shall be deemed to have replaced the original item in the contract itself to that extent and above provisions pertaining to the deviations shall apply with respect to such Substituted Item and not the original item.

NOTE: Individual trade means the trade section to which Bill of Quantities annexed to the agreement has been divided or in the absence of any such division the individual section of the MORTH/C.P.W.D. (as the case may be) Schedule of rates specified above, such as excavation and earthwork, Concrete, wood work and joinery, etc.

The rate of any such work except the items relating to foundations which is in excess of the deviation limit and deviation in quantities of AHR items on plus side as contained in Clause 9.2(i) shall be determined in accordance with the provisions contained in Clause 69.2.

69.2 In the case of contract items, substituted items, Contract cum substituted items or additional items which exceed the limits laid down in sub para (v) of condition 69.1 above (except the items relating to foundation work, which the Contractor is required to do under Clause 69.1 above and deviation in quantities of AHR items on plus side as contained in clause 9.2 (i)), the Contractor may within fifteen days of receipt of order or occurrence of the excess, claim revision of the rates, supported by proper analysis, for the work in excess of the above mentioned limits, provided that if the rates so claimed are in excess of the rates specified in the schedule of quantities or those derived in accordance with the provisions of sub para (i) to (iii) of conditions 69.1 by more than five percent, the Engineer-In-Charge shall within three months of receipt of the claims supported by analysis, after giving consideration to the analysis of the rates submitted by the Contractor, determine the rates on the basis of the market rates and if the rates so determined exceed the rates specified in the schedule of quantities or those derived in accordance with the provisions of sub paras (i) to (iii) of condition 69.1 by more than five percent, the contract shall be paid in accordance with the rates determined. In the event of the Contractor failing to claim revision of rates within the stipulated period, or if the rates determined by the Engineer-In-Charge within the period of three months of receipt of the claims supported by analysis are within five percent of the rates specified in the schedule of quantities or of those determined in accordance with the provisions of sub-para (i) to (iii) of condition 69.1, the Engineer-In-Charge shall make payment at the rates as specified in the schedule of quantities or those already determined under sub para (i) to (iii) of condition 69.1 for the quantities in excess of the limits laid down in sub para (v) of condition 69.1.

69.3 The provisions of the proceeding paragraph shall apply to the decrease in the rates of items for the work in excess of the limits laid down in sub para (v) of

condition 69.1 provided that such decrease is more than five percent of rates specified in the schedule of quantities or those derived in accordance with the provisions of sub para (i) to (iii) of condition 69.1 and the Engineer-In-Charge may after giving notice to the Contractor within two months of receipt of order by the Contractor or occurrence of the excess and after taking into consideration any reply received from him within fifteen days of receipt of the notice revise the rates for the work in question within two months of expiry of the said period of fifteen days having regard to the market rates.

69.4 The Contractor shall send to the Engineer-In-Charge once every three months an up to date account giving complete details of all claims for additional payments to which the Contractor may consider himself entitled and of all additional work ordered by the Engineer-In-Charge which he has executed during the preceding quarter failing which the Contractor shall be deemed to have waived his right.

69.5 For the purpose of operation of clause 69.1 (v) the following works shall be treated as works relating to foundation:-

- i) For buildings, compound walls plinth level or 1.2 meters (4 feet) above ground level whichever is lower excluding items of flooring and D.P.C. but including base concrete below the floors.
- ii) For abutments, piers, retaining walls of culverts and bridges, walls of water reservoirs the bed of floor level.
- iii) For retaining walls where floor level is not determinate 1.2 meters above the average ground level or bed level.
- iv) For Roads all items of excavation and filling including treatment of sub base and soiling work.
- v) For water supply lines, sewer lines, under-ground storm water drains and similar works. All items of work below ground level except items of pipe work, masonry work.
- vi) For open storm water drains, all items of work except lining of drains.

70.0 ACTION AND COMPENSATION PAYABLE IN CASE OF BAD WORK

If it shall appear to the Engineer-In-Charge or his authorized subordinate in charge of the work or to the Chief Technical Examiner or to any other inspecting agency of Government/ State Government/ Owner where the work is being executed, that any work has been executed with unsound, imperfect, or unskillful workmanship or with materials of any inferior description, or that any materials or articles provided by him for the execution of the work are unsound or of a quality inferior to that contracted for or otherwise not in accordance with the contract, the Contractor shall on demand in writing which shall be made within six months of the completion of the work from the ENGINEER-IN-CHARGE specifying the work, materials or articles complained of notwithstanding that the same may have been passed, Certified and paid for forthwith rectify, or remove and

reconstruct the work so specified in whole or in part as the case may require or as the case may be, remove the materials or articles so specified and provide other proper and suitable materials or articles at his own proper charge and cost, and in the event of his failing to do so within a period to be specified by the Engineer-In-Charge in his demand aforesaid, then the Contractor shall be liable to pay compensation at the rate of one percent of the estimated amount put to tender for every day not exceeding ten days, while his failure to do so shall continue and in the case of any such failure, the Engineer-In-Charge may rectify or remove and re-execute the work or remove and replace with others, the material or articles complained of as the case may be at the risk and expense in all respects of the Contractor.

71.0 POSSESSION PRIOR TO COMPLETION

71.1 EPI shall have the right to take possession of or use any completed or partially completed work or part of the work. Such possession or use shall not be deemed to be any acceptance of any work not completed in accordance with the contract agreement. If such prior possession or use by EPI delays the progress of work an equitable adjustment in the time of completion will be made and the contract agreement shall be deemed to be modified accordingly. The decision of EPI in this case shall be final binding and conclusive.

71.2 When the whole of the works or the items or the groups of items of work for which separate periods of completion have been specified have been completed the Contractor will give a notice to that effect to the Engineer in writing. The Engineer shall within 15 days of the date of receipt of such notice inspect the works and either the Engineer-In-Charge issues to the Contractor a completion certificate stating the date on which in his opinion the works were completed in accordance with the contract or gives instructions in writing to the Contractor specifying the balance items of work which are required to be done by the Contractor before completion certificate could be issued. The Engineer-In-Charge shall also notify the Contractor of any defect in the works affecting completion.

71.3 The Contractor shall during the course of execution prepare and keep updated a complete set of 'as built' drawings to show each and every change from the Contract Drawings, changes recorded shall be countersigned by the Engineer-In-Charge and the Contractor. Four copies of 'as built' drawings shall be supplied to EPI by the Contractor within 30 days of the completion. All costs incurred in this respect shall be borne by the Contractor only.

72.0 COMPENSATION FOR DELAY AND REMEDIES

72.1 If the Contractor fails to maintain the required progress in terms of clause 72.4 or relevant clause of Additional Conditions of Contract, to complete the work and clear the Site on or before the completion date or extended date of completion, he shall, without prejudice to any other right or remedy available under the law to EPI on account of such breach, pay as agreed compensation the amount calculated at the rates stipulated below or such smaller amount as the Engineer in charge (whose decision in writing shall be final and binding) may decide on the amount of tendered value of the work for every completed day / week (as

applicable) that the progress remains below that specified in Clause 72.4.1 or the relevant clause in Additional Conditions of Contract or that the work remains incomplete. This will also apply to items or group of items for which a separate period of completion has been specified.

- i) For works with completion period not exceeding 3 month (as originally stipulated) @ 1% per day
- ii) For works with completion period exceeding 3 months (as originally stipulated) @ 1% per week or part thereof

Provided always that the total amount of compensation for delay to be paid under this Condition shall not exceed 10% of the Tendered Value of work or of the Tendered Value of the item or group of items of work for which a separate period of completion is originally given.

The amount of compensation may be adjusted or set-off against any sum payable to the Contractor under this or any other contract with EPI even after completion of the work.

72.2 CANCELLATION / DETERMINATION OF CONTRACT IN FULL OR PART

Subject to other provisions contained in this clause, the Engineer-In-Charge may, without prejudice to his any other rights or remedy against the Contract in respect of any delay, inferior workmanship, any claims for damages and / or any other provisions of this contract or otherwise, and whether the date of completion has or has not elapsed, by notice in writing absolutely determine the contract in full or in part in any of the following cases:

- i) If the Contractor having been given by the Engineer-In-Charge a notice in writing to rectify, reconstruct or replace any defective work or that the work is being performed in an inefficient or otherwise improper or un-workmanlike manner shall omit to comply with the requirement of such notice for a period of seven days thereafter; or
- ii) If the Contractor has, without reasonable cause, suspended the progress of the work or has failed to proceed with the work with due diligence so that in the opinion of the ENGINEER-IN-CHARGE (which shall be final and binding) he will be unable to secure completion of the work by the date for completion and continues to do so after a notice in writing of seven days from the Engineer-In-Charge; or
- iii) If the Contractor fails to complete the work within the stipulated date or items of work with individual date of completion, if any stipulated, on or before such date(s) of completion and does not complete them within the period specified in a notice given in writing in that respect by the Engineer-In-Charge; or
- iv) If the Contractor persistently neglects to carry out his obligations under the contract and / or commits default in complying with any of the terms

and conditions of the contract and does not remedy it or take effective steps to remedy it within 7 days after a notice in writing is given to him in that respect by the Engineer-In-Charge; or

- v) If the Contractor shall offer or give or agree to give to any person in EPI service or to any other person on his behalf any gift or consideration of any kind as an inducement or reward for doing or forbearing to do or for having done or forborne to do any action in relation to the obtaining or execution of this or any other contract for EPI; or
- vi) If the Contractor shall enter into a contract with EPI in connection with which commission has been paid or agreed to be paid by him or to his knowledge, unless the particulars of any such commission and the terms of payment thereof have been previously disclosed in writing to the Engineer-In-Charge; or
- vii) If the Contractor shall obtain a contract with EPI as a result of wrong tendering or other non-bona-fide methods of competitive tendering; or
- viii) If the Contractor being an individual, or if a firm, any partner thereof shall at any time be adjudged insolvent or have a receiving order or order for administration of his estate made against him or shall take any proceedings for liquidation or composition (other than a voluntary liquidation for the purpose of amalgamation or reconstruction) under any Insolvency Act for the time being in force or make any conveyance or assignment of his effects or composition or arrangement for the benefit of his creditors or purport so to do, or if any application be made under any Insolvency Act for the time being in force for the sequestration of his estate or if a trust deed be executed by him for benefit of his creditors; or
- ix) If the Contractor being a company, shall pass a resolution or the Court shall make an order for the winding up of the company, or a receiver or manager on behalf of the debenture holders or otherwise shall be appointed or circumstances shall arise which entitle the Court or debenture holders to appoint a receiver or manager; or
- x) If the Contractor shall suffer an execution being levied on his goods and allow it to be continued for a period of 21 days; or
- xi) If the Contractor assigns, transfers, sublets (engagement of labour on a piece-work basis or of the labour with materials not to be incorporated in the work, shall not be deemed to be subletting) or otherwise parts with or attempts to assign, transfer sublet or otherwise parts with the entire works or any portion thereof without and prior written approval of the Engineer-In-Charge.

When the Contractor has made himself liable for action under any of the clauses aforesaid, the Engineer-In-Charge may without prejudice to any other right or remedy which shall have accrued or shall accrue hereafter to EPI, by a notice in

writing to cancel the contract as a whole or only such items of work in default from the Contract.

The Engineer-In-Charge shall on such cancellation by EPI have powers to:

- a) Take possession of Site and any materials, Construction Plant & machinery, implements, stores, etc. thereon; and/ or
- b) Carry out the incomplete work by any means at the risk and cost of the Contractor; and/ or
- c) To determine or rescind the contract as aforesaid (of which termination or rescission notice in writing to the Contractor under the hand of the Engineer-In-Charge shall be conclusive evidence). Upon such determination or rescission the full Retention Money recovered by EPI under the contract and Security Deposit cum Performance Guarantee shall be liable to be forfeited and un-used materials, construction plant & machinery, implements, temporary buildings, etc. shall be taken over and shall be absolutely at the disposal of EPI. If any portion of the Retention Money has not been received or recovered by EPI from RA Bills, it would be called for and forfeited; and/ or
- d) To employ labour and to supply materials, equipment to carry out the work or any part of the work debiting the Contractor with the cost of the labour and the price of the materials, equipment rentals (of the amount of which cost and price certified by the Engineer-In-Charge shall be final and conclusive) against the Contractor and crediting him with the value of the work done in all respects in the same manner and at the same rates as if it had been carried out by the Contractor under the terms of his contract. The certificate of the Engineer-In-Charge as to the value of the work done shall be final and conclusive against the Contractor provided always that action under the sub-clause shall only be taken after giving notice in writing to the Contractor. Provided also that if the expenses incurred by the EPI are less than the amount payable to the Contractor at his agreement rates, the difference shall not be paid to the Contractor; and/ or
- e) After giving notice to the Contractor to measure up the work of the Contractor and to take such whole, or the balance or part thereof as shall be un-executed or delayed with reference to the General Conditions of Contract clause no. 72.4.1 and/ or relevant clause of Additional Conditions of Contract, out of his hands and to give it to another Contractor to complete in which case any expenses which may be incurred in excess of the sum which would have been paid to the original Contractor if the whole work had been executed by him (of the amount of which excess the certificate in writing of the Engineer-In-Charge shall be final and conclusive) shall be borne and paid by the original Contractor and may be deducted from any money due to him by EPI under his contract or on any other account whatsoever or from his Retention Money, Security Deposit cum Performance Guarantee or the proceeds of sales of unused materials, construction plants & machinery, implements temporary buildings etc. thereof or a sufficient part thereof as

the case may be. If the expenses incurred by EPI are less than the amount payable to the Contractor at his agreement rates, the difference shall not be paid to the Contractor; and/ or

- f) By a notice in writing to withdraw from the Contractor any items or items of work as the Engineer-In-Charge may determine in his absolute discretion and get the same executed at the risk and cost of the Contractor.

Any excess expenditure incurred or to be incurred by EPI in completing the works or part of the works or the excess loss or damages suffered or may be suffered by EPI as aforesaid after allowing such credit shall without prejudice to any other right or remedy available to EPI in law be recovered from any moneys due to the Contractor on any account, and if such moneys are not sufficient the Contractor shall be called upon in writing and shall be liable to pay the same within 30 days.

If the Contractor shall fail to pay the required sum within the aforesaid period of 30 days, the Engineer-In-Charge shall have the right to sell any or all of the Contractor's unused materials, Construction Plant, machinery, implements, temporary buildings, etc. and apply the proceeds of sale thereof towards the satisfaction of any sums due from the Contractor under the contract and if thereafter there be any balance outstanding from the Contractor, it shall be recovered in accordance with the provisions of the contract and law.

Any sums in excess of the amounts due to EPI and unsold materials, Construction Plant etc. shall be returned to the Contractor, provided always that if cost or anticipated cost of completion by EPI of the works or part of the works is less than the amount which the Contractor would have been paid had he completed the works or part of the works, such benefit shall not accrue to the Contractor.

In the event of anyone or more of the above courses being adopted by the Engineer-In-Charge the Contractor shall have no claim to compensation whatsoever for any loss sustained by him by reasons of his having purchased or procured any materials or entered into any engagements or made any advances on account or with a view to the execution of the work or the performance of the contract. And in case action is taken under any of the provision aforesaid the Contractor shall not be entitled to recover or be paid any sum for any work thereof or actually performed under this contract unless and until the Engineer-In-Charge has certified in writing the performance of such work and the value payable in respect thereof and he shall only be entitled to be paid the value so certified. Provided further that if any of the recoveries to be made, while taking action as per (d) and/or (e) above, are in excess of the Retention Money & Security Deposit cum Performance Guarantee forfeited, these shall be limited to the amount by which the excess cost incurred by the EPI exceeds the Retention Money & Security Deposit cum Performance Guarantee so forfeited.

72.3 CONTRACTOR LIABLE TO PAY COMPENSATION EVEN IF ACTION NOT TAKEN

In any case in which any of the powers conferred upon the Engineer-In-Charge by relevant clause thereof, shall have become exercisable and the same are not exercised, the non-exercise thereof shall not constitute a waiver of any of the conditions hereof and such powers shall notwithstanding be exercisable in the event of any future case of default by the Contractor and the liability of the Contractor for compensation shall remain unaffected. In the event of the Engineer-In-Charge putting in force all or any of the powers vested in him under the preceding clause he may, if he so desires after giving a notice in writing to the Contractor, take possession of (or at the sole discretion of the Engineer-In-Charge which shall be final and binding on the Contractor) use as on hire (the amount of the hire money being also in the final determination of the Engineer-In-Charge) all or any tools, plant, machinery, materials and stores, in or upon the works, or the site thereof belonging to the Contractor, or procured by the Contractor and intended to be used for the execution of the work / or any part thereof, paying or allowing for the same in account at the contract rates, or in the case of these not being applicable, at current market rates to be certified by the Engineer-In-Charge, whose certificate thereof shall be final, and binding on the Contractor and/or direct the Contractor, clerk of the works, foreman or other authorized agent to remove such tools, machinery, plant, materials, or stores from the premises (within a time to be specified in such notice) in the event of the Contractor failing to comply with any such requisition, the Engineer-In-Charge may remove them at the Contractor's expense or sell them by auction or private sale on account of the Contractor and his risk in all respects and the certificate of the Engineer-In-Charge as to the expenses of any such removal and the amount of the proceeds and expenses of any such sale shall be final and conclusive against the Contractor.

72.4 TIME ESSENCE OF CONTRACT & EXTENSION FOR DELAY

The time allowed for execution of the Works as specified in the terms of contract or the extended time in accordance with these conditions shall be the essence of the contract. The execution of the works shall commence from the 10th Day or such time period as mentioned in letter of Intent after the date on which the Engineer-In-Charge issues written orders to commence the work. If the Contractor commits default in commencing the execution of the work as aforesaid, the Executing Agency shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the earnest money absolutely.

- 72.4.1 Within 10 (Ten) days of Letter of Intent, the Contractor shall submit a Time and Progress Chart (CPM/ PERT/ Quantified Bar Chart) and get it approved by the Engineer-In-Charge. The Chart shall be prepared in direct relation to the time stated in the contract documents for completion of items of the works. It shall indicate the forecast (mile-stones) of the dates of commencement and completion of various items, trades, sections of the work and may be amended as necessary by agreement between the Engineer-In-Charge and the Contractor within the limitations of time stipulated in the Contract documents, and further to ensure good progress during the execution of the work, the Contractor shall in all cases in which the time allowed for any work exceeds one month (save for

special jobs for which a separate program has been agreed upon) complete 1/8th of the whole of work before 1/4th of the whole time allowed in the contract has elapsed, 3/8th of the work before one half of such time has elapsed and 3/4th of the work before 3/4th of such time has elapsed. The physical report including photographs shall be submitted by the Contractor on the prescribed format & the intervals (not exceeding a month) as decided by the Engineer in Charge. The compensation for delay as per clause 72.1 shall be leviable at intermediate stages also, in case the required progress is not achieved to meet the above time deadlines of the completion period and/ or milestones of time and progress chart, provided always that the total amount of Compensation for delay to be paid under this condition shall not exceed 10% (Ten Percent) of the tendered value of work”.

72.4.2 If the work(s) be delayed by:

- i) force-majeure or
- ii) abnormally bad weather, or
- iii) serious loss or damage by fire, or
- iv) civil commotion of workmen, strike or lockout, affecting any or the trades employed on the work, or
- v) delay on the part of other Contractors or tradesmen engaged by Engineer-In-Charge in executing work not forming part of the Contract, or
- vi) non-availability of stores, which are responsibility of EPI or,
- vii) non-availability or break down of tools and plant to be supplied or supplied by EPI or,
- viii) any other cause which, in the absolute discretion of EPI, is beyond the Contractor's control,

then, upon the happening of any such event causing delay, the Contractor shall immediately give notice thereof in writing to the Engineer-In-Charge but shall nevertheless use constantly his best endeavors to prevent or make good the delay and shall do all that may be reasonably required to the satisfaction of the Engineer-In-Charge to proceed with the works.

72.4.3 Request for extension of time, to be eligible for consideration, shall be made by the Contractor in writing within fourteen days of the happening of the event causing delay on the prescribed form. The Contractor may also, if practicable, indicate in such a request the period for which extension is desired. In any such case EPI may give a fair and reasonable extension of time for completion of work. Such extension shall be communicated to the Contractor by the Engineer-In-Charge in writing, within 3 months of the date of receipt of such request. Non-application by the Contractor for extension of time shall not be a bar for giving a fair and reasonable extension by the Engineer-In-Charge and the extension of time so given by the Engineer-In-Charge shall be binding on the Contractor.

73.0 WITHHOLDING AND LIEN IN RESPECT OF SUMS DUE FROM CONTRACTOR

73.1 Whenever any claim or claims for payment of a sum of money arises out of or under the contract or against the Contractor, EPI shall be entitled to withhold and also have a lien to retain such sum or sums in whole or in part from the security,

if any, deposited by the Contractor and for the purpose aforesaid, EPI shall be entitled to withhold the Retention Money, if any, furnished as the case may be and also have a lien over the same pending finalization or adjudication of any such claim. In the event of the security being insufficient to cover the claimed amount or amounts or if no security has been taken from the Contractor, EPI shall be entitled to withhold and have a lien to retain to the extent of such claimed amount or amounts referred to above, from any sum or sums found payable or which may at any time thereafter become payable to the Contractor under the same contract or any other contracts pending finalization or adjudication of any such claim.

- 73.2 It is an agreed term of the contract that the sum of money or moneys so withheld or retained under the lien referred to above by the Engineer-In-Charge or EPI will be kept withheld or retained as such by the Engineer-In-Charge or EPI till the claim arising out of or under the contract is determined by the Arbitrator / Competent Court and that the Contractor will have no claim for interest or damages whatsoever on any account in respect of such withholding or retention under the lien referred to above and duly notified as such to the Contractor. For the purpose of this clause, where the Contractor is a sole proprietor or a partnership firm or a limited company, etc. the Engineer-In-Charge or EPI shall be entitled to withhold and also have a lien to retain towards such claimed amount or amounts in whole or in part from any sum found payable to proprietor /partnership firm/limited company, as the case may be whether in his individual capacity or otherwise.

EPI shall have the right to cause an audit and technical examination of the works and the final bills of the Contractor including all supporting vouchers, abstract, etc, to be made after payment of the final bill and if as a result of such audit and technical examination any sum is found to have been overpaid in respect of any work done by the Contractor under the contract or any work claimed to have been done by him under the contract and found not to have been executed, the Contractor shall be liable to refund the amount of over-payment and it shall be lawful for EPI to recover the same from him in the manner prescribed in sub-clause (I) of this clause or in any other manner legally permissible; and if it is found that the Contractor was paid less than what was due to him under the contract in respect of any work executed by him under it, the amount of such under payment shall be duly paid by EPI to the Contractor, without any interest thereon whatsoever.

73.3 LIEN IN RESPECT OF CLAIMS IN OTHER CONTRACTS

Any sum of money due and payable to the Contractor (including the Retention Money & Security deposit returnable to him) under the contract may be withheld or retained by way of lien by the Engineer-In-Charge or by EPI against any claim of the Engineer-In-Charge or EPI in respect of payment of a sum of money arising out of or under any other contract made by the Contractor with the Engineer-In-Charge or EPI.

It is an agreed term of the contract that the sum of money so withheld or retained under this clause by the Engineer-In-Charge or EPI will be kept withheld or retained as such by the Engineer-In-Charge or EPI or till his claim arising out of the same contract or any other contract is either mutually settled or determined by the Arbitrator or Competent court as the case may be, and that the Contractor shall have no claim for interest or damages whatsoever on this account or on any

other ground in respect of any sum of money withheld or retained under this clause and duly notified as such to the Contractor.

74.0 DEFECTS LIABILITY PERIOD

The Contractor shall be responsible for the rectification of defects in the works for a period of twelve months from the date of taking over of the works by the Owner/ Client. Any defects discovered and brought to the notice of the Contractor forthwith shall be attended to and rectified by him at his own cost and expense. In case the Contractor fails to carry out these rectifications, the same may without prejudice to any other right or remedy available, be got rectified by EPI at the cost and expense of the Contractor.

75.0 FORCE MAJEURE

Any delay or failure of the performance of either party hereto shall not constitute default hereunder to give rise to any claims for damages, if any to the Extent such delay or failure of performance is caused by occurrences such as Acts of God or the public enemy, expropriation, compliance with any order or request of Government authorities/ Courts, acts of war, rebellions, sabotage fire, floods, illegal strikes, or riots (other than Contractor's employees). Only extension of time shall be considered for Force Majeure conditions as accepted by EPI. No adjustment in contract price shall be allowed for reasons of force majeure.

76.0 ARBITRATION

76.1 Before resorting to arbitration as per the clause given below, the parties if they so agree may explore the possibility of conciliation as per the provisions of Part-III of the Arbitration and Conciliation Act. 1996. When such conciliation has failed, the parties shall adopt the following procedure for arbitration :

- i) Except where otherwise provided for in the contract, any disputes and differences relating to the meaning of the Specifications, Design, Drawings and Instructions herein before mentioned and as to the quality of workmanship or materials used in the work or as to any other question, claim, right, matter or thing whatsoever in any way arising out of or relating to the Contract, Designs, Drawings, Specifications, Estimates, Instructions, or these conditions, or otherwise concerning the works or the execution or failure to execute the same whether arising during the progress of the work or after the completion or abandonment thereof shall be referred to the Sole Arbitration of the Chairman and Managing Director (CMD) of Engineering Projects (India) Limited (EPI), or any other person discharging the functions of CMD of EPI and if CMD or such person discharging the functions of CMD of EPI is unable to act, to the sole Arbitration of some other person appointed by CMD of EPI or such other person discharging the functions of CMD of EPI. There will be no objection if the arbitrator so appointed is an employee of Engineering Projects (I) Ltd. However, such an employee shall not have directly dealt with the said Contract or the works there under on behalf of EPI. Such Arbitrator shall be appointed within 30 days of the receipt of letter of invocation of arbitration duly satisfying the requirements of this clause.

- ii) If the arbitrator so appointed resigns or is unable or unwilling to act due to any reason whatsoever, or dies, the Chairman & Managing Director aforesaid or in his absence the person discharging the duties of the CMD of EPI may appoint a new arbitrator in accordance with these terms and conditions of the contract, to act in his place and the new arbitrator so appointed may proceed from the stage at which it was left by his predecessor.
- iii) It is a term of the contract that the party invoking the arbitration shall specify the dispute / differences or questions to be referred to the Arbitrator under this clause together with the amounts claimed in respect of each dispute.
- iv) The Arbitrator may proceed with the arbitration ex-parte, if either party, in spite of a notice from the arbitrator, fails to take part in the proceedings.
- v) The work under the contract shall continue as directed by the Engineer-In-Charge, during the arbitration proceedings.
- vi) Unless otherwise agreed, the venue of arbitration proceedings shall be at the venue given in the 'Memorandum' to the 'Form of Tender'.
- vii) The award of the Arbitrator shall be final, conclusive and binding on both the parties.
- viii) Subject to the aforesaid, the provisions of the Arbitration and Conciliation Act, 1996 or any statutory modifications or re-enactment thereof and the Rules made there under and for the time being in force shall apply to the arbitration proceedings and Arbitrator shall publish his Award accordingly.

NOTE

NOTWITHSTANDING ANYTHING CONTAINED HEREINABOVE, THIS CLAUSE SHALL NOT BE APPLICABLE WHERE THE DISPUTE IS BETWEEN EPI AND ANOTHER CENTRAL PUBLIC SECTOR ENTERPRISE OR GOVT. OF INDIA DEPARTMENT, FOR WHICH A SEPARATE ARBITRATION CLAUSE IS PROVIDED VIDE CLAUSE NO. 76.2 GIVEN BELOW :

76.2 ARBITRATION BETWEEN CENTRAL PUBLIC SECTOR ENTERPRISES INTER SE / GOVERNMENT OF INDIA DEPARTMENTS/ MINISTRIES

- i) In the event of any dispute or difference relating to the interpretation and application of the provisions of the contract, such dispute or difference shall be referred by either party to the arbitration as per the instructions (Office Memorandums / Circulars) issued by Govt. of India from time to time with regard to arbitration between one Government Department and another, one Government Department and a Public Sector Enterprise and Public Sector Enterprise inter se.
- ii). Subject to any amendment that may be carried out by the Government of India from to time, the procedure to be followed in the arbitration shall be as is

contained in D.O. No. DPE/4(10)/2001-PMA-GL-I dated 22.01.2004 of Department of Public Enterprises, Ministry of Heavy Industries and Public Enterprises, Government of India or any modification issued in this regard.

76.3 JURISDICTION

The courts mentioned in the 'Memorandum' to the 'Form of Tender' alone will have jurisdiction to deal with matters arising from the contract, to the exclusion of all other courts.

77.0 SUSPENSION OF WORKS

(a) The Contractor shall, on receipt of the order in writing of the Engineer-In-Charge, suspend the progress of the works or any part thereof for such time and in such manner, as the Engineer-In-Charge may consider necessary for any of the following reasons:

- i) On account of any default on part of the Contractor, or
- ii) For proper execution of the works or part thereof for reason other than the default of the Contractor, or
- iii) For safety of the works or part thereof.

The Contractor shall, during such suspension, properly protect and secure the works to the extent necessary and carry out the instructions given in that behalf by the Engineer-In-Charge.

- (b) If the suspension is ordered for reasons (ii) and (iii) in sub-para (a) above, the Contractor shall be entitled to an extension of the time equal to the period of every such suspension plus 25%. No adjustment of contract price will be allowed for reasons of such suspension.
- (c) In the event of the Contractor treating the suspension as an abandonment of the contract by EPI, he shall have no claim to payment of any compensation on account of any profit or advantage which he may have derived from the execution of the work in full but which he could not derive in consequence of the abandonment.
- (d) The Contractor shall resume work in all earnestness after suspension has been lifted by EPI.

78.0 TERMINATION OF CONTRACT ON DEATH OF CONTRACTOR

If the Contractor is an individual or a proprietorship concern and the individual or the proprietor dies then unless the Engineer-In-Charge is satisfied that the legal representatives of the individual Contractor or of the proprietor of the proprietary concern and in the case of partnership firm, the surviving partners, are capable of carrying out and completing the contract, the Engineer-In-Charge shall be entitled to cancel the contract as to its incompleting part without EPI being in any

way liable to payment of any compensation to the estate of the deceased Contractor and/or to surviving partners of the Contractor's firm on account of cancellation of the contract. Such cancellation of Contract shall be without prejudice to any of the rights & remedies available to the Engineer-In-Charge under the contract. The decision of the Engineer-In-Charge that the legal representatives of the deceased Contractor or the surviving partners of the Contractor's firm cannot carry out and complete the contract shall be final and binding on the parties.

79.0 CLARIFICATION AFTER TENDER SUBMISSION

Tenderer's attention is drawn to the fact that during the period, the bids are under consideration, the bidders are advised to refrain from contacting by any means, EPI and/or his employees/ representatives on matters related to the bid under consideration and that if necessary, EPI will obtain clarifications in writing or as may be necessary. The Tender evaluation and process of award of works is done by duly authorized Tender Scrutiny Committee and this committee is authorized to discuss and get clarification from the tenderers.

80.0 ADDENDA/ CORRIGENDA

Addenda/Corrigenda to the Tender Documents may be issued prior to the date of opening of the Tender to clarify or effect modification in specification and/or contract terms included in various Tender Documents. The tenderer shall suitably take into consideration such Addenda/Corrigenda while submitting his tender. The tenderer shall return such Addenda/ Corrigenda duly signed and stamped as confirmation of its receipt and submit alongwith the Tender Document. All Addenda/ Corrigenda shall be signed and stamped on each page by the tenderer and shall become part of the Tender and contract documents.

81.0 QUALITY ASSURANCE PROGRAMME

To ensure that the works/services under the scope of this contract are in accordance with the specifications, the Contractor shall adopt Quality Assurance Programme to control such activities at the necessary points. The Contractor shall prepare and finalize such Quality Assurance Programme within 15 days from letter of intent. EPI shall also carryout quality audit and quality surveillance of systems and procedures of Contractor's quality control activities. A Quality Assurance Programme of Contractor shall generally cover the following:

- a) His organization structure for the management and implementation of the proposed Quality Assurance Program.
- b) Documentation control system.
- c) The procedure for procurement of materials and source inspection.
- d) System for site controls including process controls.
- e) Control of non-conforming items and systems for corrective actions.
- f) Inspection and test procedure for site activities.
- g) System for indication and appraisal of inspection status.
- h) System for maintenance of records.
- i) System for handling, storage and delivery.

- j) A quality plan detailing out quality practices and procedures, relevant standards and acceptance levels for all types of work under the scope of this contract.

All the quality reports shall be submitted by the Contractors in the formats appended hereto. Checklist enclosed here in this document shall be followed while carrying out Construction activities (items). If any item is not covered by the Checklist/ Formats appended hereto, the Format for the same may be developed and submitted to Engineer-In-Charge for approval and the same shall be adopted. These filled in formats shall be prepared in two copies and duly signed by representatives of Contractor and EPI. All the costs associated with printing of Formats and testing of materials required as per technical specifications or by Engineer-In-Charge shall deemed to be included in the Contractor's quoted rates of various items of work in the Schedule/ Bill of Quantities.

82.0 APPROVAL OF TEMPORARY / ENABLING WORKS

The setting and nature of all offices, huts, access road to the work areas, and all other temporary works as may be required for the proper execution of the works shall be subject to the approval of the Engineer-In-Charge.

All the equipments, labour, material including cement, reinforcement and the structural steel required for the enabling/ temporary works associated with the entire Contract-shall have to be arranged by the Contractor only. Nothing extra shall be paid to the Contractor on this account and the unit rates quoted by the Contractor for various items in the Bill of Quantities shall be deemed to include the cost of enabling works.

83.0 CONTRACT COORDINATION PROCEDURES, COORDINATION MEETINGS AND PROGRESS REPORTING

The Contractor shall prepare and finalize in consultation with EPI, a detailed contract coordination procedure within 15 days from the date of issue of Letter of Intent for the purpose of execution of the Contract.

The Contractor shall have to attend all the meetings at any place in India at his own cost with EPI, Owners/ Clients or Consultants of EPI/ Owner/ Client during the currency of the Contract, as and when required and fully cooperate with such persons and agencies involved during these discussions. The Contractor shall not deal in any way directly with the Clients/ Owners or Consultants of EPI/ Owner/ Clients and any dealing/ correspondence if required at any time with Clients/ Owners/ Consultants shall be through EPI only.

During the execution of the work, Contractor shall submit at his own cost detailed Monthly progress report to the Engineer-In-Charge of EPI by 5th of every month. The format of monthly progress report shall be as approved by Engineer-In-Charge of EPI.

84.0 CONTRACT AGREEMENT

The Contractor shall enter into a Contract Agreement with EPI within 10 days of the date of Letter of Intent or within such extended time, as may be granted by EPI. The cost of stamp papers, stamp duty, registration, if applicable on the contract, shall be borne by the Contractor. In case, the Contractor does not sign the agreement as above or does not start the work within 10 days of the issue of letter/telegram of intent, his earnest money is liable to be forfeited and letter of intent consequently will stand withdrawn.

85.0 MANNER OF EXECUTION OF AGREEMENT

- i. The agreement as per prescribed Performa as enclosed to the Additional Conditions of Contract shall be signed at the office of EPI within 10 days from the date of issue of Letter of Intent. The Contractor shall provide for signing of the Contract, appropriate Power of Attorney in favour of the authorised representative duly attested by notary Public and the requisite documents/materials. Till a formal contract is prepared and executed, the Letter of Intent read in conjunction with the Bidding Documents will constitute a binding contract.
- ii. The agreement will be signed in two originals and three more copies, EPI shall retain the 'Original', the Contractor shall be provided with the other signed original and the remaining three copies will be retained by EPI. In case of a dispute of any kind whatsoever, the 'Original' retained by EPI alone shall be treated as the 'Original Agreement'.
- iii. The Contractor shall provide free of cost to EPI all the Engineering data, drawings and descriptive materials submitted along with the bid, in at least five (5) copies to form an integral part of the Agreement within seven 7 days after issuing of Letter of Intent.
- iv. Subsequent to signing of the Agreement, the Contractor at his own cost shall provide to EPI with at least five (5) true hard bound copies of Agreement alongwith all the enclosures viz. letter of intent, Tender Documents etc. within thirty (30) days of its signing.

86.0 PURCHASE PREFERENCE TO PUBLIC SECTOR ENTERPRISES

EPI reserves its right to extend Purchase Preference to Central Public Sector Enterprises (CPSEs) as per policy of Government of India, if any, as applicable on this work. The tenderers are requested to go through latest instructions of Government of India on its Purchase Preference Policy for CPSEs before quoting for the Tender.

87.0 CHANGE IN FIRM'S CONSTITUTION TO BE INTIMATED

Where the Contractor is a partnership firm, prior approval in writing of EPI shall be obtained before any change is made in the constitution of the firm. Where the Contractor is an individual or a Hindu undivided family business concern such approval as aforesaid shall likewise be obtained before the Contractor enters into any partnership agreement whereunder the partnership firm would have the right to carry out the works hereby undertaken by the Contractor. If prior approval as aforesaid is not obtained, the contract shall be deemed to have been assigned in

contravention of Clause 59.1 hereof and EPI shall be entitled to take action under Clause 72.2 (xi).

88.0 COMPLIANCE WITH ISO PROCEDURES

EPI is an ISO-9001 and ISO-14001 Company. The conditions of the ISO as applicable shall be followed by the Contractor for implementation & maintaining the established procedures of EPI.

LABOUR SAFETY PROVISIONS

- 1.0 Suitable scaffolds should be provided for workmen for all works that cannot safely be done from the ground, or from solid construction except such short period work as can be done safely from ladders. When a ladder is used an extra mazdoor shall be engaged for holding the ladder and if the ladder is used for carrying materials as well, suitable footholds and handholds shall be provided on the ladder and the ladder shall be given an inclination not steeper than 1/4 to 1 (1/4 horizontal and 1 vertical).
- 2.0 Scaffolding or staging more than 3.6m (12 feet) above the ground or floor, swung or suspended from an overhead support or erected with stationery support shall have a guard rail properly attached or bolted, braced and otherwise secured at least 90 cm. (3 feet) high above the floor or platform of such scaffolding or staging and extending along the entire length of the outside and ends thereof with only such opening as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying from the building or structure.
- 3.0 Working platforms, gangways, and stairways should be so constructed that they should not sag unduly or unequally, and if the height of the platform or the gangway or the stairway is more than 3.6m (12 feet) above ground level or floor level, they should be closely boarded, should have adequate width & should be suitable fastened as described in (2.0) above.
- 4.0 Every opening in the floor of a building or in a working platform shall be provided with suitable means to prevent the fall of persons or materials by providing suitable fencing or railing whose minimum height shall be 90 cm (3 feet).
- 5.0 Safe means of access shall be provided to all working platforms and other working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9m. (30 feet) in length while the width between side rails in rung ladder shall in no case be less than 29 cm. for ladder up to and including 3m (10 feet) in length. For longer ladders this width should be increased at least 1/4" for each additional 30 cm (1 ft.) of length. Uniform step spacing shall not exceed 30 cm (12"). Adequate precautions shall be taken to prevent danger from electrical equipment. No materials on any of the sites of the work shall be so stacked or placed as to cause danger or inconvenience to any person or the public. The Contractor shall provide all necessary fencing and lights to protect the public from accident, and shall be bound to bear the expenses of defence of every suit, action or other proceeding at law that may be brought by an person for injury sustained owing to neglect of the above precautions and to pay any damages and cost which may be awarded in any such suit, action or proceedings to any such person or which may, with the consent of the Contractor, be paid to compensate any claim by any such person.

6.0 EXCAVATION AND TRENCHING

All trenches, 1.2mts.(four feet) or more in depth, shall at all times be supplied with at least one ladder for each 30m. (100 feet) in length or fraction thereof, Ladder shall be extended from bottom of the trench to at least 90 cm (3feet) above the surface of the ground. The sides of the trenches, which are 1.5m. (5feet) or more in depth shall be stepped back to give suitable slope or securely held by timber bracing, so as to avoid the danger or sides to collapsing. The excavated materials shall not be placed within 1.5m (5 feet) of the edges of the

- trench or half of the depth of the trench whichever is more. Cutting shall be done from top to bottom. Under no circumstances undermining or undercutting shall be done.
- 7.0 Demolition - Before any demolition work is commenced and also during the progress of the work:
- 7.1 All roads and open areas adjacent to the work Site shall either be closed or suitably protected.
- 7.2 No electric cable or apparatus which is likely to be a source of danger or a cable or apparatus used by the operator shall remain electrically charged.
- 7.3 All practical steps shall be taken to prevent danger to persons employed from risk or fire or explosion or flooding. No floor, roof or other part of the building shall be overloaded with debris or materials as to render it unsafe.
- 8.0 All necessary personal safety equipments as considered adequate by the Engineer-In-Charge should be kept available for the use of persons employed on the Site and maintained in a condition suitable for immediate use, and the Contractor should take adequate step to ensure proper use of equipment by those concerned- The following safety equipment shall be invariably provided.
- 8.1 Workers employed on mixing asphaltic materials, cement and lime mortars shall be provided with protective footwear and protective goggles.
- 8.2 Those engaged in white washing and mixing or stacking of cement bags or any materials which are injurious to the eye shall be provided with protective goggles.
- 8.3 Those engaged in welding works shall be provided with welder's protective eye shields.
- 8.4 Stone breakers shall be provided with protective goggles and protective clothing and seated at sufficiently safe interval.
- 8.5 When workers are employed in sewers and manholes, which are in active use, the Contractors shall ensure that the manhole covers are opened and ventilated at-least for an hour before the workers are allowed to get into the manholes, and the manholes so opened shall be cordoned off with suitable railing and provided with warning signals or boards to prevent accident the public. In addition, the Contractor shall ensure that the following safety measures are adhered to:
- a. Entry for workers into the line shall not be allowed except under supervision of the JE or any other higher officer.
 - b. At least 5 to 6 manholes upstream and down stream should be kept open for at least 2 to 3 hours before any man is allowed to enter into the manholes for working inside.
 - c. Before entry, presence of Toxic gases should be tested by inserting wet lead acetate paper which changes colour in the presence of such gases and gives indication of their presence.
 - d. Presence of Oxygen should be verified by lowering a detector lamp into the manhole. In case, no Oxygen is found inside the sewer line, workers should be sent only with Oxygen kit.

- e. Safety belt with rope should be provided to the workers. While working inside the manholes such rope should be handled by two men standing outside to enable him to be pulled out during emergency.
 - f. The area should be barricaded or cordoned off by suitable means to avoid mishaps of any kind. Proper warning signs should be displayed for the safety of the public whenever cleaning works are undertaken during night or day.
 - g. No smoking or open flames shall be allowed near the blocked manhole being cleaned.
 - h. The malba obtained on account of cleaning of blocked manholes and sewer lines should be immediately removed to avoid accidents on account of slippery nature of the malba.
 - i. Workers should not be allowed to work inside the manhole continuously. He should be given rest intermittently. The Engineer In-charge may decide the time up to which a worker may be allowed to work continuously inside the manhole.
 - j. Gas masks with Oxygen Cylinder should be kept at Site for use in emergency.
 - k. Air-blowers should be used for flow of fresh air through the manholes. Whenever called for, portable air-blowers are recommended for ventilating the manholes. The Motors for these shall be vapour proof and of totally enclosed type. Non-sparking gas engines also could be used but they should be placed at-least 2 meters away from the opening and on the leeward side protected from wind so that they will not be a source of friction on any inflammable gas that might be present.
 - l. The workers engaged for cleaning the manholes/ sewers should be properly trained before allowing them to work in the manhole. m. The workers shall be provided with Gumboots or non-sparking shoes, bump helmets and gloves non-sparking tools, safety lights and gas masks and portable air blowers (when necessary). They must be supplied with barrier cream for anointing the limbs before working inside the sewer lines.
 - n. Workmen descending a manhole shall try each ladder step or rung carefully before putting his full weight on it to guard against insecure fastening due to corrosion of the rung fixed to manhole well.
 - o. If a man has received a physical injury, he should be brought out of the sewer immediately and adequate medical aid should be provided to him.
 - p. The extent to which these precautions are to be taken depend on individual situation but the decision of the Engineer-In-Charge regarding the steps to be taken in this regard in an individual case will be final.
- 8.6 The Contractor shall not employ men and women below the age of 18 years on the work of painting with products containing lead in any form. Wherever men above the age of 18 are employed on the work of lead painting the following precautions should be taken.
- 8.6.1 No paint containing lead or lead products shall be used except in the form of paste or readymade paint.
- 8.6.2 Suitable facemasks should be supplied for use by the workers when paint is applied in the form of spray or a surface having lead paint is dry rubbed and scrapped.

- 8.6.3 Overalls shall be supplied by the Contractor to the workmen and adequate facilities shall be provided to enable the working painters to wash during the cessation of work.
- 8.6.4.1 a. White lead, sulphate or lead work products containing those pigments shall not be used in painting operation except in the form of paste or of paints ready for use.
- b. Measures shall be taken whenever required in order to prevent danger arising from the application of paint in the form of spray.
- c. Measures shall be taken, whenever practicable to prevent danger arising out of dust caused by dry rubbing down and scrapping.
- 8.6.4.2 a. Adequate facilities shall be provided to enable working painter to wash during and on cessation of work.
- b. Suitable arrangements shall be made to prevent clothing put off during working hours being spoiled by painting materials.
- 8.6.4.3 a) Cases of lead poisoning and of suspected lead poisoning shall be notified and shall be subsequently verified by a medical man appointed by the competent authorities of the Consultant.
- b) EPI may require when necessary a medical examination of workers.
- c) Instructions with regard to the special hygienic precautions to be taken in the painting trade shall be distributed to working painters.
- 9.0 When the work is done near any place where there is risk of drowning, all necessary equipments should be provided and kept ready for use and all necessary steps taken for prompt rescue of any person in danger and adequate provisions should be made for prompt first aid treatment of all injuries likely to be obtained during the course of the work.
- 10.0 Use of hoisting machines and tackle including their attachment encourage and supports shall conform to the following standard of conditions.
- 10.1 a. These shall be of good mechanical construction, sound material and adequate strength and free from patent, defects and shall be kept required in good working order.
- b) Every rope used in hoisting or lowering materials or as a means of suspension shall be of durable quality and adequate strength, and free from patent defects.
- 10.2 Every crane driver or hoisting appliance operator shall be properly qualified and no person under the age of 21 years should be in-charge of any hoisting machine including any scaffolding, winch or giving signals to operator.

- 10.3 In case of every hoisting machine and of every chain ring hook, shackle swivel and pulley block used in hoisting or as means of suspension the safe working load shall be ascertained by adequate means. Every hoisting machine and all gear referred to above shall be plainly marked with the safe working load. In case of a hoisting machine having a variable safe working load, each safe working load and the conditions under which it is applicable shall be clearly indicated. No part of any machine or any gear referred to above in this paragraph shall be loaded beyond the safe working load except for the purpose of testing.
- 10.4 In case of EPI machines, the safe working load shall be notified by the Engineer-In-Charge. As regards Contractor's machines the Contractor shall notify the safe working load of the machine to the Engineer-In-Charge whenever he brings any machinery to Site of work and get verified by the Engineer-In-Charge.
- 11.0 Motors gearing, transmission electric wiring and other dangerous parts of hoisting appliances should be provided with efficient safeguard, hoisting appliances should be provided with such means as will reduce to the minimum the risk of accidental descent of the load. Adequate precautions should be taken to reduce the minimum the risk of any part of a suspended load becoming accidentally displaced. When workers are employed on electrical installations, which are already energized, insulating mats, wearing apparel, such as gloves sleeves and boots as may be necessary, be provided. The worker should not wear any rings, watches and carry keys or other materials, which are good conductors of electricity.
- 12.0 All scaffold, ladders, and other safety devices mentioned or described herein shall be maintained in safe condition and no scaffold ladder or equipment shall be altered or removed while it is in use. Adequate washing facilities should be provided at or near places of work.
- 13.0 These safety provisions should be brought to the notice of all concerned by display on a notice board at a prominent place of work spot. The person responsible for compliance of the safety codes shall be named therein by the Contractor.
- 14.0 To ensure effective enforcement of the rules and regulations relating to safety precautions the arrangements made by the Contractor shall be open to inspection by the or their representatives.
- 15.0 Notwithstanding the above Clauses from (i) to (xiv) there is nothing in these to exempt the Contractor from the operations of any other Act or Rule in force in the Republic of India.

MODEL RULES FOR THE PROTECTION OF HEALTH AND SANITARY ARRANGEMENTS FOR WORKERS

1.0 APPLICATION

These rules shall apply to all building and construction works in which 20 (twenty) or more workers are ordinarily employed or are proposed to be employed in any day during the period during which the Contractor work is in progress.

2.0 DEFINITION

Work place means a place where twenty or more workers are ordinarily employed or are proposed to be employed in connection with construction work on any day during the period during which the Contractor work is in progress.

3.0 FIRST-AID FACILITIES

3.1 At every work place first aid facilities shall be provided and maintained, so as to be easily accessible during working hours, First-Aid boxes at the rate of not less than one box per 150 contract labour or part thereof ordinarily employed.

3.2 The First-Aid box shall be distinctly marked with a red cross on white ground and shall contain the following equipments:-

- 3.2.1 a) For work places in which number of contract labour employed does not exceed 50, Each First-Aid box shall contain the following equipments:
- i) 6 small sterilized dressings.
 - ii) 3 medium size sterilized dressings.
 - iii) large size sterilized dressings.
 - iv) 3 large sterilized burn dressings.
 - v) 1 (30 ml) bottle containing a two percent alcoholic solution of iodine.
 - vi) 1(30 ml) bottle containing salvolatile having the dose and mode of administration indicated on the label.
 - vii) 1 snake-bite lancet.
 - viii) 1 (30 gms) bottle of potassium permanganate crystals.
 - ix) 1 pair of scissors.
 - x) 1 copy of the First-Aid leaf-let issued by the Director General, Factory Advise Service & Labour Institutes, Government of India.
 - xi) 1 bottle containing 100 tablets (each of 5 grams) of aspirin.
 - xii) Ointment for burns.
 - xiii) A bottle of suitable surgical antiseptic solution.

3.2.2 For work places in which the number of contract labour exceed 50. Each First-Aid box shall contain the following equipments:

- i) 12 small sterilized dressings.
- ii) 6 medium size sterilized dressings.
- iii) 6 large size sterilized dressings.
- iv) 6 large size sterilized burn dressings.
- v) 6 (15 gms) packet sterilized cotton wool.
- vi) 1 (60 ml.) bottle containing a two percent iodine alcoholic solution.
- vii) 1 (60 ml.) bottle containing salvolatile having the dose and mode of administration indicated on the label.
- viii) 1 roll of adhesive plaster.
- ix) 1 snake – bite lancet.
- x) 1 (30 gms.) bottle of potassium permanganate crystals.
- xi) 1 pair of scissors.
- xii) 1 copy of the First-Aid leaf-let issued by the Director General, Factory Advice Service and Labour Institutes, Government of India.
- xiii) A bottle containing 100 tablets (each of 5 grams) of aspirin.
- xiv) Ointment for burns.
- xv) A bottle of suitable surgical antiseptic solution.

3.3 Adequate arrangements shall be made for immediate recoupment of the equipment when necessary.

3.4 Nothing except the prescribed contents shall be kept in the First Aid box.

3.5 The First Aid box shall be kept in charge of a responsible person who shall always be readily available during the working hours of the work place.

3.6 A person in charge of the First-Aid box shall be a person trained in First-Aid treatment, in work places where the number of labour employed is 150 or more.

3.7 In work places where the number of labour employed is 500 or more and hospital facilities are not available within easy distance of the works, first-Aid Posts shall be established and run by a trained Compounder. The Compounder shall be on duty and shall be available at all hours when the workers are at work.

3.8 Where work places are situated in places, which are not towns or cities, a suitable motor transport shall be kept readily available to carry injured person or persons suddenly taken ill to the nearest hospital.

4.0 DRINKING WATER

4.1 In every work place, there shall be provided and maintained at suitable places, easily accessible to labour, a sufficient supply of cold water fit for drinking.

4.2 Where drinking water is obtained from an intermittent public water supply, each work place shall be provided with storage where such drinking water shall be stored.

4.3 Every water supply of storage shall be at a distance of not less than 50 feet from any latrines drain or other source of pollution, Where water has to be drawn from

an existing well which is within such proximity of latrine, drain or any other source of pollution, the well shall be properly chlorinated before water is drawn from it for drinking. All such wells shall be entirely closed in and be provided with a trap-door which shall be dust and waterproof.

- 4.4 A reliable pump shall be fitted to each covered well, trap-door shall be kept locked and opened only for cleaning or inspection which shall be done at least once a month.

5.0 WASHING FACILITIES

- 5.1 In every work place adequate and suitable facilities for washing shall be provided and maintained for the use of labour employed herein.
- 5.2 Separate and adequate screening facilities shall be provided for the use of male and female workers.
- 5.3 Such facilities shall be conveniently accessible and shall be kept clean and hygienic condition.

6.0 LATRINES AND URINALS

- 6.1 Latrines shall be provided in every work place on the following scale, namely:
- a) Where females are employed there shall be at least one latrine for every 25 females.
 - b) Where males are employed, there shall be at least one latrine for every 25 males.

Provided that where the number of males or females exceeds 100, it shall be sufficient if there is one latrine for 25 males or females, as the case may be, up to the first 100, and one for every 50 thereafter.

- 6.2 Every latrine shall be under cover and so partitioned off as to secure privacy, and shall have a proper door and fastenings.
- 6.3 Construction of Latrines: The inside walls shall be constructed of masonry or some suitable heat resisting non-absorbent materials and shall be cement washed inside and outside at least once a year. Latrine shall not be a standard lower than borehole system.
- 6.4 (a) Where workers of both sexes are employed, there shall be displayed outside each block of latrine and urinal, a notice in the language understood by the majority of the workers "For Men only" or "For Women only" as the case may be.
- (b) The notice shall also bear the figure of man or of a woman, as the case may be.

- 6.5 There shall be at least one urinal for male workers up to 50 and one for female workers up to 50 employed at a time. Provided that where the number of male or female workmen, as the case may be, exceeds 500, it shall be sufficient if there is one urinal for every 50 males or females up to the first 500 and one for every 100 or part thereof, thereafter.
- 6.6 a) The latrines and urinals shall be adequately lighted and shall be maintained in a clean and sanitary condition at all times.
- b) Latrines and urinals other than those connected with a flush sewerage system shall comply with the requirements of the Public Health Authorities.
- 6.7 Water shall be provided by means of a tap or otherwise so as to be conveniently accessible in or near the latrines and urinals.

6.8 DISPOSAL OF EXCRETA

Unless otherwise arranged for by the local sanitary authority arrangements for proper disposal of excreta by incineration at the work place shall be made by means of a suitable incinerator. Alternatively excreta may be disposed off by putting a layer of night soil at the bottom of a pucca tank prepared for the purpose and covering it with a 15 cm layer of waste or for refuse and then covering it with a layer of earth for fortnight (when it will turn into manure).

- 6.9 The Contractor shall, at his own expense, carry out all instruction issued to him by the Engineer-In-Charge to effect proper disposal of night soil and other conservancy work in respect of the Contractor's workmen or employees on the Site. The Contractor shall be responsible for payment of any charges, which may be levied by Municipal or Cantonment Authority for execution of such work on his behalf.

7.0 PROVISION OF SHELTER DURING REST

At every place there shall be provided, free of cost four suitable sheds, two for males and the other two for rest separately for the use of man and women labour. The height of each shelter shall not be less than 3 meters from the floor level to the lowest part of the roof. These shall be kept clean and the space provided shall be on the basis of 0.6 sqm. Per head.

Provided that the Engineer-In-Charges may permit, subject to his satisfaction, a portion of the building under construction or other alternative accommodation to be used for the purpose.

8.0 CRECHES

- 8.1 A every work place, at which 20 or more women workers are ordinarily employed, there shall be provided two rooms of reasonable dimensions for the use of their children under the age of six years. One room shall be used as a playroom for the children and the other as their bedrooms.

The rooms shall be constructed on standard not lower than the following:

- i) thatched roof
 - ii) mud floor and walls.
 - iii) planks spread over the mud floor and covered with matting
- 8.2 The rooms shall be provided with suitable and sufficient openings for light and ventilation. There shall be adequate provision of sweepers to keep the places clean.
- 8.3 The Contractor shall supply adequate number of toys and games in the playroom and sufficient number of cots and beddings in the bedroom.
- 8.4 The Contractor shall provide one Ayaa to look after the children in the creche when the number of women workers does not exceed 50 and two when the number of women workers exceed 50.
- 8.5 The use of the rooms/earmarked as ealize shall be restricted to children, their attendant and mother of the children.

9.0 CANTEENS

- 9.1 In every work place where the work regarding the employment of contract labour is likely to continue for six months and wherein contract labour numbering one hundred or more are ordinarily employed, an adequate canteen shall be provided by the Contractor for the use of such labour.
- 9.2 The canteen shall be maintained by the Contractor in an efficient manner.
- 9.3 The canteen shall consist of at least a dining hall, kitchen, storeroom, pantry and washing places separately for workers and utensils.
- 9.4 The canteen shall be sufficiently lighted at all times when any person has access to it.
- 9.5 The floor shall be made of smooth and impervious material and inside walls shall be lime washed or colour washed at least once in each year.
- Provided that the inside walls of the kitchen shall be lime-washed every four months.
- 9.6 The premises of the canteen shall be maintained in a clean and sanitary condition.
- 9.7 Waste Water shall be carried away in suitable covered drains and shall not be allowed to accumulate so as to cause a nuisance.
- 9.8 Suitable arrangements shall be made for the collection and disposal of garbage.
- 9.9 The dinning hall shall accommodate at a time 30 persons of the labour working at time.

- 9.10 The floor area of the dinning hall, excluding the area occupied by the service counter and any furniture except tables and chair shall not be less than one square meter per dinner to be accommodated.
- 9.11 a) A portion of the dinning hall, and service counter shall be partitioned off and reserved for women workers in proportion to their number.
- b) Washing places for women shall be separate and screened to secure privacy.
- 9.12 Sufficient tables, stool, chairs or benches shall be available for the number of dinners to be accommodated.
- 9.13.1 a) There shall be provided and maintained sufficient utensils, crockery, furniture and any other equipment necessary for the efficient running of the canteen.
- b) The furniture, utensils and other equipment shall be maintained in a clean and hygienic condition.
- 9.13.2 a) Suitable clean clothes for the employees serving in the canteen shall be provided and maintained.
- b) A service counter, if provided, shall have top of smooth and impervious material.
- c) Suitable facilities including an adequate supply of hot water shall be provided for the cleaning of utensils and equipment.
- 9.14 The foodstuffs and other items to be served in the canteen shall be in conformity with the normal habits of the labour.
- 9.15 The charge for food stuffs, beverages and any other items served in the canteen shall be based on 'No profit No loss' and shall be conspicuously displayed in the canteen.
- 9.16 In arriving at price of foodstuffs, and other articles served in the canteen, the following items shall not be taken into consideration as expenditure, namely:
- a) The rent of land building.
- b) The depreciation and maintenance charges for the building and equipment provided for the canteen.
- c) The cost of purchase, repair and replacement of equipment including furniture, crockery, cutlery and utensils:
- d) The water charges and other charges incurred for lighting and ventilation:
- e) The interest and amounts spent on the provision and maintenance and equipment provided for in the canteen.

- 9.17 The accounts pertaining to the canteen shall be audited once every 12 months by registered accountants and auditors.

10.0 ANTI MALARIAL PRECAUTIONS

The Contractor shall at his own expense, conform to all anti-malarial instructions given to him by the Engineer-In-Charge including the filling up of any borrows pits which may have been dug by him.

11.0 AMENDMENTS

EPI may from time to time, add to or amend these rules and issue such directions as it may consider necessary for the purpose of removing any difficulty which may arise in the administration hereof.

CONTRACTOR'S LABOUR REGULATIONS

1.0 SHORT TITLE

These regulations may be called the Contractor "Labour Regulations".

2.0 DEFINITIONS

2.1 "Workman" means any person employed by EPI or its Contractor directly or indirectly through a sub-Contractor, with or without the knowledge, of EPI to do any skilled, semi-skilled, unskilled, manual, supervisory, technical or clerical work for hire or reward, whether, the terms of employment are expressed or implied but does not include any person-

- a) Who is employed mainly in a managerial or administrative capacity; or
- b) Who being employed in a supervisory capacity draws wages exceeding Rupees Two thousand Five hundred per person or exercises either by the nature of the duties attached to the office or by reason of powers vested to him, functions mainly of managerial nature.
- c) Who is an out worker, that is to say, a person to whom any articles or materials are given out by or on behalf of the principal Employer to be made up cleaned, washed, altered, ornamental finished, repaired, adopted or otherwise processed for sale for the purpose of the trade or business of the principal Employer and the process is to be carried out either in the home of the out worker or in some other premises, not being premises under the control and management of the principal Employer.

2.2 "Fair Wages" means wages whether for time or piecework fixed and notified under the provisions of the minimum Wages Act from time to time.

2.3 "Contractor" shall include every person who undertake to produce a given result other than a mere supply of goods or articles of manufacture through labour or who supplies labour for any work and includes a sub-Contractor.

2.4 "Wages" shall have the same meaning as defined in the Payment of Wages Act.

2.4.1 Normally working hours of an adult employee should not exceed 9 hours a day. The working day shall be so arranged that inclusive of interval for rest, if any, it shall not spread over more than 12 hours on any day.

2.4.2 When an adult worker is made to work for more than 9 hours on any day or for more than 48 hours in any week he shall be paid overtime for the extra hours put in by him at double the ordinary rate of wages.

2.4.3.1 Every worker shall be given a weekly holiday on a Sunday, in accordance with the provisions of the Minimum Wages (Central) Rules 1960 as amended from time to time, irrespective of whether such worker is governed by the Minimum Wages Act or not.

2.4.3.2 Whether the Minimum Wages prescribed by the Government under the Minimum Wages Act are not inclusive of the wages for the weekly day of rest, the worker shall be entitled to rest day wages at the rate applicable to the next preceding day, provided he has worked under the same Contractor for a continuous period of not less than 6 days.

2.4.3.3 here a Contractor is permitted by the Engineer-In-Charge to allow a worker to work on a normal weekly holiday, he shall grant a substitute holiday to him for the whole day on one of the five days immediately before or after the normal weekly holidays and pay wages to such worker for the work performed on the normal weekly holiday at overtime rate.

3.0 DISPLAY OF NOTICE REGARDING-WAGES, ETC.

The Contractor shall before he commences his work on contract, display and correctly maintain and continue to display and correctly maintain in a clean and legible condition in conspicuous places on the work, notices in English and in the local Indian languages spoken by the majority of the workers, giving the minimum rates of wages fixed under the Minimum Wages Act, the actual wages being paid, the hours of work for which such wages are earned, wage period, dates of payment of wages and other relevant information as per Appendix 'A'.

4.0 PAYMENT OF WAGES

4.1 The Contractor shall fix wage periods in respect of which wages shall be payable.

4.2 No wage period shall exceed one month.

4.3 The wages of every person employed as labour in an establishment or by a Contractor where less than one thousand, such persons are employed shall be paid before the expiry of the seventh day and in other cases before the expiry of tenth day after the last day of the wage period in respect of which the wages are payable.

4.4 Where the employment of any worker is terminated by or on behalf of the Contractor the wages earned by him shall be paid before the expiry of the second working day from the date on which his employment is terminated.

4.5 All payments of wages shall be made on a working day at the work premises and during the working time and on a date notified in advance and in case the work is completed before the expiry of the wage period, final payment shall be made within 48 hours of the last working day.

- 4.6 Wages due to every worker shall be paid to him direct or to other person authorized by him in this behalf.
- 4.7 All wages shall be paid in current coin or currency or in both.
- 4.8 Wages shall be paid without any deductions of any kind except those specified by the Central Government by general or special order in this behalf or permissible under the Payment of Wages Act 1956.
- 4.9 A notice showing the wage period and the place and time of disbursement of wages shall be displayed at the place of work and a copy sent by the Contractor to the Engineer-In-Charge under acknowledgment.
- 4.10 It shall be the duty of the Contractor to ensure the disbursement of wages in the presence of the Engineer or any other authorized representatives of the Engineer-In-Charge who will be required to be present at the place and time of disbursement of wages by the Contractor to workmen.
- 4.11 The Contractor shall obtain from the Engineer or any other authorized representative of the Engineer-In-Charge as the case may be, a certificate under his signature at the end of the entries in the "Register of Wages" or the "Wage-cum-Muster Roll" as the case may be in the following form :

"Certified that the amount shown in column No..... has been paid to the workmen concerned in my presence on..... at"

5.0 FINES AND DEDUCTIONS, WHICH MAY BE MADE FROM WAGES

- 5.1 The wages of a worker shall be paid to him without any deduction of any kind except the following :
- a) Fines
 - b) Deductions for absence from duty i.e. from the place or the places where by the terms of his employment he is required to work. The amount of deduction shall be in proportion to the period for which he was absent.
 - c) Deduction for damage to or loss of goods expressly entrusted to the employed persons for custody, or from loss of money or any other deduction which he is required to account where such damage or loss is directly attributable to his neglect or default.
 - d) Deduction for recovery of advances or for adjustment of over payment of wages, advances granted shall be entered in a register.
 - e) Any other deduction, which the Central Government may from time to time allow.
- 5.2 No fines should be imposed on any worker save in respect of such acts and omissions on his part as have been approved by the Chief Labour Commissioner.

NOTE: An approved list of Acts and Omissions for which fines can be imposed is enclosed at Appendix-I.

- 5.3 No fine shall be imposed on a worker and no deduction for damage or loss shall be made from his wages until the worker has been given an opportunity of showing cause against such fines or deductions.
- 5.4 The total amount of fine which may be imposed in any one-wage period on a worker shall not exceed an amount equal to three paise in a Rupee of the total wages, payable to him in respect of that wage period.
- 5.5 No fine imposed on any worker shall be recovered from him in installment, or after the expiry of sixty days from the date on which it was imposed.
- 5.6 Every fine shall be deemed to have been imposed on the day of the act or omission in respect of which it was imposed.

6.0 LABOUR RECORDS

- 6.1 The Contractor shall maintain a "Register of persons employed" on work on contract in form XIII of the CL (R&A) Central Rules 1971 (Appendix-B).
- 6.2 The Contractor shall maintain a "Muster Roll" register in respect of all workmen employed by him on the work under contract in form XVI of the CL (R&A) Rules 1971 (Appendix-C).
- 6.3 The Contractor shall maintain a "Wage Register" in respect of all workmen employed by him on the work in form (Appendix-D).
- 6.4 Register of accidents – The Contractor shall maintain a register of accidents in such form as may be convenient at the work place but the same shall include the following particulars:
 - a) Full particulars of the labourers who met with accident.
 - b) Rate of wages
 - c) Sex
 - d) Age
 - e) Nature of accident and cause of accident.
 - f) Time and date of accident.
 - g) Date and time when he/she admitted in Hospital
 - h) Date of discharge from the Hospital
 - i) Period of treatment and result of treatment
 - j) Percentage of loss of earning capacity and disability as assessed by Medical Officer.
 - k) Claim required to be paid under Workmen's Compensation Act.
 - l) Date of payment of compensation.
 - m) Amount paid with details of the person to whom the same was paid.
 - n) Authority by whom the compensation was assessed.
 - o) Remarks.

- 6.5 Register of Fines – The Contractor shall maintain a “Register of Fines” in the form (Appendix-H).

The Contractor shall display in a good condition and in a conspicuous place of work the approved list of Acts and Omission for which fines can be imposed (Appendix-I).

- 6.6 Register of Deductions-The Contractor shall maintain a “Register of Deductions” for damage or loss in form (Appendix-J).
- 6.7 Register of Advances-The Contractor shall maintain a “Register of Advances” in form (Appendix-K).
- 6.8 Register of Overtime-The Contractor shall maintain a “Register of Overtime” in form (Appendix-L).

7.0 ATTENDANCE CARD-CUM WAGE SLIP:

- 7.1 The Contractor shall issue an attendance card-cum-wage slip to each workman employed by him in the specimen form at (Appendix-E).
- 7.2 The card shall be valid for each wage period.
- 7.3 The Contractor shall mark the attendance of each workman on the card twice each day, once at the commencement of the day and again after the rest interval, before he actually starts work.
- 7.4 The card shall remain in possession of the worker during the wage period under reference.
- 7.5 The Contractor shall complete the wage slip portion on the reverse of the card at least a day prior to the disbursement of wages in respect of the wage period under reference.
- 7.6 The Contractor shall obtain the signature or thump impression of the worker on the wage slip at the time of disbursement of wages and retain the card with himself.

8.0 EMPLOYMENT CARD

The Contractor shall issue an Employment Card in form to each worker within three days of the employment of the worker (Appendix-F).

9.0 SERVICE CERTIFICATE

On termination of employment for any reason whatsoever the Contractor shall issue to the workman whose services have been terminated, a service certificate in from Appendix-G.

10.0 PRESERVATION OF LABOUR RECORDS

All records required to be maintained under Regulations Nos. 6 and 7 shall be preserved in original for a period of three years from the date of last entries made in them and shall be made available for inspection by the Engineer-In-Charge, Labour Officer.

11.0 POWER OF LABOUR OFFICERS TO MAKE INVESTIGATIONS INQUIRY

The Labour Officer or any other person authorized by EPI on its behalf shall have power to make inquiries with a view to ascertaining and enforcing due and proper observance of the Fair Wage Clauses and the Provisions of Regulations. He shall investigate into any complaint regarding the default made by the Contractor or sub-Contractor in regard to such provision.

12.0 INSPECTION OF BOOK AND SLIPS

The Contractor shall allow inspection of all the prescribed labour records to any of his workers or to his agent at a convenient time and place after due notice is received or to the Labour officer or any other person, authorized by the Central Government on his behalf.

13.0 SUBMISSION OF RETURNS

The Contractor shall submit periodical returns as may be specified from time to time.

14.0 AMENDMENTS

EPI may from time to time, add or amend the regulations and on any question as to the application, interpretation or effect of these regulations the decision of the Zonal Chief concerned shall be final.

Appendix – ‘A’

LABOUR BOARD

Name of work

Name of Contractor

Address of Contractor

Name and Address of Unit

Name of Labour Enforcement Officer

Address of Labour Enforcement Officer

Date:

S. No.	Category	Minimum wage fixed	Actual wages paid	Number present	Remarks

Weekly Holiday

Wage Period

Date of Payment of wages

Working hours

Rest interval

Appendix – ‘B’

FORM 13

SEE RULE 75

REGISTER OF WORKMEN EMPLOYED BY CONTRACTOR

Name and Address of Contractor

Name and Address of Establishment in/
under which contract is carried on

Nature and location of work

Name & Address of Principal Employer

Sl. No.	Name and surname of workman	Age & sex	Father's Husbands Name	Nature of employment / designation	Permanent home address of the workman (village and Tehsil Taluk and District)	Local address
1	2	3	4	5	6	7

Date of commencement of employment	Signature or thumb impression of the workman	Date of termination of employment	Reasons for termination	Remarks
8	9	10	11	12

Appendix – 'C'

FORM XVI

(See Rule 78(2) (193))

MUSTER ROLL

Name and address of Contractor

Name and address of establishment in/under
which contract is carried on

Nature and location of work

Name and Address of Principal Employer

For the month / fortnight

S.No.	Name of the workman	Sex	Father's / Husband's Name	Dates	Remarks					
1.	2	3	4	5.						
				<table><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr></table>	1	2	3	4	5	
1	2	3	4	5						

Appendix – ‘D’

FORM XVII

[SEE RULE 78(2) (03)]

REGISTER OF WAGES

Name and address of Contractor

Name and address of establishment in/under
which contract is carried on

Nature and location of work

Name and Address of Principal Employer

Wage period: per month/ fortnightly

S. No.	Name of Workman	Serial No. in the register of workman	Designation nature of work done	Nos. of days worked	Units of work done	Daily rate of wages/ piece rate	Basic Wages
1	2	3	4	5	6	7	8

Dearness allowance	Overtime	Other cash payments (Nature of payments to be indicated)	Total	Duration if any (indicate)	Net Amt paid	Signature thumb impression of the workman	Initial Contractor or his representative
9	10	11	12	13	14	15	16

Appendix – 'E'

FORM XIX

[SEE RULE 78 (2) (B)]

W A G E S L I P

Name and address of Contractor

Name and Father's/Husband's Name of workman

Nature and location of work

For the Week/Fortnight/Month ending

1. No. of days worked
2. No. of Units worked in case of piece rate workers
3. Rate of daily wages/piece rate
4. Amount of overtime wages
5. Gross wages payable
6. Deductions if any
7. Net amount of wages paid

Sign of the Contractor

Appendix – 'E'

WAGE CARD

WAGE CARD NO.

NAME AND ADDRESS OF CONTRACTOR

DATE OF ISSUE

NATURE OF WORK WITH LOCATION

DESIGNATION

NAME OF WORKMAN

MONTH/FORTNIGHT

RATE OF WAGES

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
26 27 28 29 30 31

MORNING

RATE

EVENING

AMOUNT

INITIAL

RECEIVED FROM

THE SUM OF RS.

ON ACCOUNT
OF MY WAGON.

SIGNATURE

THE WAGE CARD IS VALID FOR ONE MONTH FROM THE DATE OF ISSUE.

Appendix – 'F'

FORM XIV

(SEE RULE 76)

EMPLOYMENT CARD

Name and address of Contractor

Name and address of establishment under which

The contract is carried out

Nature and location of work

Name and address of Principal Employer

1. Name of the workman
2. S. Name in the register of workman employed
3. Nature of Employment/Designation
4. Wage rate (with particulars of unit in case of piece work)
5. Wage Period
6. Tenure of employment
7. Remarks

Signature of Contractor

Appendix – ‘G’

FORM XV

(SEE RULE 77)

SERVICE CERTIFICATE

Name and address of Contractor

Nature and location of work

Name and address of workman

Age or date of birth

Identification Marks

Father's/Husband's Name

Name and address of establishment in under which
contract is carried on

Name and address of Principal Employer

Total period of which employed

S.No.	From	To	Nature of work	Rate of wages (with particular s of unit In case of piece work)	Remarks
1	2	3	4	5	6

Signature

Appendix – 'H'

FORM XII

[SEE RULE 78 (2) (D)]

REGISTER OF FINES

Name and address of Contractor

Name and address of establishment in/ under which
contract is carried on

Nature and location of work

Name and address of workman

Name and address of Principal Employer

S.No.	Name of workman	Father's/Husband Name	Designation/nature of employment	Act/Omission for which fine imposed	Date of offence
1	2	3	4	5	6

Whether workman showed causes against fine	Name of person in whose presence employees explanation was heard	Wage period and wages payable	Amount of fine Imposed	Date on which fine realized	Remarks
7	8	9	10	11	12

Appendix – ‘I’

**LIST OF ACTS AND OMISSIONS FOR
WHICH FINES CAN BE IMPOSED**

In accordance with rule of Labour Regulations, to be displayed prominently at the Site of work both in English and local language.

1. Willful insubordination or disobedience, whether alone or in combination with other.
2. Theft, fraud or dishonestly in connection with Contractors beside a business or property of EPI.
3. Taking or giving bribes or any illegal gratifications.
4. Habitual late attendance.
5. Drunk-ness fighting riotous or disorderly or indifferent behaviour.
6. Habitual negligence.
7. Smoking near or around the area where combustible or other materials are locked.
8. Habitual indiscipline.
9. Causing damage to work in the progress or to property of EPI or of the Contractor.
10. Sleeping on duty.
11. Malingering or slowing down work.
12. Giving the false information regarding name, age, fathers name etc.
13. Habitual loss of wage cards supplied by the Employer.
14. Unauthorized use of Employers property or manufacturing or making of unauthorized articles at the work place.
15. Bad workmanship in construction and maintenance by skilled workers, which is not approved by EPI for which the Contractors are compelled to undertake rectifications.
16. Making false complaints and/or misleading statements.
17. Engaging on trade within the premises of the establishment.
18. Any unauthorized divulgence of business affairs of the employees.
19. Collection or canvassing for the collection of any money within the premises of an establishment unless authorized by the Employer.
20. Holding meeting inside the premises without previous sanction of the Employers.
21. Threatening or intimidating any workman or employee during the working hours within the premises.

Appendix – 'J'

FORM XX

[SEE RULE 78 (2) (D)]

REGISTER OF DEDUCTION FOR DAMAGES OR LOSS

Name and address of Contractor

Name and address of establishment in/ under which
contract is carried on

Nature and location of work

Name and address of Principal Employer

S.No.	Name of workman	Father's/Husband Name	Designation/nature of employment	Particulars of damage or loss	Date of damage/loss
1	2	3	4	5	6

Whether workman showed cause against deductions	Name of person in whose presence employees explanation was heard	Amount of deduction Imposed	No. of installment	<u>Date of recovery</u>		Remarks
				First Installment	Last Installment	
7	8	9	10	11	12	13

FORM XXII

[SEE RULE 78(2)]

REGISTER OF ADVANCES

Name and address of Contractor

Name and address of establishment in/ under which
contract is carried on

Nature and location of work

Name and address of Principal Employer

S.No.	Name of workman	Father's/Husband Name	Designation/nature of employment	Wages period and wages payable	Date and amount of advance given
1	2	3	4	5	6

Purpose / for which advance made	No. of installments by which advance is to be paid	Date and amount of each installment repaid	Date on which last installment was repaid	Remarks
7	8	9	10	11

Appendix – 'L'

FORM XXIII

[See Rule 78(2) (E)]

REGISTER OF OVERTIME

Name and address of Contractor

Name and address of establishment in/ under which
contract is carried on

Nature and location of work

Name and address of Principal Employer

S.No.	Name of workman	Father's/Husband Name	Sex	Designation/ nature of employment	Date on which overtime worked
1	2	3	4	5	6

Total overtime worked or production in case of piece rated	Normal rate of wages	Overtime rate of wages	Overtime earning	Rate on which overtime wages paid	Remarks
7	8	9	10	11	12

APPLICATION FOR EXTENSION OF TIME

(To be completed by the Contractor)

P A R T –I

1. Name of Contractor
2. Name of the work as given in the Agreement
3. Agreement No.
4. Estimated amount put to Tender
5. Date of commencement work as per agreement
6. Period allowed for completion of work as per agreement
7. Date of completion stipulated as per agreement
8. Period for which extension of time has been given previously
Extension granted
 - a) First extension vide Engineer-in-charge letter No... ..date Months Days
 - b) 2nd extension vide Engineer-in-charge letter No..... date Months Days
 - c) 3rd extension vide Engineer-in-charge letter No..... date Months Days
 - d) 4th extension vide engineer-in-charge letter No..... date Months DaysTotal extension previously given
9. Reasons for which extension have been previously given (copies of the previous application should be attached)
10. Period for which extension is applied for:
11. Hindrances on account of which extension is applied for with dates on which hindrances occurred, and the period for which these are likely to last.
 - a) Serial No.
 - b) Nature of hindrance

- c) Date of Occurrence
- d) Period for which it is likely to last
- e) Period for which extension required for this particular hindrance.
- f) Over lapping period, if any, with reference to item
- g) Net extension applied for
- h) Remarks, if any

Total period for which extension is now applied for on account of hindrances mentioned above Month/ days.

- 12. Extension of time required for extra work.
- 13. Details of extra work and on the amount involved:
 - a) Total value of extra work
 - b) Proportionate period of extension of time based on estimated amount put to tender on account of extra work.
- 14. Total extension of time required for 11 & 12
Submitted to the Engineer-In-Charges office.

SIGNATURE OF CONTRACTOR

DATE

APPLICATION FOR EXTENSION OF TIME

(PART – II)

1. Date of receipt of application from Contractor for the work in the Engineer-In-Charge office.
2. Acknowledgement issued by Engineer-In-Charge vide his letter No dated
3. Engineer-In-Charge remarks regarding hindrances mentioned by the Contractor.
 - i) Serial No.
 - ii) Nature of hindrance
 - iii) Date of occurrence of hindrance
 - iv) Period for which hindrance, is likely to last
 - v) Extension of time period applied for by the Contractor
 - vi) Over lapping period, if any, giving reference to items which over lap
 - vii) Net period for which extension is recommended.
 - viii) Remarks as to why the hindrance occurred and justification for extension recommended.
4. Engineer-In-Charge recommendations.

(The present progress of the work should be stated and whether the work is likely to be completed by the date upto which extension has been applied for. If extension of time is not recommended, what compensation is proposed to be levied under the agreement.

SIGNATURTE OF ENGINEER-IN-CHARGE

APPROVAL OF ZONAL HEAD

PROFORMA FOR EXTENSION OF TIME

P A R T –III

To

NAME

ADDRESS OF THE CONTRACTOR

SUBJECT:

Dear Sir(s)

Reference your letter No _____ dated _____ , in connection with the grant of extension of time for completion of the work.....

The date of completion for the above mentioned work, is as stipulated in the agreement, dated

Extension of time for completion of the above mentioned work is granted upto_____, without prejudice to the right of EPI to recover compensation for delay in accordance with the provision made in the relevant Clause (s) of the said agreement dated the ____/ ____/ _____. It is also clearly understood that EPI shall not consider any revision in contract price or any other compensation whatsoever due to grant of this extension.

Provided that notwithstanding the extension hereby granted, time is and shall still continue to be the essence of the said agreement.

Yours faithfully,

FOR EPI LTD.

**PROFORMA FOR BANK GUARANTEE IN LIEU OF
EARNEST MONEY DEPOSIT**

In consideration of Chairman & managing Director, Engineering Projects (India) Limited, (A Govt. of India Enterprise), Core-3, Scope Complex, Lodhi Road, New Delhi Pin-110003. (hereinafter called the EPI) having agreed to accept bank Guarantee of Rs in lieu of EARNEST MONEY DEPOSIT from (hereinafter called the Supplier/ Contractor/ Sub-Contractor, which expression shall include its heirs, successors and assignees) in respect of the Tender for

We, bank having its registered/head office at (hereinafter referred to as the Bank) do hereby agree and undertake to pay to EPI without demur or protest an amount not exceeding Rs..... on demand by EPI.

We the above said Bank further agree and undertake to pay the said amount of Rs..... without any demur on demand within 48 hours. Any demand made on the Bank by EPI shall be conclusive as regards the amount due and payable by the Bank under this guarantee.

We the above said Bank further agree that the guarantee herein contained shall be in full force and in effect until date

Unless a demand or claim under this guarantee is made on us in writing on or before date, we shall be discharged from all liabilities under this guarantee thereafter.

We, the above said Bank, further agree that EPI shall have full liberty, without our consent and without affecting in any manner our obligation to verify, modify or delete any of the conditions.

We, the above said Bank, lastly undertake not to revoke this guarantee during its currency except with the prior consent of EPI in writing.

Dated.....this day of.....200.

For and on behalf of the Bank

NOTE: on a Non-Judicial stamp paper of Rs. 100/- (Rupees One hundred only)

FORMAT NO. EPI/MMD/F/17

SECURITY DEPOSIT CUM PERFORMANCE BANK GUARANTEE

The Chairman & Managing Director
(A Govt. of India Enterprise),
Engineering Projects (India) Ltd.
Core-3, SCOPE Complex
7, Institutional Area, Lodhi road
New Delhi –110 003

Dear Sir,

In consideration of the Chairman & Managing Director, Engineering Projects (India) Ltd. (A Govt. of India Enterprise), Core-3, Scope Complex, 7 Institutional Area, Lodhi Road, New Delhi – 110 003 (hereinafter called 'EPI' which expression shall unless repugnant to the subject or context includes its successors and assigns) having agreed under the terms and conditions of Supply Contract/Contract/Sub-Contract no. _____

_____ Dated _____ made between _____ M/s _____

_____ (hereinafter referred to as the said Supplier/Contractor/Sub-Contractor) which expression shall unless repugnant to the subject or context includes its successors and assigns) and EPI in connection with _____ (hereinafter called 'The said Supply Contract/Contract/Sub-Contract) to accept a Deed Security Deposit-cum-Performance Bank Guarantee as herein provided for _____ in lieu of :

- a) The Security Deposit to be made by the said Supplier/Contractor/Sub-Contractor for the due fulfillment by the said Supplier/Contractor/Sub-Contractor of the terms and conditions contained in the said Supply Contract/Contract/Sub-contract, and
- b) Fulfillment of the conditions of the said Supply Contract /Contract/Sub-Contract by furnishing a security for the performance of the works and/or equipment/materials supplied in accordance with conditions of the said Supply Contract/ Contract/ Sub-Contract.

1. We _____ (hereinafter referred to as "the said bank which expression shall unless repugnant to the subject or context includes its successors and assigns) and having our registered office at _____ do hereby unconditionally and irrevocably undertake and agree to indemnify and keep indemnified EPI from time to time to the extent of (_____) Only against any loss, damages, costs, charges and expenses caused to or suffered by or that may be caused or suffered by EP [I by reason of any breach or breaches by the said Supplier/Contractor/Sub-Contractor of any of the terms and conditions contained in the said Supply Contract/Contract/Sub-Contract and or any amount becoming due for non-

performance and /or penalty as assessed by EPI and top unconditionally pay the amount claimed by EPI on demand and without demur and protest.

2. We the said Bank further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Supply Contract/Contract/Sub-Contract and till all the dues of EPI under the said Supply Contract/Contract/Sub-Contract or by virtue of any of the terms and conditions governing the said Supply Contract/ Contract/ Sub-Contract have been fully paid and its claims satisfied or discharged and till EPI certifies that the terms and conditions of the said Supply Contract/Contract/Sub-Contract have been fully and properly carried out by the said Supplier/Contractor/Sub-Contractor and accordingly discharge this guarantee subject, however, that EPI shall have no claim under this guarantee after 6 months from the date of expiry of the guarantee unless a notice of the claim under this guarantee has been served on the Bank before the expiry of the said period of 6 months.
3. EPI shall have the fullest liberty without affecting in any way the liability of the said Bank under this Guarantee or indemnity from time to time to vary any of the terms and conditions of the said Supply Contract/Contract/Sub-Contract to extend time of performance of the said Supply Contract/ Contract/ Sub-Contract or to postpone for any time and from time to time any power's exercisable by it against the said Supplier/Contractor/Sub-Contractor and either to enforce or forbear from enforcing any of the terms and conditions governing the said Supply Contract/ Contract/ Sub-Contract or securities available to EPI and the said Bank shall not be released from its liability under these presents by any exercise by EPI of the liberty with reference to the matters aforesaid or by reason of time being given to the said Supplier/Contractor/Sub-Contractor or of any other matter or thing whatsoever which under the law relating to sureties would but for this provision have the effect of so releasing the said Bank from its such liability.
4. We, the said Bank, further agree that EPI shall be the sole judge of and as to whether the said Supplier/Contractor/Sub-Contractor has committed any breach or breaches of any of the terms and conditions of the said Supply Contract/Contract/Sub-Contract and the extent of loss, damage, cost, charges and expenses caused to or suffered by or that may be caused to or suffered by EPI on account thereof and the decision of EPI that the said Supplier/Contractor/Sub-Contractor has committed such breach or breaches and as to the amount or amounts of loss, damages, costs, charges and expenses caused to or suffered by EPI from time to time shall be final and binding on the Bank.
5. This guarantee shall be a continuing guarantee and shall remain valid and irrevocable for all claims of EPI and liabilities of the said Supplier/Contractor/Sub-Contractor arising up to and until mid night of _____, subject the claim period as mentioned in para _____.
6. This guarantee shall be in addition to any other guarantee or security whatsoever that EPI may now or at any time anyway may have in relation to the said Supplier/Contractor/Sub-Contractor obligation/liabilities under and/or in connection with the said Supply Contract/Contract/Sub-Contract and EPI shall have full authority to take recourse to or enforce this guarantee in preference to any other guarantee or

security which EPI may have or obtain and there shall be no forbearance on the part of EPI IN ENFORCING OR REQUIRING ENFORCEMENT OF ANY OTHER SECURITY AND shall not have the effect of releasing the said Bank from its full liability hereunder:

7. EPI shall be at liberty without reference to the said Bank and without effecting the full liability of the said Bank hereunder to take any other security in respect of the said supplier's/Contractor's/sub-Contractor's obligations and/or liabilities under or in connection with the said Supply Contract/ Contract/ Sub-Contract.
8. This guarantee shall not be determined or affected by the liquidation or winding up, dissolution, or change of constitution or insolvency of the said Supplier/Contractor/Sub-Contractor, but shall in all respects and for all purposes be binding and operative until payment of all moneys paid to EPI in terms thereof.
9. The said Bank hereby waives all rights at any time inconsistent with the terms of this guarantee and the obligations of the said Bank in terms hereof shall not be anywise affected or suspended by reasons of any dispute or disputes having been raised by the said Supplier/Contractor/Sub-Contractor (whether or not pending before any arbitrator, tribunal or court) of any denial or liability by the said Supplier/ Contractor/ Sub-Contractor stopping or preventing or purporting to stop or prevent any payment by the said Bank to EPI in terms hereof. The amount stated in any notice of demand addressed by EPI to the Guarantor Bank as liable to be paid to EPI by the Supplier/ Contractor/ Sub-Contractor on account of any losses or damages or costs, charges and /or expenses shall as between the said bank and EPI be conclusive evidence of the amount so liable to be paid to EPI or suffered or incurred by EPI as the case may be and payable by the said Bank to EPI in terms hereof. We, the said Bank further undertake that we shall pay forthwith the amount stated in the notice of demand to EPI without demur and protest.
10. We, the said bank undertake not to revoke this guarantee during its currency except with the consent of EPI in writing and agree that any change in the constitution of the aid Supplier/Contractor/Sub-Contractor or the said Bank shall not discharge our liabilities hereunder.
11. It shall not be necessary for EPI to proceed against the said Supplier/Contractor/Sub-Contractor before proceeding against the Bank and the guarantee herein contained shall be enforceable against the Bank notwithstanding any security which EPI may have obtained or obtain from the Supplier/Contractor/Sub-Contractor shall at the time when proceedings are taken against the said Bank hereunder be outstanding or unrealized.
12. Our liability under this guarantee shall be restricted to _____ and this guarantee shall remain in force until midnight of _____ unless a claim to enforce this guarantee is filed with us within six months from _____. (which is date of expiry of this guarantee), we shall be discharged from all liabilities under this guarantee thereafter.

DATED ----- THIS day of -----200...

FOR AND ON BEHALF OF BANK

PROFORMA FOR ADVANCE BANK GUARANTEE

To

The Chairman & Managing Director,
Engineering Projects (India) Ltd.,
(A Govt. of India Enterprise),
Core-3, Scope Complex,
7, Institutional Area,
Lodhi Road,
New Delhi—110 003.

Dear Sir,

1. In consideration of the Chairman & Managing Director, Engineering Projects (India) Limited, (A Govt. of India Enterprise), Core-3, Scope Complex, 7, Institutional Area, Lodhi Road, New Delhi – 110 003 (hereinafter called 'EPI' which expression shall include its successors and assigns) having agreed under the terms and conditions of Supply Contract/ Contract/ Sub-Contract No.....dated...(hereinafter referred to as the said Supply Contract/ Contract/ Sub-Contract) made between EPI and.....hereinafter called the Supplier/ Contractor/ Sub-Contractor) which expression shall include its successors and assigns to make at the request of the Supplier/ Contractor/ Sub-Contractor a lump sum advance of Rs.....for utilising it only for the purposes of the said Supply Contract/ Contract/ Sub-Contract on his furnishing a guarantee acceptable to EPI.
2. We, the.....Bank (hereinafter referred to as 'the said Bank') a Company under the Companies Act 1956 and having our registered office at.....do hereby guarantee the recovery of the said advance and interest thereon as provided according to the terms and conditions of the said Supply Contract/ Contract/ Sub-Contract. If the Supplier/ Contractor/ Sub-Contractor fails to utilise the said advance for the purposes of the said Supply Contract/ Contract/ Sub-Contract and/or the said advance together with interest thereon as aforesaid is not fully recovered by EPI, we,Bank hereby unconditionally and irrevocably undertake to pay the EPI on demand and without demur or protest to the extent of the said sum of Rs.....any claim made by EPI on us against non-utilisation / misutilisation of the said advance and/or by reason of EPI not being able to recover in full the sum of Rs..... with interest as aforesaid.
3. We.....Bank further agree that EPI shall be the sole judge of and as to whether the said Supplier/ Contractor/ Sub-Contractor has utilised or not utilised the said advance or any part thereof for the purposes of the said Supply Contract/ Contract/ Sub-Contract and/or as to whether the advance or any part thereof with

interest has been recovered or not and the finding of the EPI in this regard- shall be final and binding on us.

4. We, the said Bank further agree that the Guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Supply Contract/ Contract/ Sub-Contract and till the said advance with interest has been fully recovered and its claims satisfied or discharged and till EPI certifies that the said advance with interest has been fully recovered from the Supplier/ Contractor/ Sub-Contractor.
5. EPI shall have the fullest liberty without affecting in any way the liability to the said Bank under this guarantee or indemnity from time to time to vary any of the terms and conditions of the said Supply Contract/ Contract/ Sub-Contract, or the advance or to extend time of performance by the said Supplier/ Contractor/ Sub-Contractor or to postpone for any time and from time to time any powers exercisable by it against the said Supplier/ Contractor/ Sub-Contractor and either to enforce or forbear from enforcing any of the terms and conditions governing the said Supply Contract/ Contract/ Sub-Contract or securities available to EPI and the said Bank shall not be released from its liability under these presents by any exercise by EPI of the liberty with reference to the matters aforesaid or by reason of time being given to the said Supplier/ Contractor/ Sub-Contractor or any other forbearance, act or omission on the part of the EPI or any indulgence by EPI to the said Supplier/ Contractor/ Sub-Contractor or of any other matter or thing whatsoever which under the law relating to sureties would but for this provision have the effect of so releasing the said Bank from its such liability.
6. The Bank hereby waives all rights at any time inconsistent with the terms of this guarantee/Undertaking and the obligations of the Bank in terms hereof shall not be anyway affected or suspended by reasons of any dispute or disputes having been raised by the Supplier/ Contractor/ Sub-Contractor (whether or not pending before any arbitrator, Tribunal or court) or any denial or liability by the Supplier/ Contractor/ Sub-Contractor stopping or preventing or purporting to stop or prevent any payment by the Bank to EPI in terms hereof.
7. The amount stated in any notice of demand addressed by EPI to Bank as liable to be paid to EPI by the Supplier/ Contractor/ Sub-Contractor, shall be conclusive evidence of the amount so liable to be paid to EPI by the Bank.
8. This guarantee/undertaking shall be in addition to any other guarantee or security whatsoever that EPI may now or any time anyway may have in relation to the Supplier's/ Contractor's/ Sub-Contractor's obligations of liabilities under and/or in connection with the said Supply Contract/ Contract/ Sub-Contract, and EPI shall have full authority to take recourse to or enforce this security in preference to any other guarantee or security which EPI may have or obtain and there shall be no forbearance on the part of EPI in enforcing or requiring enforcement of any other security and shall not have the effect of releasing the Bank from its full liability hereunder.
9. It shall not be necessary for EPI to proceed against the said Supplier/ Contractor/ Sub-Contractor before proceeding against the Bank and the guarantee herein contained shall be enforceable against the Bank notwithstanding any security which EPI may have obtained or obtain from the Supplier/ Contractor/ Sub-Contractor, shall at the time

when proceedings are taken against the said Bank hereunder be outstanding or unrealised.

10. We, the said Bank further undertake that we shall pay forthwith the amount stated in the notice of demand without demur and protest notwithstanding any dispute/difference pending between the parties before the arbitrator Tribunal or Court and/or dispute is being referred to arbitrator.
11. We, the said Bank undertake not to revoke this Guarantee during its currency except with the consent of EPI in writing and agree that any change in the Constitution of the said Supplier/ Contractor/ Sub-Contractor or the said Bank shall not discharge our liability hereunder.
12. This guarantee/undertaking shall be a continuing guarantee/undertaking and shall remain valid and irrevocable for all claims of EPI and liabilities of the Supplier/ Contractor/ Sub-Contractor arising up to and until midnight of.....
13. Notwithstanding anything contained herein above, our liability under this guarantee shall be restricted to Rs..... (Rs.....) and this guarantee shall remain in full force till..... unless a claim is made on us within 3 months from the date of expiry of this guarantee i.e. before all the claims under this guarantee shall be forfeited and we shall be relieved of and discharged from our liabilities hereunder.

Datedday of200

For and on behalf of Bank

Format No: EPI/MMD/F-16

PROFORMA FOR PERFORMANCE BANK GUARANTEE

To

The Chairman & Managing Director,
Engineering Projects (India) Ltd.,
(A Govt. of India Enterprise),
Core-3, Scope Complex,
7, Institutional Area,
Lodhi Road,
New Delhi—110 003.

Dear Sir,

In consideration of the Chairman & Managing Director, Engineering Projects (India) Limited, (A Govt. of India Enterprise), Core-3, Scope Complex, 7, Institutional Area, Lodhi Road, New Delhi – 110 003 (hereinafter called 'EPI' which expression shall include its successors and assigns) having awarded to (hereinafter referred to as 'the Supplier/ Contractor/ Sub-Contractor' which expression shall wherever the subject or context so permits include its successors and assigns) a Supply Contract/Contract / Sub-Contract No. in terms inter alia, of EPI Letter No.dated...and the General Conditions of Contract/ General Purchase Conditions of EPI and upon the condition of the Supplier's/ Contractor's/ Sub-Contractor's furnishing security for the performance of the Supplier's/ Contractor's/ Sub-Contractor's obligations and/or discharge of the Supplier's/ Contractor's/ Sub-Contractor's liability under and/or in connection with the said Supply Contract/ Contract/ Sub-Contract up to a sum of Rs.....(Rupees..... only) amount to.....percent of the total Supply Contract/ Contract/ Sub-Contract Value.

1. We.....(hereinafter called 'the Bank' which expression shall include its successors and assigns) hereby jointly and severally undertake the guarantee to payment to EPI in rupees forthwith on demand in writing and without protest or demur or any and all monies anyway payable by the Supplier/ Contractor/ Sub-Contractor to EPI under in respect of or in connection with the said Supply Contract/ Contract/ Sub-Contract inclusive of all EPI's losses and damages and costs, charges and expenses and other moneys anyway payable in respect to the above as specified in any notice of demand made by the EPI to the Bank with reference to this guarantee up to and aggregate limit of Rs..... (Rupees.....only).

2. We..... Bank further agree that EPI shall be sole judge of and as to whether the said Supplier/ Contractor/ Sub-Contractor has committed any breach or breaches of any of the terms and conditions of the said Supply Contract/ Contract/ Sub-Contract and the extent of loss, damage, cost, charges and expenses caused to or suffered by or that may be caused to or suffered by EPI on account thereof and the decision of EPI that the said Supplier/ Contractor/ Sub-Contractor has committed such breach or breaches and as to the amount or amounts of loss, damage, costs, charges and expenses caused to or suffered by EPI from time to time shall be final and binding on us.
3. EPI shall be at liberty without reference to the Bank and without effecting the full liability of the Bank hereunder to take any other security in respect of the Supplier's/ Contractor's/ Sub-Contractor's obligations and/or liabilities under or in connection with the said Supply Contract/ Contract/ Sub-Contract and to vary the forms vis-à-vis the Supplier/ Contractor/ Sub-Contractor of the said Supply Contract/ Contract/ Sub-Contract or to grant time and/or indulgence to the Supplier/ Contractor/ Sub-Contractor or to reduce or to increase or otherwise vary the prices of the total Supply Contract/ Contract/ Sub-Contract Value or to release or to forbear from enforcement of all or any of the security and/or any other security(ies) now or hereafter held by the EPI and no such dealing(s) reduction(s) increase(s) or other indulgence(s) or arrangements with the Supplier/ Contractor/ Sub-Contractor or release or forbearance whatsoever shall absolve the bank of the full liability to EPI hereunder or prejudice rights of EPI against the bank.
4. The guarantee/undertaking shall not be determined or affected by the liquidation or winding up, dissolution, or change of constitution or insolvency of the Supplier/ Contractor/ Sub-Contractor but shall in all respects and for all purposes be binding and operative until payment of all moneys made to EPI in terms thereof.
5. The Bank hereby waives all rights at any time inconsistent with the terms of this guarantee/undertaking and the obligations of the Bank in terms hereof shall not be anywise affected or suspended by reasons of any dispute or disputes having been raised by the Supplier/ Contractor/ Sub-Contractor (whether or not pending before any arbitrator, Tribunal or Court) of any denial or liability by the Supplier/ Contractor/ Sub-Contractor stopping or preventing or purporting to stop or prevent any payment by the Bank to the EPI in terms hereof.
6. The amount stated in any notice of demand addressed by EPI to Bank as liable to be paid to EPI by the Supplier/ Contractor/ Sub-Contractor or as suffered or incurred by the EPI on account of any losses or damages or costs, charges and/or expenses shall be conclusive evidence of the amount so liable to be paid to EPI or suffered or incurred by EPI as the case may be and shall be payable by the Bank to EPI in terms hereof.

7. This guarantee/undertaking shall be a continuing guarantee/undertaking and shall remain valid and irrevocable for all claims of EPI and liabilities of the Supplier/ Contractor/ Sub-Contractor arising up to and until midnight of.....
8. This guarantee/undertaking shall be in addition to any other guarantee or security whatsoever that EPI may now or any time anywise may have in relation to the Supplier's/ Contractor's/ Sub-Contractor's obligations of liabilities under and/or in connection with the said Supply Contract/ Contract/ Sub-Contract, and EPI shall have full authority to take recourse to or enforce this security in preference to any other guarantee of security which EPI may have or obtain and here shall be no forbearance on the part of EPI in enforcing or requiring enforcement of any other security and shall not have the effect of releasing the Bank from its full liability hereunder.
9. It shall not be necessary for EPI to proceed against the said Supplier/ Contractor/ Sub-Contractor before proceeding against the Bank and the guarantee herein contained shall be enforceable against the Bank notwithstanding any security which the EPI may have obtained or obtain from the Supplier/ Contractor/ Sub-Contractor, shall at the time when proceedings are taken against the said Bank hereunder be outstanding or unrealised.
10. We the said Bank undertake not to revoke this guarantee during its currency except with the consent of EPI in writing and agree that any change in the constitution of the said Supplier/ Contractor/ Sub-Contractor or the said bank shall not discharge our liability hereunder.
11. Wethe said Bank further undertake that we shall pay forthwith the amount stated in the notice of demand without demur and protest notwithstanding any dispute/difference pending between the parties before the arbitrator Tribunal or Court and/or any dispute is being referred to arbitrator.
12. Notwithstanding anything contained herein above, our liability under this guarantee shall be restricted to Rs.....
(Rupees.....) and this guarantee shall remain in force till..... unless a claim is made on us within 3 months from that date, that is before all the claims under this guarantee shall be forfeited and we shall be relieved of and discharged from our liabilities thereunder.

Dated day of 200

For and on behalf of Bank

PROFORMA FOR INDEMNITY BOND TO BE EXECUTED BY
THE CONTRACTOR FOR SECURED ADVANCE
AGAINST MATERIALS SUPPLIED FOR THE PROJECT

(On non-judicial stamp paper of appropriate value)

INDEMNITY BOND

THIS INDEMNITY BOND is made this day of..... 20..... by..... (*Contractor's Name*) a Company registered under the Companies Act, 1956/Partnership firm/Proprietary concern having its Registered Office at (hereinafter called as 'Contractor' which expression shall include its successors and permitted assigns) in favour of Engineering Projects (India) Limited, a Company incorporated under the Companies Act, 1956 having its Registered Office at Core-3, Scope Complex, 7, Institutional Area, Lodhi Road, New Delhi - 110 003 (hereinafter called "EPI" which expression shall include its successors and assigns) :

WHEREAS EPI has awarded to the Contractor a Contract for the work of..... vide its letter of Intent/Work Order No..... dated..... (hereinafter called the "Contract") in terms of which EPI is required to give "Secured Advance" to the Contractor as per Clause no. 35 of the General Conditions of Contract against supply of materials by the Contractor for the project on the security of materials, the quantities, rates and other particulars of which are detailed in the Bill of Quantities for the said Contract.

And WHEREAS by virtue of Clause no. 35 of the General Conditions of Contract of the said Contract, the Contractor is required to execute an Indemnity Bond in favour of EPI for the amount of "Secured Advance" towards the materials actually supplied by the Contractor for the Contract Work from time to time to EPI for the purpose of performance of the Contract. (hereinafter called the "Materials").

"AND WHEREAS the Contractor has applied to EPI that they may be allowed "Secured Advance" on the security of materials absolutely belonging to them and brought by them to the site of the works for use in construction of the work".

NOW THEREFORE, This Indemnity Bond witnesseth as follows:

1. That in consideration of the "Secured Advance" being given to the Contractor as mentioned in the Contract, for the purpose of performance of the Contract, the Contractor hereby undertakes to indemnify and shall keep EPI indemnified, for the Actual Cumulative Amount of the "Secured Advance" given to the Contractor from time to time against the said Contract. The Contractor hereby acknowledges actual receipt of the materials etc. as per despatch title documents being /to be handed over to EPI from time to time. The Contractor shall hold such materials in trust as a "Trustee" for and on behalf of EPI.

2. That the Contractor is obliged and shall remain absolutely responsible for the safe transit/protection and custody of the materials at EPI's project site against all risks whatsoever till the materials are duly used/erected in accordance with the terms of the Contract and the plant/package duly erected and commissioned in accordance with the terms of the Contract is taken over by EPI and the Secured Advance is fully adjusted/recovered as per terms of the Contract. The Contractor undertakes to keep EPI harmless against all losses, damages, deterioration and shortages that may be caused to the materials.
3. The Contractor undertakes that the materials shall be used exclusively for the performance/execution of the Contract strictly in accordance with its terms and conditions and no part of the materials shall be utilized for any other work or purpose whatsoever. It is clearly understood by the Contractor that non-observance of the obligations under this Indemnity Bond by the Contractor shall inter-alia constitute a criminal breach of trust on the part of the Contractor for all intents and purposes including legal/penal consequences.
4. That EPI is and shall remain the exclusive owner of the materials free from all encumbrances, charges or liens of any kind, whatsoever. The materials shall at all times be open to inspection and checking by the Engineer – In - Charge or other employees/agents authorized by him in this regard. Further, EPI shall always be free at all times to take possession of the materials in whatever form the materials may be, if in its opinion, the materials are likely to be endangered, misutilised or converted to uses other than those specified in the Contract, by any acts of omission or commission on the part of the Contractor or any other person or on account of any reason whatsoever and the Contractor binds himself and undertakes to comply with the directions of demand of EPI to handover the materials without any demur or reservation.
5. That this Indemnity Bond is irrevocable. If at any time any loss or damage occurs to the materials or the same or any part thereof is mis-utilised in any manner whatsoever, then the Contractor hereby agrees that the decision of the Engineer-In-Charge of EPI as to assessment of loss or damage to the materials shall be final and binding on the Contractor. The Contractor binds itself and undertakes to replace the lost and /or damaged materials at its own cost and/or shall pay the amount of 'Secured Advance' to EPI without any demur, reservation or protest. This is without prejudice to any other right or remedy that may be available to EPI against the Contractor to recover any amount or all the amounts of this Bond from any dues of the Contractor under the Contract or as per the law.
6. This Bond shall remain in force and effect till the completion of the work as per the aforesaid Contract and till all the amount recoverable under this Bond from the Contractor is fully recovered by EPI. The Bond can not be revoked by the Contractor without the written consent of EPI.
7. That Contractor also agrees that any change in the constitution of the Contractor shall not discharge them from their obligation and liability.
8. This Bond shall be treated as an additional addage to the Contract and nothing herein contained shall be construed to adversely affect the rights of EPI in the Contract.

IN WITNESS WHEREOF, the Contractor has signed this Indemnity Bond through its duly authorized representative on the date and place first above written.

For and on behalf of Contractor

(Contractor's Name)

WITNESS:

- | | | | |
|----|----|-----------------|--|
| 1. | 1. | Signature | Signature |
| | 2. | Name | Name (Executant) |
| | 3. | Address | Designation
(Authorised representative) |
| 2. | 1. | Signature | |
| | 2. | Name | |
| | 3. | Address | Seal |

FORM FOR GUARANTEE BOND

FOR ANTI-TERMITE TREATMENT

THIS AGREEMENT made this ____ day of Two thousand ____ between M/s _____ (hereinafter called the guarantor of the one part and M/s Engineering Projects (India) Limited, hereinafter called EPI hereinafter called the OWNER of the other part.

Whereas this agreement is supplementary to the contract hereinafter called the contract dated _____ made between the guarantor of the one part and Engineering Projects (India) Ltd., of the other part whereby the Contractor inter-alia, understood to render the buildings and structures in the said contract recited, completed, termite proof. And whereas the guarantor agreed to give a guarantee to the effect that the said structure will remain termite proof for TEN YEARS to be so reckoned from the date after the maintenance period prescribed in the contract expires.

During this period of guarantee the guarantor shall make good all defects and for that matter shall replace at his risk and cost such wooden member as may be damaged by termite and in case of any other defect being found, he shall render the building termite proof at his cost to the satisfaction of the Engineer-In-Charge and shall commence the works of such rectification within seven days from date of issuing notice from the Engineer-In-Charge calling upon him to rectify the defects falling which the work shall be got done by EPI/ OWNER by some other Contractor at the guarantor's cost and risk and in the later case the decision of the Engineer-In-Charge as to the cost recoverable from the guarantor shall be final and binding.

That if the Guarantor fails to execute the Anti-Termite treatment or commits breaches hereunder then the Guarantor will indemnify EPI against all losses damages, cost expenses or otherwise which may be incurred by him by reasons of any default on the part of the guarantor in performance and observance of this supplemental Agreement. As to the amount of loss and or damage and/or cost incurred by EPI/ OWNER, the decision of the Engineer-In-Charge will be final and binding on the parties.

In witness where of these presents have been executed by the Guarantor _____ and by _____ for and on behalf of EPI on the day of month and year first above written.

Signed sealed and delivered by (Guarantor)

IN THE PRESENCE OF:

1.

2.

Signed for and on behalf of EPI by/ in presence of:

1.

2.

GUARANTEE TO BE EXECUTED BY CONTRACTOR FOR REMOVAL OF DEFECTS AFTER COMPLETION IN RESPECT OF WATER PROOFING WORKS

The agreement made this day of Two thousand between (hereinafter called Guarantor of the one part) and EPI (hereinafter called the Execution Agency of the other part).

WHEREAS this agreement is supplementary to a contract (hereinafter called the Contract), dated and made between the GUARANTOR OF THE ONE part and EPI of the other part, whereby the Contractor, inter-alia, undertook to render the buildings and structures in the said contract recited completely water and leak proof.

AND WHEREAS the Guarantor agreed to give a guarantee to the effect that the said structures will remain water and leak proof for ten years from the date of handing over of the structure of water proofing treatment.

NOW THE GUARANTOR hereby guarantees that water proofing treatment given by him will render the structures completely leak proof and the minimum life of such water proofing treatment shall be ten years to be reckoned from the date after the maintenance period prescribed in the contract.

Provided that the Guarantor will not be responsible for leakage caused by earthquake or structural defects or misuse of roof or alteration and for such purpose.

- a) Misuse of roof shall mean any operation, which will damage proofing treatment, like chopping of firewood and things of the same nature, which might cause damage to the roof.
- b) Alternation shall mean construction of an additional storey or a part of the roof or construction adjoining to existing roof whereby proofing treatment is removed in parts
- c) The decision of the Engineer-In-Charge with regard to cause of leakage shall be final

During this period of guarantee, the Guarantor shall make good all defects and in case of any defect being found render the building water proof to the satisfaction of the Engineer-In-Charge at his cost and shall commence the work for such rectification within seven days from the date of issue of notice from the Engineer-In-Charge calling upon him to rectify the defects failing which the work shall be got done by EPI by some other Contractor at the **guarantor's** cost and risk. The decision of Engineer-In-Charge as to the cost, payable by the Guarantor shall be final and binding.

That if the Guarantor fails to execute the waterproofing or commits breach thereunder, then the Guarantor will indemnify the principal and his successors against all laws

damage, cost, expense or otherwise which may be incurred by him by reason of any default on the part of the GUARANTOR in performance and observance of this supplementary agreement. As to the amount of loss and / or damage and/ or cost incurred by EPI, the decision of the Engineer-In-Charge will final and binding on the parties.

IN WITNESS WHEREOF these presents have been executed by the Obligator,,,,,..... and by And for and on behalf of EPI on the day, month and year first above written.

Signed, sealed and delivered by Obligator in the presence of-

- 1.
- 2.

Signed for and on behalf of EPI by _____

In presence of :

- 1.
- 2.

AGREEMENT FORM

This agreement made this day of (Month) (Year), between THE **ENGINEERING PROJECTS (INDIA) LIMITED (EPI)**, (A Govt. of India enterprise) a company incorporated under the Companies Act, 1956 having its Registered and Corporate Office at Core-3, Scope Complex, 7, Institutional area, Lodhi Road, New Delhi – 110003 (hereinafter referred to as the “EPI” which expression shall include its administrators, successors, executors and assigns) of the one part and **M/s (NAME OF CONTRACTOR)** (hereinafter referred to as the ‘Contractor’ which expression shall unless the context requires otherwise include its administrators, successors, executors and permitted assigns) of the other part.

WHEREAS, EPI, is desirous of construction of **(NAME OF WORK)** (hereinafter referred to as the “PROJECT”) on behalf of the **(NAME OF OWNER/MINISTRY)** (hereinafter referred to as “OWNER”), and had invited Tenders as per Tender Documents vide NIT No. _____.

AND WHEREAS **(NAME OF CONTRACTOR)** had participated in the above referred Tender vide their tender dated _____ and EPI has accepted their aforesaid Tender and award the contract for **(NAME OF PROJECT)** on the terms and conditions contained in its Letter of Intent No. _____ and the documents referred to therein, which have been unequivocally and unconditionally accepted by **(NAME OF CONTRACTOR)** vide their Letter of Undertaking dated _____ resulting into a contract.

NOW THEREFORE THIS DEED WITNESSETH AS UNDER:

ARTICLE 1.0 – AWARD OF CONTRACT

1.1 SCOPE OF WORK

EPI has awarded the contract to **(NAME OF CONTRACTOR)** for the work of **(NAME OF WORK)** on the terms and conditions in its Letter of intent No. _____ dated _____ and the documents referred to therein. The award of work has taken effect from **(DATE)** i.e. the date of issue of aforesaid letter of intent. The terms and expressions used in this agreement shall have the same meanings as are assigned to them in the “Contract Documents” referred to in the succeeding Article.

ARTICLE 2.0 – CONTRACT DOCUMENTS

2.1 The contract shall be performed strictly as per the terms and conditions stipulated herein and in the following documents attached herewith (hereinafter referred to as “Contract Documents”).

- a) EPI Notice Inviting Tender vide No. _____ date _____ and EPI's Tender Documents consisting of:
 - i) Instructions to Tenderers and General Conditions of Contract (GCC) alongwith amendments/errata to GCC (if any) issued (Volume-I).

- ii) Additional Conditions of Contract including Appendices & Annexures, Volume-II.
- iii) Bill of Quantities alongwith amendments/corrigendum of schedule items, if any (Volume-III).
- iv) Technical Specifications
- v) Drawings
- vi) _____

b) (NAME OF CONTRACTOR) letter/proposal no._____
dated _____ and their subsequent communication:

- i) Letter of Undertaking of Tender Conditions dated _____
- ii) _____
- iii) _____

2.2 EPI's detailed Letter of Intent No. _____ dated ____ including Bill of Quantities. Agreed time schedule, Contractor's Organisation Chart and list of Plant and Equipments submitted by Contractor.

2.3 All the aforesaid contract documents referred to in Para 2.1 and 2.2 above shall form an integral part of this Agreement, in so far as the same or any part thereof conform, to the Tender Documents and what has been specifically agreed to by EPI in its Letter of Intent. Any matter inconsistent therewith, contrary or repugnant thereto or deviations taken by the Contractor in its "TENDER" but not agreed to specifically by EPI in its Letter of Intent, shall be deemed to have been withdrawn by the Contractor without any cost implication to EPI. For the sake of brevity, this Agreement alongwith its aforesaid contract documents and Letter of Intent shall be referred to as the "Contract".

ARTICLE 3.0 – CONDITIONS & CONVENANTS

3.1 The scope of Contract, Consideration, Terms of Payments, Advance, Retention Moneys, Taxes wherever applicable, Insurance, Agreed Time Schedule, Compensation for delay and all other terms and conditions contained in EPI's Letter of Intent No. _____ dated ____ are to be read in conjunction with other aforesaid Contract Documents. The contract shall be duly performed by the Contractor strictly and faithfully in accordance with the terms of this contract.

3.2 The scope of work shall also include all such items which are not specifically mentioned in the Contract Documents but which are reasonably implied for the satisfactory completion of the entire scope of work envisaged under this contract unless otherwise specifically excluded from the scope of work in the Letter of Intent.

3.3 Contractor shall adhere to all requirements stipulated in the Contract documents.

3.4 Time is the essence of the Contract and it shall be strictly adhered to. The progress of work shall conform to agreed works schedule/contract documents and Letter of Intent.

3.5 This agreement constitutes full and complete understanding between the parties and terms of the presents. It shall supersede all prior correspondence to the extent of inconsistency or repugnancy to the terms and conditions contained in

Agreement. Any modification of the Agreement shall be effected only by a written instrument signed by the authorized representative of both the parties.

- 3.6 The total contract price for the entire scope of this contract as detailed in Letter of Intent is Rs. _____ (Rupees _____ only), which shall be governed by the stipulations of the contract documents.

ARTICLE 4.0 – NO WAIVER OF RIGHTS

- 4.1 Neither the inspection by EPI or the Engineer-In-Charge or Owner or any of their officials, employees or agents nor order by EPI or the Engineer-In-Charge for payment of money or any payment for or acceptance of, the whole or any part of the work by EPI or the Engineer-In-Charge nor any extension of time nor any possession taken by the Engineer-In-Charge shall operate as waiver of any provisions of the contract, or of any power herein reserved to EPI, or any right to damage herein provided, nor shall any waiver of any breach in the contract be held to be a waiver of any other or subsequent breach.

ARTICLE 5.0 – GOVERNING LAWS AND JURISDICTION

- 5.1 The Laws applicable to this contract shall be the laws in force in India and as amended from time to time.

Jurisdiction shall be of the Court (s) stated in the 'Memorandum' to the 'Form of Tender' only.

5.2 Notice of Default

Notice of default given by either party to the other party under the Agreement shall be in writing and shall be deemed to have been duly and properly served upon the parties hereto, if delivered against acknowledgment due or by FAX or by registered mail duly addressed to the signatories at the address mentioned herein above.

IN WITNESS WHEREOF, the parties through their duly authorized representatives have executed these presents (execution whereof has been approved by the Competent Authorities of both the parties) on the day, month and year first above mentioned at New Delhi.

For and on behalf of:

(NAME OF CONTRACTOR)

WITNESS:

1.

2.

For and on behalf of:

M/s. Engineering Projects (I) Ltd.

WITNESS:

1.


2.




ENGINEERING PROJECTS (INDIA) LIMITED **(A Govt. of India Enterprise)**

QUALITY CONTROL FORMATS AND CHECKLISTS


NAME OF PROJECT _____

CONTRACT		CHECK LIST FOR CONCRETING							
CONTRACT No. _____		REF DRAWING No. _____							
		LOCATION BLOCK _____ FLOOR _____ AREA _____							
LAYOUT	Alignment Checked	<input type="checkbox"/>	Level of base Checked	<input type="checkbox"/>	Dimensional Check (edges & diagonals)	<input type="checkbox"/>	Starers	<input type="checkbox"/>	Location of cutouts & services
STAGING / SCAFFOLDING	Adequacy & rigidity of Props, stays, bracings, conformity to scheme drgs.	<input type="checkbox"/>		<input type="checkbox"/>					
FORMWORK	Qty. of forms and support Props adequate	<input type="checkbox"/>	Vertical form surface in alignment & plumb	<input type="checkbox"/>	Even Surface Oil sprayed	<input type="checkbox"/>	Gaps btwn shuttering are properly closed	<input type="checkbox"/>	No space for sagging of Form work
REINFORCEMENT	Cutting & bending as per Bar bending schedule (Schedules attached)	<input type="checkbox"/>	Adequate laps welds	<input type="checkbox"/>	Chair / cover blocks Placed as per scheme	<input type="checkbox"/>	Binding wire not Touching shuttering	<input type="checkbox"/>	Fixtures, inserts Cunduits in position
	Dowels & positioning Provided as per drg.	<input type="checkbox"/>	Walkway for Labour provided						
							<div style="border: 1px solid black; padding: 2px;">CLEARANCE from Elect. In-charge</div>		
PRE-CONCRETING	Concreting Arrangements	<input type="checkbox"/>	Approval of Construction joint	<input type="checkbox"/>	Mixer / vibrator Condition & mixing	<input type="checkbox"/>	Top level of Concrete marked	<input type="checkbox"/>	Transporting & Placing arrangement
POST-CONCRETING	Compaction Checked	<input type="checkbox"/>	Removal of Laitance	<input type="checkbox"/>	Post Concreting Level/Dimensions	<input type="checkbox"/>	No. of Cubes Cast		
DESHUTTERING & CLEARING	Curing days..... Water / compound	<input type="checkbox"/>	Surface finish Ok	<input type="checkbox"/>	Concrete Test Results Ok				
							W.O. ITEM	UNIT	QTY.
SIGNATURE									
CONTRACTOR	DATE	SITE ENGR	DATE	SITE INCHARGE	DATE	DATE	CONSULTANT	DATE	


NAME OF PROJECT _____

CONTRACT		CHECK LIST FOR MASONRY WORK					
CONTRACT No.		REF DRAWING No. _____					
		LOCATION BLOCK _____ FLOOR _____ AREA _____					
LAYOUT	Alignment & wall Thickness Checked	<input type="checkbox"/>	Brick on edge (top course)				
SCAFFOLDING	Adequacy of props, Stays, platform	<input type="checkbox"/>	Rigidity of base	<input type="checkbox"/>	Movement Space	<input type="checkbox"/>	Approach to height
PRE-LAYING	Working arrangements & service provisions checked	<input type="checkbox"/>	Bricks as per specification	<input type="checkbox"/>	Mortar grade & mix As specified	<input type="checkbox"/>	Bricks moistened
LAYING	Joint thickness & course Ht. As specified	<input type="checkbox"/>	Joint alignment Checked	<input type="checkbox"/>	Vertical joints Properly mortar filled from top		
	Raking of joints Done (if applicable)	<input type="checkbox"/>	Bearing plaster for Concrete				
CURING AND CLEARING	Proper curing of const. Joint	<input type="checkbox"/>	Scaffolding removed (if required)				
					W.O. ITEM	UNIT	QTY.
SIGNATURE CONTRACTOR	DATE	SITE ENGR	DATE	SITE INCHARGE	DATE	CONSULTANT	DATE


NAME OF PROJECT _____

CONTRACT		CHECK LIST FOR PLASTERING WORK					
CONTRACT No.		REF DRAWING No. _____ LOCATION BLOCK _____ FLOOR _____ AREA _____					
SCAFFOLDING	Platform	<input type="checkbox"/> Stability <input type="checkbox"/>	<input type="checkbox"/> Movement space <input type="checkbox"/>	<input type="checkbox"/> Approach to Height <input type="checkbox"/>			
SERVICE	All chasing work Complete	<input type="checkbox"/> Fixing in position <input type="checkbox"/> Using clamps etc.	<input type="checkbox"/> Patching Work complete <input type="checkbox"/>	<input type="checkbox"/> All door / window frames <input type="checkbox"/> Fixed in position	<input type="checkbox"/> Skirting to floors marked <input type="checkbox"/>		
		<div style="border: 1px solid black; padding: 2px; text-align: center;">CLEARANCE from Elect. In-charge</div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div>					
SURFACE PREPARATION	Clearing & raking of surface	<input type="checkbox"/> Roughening <input type="checkbox"/> Hacking done	<input type="checkbox"/> Fixing metal / lathe <input type="checkbox"/> Chicken mesh	<input type="checkbox"/> Mortar level <input type="checkbox"/> Guides made	<input type="checkbox"/> Surface moistened <input type="checkbox"/> Cement slurry		
PIASTERING	Mix & W/P compound Checked as per specification	<input type="checkbox"/> Coating / thickness <input type="checkbox"/> As specified	<input type="checkbox"/> Groove at Joints <input type="checkbox"/> Provided	<input type="checkbox"/> Corners & edges sharp <input type="checkbox"/> & at right Angles lines & levels maintained	<input type="checkbox"/> Surface leveled with <input type="checkbox"/> At straight edge		
FINISHING	Texture	<input type="checkbox"/> Curing <input type="checkbox"/> Days.....	<input type="checkbox"/> Site cleared <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>		
				W.O. ITEM	UNIT	QTY.	
SIGNATURE CONTRACTOR	DATE	SITE ENGR	DATE	SITE INCHARGE	DATE	CONSULTANT	DATE


NAME OF PROJECT _____

CONTRACT		CHECK LIST FOR LAYING OF EXTERNAL SEWER						
CONTRACT No.		REF DRAWING No. _____						
		LOCATION BLOCK _____ FLOOR _____ AREA _____						
EXCAVATION	Layout	<input type="checkbox"/> <input type="checkbox"/>	Slope / cutting as per Specifications	<input type="checkbox"/> <input type="checkbox"/>	Level			
LAYING/RCC	Bed concrete as per Specifications	<input type="checkbox"/> <input type="checkbox"/>	RCC pipes as per Requirement	<input type="checkbox"/> <input type="checkbox"/>	Jointing of Pipes			
	Boxing	<input type="checkbox"/> <input type="checkbox"/>	Strata bore Dewatering (wherever required)					
Manholes	Bricks as per specifications	<input type="checkbox"/> <input type="checkbox"/>	Mortar as per specifications	<input type="checkbox"/> <input type="checkbox"/>	Plastering			
	End of pipes plugged							
Back fillings	In layers							
						W.O. ITEM	UNIT	QTY.
SIGNATURE CONTRACTOR	DATE	SITE ENGR	DATE	SITE INCHARGE	DATE	CONSULTANT	DATE	


NAME OF PROJECT _____

CONTRACT		CHECK LIST FOR GRIT WASH					
CONTRACT No.		REF DRAWING No. _____					
		LOCATION BLOCK _____ FLOOR _____ AREA _____					
SCAFFLADING	Platform	<input type="checkbox"/>	Stability	<input type="checkbox"/>	Movement space	<input type="checkbox"/>	Approach to Height
SERVICE PROVISIONS		<input type="checkbox"/>	All chasing work Complete	<input type="checkbox"/>	All door / window frames Fixed in position		
SURFACE PREPARATION	Roughening / hacking of surface done	<input type="checkbox"/>	Fixing metal / lathe	<input type="checkbox"/>	Mortar level	<input type="checkbox"/>	Surface moistened/
		<input type="checkbox"/>	Chicken mesh	<input type="checkbox"/>	Guides made	<input type="checkbox"/>	Cement slurry
BASE PLASTER	Mix & W/P compound Checked against specs	<input type="checkbox"/>	Coating / thickness	<input type="checkbox"/>	Corners & edges sharp & at right Angles lines & levels maintained		
		<input type="checkbox"/>	As specified	<input type="checkbox"/>			
TOP LAYER	Fixing of beading for grooves as per drawing	<input type="checkbox"/>	Lines and levels of grooves maintained	<input type="checkbox"/>	Mix as per specificaiton		
		<input type="checkbox"/>		<input type="checkbox"/>			
	Washing of top layer	<input type="checkbox"/>	Washing with Acid (light)	<input type="checkbox"/>	Curing day	<input type="checkbox"/>	Texture of final surface
		<input type="checkbox"/>		<input type="checkbox"/>			
						W.O. ITEM	UNIT
						QTY.	
SIGNATURE CONTRACTOR	DATE	SITE ENGR	DATE	SITE INCHARGE	DATE	CONSULTANT	DATE


NAME OF PROJECT _____

CONTRACT		CHECK LIST FOR WASTE/SOIL/VENT PIPES ETC.					
CONTRACT No.		REF DRAWING No. _____					
		LOCATION BLOCK _____ FLOOR _____ AREA _____					
MATERIAL	Make as specified	<input type="checkbox"/> Thickness / class as Specified	<input type="checkbox"/> Length & dia as specified	<input type="checkbox"/> No cracks or holes visible			
LAYOUT	Space distribution & Alignment as specf.	<input type="checkbox"/> Plumb of vertfical line checked					
FIXING PIPE & FITTINGS	Qty available for pipes fittings & jointing material as per size & fixing	<input type="checkbox"/> Cutting & jointing as Specified	<input type="checkbox"/> Fixing of fittings & specials as specified	<input type="checkbox"/> Connection with corr. Internal networks	<input type="checkbox"/> Temporary Plugging		
SMOKE TEST	Open ends plugged	<input type="checkbox"/> Injection of smoke Pressure	<input type="checkbox"/> No leakage of Smoke	<input type="checkbox"/> Section is Ok			
				W.O. ITEM	UNIT	QTY.	
SIGNATURE CONTRACTOR	DATE	SITE ENGR	DATE	SITE INCHARGE	DATE	CONSULTANT	DATE


NAME OF PROJECT _____

CONTRACT		CHECK LIST FOR MOSAIC FLOORING							
CONTRACT No.		REF DRAWING No. _____							
		LOCATION BLOCK _____ FLOOR _____ AREA _____							
LAYOUT	Sub base Prepared	<input type="checkbox"/> Provision of <input type="checkbox"/> Services checked	<input type="checkbox"/> Panelling (max size) <input type="checkbox"/> Separator strips	<input type="checkbox"/> Level of <input type="checkbox"/> Sub base checked					
	Slope Provision checked								
BASE LAYER	Mix As specified	<input type="checkbox"/> Water / cement <input type="checkbox"/> Slurry applied	<input type="checkbox"/> Cement concrete <input type="checkbox"/> Thickness checked	<input type="checkbox"/> Ramming / leveling <input type="checkbox"/> Compaction done					
	Evenness Checked	<input type="checkbox"/> Joints treatment <input type="checkbox"/> If any, provided							
TOP LAYER	Mix As specified	<input type="checkbox"/> Proper leveling <input type="checkbox"/> Done	<input type="checkbox"/> Trowelling finish <input type="checkbox"/> proper	<input type="checkbox"/> Curing done					
FINISHING	Grinding	<input type="checkbox"/> Final grinding <input type="checkbox"/>	<input type="checkbox"/> Repair applied at <input type="checkbox"/> grinding stages	<input type="checkbox"/> Polishing <input type="checkbox"/>					
		<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 30%;">W.O. ITEM</td> <td style="width: 30%;">UNIT</td> <td style="width: 40%;">QTY.</td> </tr> </table>					W.O. ITEM	UNIT	QTY.
W.O. ITEM	UNIT	QTY.							
SIGNATURE CONTRACTOR	DATE	SITE ENGR	DATE	SITE INCHARGE	DATE	CONSULTANT DATE			

NAME OF PROJECT _____

CONTRACT CONTRACT No.		CHECK LIST FOR GLAZED TILE FLOORING REF DRAWING No. _____ LOCATION BLOCK _____ FLOOR _____ AREA _____							
LAYOUT	Service provisions Sanitary, electrical	<input type="checkbox"/>	Fixing pattern	<input type="checkbox"/>	Level of base & dad Height marked	<input type="checkbox"/>	Finish level Guide	<input type="checkbox"/>	Door & window frames in position
BASE	Mix	<input type="checkbox"/>	Thickness Layers	<input type="checkbox"/>	Watering / Cement slurry	<input type="checkbox"/>	Evenness	<input type="checkbox"/>	Verticality, corners At right angle
LAYING	Moistening of tiles	<input type="checkbox"/>	Plan position of cut pieces at corner	<input type="checkbox"/>	Cut to size Smooth edge	<input type="checkbox"/>	Chamfering of edges & edge matching proper	<input type="checkbox"/>	Raking / jointing
	Cement slurry adhesive	<input type="checkbox"/>	Level & plumb checked	<input type="checkbox"/>	No hollow sound on tapping				
FINISHING	Grouting of joints	<input type="checkbox"/>	Curing of joints						
				W.O. ITEM		UNIT		QTY.	
SIGNATURE CONTRACTOR	DATE	SITE ENGR	DATE	SITE INCHARGE	DATE	CONSULTANT	DATE		

NAME OF PROJECT _____

CONTRACT		CHECK LIST FOR WATER BOUND MACADAM				
CONTRACT No.		LOCATION _____				
MATERIAL AGGREGATE	Gradation as specified	<input type="checkbox"/> Crushing strength as specified <input type="checkbox"/> As specified	<input type="checkbox"/> No of layers <input type="checkbox"/> Thickness of layers starting from subgrade			
SCREENINGS	Gradation as specified	<input type="checkbox"/> Crushing strength <input type="checkbox"/> As specified	<input type="checkbox"/> waiting & rolling as specified <input type="checkbox"/>			
MOORUM	Gradation as specified	<input type="checkbox"/> Silt content as specified <input type="checkbox"/>	<input type="checkbox"/> Fill material <input type="checkbox"/>			
LAYOUT	Alignment of central line as per drawings and reference points	<input type="checkbox"/> Marking of Carriage <input type="checkbox"/> way edges as per drawings	<input type="checkbox"/> Cross section levels of predecant <input type="checkbox"/> Layer recorded			
WATER BOUND MACADAM	Templates placed of specified thickness	<input type="checkbox"/> Placing, leveling of stone <input type="checkbox"/> aggregate	<input type="checkbox"/> Stone Screeing spread as specified <input type="checkbox"/>			
	Dry rolling as specified Top cross section lands layer recorded	<input type="checkbox"/> Application of moorum as specified <input type="checkbox"/>	<input type="checkbox"/> Wet rolling / compaction as specified <input type="checkbox"/>			
				W.O. ITEM	UNIT	QTY.
SIGNATURE CONTRACTOR	DATE	SITE ENGR	DATE	SITE INCHARGE	DATE	CONSULTANT DATE

राष्ट्रीय आदिवासी छात्र शिक्षा समिति
(जनजातीय कार्य मंत्रालय के अंतर्गत
एक स्वायत्त संस्थान, भारत सरकार)
भू-तल, गेट नंबर-3ए, जीवन तारा बिल्डिंग,
संसद मार्ग, नई दिल्ली-110001
दूर. 011-23340280



National Education Society for Tribal Students
(An Autonomous Organization under
Ministry of Tribal Affairs, Govt. of India)
Ground Floor, Gate No.3 A, Jeevan Tara Building,
Parliament Street, New Delhi-110001
Telephone No. 011-23340280
वेबसाइट/Website: www.tribal.nic.in
Email: nests-tribal@tribal.gov.in

File: No: NESTS/Civil/EMRS Order/140/202122(Pt.)

Date: 22.09.2023

To,

CMD/MD/CEO/Chief Engineers of CPWD respective regions entrusted with EMRS work.
B & R/EPIL/HSCL/NPCC/MTDC/MANIDCO/TCIL/WAPCOS.

Sub: Partial modifications in guidelines in r/o Furniture(F) and Kitchen Equipment's/Machinery Tools & Plants (KE/MTP) of EMRS-reg.

Dear Sir,

In partial modification of NESTS Order dated 26.05.2023 regarding Furniture (F) and Kitchen Equipment's/Machinery Tools & Plants (KE/MTP), with a view to expedite the completion of EMRS, it has been decided that Construction Agencies (CA) i.e PSUs/CPWD/State Societies may include the budget provision for procurement of Furniture (F) & KE/MTP in their DPR of Single Phase/Phase-II or may submit the budget demand to procure above items as per GFR guidelines.

2. Item wise requirement with broad indicative specifications along with sample photographs are enclosed at Annexure 'A'. Detailed specifications and quality aspects of required items shall be finalized and approved by the concerned PSUs/CPWD/State Societies within the budget i.e., Rs 1.25 crore for furniture (F) and Rs 25 lakhs for KE/MTP items per EMRS.

3. However, PSUs/CPWD/State Societies shall ensure that above items are procured from the reputed brands/manufacturers who have sufficient experience and supplied furniture items in Govt. institutions, certifying the conditions that they shall have registered service centre in the respective State. Further the supplied furniture shall carry On-site service warranty of minimum 03 years from the date of installation. Further PSUs/CPWD/State Societies shall check samples of major items for conformance of specifications and got approved before going for bulk order.

4. In respect of DPR of Single Phase/Phase-II, where the provision of furniture (F) and KE/MTP items are not included. PSUs/CPWD/State Societies shall submit the budget demand for procurement of above items to NESTS for approval A/A & E/S.

This issues with the approval of competent authority.

Encl.: Annexure 'A'.

Yours Sincerely,

(R.P Joshi)








Executive Engineer

Copy to:

1. PS to Commissioner NESTS.
2. PS to Addl Commissioner NESTS.
3. DC Finance NESTS.
4. Guard Files.









NESTS/Civil/EMRSOrder/140/2021-22(Pt.)

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Abstract of Furniture			
Item No	Specification	Items	Sample Image
1	<p>Knock down class room dual desk is specially designed for rugged use. The desk are made of pressed formed MS CRCA section & CRCA tube fitted with pre laminated Particle board top, seat & back with Machine pressed PVC egde banding 2 mm thick glued with industrial adhesive and diffused with board monolithically . Hanger for water bottle and bag. Space for keeping pen, pencil and scale. The overall appearance of the product shall be as per indicative potographs attached:</p> <p>DESK TOP –18mm Both Side laminate(BSL) PreLam Partical Board 400 mm wide</p> <p>BENCH TOP – 18mm BSL PreLam Partical Board 330 mm wide</p> <p>FRONT SHELF – 18mm BSL PreLam Partical Board 300(Wide)mm.</p> <p>BENCH BACK – 18mm BSL PreLam Partical Board 250(W)mm.</p> <p>Modesty Panel – 18mm BSL PreLam Partical Board 300 (W)mm.</p> <p>Supporting Understrucure- Left Hand and Right Hand FRAME consisting of vertical, horizontal and Cross Member made up of 25 x 1.2 mm outer dia ERW tube confirming to IS Grade 4923 and shall be finised with epoxy polyster powder coated finish with DFT 50-60 Micron confirming IS 13871:1993. The support system of Bench and Shelf shall also made up of made up of 25 x 1.2 mm outer dia ERW tube confirming to IS Grade 4923 and shall be finised with epoxy polyster powder coated DFT 50-60 Micron confirming IS 13871:1993.. Resting support plate made of Table top , provided on the top of vertical members shal be made up of 3mm Thk CRCA sheet Conforming IS code 513. Legs shall be fitted with PVC Leveler. Construction is fully welded with MIG welding and assembled using M6 trilobularscrews(As per DIN 7500)with Zn blue plating. Compact top, seat and back panels are assembled using M6 Countersunk Trilobular screws(as per DIN 7500) with Zn Black Plating (As per IS 1573:1986).</p>	Duel Desk	
1(a)	Dual Desk :Overall Size 1100 (W) x 930-950(D) x 650 (H) - Desk Depth 390-400 mm. Seat Height 375 mm for Classes 6-8)		
1(b)	Dual Desk-(Overall Size 1100 W x 940-975(D)x 750 H - Desk Depth 400 mm. Seat Height 450 mm for Classes 9-12)		
2	<p>Supply and installation of Office table as per approved design and as directred by Engineer-in-charge</p> <p>Work Top - Work top shall be made 25mm thick Pre-lam MDF board confirming to IS 12406:2003 with post forming on front , back and machine pressed PVC egde banding 2 mm thick glued with industrial adhesive and diffused with board monolithically on other two sides</p> <p>Understructure- C-type leg shall be made of 50X50X1.6mm thick vertical member and 40x40x1.6mm thick M.S. pipe of Horizontal/Cross member confirming IS-Grade 4923 and shall be finished with epoxy polyster powder coated DFT 50-60 Micron. Legs shall be fitted to the ground with M8 screw leveler with the height adjustment up to 12mm to 15mm.Cross members shall be mounted by end brackets made of 3mm thick CRCA sheet confirming IS 513: 2008 and finished with epoxy polyster powder coated DFT 50-60 Micron confirming IS 13871:1993.</p> <p>Wire management - Electrical wires shall be carried from horizintal/ vertical duct made of 0.7mm CRCA sheet confirming to IS 513:2008. Switch Plate or Cromet depending upon requirement shall also be provided for electrical/LAN connection on table top.</p> <p>Modesty Panel -Modesty Panel of height 450 mm shall be made of 1.5mm thick CRCA sheet confirming to IS 513: 2008 and shall be finised with epoxy polyster powder coated DFT 50-60 Micron.</p> <p>Storage body- Storage top shall also be made of 25mm thick Pre-lam MDF board confirming to IS 12406:2003 with post forming on two sides and machine pressed PVC egde banding 2 mm thick glued with industrial adhesive and diffused with board monolithically on other two sides. The body of storage units shall be made of 0.8mm thick CRCA Sheet and skirting shall be of 1.2mm thick CRCA sheet confirming to IS 513: 2008 finished with epoxy powder coated of DFT 50-60 Micronconfirming IS 13871:1993. Internal Shelves shall be also made up of 0.8mm CRCA sheet confirming to IS 513: 2008 and shall be mounted with the Metal shelf support pin made of 2mm thick CRCA sheet with Nickel or Chrome plating. M10 screw leveler is given with height adjustment up to 12mm to 15mm.</p>	Principal & Vice Principal Table	
2a	Table of Size 1800 W x 750 D x 750 H with Side Storage of Size 900W x 450W X 750H and Back Storage 1800 W x 450 D x 750H	Principal Table	
2b	Table of Size 1650 W x 750 D x 750 H with Side Storage of Size 900W x 450W X 750H and Back Storage 1800 W x 450 D x 750H	Vice Principal Table	
2c	Office table with overall Size of desk 1350 x 750 x 750 mm & Side Storage Unit of size 900 x 450 x 750 mm	Office Table	
3	Office Table made of Pre-laminated table top of size 1199 X 590 X 735 mm with one drawer unit made of 0.5mm thick CRCA sheet. The table top shall be supported over legs consists of MS ERW round tube of 25.4 x 1.2mm and Cross Horizontal Members including Leg rest of 25.4 x 1.2 mm ERW tube. All steel components be shall be finised with epoxy polyster powder coated DFT 50-60 Micron.	Teacher's table	
4	<p>Supply and installation of 12 Seater Meeting Table of of overall size 3600 x 1350 (Avergae) x 750 mm (Knock down construction). Table Top and Gable End shall be made of 25mm thick Pre-Laminate Partical Board with 2mm thick Machine pressed PVC edge banding glued with industrial adhesive and monolithically diffused.</p> <p>Supporting Understrucure consists of 2 Metal C Legs on either ends of table support frame made of 50 x 50 x 1.6 mm MS ERW tube and One number Wire Carrier leg at middle of 50X50X1.6 mm. 4 numbers Horizontal connector of 40mm X 40mm X 1.6mm thick MS Pipe between supporting vertical legs. All The MS Pipes and Sheet shall be finished with epoxy powdercoated of DFT 50-60 Micron. C typed metal legs shall be kept 150 mm inside from from end of table. WIRE MANAGEMENT - The Vertical (snake) & Horizontal(cable tray) wire carriers are placed below worktop, made up of CRCA with epoxy powder Coating & Fixed to the understructure with specially designed brackets. Provision of placing switch plates/Cromet in the cable tray .</p>	Meeting Table	







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	Supply and Installation of Library Table in sizes of 2400 L x 900 W x 750 H mm consisting of following specification:- Work Top - Work top shall be made 25mm thick Prelam (One Side laminated) particle board conforming to IS 12823: 1990 post formed edge moulding on two sides and 2 mm thick Machine pressed PVC edge banding glued with industrial adhesive and monolithically diffused with board on other two sides. Understructure Supporting frame consists of two Metal C Legs on either ends of table made up of 50X50X1.6 mm and are joined by two numbers Horizontal connector made of 40mm X 40mm X 1.6mm thick MS Pipe between supporting vertical legs. All Metal Pipes shall confirm to IS 4923 and steel plates are made up of CRCA sectionm pconfirming to IS 513 and shall be shall be finished with epoxy polyster powder coated DFT 50-60 Micron. C typed metal legs shall be kept 150 mm inside from from end of table. Legs shall be fitted to the ground with M8 screw leveler with the height adjustment up to 12mm to 15mm(Payment Shall be per running metre length)	Library Table	
6	Supply and Istallation of Computer Work Station of unit Size 750 mm X 600 mm X 750 mm. Work Top- Work top shall be made 25mm thick Prelam particle board conforming to IS 12823: 1990 with post formed edge moulding on one side and 2 mm thick Machine pressed PVC edge banding glued with industrial adhesive and monolithically diffused with board on other three sides. Understructure supporting frame consist of Metal C Legs type made up of 50 x 50 x 1.6 mm and Wire Carrier leg of 50X50X1.6 mm in placed alternately and are connected with horizontal cross connectors of 40mm X 40mm X 1.6mm thick MS Pipe between supporting vertical legs. The MS Pipes shall be finished with epoxy powdercoated with DFT of 50-60 Micron confirming to IS 13871:1993. Legs shall be fitted to the ground with M8 screw leveler with the height adjustment up to 12mm to 15mm. Wire management-The Vertical /Electrical duct & Horizontal Cable tray (wire carriers) are made of CRCA section & fixed to the understructure below worktop with specially designed brackets. Provision for fixing Switch plates are provided in the cable tray for easy access through wire mangae or PVC grommet. Screens / privacy panel: - Screen height will be 300 above work-top made of prelam particle board/White Board alternatively as approved by Engineer-in-Charge.	Computer Work Station	
7	Supply and Istallation of Library Open book Shelf (Single Side)of Sizes 1800 mm x 900 mm x 316 mm body made up of of 0.8mm thick CRCA Sheet and skirting of 1.2mm thick CRCA sheet conforming to IS 513: 2008 with epoxy powder coated finish (DFT minimum 50-60 micron). Shelves shall also be made up of 0.8mm CRCA sheet conforming to IS 513: 2008 and fixed with CRCA sheet brackets of approved design . Number of adjustable shelf shall be five with six loading levels . Load bearing capacity of the shelf shall be 30Kgs UDL. The construction shall be aesthetically appealing completely welded. M10 screw leveler is given with height adjustment up to 12mm to 15mm	One Side book Shelf	
8	Supply & Placing of Glassdoor Storage of Size 916mm(W)x486mm(D)x1980mm(H). It should have shelf thickness of 0.7 mm, Back thickness of 0.8mm, Door thickness of 0.8mm (high yield strength) and all other components shall have a thickness of 0.9mm. These components shall be made of CRCA sheet 'D' grade high yield strength as per IS:513. The glass door storwel shall have a brass handle and a 2 way locking mechanism with shooting bolt. It should have a height wise adjustable shelf mounting which shall have a Uniformly Distributed Load Capacity of max 40 Kg. It should also have a M10 Screw type Leveller with Hex plastic base.All metal components would be epoxy polyster powder coated DFT 50-60 Micron confirning to IS 13871:1993	Steel Glass Door Almira	
9	Supply & Placing of Metal Almira of Size 916mm(W)x486mm(D)x1980mm(H). It should have the shelf thickness of 0.7 mm, Back thickness of 0.8mm, Door thickness of 0.8mm (high yield strength) and all other components shall have a thickness of 0.9mm. These components shall be made of CRCA sheet 'D' grade high yield strength as per IS:513. The Storwel Plain should have a Mazak handle and Three way locking mechanism with Shooting Bolts. It should have a height wise adjustable shelf mounting which shall have a Uniformly Distributed Load Capacity of max 40 Kg. It shall have 4 no.s full shelves. A4 size box file(85 W x 285 D x 345 H mm) can be stored vertically on three shelves and the clear space above fourth shelf is 240mm. It should also have a M10 Screw type Leveller with Hex plastic base. All metal components would be powder coated with epoxy powder coating of 50-60 micron DFT Confirming IS 13871:1993	Steel Almira	
10	Supply and Istallation of One 2- Seater Sofa (1550 X 785 X 675 mm) one 3-Seater Sofa of overall size (1950 X 785 X 675 mm),understructure is made up of Natural Hard wood battens and 12mm THK COMMERCIAL PLYWOOD. High density foam is used for seat and back , The seat is made up of PU foam with density 32+/-2 Kg/m3 having an additional top layer of PU foam with density 28+/-2 Kg/m3, upholstered with leatherette. The back is made up of 28+/-2 Kg/m3 with additional top layer of PU foam with density 23+/-2 Kg/m3, upholstered with leatherette. LEATHERITE -ABRASION RESISTANCE in excess of 80,000 cycles, Legs are made up of 600 to 650 GSM PVC composition Legs are made of SS 304	Sofa Set 2 Seater + 3 Seater	
11	Supply and Installation of two 2- Seater Sofa (1550 X 785 X 675 mm) ,understructure is made up of Natural Hard wood battens and 12mm THK COMMERCIAL PLYWOOD. High density foam is used for seat and back , The seat is made up of PU foam with density 32+/-2 Kg/m3 having an additional top layer of PU foam with density 28+/-2 Kg/m3, upholstered with leatherette. The back is made up of 28+/-2 Kg/m3 with additional top layer of PU foam with density 23+/-2 Kg/m3, upholstered with eatherette. LEATHERITE -ABRASION RESISTANCE in excess of 80,000 cycles, 600 to 650 GSM PVC composition Legs are made of SS 304	Sofa Set 2 Seater + 2 Seater	
12	Supply and installation of Steel bed of overall size 1775-1825(L)x870(W)x650/450mm(H) consisting of following specification:- HEADBOARD: Head Board consists of MS tube of 25 x 50 x 1.6 mm thick vertical legs connected with 2 number horizontal members of MS ERW tube 25x50x1.6mm thick and one number MS ERW tube of 25 x 25 x 1.6 mm at middle conforming to IS-Grade 4923. Construction is partially welded with MIG welding conforming to IS standard IS 816:1969 and is also tested as per the IS grade IS 822:1970. Legs shall be fitted to the ground with M8 screw leveler with the height adjustment up to 12mm to 15mm if required. Head Board and Tail board are connected to middle frame with 2 mm thick CRCA bracket conforming to IS 513: 2008.Connecting bracket is welded on vertical pipe. End to end dimensions for the Headboard is 870(W) x 650mm (H). Whole Assembly is finished with epoxy powder coated of a minium thickness of DFT 50-60 Micron confirming to IS 13871:1993. TAILBOARD-Tail Board consists of vertical legs of MS ERW tube of 25x50x1.6mm thick connected with one number horizontal MS pipe 25x50x1.6mm thick Conforming IS-Grade 4923. Construction is partially welded with MIG welding conforming to IS standard IS 816:1969 and welding is also tested as per the IS grade IS 822:1970. Legs shall be fitted to the ground with M8 screw leveler with the height adjustment up to 12mm to 15mm if required .To connect Tailboard with middle frame 2mm thick CRCA sheet bracket is used conforming IS 513: 2008 . Connecting bracket is welded on vertical pipe. End to end dimensions for the Tailboard is 870(W)x450mm(H). Whole Assembly is finished with epoxy powder coated of a minium thickness of DFT 50-60 Micron confirming to IS 13871:1993. Bed Staggering- Head board and Tail boad are joined together by bed stage made up of 12 mm Merine grade ply conforming to IS 710 , supported over steel framework consisting of two outer MS ERW Pipe 25x50x1.2mm thick IS-Grade 4923 and four numbers of 25 x25 x 1.6 mm MS ERW tubes as a cross bracing welded to each other by MIG welding. FINAL ASSEMBLY: Headboard, Tailboard, and middle frame shall be assebled and connected by 4 Nos of connecting Brackets & M8x16 Allen Bolt. The bed stage shall be 10-12 mm below side frame to provide proper fixity to mattress. End to end dimensions for the bed is 1775-1825 (L) x 870(W)x 650/450mm(H). Finish- All metal components are given anti-rust surface treatment and are finised with epoxy polyster powder coated DFT 50-60 Micron confirming to IS 13871:1993.	Metal Bed	







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	<p>Metal Table with Integrated Storage 1750(L) x 600(W) x 750(H) for two students</p> <p>Work Top Shall be made up of 25mm thick Prelam (OSL) particle board conforming to IS 12823: 1990 with post formed edge moulding on one side and 2 mm thick Machine pressed PVC edge banding glued with industrial adhesive and monolithically diffused with board on other three sides.</p> <p>Supporting Structure of table top consists of 4 vertical Legs of ERW tube 40 x40 x 1.6 mm and one storage unit at middle. The vertical legs are connected with 2 cross horizontal members of size ERW Tube of 40 x 40 x 1.6 mm provided at top a. The table shall have provisions of foot rest made up of 25 x25 x1.2 mm ERW pipe fitted in between two vertical legs and also support the storage unit & acts as bracing member. All ERW pipes are pipe shall to conform to IS grade IS 4923 and shall be finished with epoxy polyester powder coated DFT 50-60 Micron Confirming IS 13871:1993.</p> <p>Drawer Unit: SPECIFICATIONS :-</p> <p>Table shall have 2 numbers of Metal Storage consisting of Shutter of size consisting of 350 (W) x 550 (D) x 280 (H) mm Pad Lock provision . All metal component including shutter and Shelf shall be made of 0.8mm thick CRCA confirm to IS grade IS 513 and shall be powder coated with epoxy powder coating of 50 micron DFT Confirming IS 13871:1993.</p>	<p>Metal Table with Integrated Storage 1750(L) x 600(W) x 750(H).</p>	
14	<p>SS Dinning Table consists of Dinning Top is made up of and 1 mm thickness Stainless steel sheet of SS 304 Grade with overall dimension of 2400(L) X 760(D) X 750(H). The table top is reinforced with a 20 mm HDHMR Board. Dinning top sheet shall be extended to the sides for a depth of 24 mm in all directions including , edge rounding, grining and finishing ,etc all complete . The Table top shall finish in such a manner to avoid any sharp edges.</p> <p>Stool Seats are made of 300 mm dia SS 202 Grade formed Plates of 1 mm thickness welded over 3 mm thick MS Plate.</p> <p>Supporting understructure of table consists of 4 number C legged frame made up of 40 x40 x1.6 mm ERW tube and are connected to 6 numbers horizontal members of MS ERW tube 40 x 40 x 1.6 mm.</p> <p>The supporting vertical member of each stool seat consists of MS ERW tube 40 x 40 x 1.6 mm and is connected to C legged frame of table top. All Metal components of entire assembly confirm to IS 4923. Both the horizontal and vertical pipes are welded together by MIG welding conforming to IS standard IS 816:1969 and is tested for welding conforming to IS 822:1970. All CRCA Components would be shall be finished with epoxy polyester powder coated DFT 50-60 Micron confirming IS 13871:1993.</p> <p>Understructure height of table will be 725mm from the ground, and the stool height will be 500mm from the ground.</p>	<p>8 Seater SS Top Fixed Canteen Table 2400 x 750</p>	
15	<p>SS Dinning Table consists of Dinning Top is made up of and 1 mm thickness Stainless steel sheet of SS 304 Grade with overall dimension of 1800(L) X 760(D) X 750(H). The table top is reinforced with a 20 mm HDHMR Board. Dinning top sheet shall be extended to the sides for a depth of 24 mm in all directions including , edge rounding, grining and finishing ,etc all complete . The Table top shall finish in such a manner to avoid any sharp edges.</p> <p>Stool Seats are made of 300 mm dia SS 202 Grade formed Plates of 1 mm thickness welded over 3 mm thick MS Plate.</p> <p>Supporting understructure of table consists of 3 number C legged frame made up of 40 x40 x1.6 mm ERW tube and are connected to 4 numbers horizontal members of MS ERW tube 40 x 40 x 1.6 mm.</p> <p>The supporting vertical member of each stool seat consists of MS ERW tube 40 x 40 x 1.6 mm and is connected to C legged frame of table top. All Metal components of entire assembly confirm to IS 4923. Both the horizontal and vertical pipes are welded together by MIG welding conforming to IS standard IS 816:1969 and is tested for welding conforming to IS 822:1970. All CRCA Components shall be finished with epoxy polyester powder coated DFT 50-60 Micron confirming IS 13871:1993.</p> <p>Understructure height of table will be 725mm from the ground, and the stool height will be 500mm from the ground. .</p>	<p>6 Seater SS Top Fixed Canteen Table 1800 x 750</p>	
16	<p>Supply and installation of Lab Stool Seat made up of 300 mm dia SS 202 Grade formed Plates of 1 mm thickness welded over 3 mm thick MS Plate. The Stool seat is supported by four legs 19x19x1.2mm SQUARE Pipe. Stool shall be provided with foot rest made of 19 x 19 x 1.2 mm thick MS Tube at a height of 100 mm from ground. Height of stool is st from the ground shall be 540. Legs are provided with PU/PVC leveller at the bottom.</p> <p>All MS CRCA Components are confirming to IS 4923 and finished with epoxy powder coated finish (DFT Minimum 45 micron) Confirming IS 13871:1993.</p>	<p>Lab Stool</p>	
17	<p>Supplying & placing in position Executive Chair as per indicative photograph and specification:</p> <p>(i) SEAT/BACK ASSEMBLY: The seat and back should be made up of 1.2 ±0.1cm. thick hot-pressed plywood and upholstered with .fabric upholstery covers and moulded Polyurethane foam. The back foam should be designed with contoured lumbar support for extra comfort. The seat has extra thick foam on front edge to give comfort to popliteal area.</p> <p>BACK SIZE 47.5 cm. (W) x 69.5 cm (H)</p> <p>SEAT SIZE 47.0 cm. (W) x 48.0 cm. (D)</p> <p>(ii) HIGH RESILIENCE (HR) POLYURETHANE FOAM: The HR polyurethane foam should be moulded with density = 45±2 kg/m3 and hardness load 16 ± 2 kgf for 25% compression.</p> <p>(iii) ARMRESTS :The one-piece armrests should be injection moulded from black Co-polymer Polypropylene.</p> <p>(iv) CENTER TILT SYNCHRO mechanism: The mechanism should be designed with the following features:</p> <ul style="list-style-type: none"> • 360° revolving type. • Upright-position locking • Tilt tension adjustment • Seat/back tilting ratio of 1:3. <p>(v).PNEUMATIC HEIGHT ADJUSTMENT: The pneumatic height adjustment has an adjustment stroke of 12.0 ±0.3cm.</p> <p>(vi).TELESCOPIC BELLOW ASSEMBLYThe bellow should be 3 piece telescopic type and injection moulded in black Polypropylene.</p> <p>(vii).PEDESTAL ASSEMBLY:The pedestal should be injection moulded in black 33% glass-filled Nylon-66 and fitted with 5 nos. twin wheel castors. The pedestal should be 66.3 ±0.5cm. pitch-center dia. (76.3 ±1.0cm with castors).</p> <p>(viii).TWIN WHEEL CASTORS:The twin wheel castors should be injection moulded in Black Nylon.</p>	<p>High Back Chair</p>	
18	<p>Supply & Installation of Medium Back Chair as per indicative photograph and specification:</p> <p>(i) SEAT/BACK ASSEMBLY: The seat and back should be made up of 1.2 ±0.1cm. thick hot-pressed plywood and upholstered with .fabric upholstery covers and moulded Polyurethane foam. The back foam should be designed with contoured lumbar support for extra comfort. The seat has extra thick foam on front edge to give comfort to popliteal area</p> <p>BACK SIZE 47.5 cm. (W) x58.0 cm (H)</p> <p>SEAT SIZE 47.0 cm. (W) x 48.0 cm. (D)</p> <p>(ii) HIGH RESILIENCE (HR) POLYURETHANE FOAM: The HR polyurethane foam should be moulded with density = 45±2 kg/m3 and hardness load 16 ± 2 kgf for 25% compression.</p> <p>(iii)ARMREST- The one-piece armrests should be injection moulded from black Co-polymer Polypropylene.</p> <p>(iv) CENTER TILT SYNCHRO mechanism: The mechanism should be designed with the following features:</p> <ul style="list-style-type: none"> • 360° revolving type. • Upright-position locking • Tilt tension adjustment • Seat/back tilting ratio of 1:3. <p>(v)PNEUMATIC HEIGHT ADJUSTMENT: The pneumatic height adjustment has an adjustment stroke of 12.0 ±0.3cm.</p> <p>(vi).TELESCOPIC BELLOW ASSEMBLY : The bellow should be 3 piece telescopic type and injection moulded in black Polypropylene.</p> <p>(vii).PEDESTAL ASSEMBLY:The pedestal should be injection moulded in black 33% glass-filled Nylon-66 and fitted with 5 nos. twin wheel castors. The pedestal should be 66.3 ±0.5cm. pitch-center dia. (76.3 ±1.0cm with castors).</p> <p>(viii).TWIN WHEEL CASTORS:The twin wheel castors should be injection moulded in Black Nylon.</p>	<p>Medium Back Chair</p>	

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	<p>Supply and installation of Medium Back Chair as per indicative photograph and specification:</p> <p>(i). SEAT/BACK ASSEMBLY: The seat and back should be made up of 1.2 ±0.1cm. thick hot-pressed plywood and upholstered with fabric upholstery covers and moulded Polyurethane foam. The back foam should be designed with contoured lumbar support for extra comfort. The seat has extra thick foam on front edge to give comfort to popliteal area. BACK SIZE 47.5 cm. (W) x58.0 cm (H)</p> <p>SEAT SIZE 47.0 cm. (W) x 48.0 cm. (D)</p> <p>(ii).HIGH RESILIENCE (HR) POLYURETHANE FOAM: The HR polyurethane foam should be moulded with density = 45±2 kg/m3 and hardness load 16 ± 2 kgf for 25% compression.</p> <p>(iii) ARMRESTS :The one-piece armrests should be injection moulded from black Co-polymer Polypropylene.</p> <p>(iv)TUBULAR FRAME: The powder coated (DFT 40-60 microns) tubular frame should be cantilever type & made of 0 2.54 ±0.03cm. x 0.2 ±0.016cm.thk. M.S. ER.W. Tube.</p>	Visitor Chair	
20	<p>Supply and placing of chair with MOULDED PLY SHELL: The Nosh shell is made up of moulded ply in Veneer or Laminate finish. Shell size - 420 mm (W) X 410 mm (D) X 440 (H) X Thickness 12 mm.</p> <p>UNDERSTRUCTURE: The Understructure is made up of Diameter 19 x 1.6 mm thk and 2mm MS plate welded with it. Powder Coating done in Texture Metallic Silver Color having DFT – 50 to 80 micron.</p>	Chair without arm	
21	<p>Supply and installation of Wooden chair of Dimension - 480W x 420D x 820H</p> <p>UNDERSTRUCTURE:The Understructure is made from Hot pressed rubber wood.</p> <p>BACKREST: The backrest is made up of plywood and foam upholstered with polyester fabric.</p> <p>SEAT:The seat is made up of 12mm thick (7 layers) hot pressed plywood and moulded seat foam upholstered with fabric.</p> <p>SEAT FOAM:Foam made out of moulded Polyurethane foam with the following properties:</p> <p>• Density (IS-7888-1976) : 50-55 Kg/m3. • Hardness: 28+/-3 Kgf. • Compression set (IS-7888-1976): 10% Max. • Tensile strength (IS-7888-1976): 0.9-1.2 Kg/cm2• Tear strength(Min) (IS-8067) : 0.6 Kg/cm(min)• Resilience (IS-7888-1976): 40% - 60% • Elongation (IS-7888-1976): 110 %</p> <p>GLIDE:The glide is made from Nylon.</p> <p>SEAT AND BACK FABRIC PROPERTIES: Content: 100% Polyester</p> <p>170 GSM Abrasion Resistance:Over 30000 cycle.Bursting Strength: 19.1 kg/cm²Tear Strength (NF):</p>	Chair without arm	
21	<p>Supply and installation of Metal Lockers consisting of unit size of 381W x 381D x 1831H with 4 Lockers .</p> <p>Body-LH and RH Side and back panel is made up of 0.8mm thick CRCA sheet conforming to IS 513:2008 which is having standard dimension 1831 x380mm. Shelf hanging bracket is welded on both the side panel by spot welding. Shelf hanging bracket is made up of 0.8mm thick CRCA sheet conforming to IS 513:2008. front frame top and bottom part made up 0.8mm thick CRCA sheet conforming to IS 513:2008 and horizontal part is made up 1mm thick CRCA sheet conforming to IS 513:2008. On a front frame horizontally provision is given at a common distance to hold shutter bracket. Locker's top is made up of 0.8mm thick CRCA sheet conforming IS 513:2008 which is having standard dimension 375 x378mm. Shelf is also made up of 0.8 mm CRCA sheet conforming to IS 513:2008.</p> <p>Shutter- Is made up on 0.7mm thick CRCA sheet conforming to IS 513:2008. All the shutter are hung on shutter pin and shutter bracket, louvers are given shutter for air flow. PVC flush handle and name plate is used for handling and for name plate tagging. Standard PAD/CAM lock is used for locking each shutter.</p> <p>The bodies including shelves are given anti-rust surface treatment & are powder coated with epoxy polyester powder coating of DFT 50-60 Micron confiring to IS 13871:1993.</p>	Personal Locke Unit	
22(a)	<p>'Super White' writing grade resin coated steel writing surface conforming to International Standards. A 100% smooth and 100% scratch-free surface ensures maximum pleasure of writing. The surface can also be used for sticking magnets or magnet impregnated objects</p> <p>Satin-finish alloy aluminum (6063-T6) frame and precision engineered paper honeycomb core to make the board 100% warp-free and 100% flat. Can be mounted in landscape as well as portrait orientation on a wall with the help of built-in wall hanging clips</p> <p>Excellent erasability with no ghost-marks, high scratch-resistance with easy- wipe properties and maximum readability with minimum glare makes the Genius series boards an ideal companion for all training, teaching, display and learning activities</p> <p>Material: Resin Coated Steel Writing Surface, Alloy Aluminum Frame, Paper Honeycomb Core & Virgin ABS Corners.</p> <p>Size of the board: 6 x 4 Feet</p>	Magnetic White Board- 6' x 4'	
22(b)	<p>'Green' writing grade melamine writing surface (chalk sheet) conforming to IS:2046/1997. A 100% clean and 100% scratch-free surface ensures maximum pleasure of writing. The surface cannot be used for sticking magnets or magnet impregnated objects</p> <p>Satin-finish alloy aluminium (6063-T6) frame and precision engineered paper honeycomb core to make the board 100% warp-free and 100% flat. Can be mounted in landscape as well as portrait orientation on a wall with the help of built-in wall hanging clips</p> <p>Excellent erasability with no ghost-marks, high scratch-resistance with easy- wipe properties, maximum readability with minimum glare and minimum chalk dust formation with clean & continuous lines of chalk, makes the Genius series boards an ideal companion for all training, teaching, display and learning activities</p> <p>Board Size: 3x4 Feet (90x120 CM). Suitable for use at home, home offices, offices and schools. Works well with all standard chalk sticks</p>	Melamine Surface Non-Magnetic Chalk Board-6' X 4'	

ADDITIONAL ITEM PREFERRED MAKE LIST, AS PER GUIDELINES DATED- 14.03.2023

A handwritten signature in blue ink, appearing to read "Alok C Bhatia", is placed above the printed name.

आलोक सी भाटिया / ALOK C BHATIA
अपर महा प्रबंधक / Addl. General Manager
ENGINEERING PROJECTS (INDIA) LTD.
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ई.एम.आर.एस, गुजरात / EMRS, GUJARAT
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L P Savani Road, Adajan, SURAT.

**Additional Preferred Make List as per NESTS's EMRS Guidelines
Dated 14.03.2023**

Sr. No.	Material/Article	Manufactures Agencies/ Brand make
1	Factory Made steel Glazed/Gauged windows & Ventilators	SKS Steel industries / Madhu Industries/ MULTIWIN/M/s Classic Engineers and Fabricators/ Ajanta/ CPWD LATEST Approved Make of respective region.
2	Solar Lighting system	WIPRO/Panasonic/Phillips/ Crompton/ CPWD LATEST Approved Make of respective region
3	CP Brass Fittings/Fixtures	JAQUAR, MARC, Hindware, Parryware, CERA /Parko CPWD LATEST Approved Make of respective region

Additional Preferred make list by PSU

Sr. No.	Material/Article	Relevant IS Code	Manufactures Agencies/ Brand make
1	Kitchen Machinery	As Applicable	R.R.R Total Kitchen Solution, Triune Kitchen Solution, Quandra Galley Private Limited OR Equivalent
2	Furniture	As Applicable	Godrej, Spacewood Office Solution Pvt. Ltd (SOS), Neelkamal., Methodex systems Pvt. Ltd.

Certified that the materials shall be confirm to relevant IS provisions, BIS standard and specifications.


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PREFERED MAKE LIST ISSUED BY NESTS DATE 25.05.2022(R-2)



LJ PURANI
& ASSOCIATES

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इंजीनियरिंग प्रोजेक्ट्स (इंडिया) लि.
ENGINEERING PROJECTS (INDIA) LTD.
(A Government of India Enterprise)
(भारत सरकार का उद्यम)

राष्ट्रीय आदिवासी छात्र शिक्षा समिति

(जनजातीय कार्य मंत्रालय के अंतर्गत
एक स्वायत्त संस्थान, भारत सरकार)
भू-तल, गेट नंबर-3ए, जीवन तारा बिल्डिंग,
संसद मार्ग, नई दिल्ली-110001
दूर. 011-23340280



National Education Society for Tribal Students

(An Autonomous Organization under
Ministry of Tribal Affairs, Govt. of India)
Ground Floor, Gate No.3 A, Jeevan Tara Building,
Parliament Street, New Delhi-110001
Telephone No. 011-23340280
वेबसाइट/Website: www.tribal.nic.in
Email: nests-tribal@tribal.gov.in

F. No. NESTS/Civil/EMRS Order/140/2021-22

Date: 25.05.2022

To

MDs/CMDs/CEOs
(TCIL/WAPCOS/NPCC/MTDC/MANIDCO/HSCL/B&R and EPIL)

Subject: -List of preferred makes of materials to be used in EMRS/EMBDS works (R- 2) –
reg.

Reference: -

1. Prefer make List vide NESTS order no. 18015/11/2019-EMRS(Pt.) dated 09/08/2021(R1)
2. D.O.No S-20027/13/2020-TECH Issued by Ministry of Steel dated 12th January, 2021
3. OM Issued by the authority of DG, CPWD dated 17-02-2021

Sir,

I am directed to convey the approval of the competent authority in respect of Revision-2 to the list of preferred makes of materials (Civil) issued by this office vide order no. 18015/11/2019-EMRS(Pt.) dated 09/08/2021.

1. **Reinforcement Steel (TMT- FE 500) -** "Thermo Mechanically Treated (TMT) bars Fe-500 Grade conforming to IS 1786:2008 shall only be permitted. The PSU may approve the make/brand for use of TMT bars in EMRS Construction Work in light of the guidelines issued by Ministry of Steel vide DO letter Nos S-20027/13/2020-TECH dated 12.01.2021 addressed to Secretaries of various Ministries for procurement of Steel. Further PSU shall refer subsequent orders issued & procedure followed by CPWD & other Central Government Department for approval of TMT bars in this regard. While approval PSU ensure that approved brands/ make shall meet all quality parameters on Chemical Properties including Phosphorous and Sulphur percentage, Strength, etc. confirming to IS 1786:2008. The brands with consistent production quality having sufficient production capacity and fulfilling the aforesaid norms shall only be approved."
2. **Miscellaneous Civil & Electrical item (Revision-R-2) -** Preferred make list dated 09.08.2021 have been modified based on materials/brands preferred by CPWD and other reputed infrastructure govt organization confirming to relevant IS Stannard following established standard procedure (Revised Preferred Make Enclosed)
3. Furthermore, the NIT approving authority or the competent authority of PSUs may approve the other brand/make based on requirement on case-to-case basis provided **it confirm to relevant IS provision following established standard procedure and subject to full fill GOI norms, provisions and guidelines issued thereof.**

This issues with the approval of the competent authority

Encls.: As Above

(K C Meena)

Additional Commissioner

Copy to:-

1. Nodal Officer HQ, EMRS Works TCIL/WAPCOS/NPCC/MTDC/MANIDCO/HSCL/B&R and EPIL
2. Nodal Officer Zone/ State, EMRS Works TCIL/ WAPCOS/ NPCC/ MTDC/ MANIDCO/ HSCL/ B&R and EPIL
3. PS to Commissioner, NESTS, New Delhi
4. Guard File

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LIST OF PREFERRED MAKE OF MATERIALS (CIVIL)			
S. No.	Material /Article	Confirming IS Code	Manufacturers/ Agencies/ Brand make
1	Cement (OPC 43 grade)/PPC	IS 8112:1989/ IS 1489 (Part-1) 2015	A.C.C., Jaypee Cement, Ultratech, Shri Cement, Gujrat Ambuja Cement and cement Corporation of india., Dalmia InfraPro (Dalmia Bharat Cement)
2	Ready Mix Concrete	-	Ultra Tech (Ultra Tech Cement Ltd.), ACC (ACC Cements Ltd), RMC (India), RMC (India) Pvt. Ltd.
3	AAC Blocks	-	Xtralite (Ultra Tech Cement Ltd), Areocon (HIL), Nucon (Green Way building materials India Pvt. Ltd.), Magicrete (Magicrete Precast), NCL
4	Structural Steel	IS 2062:2011	SAIL, TISCO, RINL, JSW Steel Ltd, JINDAL
5	Stainless Steel	-	JINDAL SS Ltd (JSL), Salem (SAIL), SAIL (SAIL)
6	Corrugated GI Sheets	IS 277:2003	TATA, SAIL, JSW, JSPL , BHUSAN
7	Colour coated profile sheet	-	TATA, JINDAL
8	Aluminium extruded sections	IS 733:1983 & IS 1285:2002	Jindal, Hindalco, Indian Aluminium Co. NALCO
9	Aluminium plain sheets	IS 733:1983 & IS 1285:2002	Jindal, Hindalco, Indian Aluminium Co. NALCO
10	Factory made Machine pressed laminated flush door shutter	IS 2202 (Part 1) : 1999 and relevant IS code	Century, Greenply, Kitply, Duroply, Merino.
11	Block Board	IS 1659:2004	Century, Greenply, Kitply, Duroply, Merino.
12	Flush door shutter	IS 2202 (Part 1) : 1999	Greenply, Century, Kitply, Duroply Merino,
13	Boiling Water proof plywood, Block board, Commercial plywood	IS 303:1989	Greenply, Century, Kitply, Duroply Merino,
14	Aluminium door & window fittings	Relevant IS Code	Jyoti, Argent, Everest
15	PVC rigid foam sheet	-	Rajshri or equivalent
16	Hydraulic Floor Spring	IS 6315:1992	Dorma, Hardwin, Ozone, Dorset
17	Door Closure	IS : 3564	Dorma, Hardwin, Ozone, Dorset
18	Float Glass		Saint Gobain (Saint Gobain India Pvt. Ltd.), Modiguard (Gujarat Guardian Ltd.), Asahi (Asahi India Glass Ltd.)
19	SWR uPVC pipe & fitting	IS 4985:2000 & IS 14233:1999	Supreme, Finolex, Prince, Astral, Prakash, Ashirwad
20	CPVC Pipe & fittings	IS 16088: 2012,IS 15778:2007	Supreme, Finolex, Prince, Astral, Prakash, Ashirwad,
21	Ceramic glazed wall tiles	IS 13712:1993	Kajaria, Orientbell, Somany, NITCO, HR Johnson.
22	Vitrified Tiles	IS: 15622: 2006	Kajaria, Orientbell, Somany, NITCO, HR Johnson.
23	Bitumen VG-30, VG-10 etc.	IS:73:2013	As per particular specification of IOCL, BPCL, HPCL.
24	Admixtures	IS: 9103:1999	FOSROC, SIKKA, CICO Technologies Ltd., Pidilite
25	Mild Steel Tubes	IS: 1239:1990	As per IS Code
26	Ist quality acrylic distemper (Ready mix)		Bison (Lewis Berger), Beauty (NEROLAC), Tractor Uno (Asian Paints)

K. G. N.

AK

S. No.	Material /Article	Confirming IS Code	Manufacturers/ Agencies/ Brand make
27	Premium Acrylic smooth exterior Paint with silicon additives		ULTIMA (Asian paint), Premium Exterior Emulsion (Dulux), Weather coat long life 7 (Berger)
28	Paints	IS:101:1986	Lewis Berger, Asian Paints, Nerolac, Dulux
29	Steel/Wood Primer paints	IS:14177:1994	Lewis Berger, Asian Paints, Nerolac, Dulux
30	Factory made C.C. Interlocking Paver Blocks	IS: 15658:2006	NITCO, KK, NTC
31	Bitumen 85/25	IS:702:1988	HPCI, IOCL
32	Water Proofing Compound	IS:2645:2003	FOSROC, Dr. FIXIT, BASF, CICO, SIKKA
33	Crystalline Waterproofing Compound	IS 2645:2003	FOSROC, Dr. FIXIT, BASF, SIKKA
34	G. I. Pipes	IS:1239	TATA, Jindal Hissar
35	PVC Water Storage Tanks	IS: 12701:1996	Sintex, Plasto
36	P.T.M.T. Accessories	IS:9763	Prayag, Prakash
37	Mirror		Saint Gobain (Saint Gobain India Pvt. Ltd.), Modiguard (Gujarat Guardian Ltd.), Asahi (Asahi India Glass Ltd.), Atul (Autl Glass Industries Ltd.)
38	Stainless Steel Sink	IS: 13983:1994	Hindware, NIRALI, CERA, JAYNA
39	Sanitaryware/ Chinaware	As per IS Code	Cera, Parryware, Hindware, Jaquar
40	C.P. Fittings and accessories for bathroom / toilets	IS:7784:1993	Jaquar, Gem, Parko, Hindware, Cera, Parryware
41	RCC Pipes	Confirming to IS Specification	Indian Hume Pipes (Indian Hume Pipe Ltd.), Jain & Co (Jain spun pipes Co)
42	SFRC Cover and grating	IS 12592(2002)	KK (KK Manhole and gratings Co Pvt Ltd.)
43	CI Manhole cover	IS 1726 (1991)	RPFM (M/s Raj Pattern Makers & founders Pvt. Ltd.), BIC (Bengal iron corporation), Neco (Jayaswal Neco Ltd)
44	Foot Rest (for manhole)		KGM (KGM Exports), Accurate Buildcon (AccurateBuildconcompany),Neco (Jayaswal Neco Ltd)
45	Water stops		Hydrotite (Sika India), Dr. Fixit (Pidilite industries), Ferrous Crete (Ferrous Crete (India) Pvt Ltd.)
46	Aluminium doors/windows sections	IS 733 & IS 1285	Hindalco (Hindalco Industries Ltd.), Jindal (jindal Aluminium Ltd.)
47	Glass Reinforced Concrete (GRC) Jali		Terrafirma (Terrafirma GRC Industries), Ecovision (Ecovision Industries Pvt Ltd.), Mahesh GRC (Mahesh Prefab Pvt Ltd.)
48	SS Doors & Windows Hardware & Fittings.		JINDAL, Dorma, KICH, Godrej, Ozone
49	Wall Putty		Dalmia, JK , Birla, Asian

Handwritten signature/initials

LIST OF PREFERRED MAKE OF MATERIALS (ELECTRICAL)		
S. No.	Material /Article	Manufacturers/ Agencies/ Brand make
1	Engine	Ashok Leyland /Cummins/ Cater pillar /KOEL Mahindra & Mahindra /Escorts
2	Alternator	Kirloskar/KEL/Crompton Greaves (AL. series) / KEC / Stamford
3	Battery (Lead Acid /Mntc. Free)	Amara Raja / Exide/Crompton Greaves/Prestolite/Pace Setter/Standard/
4	HV Switchgear	Crompton / Kirloskar /Voltas/ C & S Electric
5	LT Switchgear	L&T/ Schneider Electric / Siemens/Legrand/Havells
6	Vaccum Circuit Breaker	GE/Siemens/ C & S Electric
7	Transformer (Oil filled / Dry type)	ABB / Crompton Greaves / /Kirloskar /Siemens/ Alstom/Uttam
8	HT Panels	ABB/Siemens/L&T/Schneider/Kirloskar
9	Air Circuit Breaker	L&T/ Schneider Electric / Siemens/Havells
10	MCCB (Ics=Icu)	L &T/ Schneider Electric / Siemens/Legrand/Havells
11	MV/LT Panels	TTA/CPRI Fabricators with panels cleared by CPRI
12	SDF units	L&T/ Schneider Electric / Siemens/ Havells/ Legrand
13	Power Contactors	L&T/ Schneider Electric / Siemens/BCH/GE/ Power Controls
14	Change Over Switch	L & T/ HPL / Havells / Standard/Control & Switch gears
15	Air Brake Switch	National/Kiran/Pactil/Atlas/Power grid switchgears
16	Pin and Disc Insulator	Jayshree/WS/IEC/BHEL/Bharat Industries
17	11 KV Horn Gap Arrestor	Sahal/Pactil/GEC/SEW
18	Lightning Arrestor	Atlas/GE/Elaro/Lamco/International/Oblum/Elpro
19	Drop out Fuses	National/Kiran/Pactil
20	GI/MS Pipe (ISI Marked)	ATC / ATL / BST / GSI / ITC / ITS / IIA /JST / Jindal /TTA / Tata/Zenith
21	APFC Relay	L&T/ Schneider Electric / Neptune Ducati/Syntron/Trinity Electronics
22	IDMT Relay	AVKC/SEGC
23	C.T./P.T.	AE/MP/Marshall/Pactil/Kappa/L&T/Ashmor/Waco/Meco/Gilbert/Trio/Indotech/Indo coil
24	Selector Switch	L&T/Kaycee/IMP/Vaishno/Seizer/rass control
25	Indicating Lamp (LED Type) and Push But	Vaishno/Siemens/L&T/AE/IMP/Rass
26	Power Capacitors (MPP/APP)	Khatau/Junkar/L&T/EPCOS(Siemens)/ABB/Crompton/Schneider Electric/Neptune Ducati
27	Digital Panel Meters i/c Multi Function Meter	Conzerv/Schneider Electric/ AE/ Digitron / IMP/Meco / Rishabh /Universal/HPL/L&T/ABB
28	Ammeter/Voltmeter	AE/Universal/Rishabh/Kaycee/Meco/Enercom
29	Cold shrink HT/LT Cable Joint Kit	Denson / 3M(M-Seal)/ Raychem
30	Rubber Matting (ISI Marked)	Jyoti Rubber Udyog/Raychem/Padmini/Dozz
31	AVM Pads	Dunlop/Poly Bond
32	MCB/ Isolator/ELCB/RCCB/ Distribution Board	Crompton / Havells / MDS Legrand/ L&T / Schneider Electric/Siemens / Polycab/ C&S/ (makes of DBs and circuit breakers shall be same)
33	TPN Switches & HRC Fuses	Crompton / Havells / MDS Legrand/ L&T / Schneider Electric/Siemens / Polycab/ C&S/ (makes of DBs and circuit breakers shall be same)
34	PVC Conduits (ISI Marked) Colour : Ivory/Grey	AKG/Polycab/Avon Plast/Precision

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AKG

35	Steel Conduits (ISI Marked)	BEC/Bharat/Gupta/AKG/RMCON/Steel Kraits
36	Piano/Modular Switches and Sockets	Legrand/Havells/Polycab/ Schneider/Anchor
37	Cable Tray	MEM/Bharti/Ratan/Slotco/Profab
38	Cable Glands	MCI, Comet/Jainson/Dowells
39	Thimbles/Lugs	Jainson/Dowells/Ascon
40	1.1 KV/11KV grade Al. Condr., XLPE insulated armoured cables (ISI Marked	Finolex/Havells/Polycab//KEI
41	Fire Survival cable	Finolex/Havells/Polycab//KEI
42	Wires (PVC insulated copper conductor cable FRLS - ISI marked)/Telephone Cables / Submersible cables/Co-axial/TV cables	Finolex/Havells/Polycab//KEI
43	Fans and Exhaust fans (All Types)	Khaitan/Havells/Crompton/Orient/Bajaj/Usha/Polycab
44	LED Luminaries i/c street light fittings (ISI Marked)	Khaitan/Havells/Crompton/Orient/Bajaj/Usha/Polycab
45	LAN Cables	Panduit/Legrand/Schneider//Polycab
46	Centrifugal Pump	BE Power / Beacon /Crompton / Kirloskar / KSB
47	Submersible Pump	BE Power / Beacon /Crompton / Kirloskar / KSB
48	Motors	Crompton Greaves /Schneider Electric / Kirloskar/ Siemens
49	Motor Starter	L&T/Siemens/BCH/GE Power Control/Schneider Electric
50	Fresh Air Fans	Khaitan/Havells/Crompton/Orient/Bajaj/Usha/Polycab
51	Single Phase Preventer/Overload Unit	L&T / Minilec / Siemens
52	Timers	L&T / Minilec / Siemens /AE
53	Gate Valve/Foot Valve/NRV/Butter Fly Valve	Advance/Audco/Johnson Controls/Zoloto/Annapurna / Fountain /Kirloskar / Leader / Sant / Trishul/Kartar/Inter Valve
54	Single/Double Headed GM Landing Valve	New Age (Mumbai)/Safex/Ceasefire/Padmini/Life guard
55	Hydrant Valve	New Age (Mumbai)/Safex/Ceasefire/Kalpna/L&T valves Ltd./Life guard
56	Sprinkler/ Hose Reel & Hose Pipe (ISI Marked)	Safex/Agni/Newage/Ceasefire/Life Guard/Omex
57	Fire Extinguisher (ISI Marked)	Minimax/Lifeguard/Safeguard/Safex/Omex
58	Water Purifier	Eureka Forbes/Kent/Ion Exchange/LG
59	Inverter System	Sukam/Microtek/Luminous
60	Electrical Water Storage Heater	Racold/Crompton/Havells/Bajaj/Polycab

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QUALITY PLAN



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Minimum Quality Assurance (QA) Plans

1. This QAP shall contain beforehand finalized tentative dates for the TPQA visit to monitor the target activity.
2. All items cover in Annexure I to IV as per CPWD manual clause 53.2 and modified annexure V shall form part of overall Quality Plan.
3. List of equipment and T& P shall be maintained at site as per the list provided in Annexure -I, Annexure -IIA & II B.
4. QAP shall list out various mandatory tests of the building materials being used in construction along with the frequency of tests to be done as per Annexure-III
5. The Checklist for items of construction like RCC, Brickwork, Centring & Shuttering, Plaster, etc as provided in Annexure IV (Part A to Part E) shall be followed during execution.
6. TPQA Activities shall form part of Quality Plan:
 - (i) Following critical activities has been identified for TPQA visit
 - a) Foundation and footings of all buildings and Compound Wall
 - b) Plinth and Columns
 - c) GF Slab
 - d) Roof Slab
 - e) Brick Work
 - f) Protection Work
 - g) Plumbing/Sanitary/Electrical Work
 - h) Flooring/Finishing/Doors/Windows
 - i) Drainage/Sewerage/Road Work
 - j) Final Review
 - (ii) Minimum 4 numbers of visit of TPQA Agency are required in respect of critical activities numbers (a) to (f) mentioned above, out of which one visit of TPQA shall be mandatory for Foundation and footings of all buildings and Compound Wall
 - (iii) Minimum 2 TPQA Agency visits are required in respect of critical activities numbers (g) to (i) mentioned above.
 - (iv) TPQA visit for Final review after the completion of work is mandatory.
 - (v) Wherever, TPQA agency has made any adverse observations/remarks on quality and construction issues, PSU shall immediately rectify the same and compliance/action taken by PSU shall be sent to TPQA agency and it shall be considered settle only after admitting the compliances by TPQAA.
 - (vi) copy of TPQA reports shall be maintained at site

Signature of PSU

Signature of TPQAA



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Annexure – I		
Sr. No.	List of Equipment available For Field Testing Laboratory	Comments of TPQA
A.	For Building Works	
1	Balances	
(i)	7 kg. to 10 kg. capacity, semi-self-indicating type – accuracy 10 gm.	
(ii)	500 gm. capacity, semi-self-indicating type – accuracy 1 gm.	
(iii)	Pan balance – 5 kg. capacity – accuracy 10 gms.	
2	Ovens-electrically operated, thermostatically controlled upto 110 C – sensitivity 1 C.	
3	Sieves: as per IS 460=1962.	
(i)	I.S. sieves – 450mm internal dia, of size 100 mm, 80 mm, 63 mm, 50 mm, 40 mm, 25 mm, 20 mm, 12.5 mm, 10 mm, 6.3 mm, 4.75 mm, complete with lid and pan.	
(ii)	I.S. sieves- 200mm internal dia (brass frame) consisting of 2.36mm, 1.18mm, 600 microns, 425 microns, 300 microns, 212 microns, 150 microns, 90 microns, 75 microns, with lid and pan.	
4	Sieve shaker capable of 200 mm and 300 mm dia sieves, manually operated with timing switch assembly.	
5	Equipment for slump test- Slump cone, steel plate, tamping rod, steel scale, scoop.	
6	Dial gauge, 25 mm travel – 0.01 mm/division least count - 2nos.	
7	100 tonnes compression testing machine, electrical-cum manually operated.	
8	Graduated measuring cylinders 200 ml capacity – 3 Nos.	
9	Enamel trays (for efflorescence test for bricks).	
(i)	300 mm x 250 mm x 40 mm- 2 nos.	
(ii)	Circular plates of 250 mm dia – 4 nos.	

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Annexure – II A		
Sr. No.	Field Testing Instruments	Comments of TPQA
1	Steel tapes – 3 m	
2	Vernier callipers	
3	Micrometre screw 25 mm gauge	
4	A good quality plumb bob	
5	Spirit level, minimum 30 cms long with 3 bubbles for horizontal vertical	
6	Wire gauge (circular type) disc	
7	Foot rule	
8	Long nylon thread	
9	Rebound hammer for testing concrete	
10	Dynamic penetrometer	
11	Magnifying glass	
12	Screw driver 30 cms long	
13	Ball pin hammer, 100 gms	
14	Plastic bags for taking samples	
15	Moisture meter for timber	
16	Earth resistance tests (for Electrical Divisions)	
17	Megger (for Electrical Divisions)	

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Annexure – II B		
Sr. No.	List of Non-Destructive Test Equipment Available testing RCC Work	Comments of TPQA
1	Rebound Hammer	
2	Pulse Velocity Testing Instrument	
3	Bar Re-locator/Bar Scanner	

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Annexure – III

Proforma For Mandatory Tests to Be Attached with Running Bills

Name of the work Name of
Contractor..... Agreement No. and Date
R/A Bill No.

Sl. No.	Item	Quantities as per agreement	Frequency as per specification	No. of tests required	Upto date quantity	No. of tests required	No. of tests actually done	Remarks
1	2	3	4	5	6	7	8	9

Note: If the number is less than that required, then reasons shall be recorded.

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Annexure – IV

Check Lists for Various Items

PART – A

CHECK LIST FOR ITEMS OF FOUNDATION CONCRETE

Name of work

Name of contractor

Agreement No.

- | | |
|--|--------|
| 1. Date of inspection | |
| 2. Location | |
| 3. Material used for concrete whether tested | |
| (a) Sand | Yes/No |
| (b) Coarse aggregate | Yes/No |
| (c) Water | Yes/No |
| (d) Admixture, if any | Yes/No |
| 4. Raft top level, whether provided as per details | Yes/No |
| 5. Architectural/structural drawing correlated | Yes/No |
| 6. Whether location of construction joint has been discussed with Executive Engineer, and he has approved it | Yes/No |
| 7. Cleaning over water proofing surface and construction joint done | Yes/No |
| 8. CC cover blocks of 60 mm, thickness provided (min 2 in one square metre area) | Yes/No |
| 9. Reinforcement placement as per relevant structural drawing checked | Yes/No |
| 10. Layout of columns as per relevant structural drawing checked | Yes/No |
| 11. Placement of shuttering plates and key board for proper construction joint with shuttering oil | Yes/No |
| 12. Cement slurry applied on construction joint before pouring of concrete | Yes/No |
| 13. Trained mason available | Yes/No |
| 14. Concreting to start from farthest point to nearest point with respect of weight batching plant | Yes/No |
| 15. Concrete mix has been designed | Yes/No |
| 16. Plasticiser being used | Yes/No |
| 17. Adequate number of concrete vibrators in working condition available | Yes/No |
| 18. Slump checked | Yes/No |
| 19. Sample cubes taken | Yes/No |
| 20. Signature of Junior Engineer | |
| 21. Signature of Assistant Engineer | |
| 22. Signature of Executive Engineer | |

Signature of PSU

Signature of TPQAA



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PART – B

CHECK LIST FOR COLUMNS/BEAMS/SLABS

- | | |
|---|--------|
| 1. Date of inspection | |
| 2. Drawing No. | |
| 3. Location | |
| 4. Whether materials used conform to relevant Specifications | |
| (a) Sand | Yes/No |
| (b) Coarse aggregate | Yes/No |
| (c) Water | Yes/No |
| (d) Admixture, if any | Yes/No |
| 5. Whether structural drawings correlated with architectural drawings? | Yes/No |
| 6. Whether the centre line of column/beams checked with references to grid lines as per architectural drawings? | Yes/No |
| 7. Whether treatment of expansion joint, wherever required, is done? | Yes/No |
| 8. Whether cleaning, repairing and approval of shuttering plate, application of quality shuttering oil is done? | Yes/No |
| 9. Whether shuttering is in true plumb and vertical and properly done and maintained during concreting? | Yes/No |
| 10. Whether reinforcement detailing, their placement is as per structural drawings? | Yes/No |
| 11. Whether proper gauge binding wire is used and with full cross binding and tightening of reinforcement bars with stirrups? | Yes/No |
| 12. Whether required minimum cover to reinforcement is maintained? | Yes/No |
| 13. Whether stainless steel cramps, angle irons for holding stones and any holding arrangement for electrical/mechanical/firefighting/other services have been seen and approved by JE (E)/AE (E) | Yes/No |
| 14. Whether conduits for various electrical/mechanical/firefighting/other services have been seen and approved by JE (E)/AE (E) | Yes/No |
| 15. Whether concrete of approved design mix within maximum permissible water-cement ratio is used? | Yes/No |
| 16. Whether admixture of good brand quality approved by Engineer-in-charge is used? | Yes/No |
| 17. Whether technical supervision at batching plant/mixer and at point of concreting done? | Yes/No |
| 18. Whether concreting is placed within initial setting time of mixing? | Yes/No |
| 19. Whether proper compaction with vibrator is done? | Yes/No |
| 20. Whether the concreting has been done in a lift not exceeding 1.5 m? | Yes/No |
| 21. Whether cubes as per requirement filled for testing? | Yes/No |
| 22. Signature of Junior Engineer | |
| 23. Signature of Assistant Engineer | |
| 24. Signature of Executive Engineer | |

Post-concreting:

- | | |
|--|--------|
| 25. Whether shuttering stripped off as per specification, and laitance removed immediately thereafter? | Yes/No |
|--|--------|

- | | |
|--|--------|
| 26. Whether proper arrangement of curing and curing period maintained as per specifications? | Yes/No |
|--|--------|


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27. Whether hacking of RCC surface by proper hacking tool for subsequent plastering/finishing is carried out?

Yes/No

28. Signature of Junior Engineer

29. Signature of Assistant Engineer

30. Signature of Executive Engineer

Signature of PSU

Signature of TPQAA



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PART – C

CHECK LIST FOR BRICK WORK

1. Date of Inspection
2. Drawing No.
3. Location
4. Whether materials used conform to relevant Specifications and whether mandatory tests doen?
 - (a) Sand Yes/No
 - (b) Bricks Yes/No
 - (c) Water Yes/No
5. Whether structural drawings co-related with architectural drawings? Yes/No
6. Whether the centre line of brickwork checked with reference to grid lines as per architectural drawings? Yes/No
7. Whether bricks soaked in water before use for sufficient period? Yes/No
8. Whether queen closers are used at junction of walls? Yes/No
9. Whether brickwork is in true plumb and vertical and all layers truly horizontal? Yes/No
10. Whether graduated wooden straight edge storey rod being used for keeping height of brick courses uniform? Yes/No
11. Whether wall height being constructed in a day is being restricted to 1 m height? Yes/No
12. Whether parts of wall left at different levels are raked back at an angle of 45 degrees or less with the horizontal? (Toothing is not to be permitted) Yes/No
13. Whether top courses of all plinths, parapets, steps and top of walls below floor and roof slabs laid with brick on edge? Whether marucona provided at corners in such brickwork? Yes/No
14. Whether thickness of joints in brickwork is kept 1 cm +_ 20%? Yes/No
15. Whether mortar of approved mix within maximum permissible water cement ratio is used? Yes/No
16. Whether all horizontal and vertical joints are being filled? Yes/No
17. Whether proper arrangement of curing and curing period maintained as per specification? Yes/No
18. Whether date of work done written? Yes/No
19. Signature of Junior Engineer
20. Signature of Assistant Engineer
21. Signature of Executive Engineer

Signature of PSU

Signature of TPQAA



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PART – D

CHECK LIST FOR PLASTERING

1. Date of inspection
2. Drawing No.
3. Location
4. Whether materials used conform to relevant specifications and whether mandatory tests done? Yes/No
5. Whether surface cleaned of all loose mortar and efflorescence? Yes/No
6. Whether all conduiting and electrical piping done? Yes/No
7. Whether all doors, windows etc. fixed? Yes/No
8. Whether all defects of brickwork/CC/RCC rectified? Yes/No
9. Whether preparation of surface done? Yes/No
10. Whether 2.5 m long aluminium straight edge and plumb bob being used to check vertically and evenness of surface? Yes/No
11. Whether 15 cm x 15 cm bunda at every 2 m horizontally and vertically being provided to serve as gauges? Yes/No
12. Whether uniform groove provided at junctions of all plaster and ceiling plaster? Yes/No
13. Whether mortar of approved mix within maximum permissible water cement ratio is used? Yes/No
14. Whether proper arrangement of curing and curing period maintained as per specifications? Yes/No
15. Whether date of work done written? Yes/No
16. Signature of Junior Engineer
17. Signature of Assistant Engineer
18. Signature of Executive Engineer

Signature of PSU

Signature of TPQAA



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PART – E

CHECK LIST FOR WATER SUPPLY LINES

- | | |
|--|--------|
| 1. Date of inspection | |
| 2. Drawing No. | |
| 3. Location | |
| 4. Whether materials used conform to relevant specifications and whether mandatory tests done? | Yes/No |
| 5. Whether plumber employed is licensed plumber or not? | Yes/No |
| 6. Whether plan for piping system has been prepared and got approved? | Yes/No |
| 7. Whether all pipes and fittings are ISI marked? | Yes/No |
| 8. Whether a sample system has been prepared and got approved? | Yes/No |
| 9. Whether clamps provided at specified spacing? | Yes/No |
| 10. Whether pipe lines checked at required pressure before covering? | Yes/No |
| 11. Whether weight of flushing pipe checked? | Yes/No |
| 12. Whether flushing cistern is ISI marked and internally painted with bitumastic paint? | Yes/No |
| 13. Whether fittings like wash basin, sink pan, cistern, bib cock, stop cock, wheel valves, etc. are ISI marked? | Yes/No |
| 14. Whether PVC water storage tank is ISI marked? If not, whether sample sent for testing? | Yes/No |
| 15. Signature of Junior Engineer | |
| 16. Signature of Assistant Engineer | |
| 17. Signature of Executive Engineer | |

Signature of PSU

Signature of TPQAA



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Annexure-V (Modified)		
Name of TPQA Agency : -		
Sl No.	Particulars of work:	Remarks.
1.1	(a) Name of work	
	(b) Description/Scope of work	
1.2	(a) Sub-Division and name of Assistant Engineer:	
	(b) Division and name of Zonal Manager or Representative	
	(c) Circle and name of superintending Engineer.	
	(d) Zone and name of Chief Engineer.	
1.3	Agency/contractor	
	(a) Name:	
	(b) Registration class	
1.4	Agreement No.	
1.5	Stipulated time and date of start.	
1.6	Stipulated time and date of completion.	
1.7	(a) Estimated cost put to tender	
	(b) Schedule of rates applicable.	
1.8	Accepted tendered cost with overall percentage.	
1.9	Percentage progress at time of inspection vis-à-vis expected as per contract and reasons for delay, if any.	
1.10	Inspection officers (Name and Designation)	
1.11	Officers and contractor present during inspection (Name and Designation)	
1.12	Date of inspection and number	
2.0	Quality control Aids:	
2.1	Is site equipped with	
	(a) Copy of agreement	
	(b) CAs specification along with upto date correction slips.	
	(c) List of ISI marked/approved materials to be used.	
	(d) Guard file containing inspection report of CTE/QCTA/AE/QC/Zonal Head/GM/SE/SE etc.	
	(e) Testing facilities to check conformation to acceptance criteria	
	(f) QAFW circular on quality control	
2.2	Is field laboratory existing and well equipped	
3.0	Department procedure aspects	
3.1	Maintenance of inspection register.	
3.2	Highlights of inspection by GM, Engineer-in-Charge requiring compliance.	

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3.3	Are all site register maintained in standards forms?	
3.4	Are test registers reviewed by Engineer-in-Charge with dates	
3.5	Cement Registers	
	a.) Is cement store checked by Engineer-in-Charge periodically as stipulated	
	b.) Comment of TPQA on cement stock with reference to cement register. (Critical Analysis/Elaborative opinion of TPQA is required required)	
3.6	Site order book and schedule of defects	
	a) Is site order book properly maintained?	
	b) Is site order book reviewed by GM and Engineer-in-Charge (Mention details)	
	c) Have timely notices been issued to the contractor with the schedule of defects/damages whether action under clause 14/17 initiated? (Please elaborate)	
4.0	Process control aspects:	
4.1	Is soil investigation done? (Give brief details)	
4.2	Suitability of water for construction:	
	(a) What is the sources of water?	
	(b) Has water been tested subsequently (i.e. after every 03 months) and found fit for use in works.	
	(c) Has water been tested subsequently (i.e. after every 03 months) and found fit for use in works.	
4.3	Are 10% (25% for concrete) of all samples for testing taken in presence of Engineer-in-Charge	
4.4	Are all mandatory tests carried out at stipulated frequency?	
4.5	Are materials approved by Engineer-in-Charge If so, are samples available at site?	
4.6	Are sample units/items completed and approved by Engineer-in-Charge before start of mass finishing work?	
4.7	Specific control on RCC work like centering/shuttering, proportioning with boxes: mixing by full bag capacity hopper fed mixer: control of slump: placing/compaction with vibrator.	
4.8	Any other particular comments on adequacy of process control.	
5.0	Site inspection for observations and comments on quality control system in place.	



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5.1	Observation on floor slope (especially in Bath, WC, Kitchen, Terrace, Balcony etc).	
5.2	Observation on QC for dampness/leakages prevention. If dampness/leakages notices, then locations and probable reasons.	
5.3	Are Samples collected by Quality Control Cell of Construction Agency	
6.0	Observations on site materials QC aspects (Keeping in view the requirement of contract specifications: BIS marked/CAs approved products etc.) (Attached separate sheet, if required). (Critical Analysis/Elaborative opinion of TPQA is required required)	
7.0	Observations on workmanship QWC aspects. (Attached separate sheet, if required) (Critical Analysis/Elaborative opinion of TPQA is required required)	

Signature of PSU

Signature of TPQAA



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INSPECTION CHECKLIST PSU/NESTS ENGINEER

	Items	Brief Details to be provided by PSU's engineer	Remarks of Visting Consultant
EMRS Site			
1	Name of Site		
2	PSU		
3	Architectural Consultant		
4	Structural Consultant		
5	Zonal Head		
6	Project Engineer with mob.		
7	Site Engineer with mobile		
8	Name of Contractor		
9	Contractor's Site Engineer		
Work Award Details			
1	Agreement No.		
2	Estimated Cost put to tender		
3	Tendered Amount		
4	Tender Percentage below/above		
5	Stipulated date of Start		
6	Actual date of Start		
7	Stipulated date of Completion		
8	Period of Completion		
Drawings			
1	MLP	Appd. MLP with letter of approval.	
2	Architectural Drawings	School, Boys' Hostel, Girls' Hostel, Kitchen & Dining, Warden, ESS, G. RM, UG Tank & Pump, Gate, Compound Wall	
3	Electrical & Plumbing Drg	School, Boys' Hostel, Girls' Hostel, K&D, Warden, ESS, Security Room, UG Tank & Pump, Gate, Compound Wall	
4	Vetted Structural Drawings	School, B. Hostel, G. Hostel, K&D, Warden, ESS, G. RM, UG Tank & Pump, Gate, Compound Wall	
5	Vetting Certificate from NIT/IIT	Whether provided from vetting authority	
Documents & Registers			
1	Copy of Agreement		
2	Bills of Quantities		
3	EMRS Specifications		
4	Approved Make list as per tender		
5	Quality Plan indicating number and frequencies of Testing of materials as per BOQ and checklist, T & P, etc for Quality Assurance		



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5.1	Proforma For Mandatory Tests indicating frequencies and number of tests required w.r.t. BOQ vis-à-vis number of tests actual done (See Annexure III)		
5.2	Checklist (See Annexure IV)		
5.2.1	Foundation		
5.2.2	Columns/Beams/Slabs		
5.2.3	Brick Work		
5.2.4	Plaster		
5.2.5	Plumbing		
6	Files concerning remarks of NESTS and TPQA regarding quality issues and compliance by PSU there of.		
7	PERT Chart /Work Plan for completion		
Registers			
1	Site Order Register		
2	Cement Register		
3	Steel Register		
5	Brick Test Register		
6	Water Test Register		
7	Other Test Register		
11	Inspection Report Register by higher officer		
12	TPQA Visit Register		
Tools & Plants			
1	List of Equipment available For Field Testing Laboratory (See Annexure-I)	Whether available/functional	
2	Field Testing Instruments (See Annexure-II)	To see availability Set of sieves, Silt Testing Glass, Slump Cone, Cube moulds	
3	Batching Plant	Whether available/functional	
4	Vibrators (Needle & Plate)	Whether available/functional	
4	Compression Testing Machine	Whether available/functional	
5	Non-Destructive Test Instrument	Rebound Hammer, Pulse Velocity Test & Bar Scanner	
Material Quality			
1	Source and Quality of Water	To see whether potable	
2	Cement	Make, Grade, OPC or PPC?	
3	Steel	Make, Grade?	
4	Bricks	Factory made fly ash brick/clay brick	
5	Admixture	Make with details	
6	Aggregates (Grading and Nominal Sixe	Quality of metal aggregates	
7	Fine Aggregate-	Quality of sand, whether approval of competent authority in case of stone duat is being used	

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8	Centring and Shuttering	Steel prop and plyboard/steel shuttering to be checked	
Progress Check			
1	School	Stages/Milestone of progress to be indicated	
2	G. Hostel	Stages/Milestone of progress to be indicated	
3	B. Hostel	Stages/Milestone of progress to be indicated	
4	Kitchen & Dining	Stages/Milestone of progress to be indicated	
5	ESS, Security, S/T, Pump	Stages/Milestone of progress to be indicated	
6	Campus Development-Cutting & Filling, Road, Protection Work, etc	Deviation, if any from approved MLP	
7	Work Plan/PERT Chart		
8	Reason for Slow Progress, if any	Lagging period to be mentioned	
Quality Check			
1	MLP Check	Whether layout of Bldgs & Boundary wall as per MLP? If any issue w.r.t. levels, locations, etc, MLP may also be proposed for modification	
2	Bench Mark	Whether bench mark pillars for fixing plinth level and grid lines are provided before foundation work	
3	Layout as per architectural drawings	To see layout of rooms, toilets, stair case and ramp, portico, etc as per approved architectural drawings.	
4	Important Items to be cautioned to PSU	<ul style="list-style-type: none"> * Buildings shall be placed at higher ground level, not at down area and drainage shall be ensured around the buildings. * Plinth beams of portico to be at NGL/FGL * School buildings to be at minimum at 75 cm and other buildings at 60 cm above NGL. However, if required it may be increased upto 1.2 metre. * Back Side Stair Case shall be stopped at GF Slab. * Ramp roof shall be of Profile Sheet with Truss work 	
2	Cement Godown	Whether storage is as per CPWD specification?	
3	Casting Quality	<ul style="list-style-type: none"> *Check for honeycomb & overall. *Shuttering should be such that height of drop of concrete is restricted to 1.5 m otherwise use tremie method. * For slab, plate vibrator has to be used. 	

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4	Curing Quality	Whether date of casting mentioned & curing being attended	
5	Plinth beams Level	Whether plinth beam is at level given in the structural drg	
6	Plinth beam in Toilet Block	Layout should be as per the latest drg.	
7	Plinth beam for CB wall & window wall in Hostel	Layout should be as per the latest drg.	
8	Stair flight thickness	Minimum of 185 mm	
9	Reinforcements	*Whether reinforcements are as per the vetted drgs? * First ring in beam near column should be within 50 mm. *Avoid laps near joint and lapping shall not be more than 50% at one location *Check reinf. & rings in confinement Zone. * Columns shall be casted leaving 200 mm gap from beam bottom. * Maintain proper cover * Cover Blocks- precast cover blocks of M35 and above shall be used to avoid crushing by steel	
10	Filling in Plinth	Filling to be done in layers well compacted at OMC.	
11	Brick Work	B/W at plinth, sill & coping shall be brick on edge. B/W in Parapet coping will be slightly tilted inward.	
12	Half brick work	Every third course shall have bars as per MOU	
13	Check for size of Flag Hoisting Platform	Size to be as per the latest drawing.	
14	Check for rear wall of ramp	Openings as much as can be made.	
15	Earth Filling & Compaction		
Site Logistic			
1	Availability of Electric Connection	Whether available?	
2	Availability of Tube well	Whether available?	
3	Approach to School	Whether available?	
Overall Workmanship			
1	RCC Foundation		
2	RCC Column/Slab/Beam		
3	Brick Work		
4	Protection Work		
5	Plastering		
6	Plumbing		
7	Flooring		
8	Doors/windows		
9	External & Internal painting		


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10	Cladding		
11	Road work		
12	Electrical Layout		
	NESTS Technical Consultant to comment on overall quality and workmanship		
1	Suggestions to improvise quality, process, progress, etc		

Signature

PSU Engr. With Designation

Name

Date

Signature

NESTS Technical Consultant

Name

Date



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Quality Assurance & Quality Control Laboratory Test Program

A sample QA QC Lab test program is presented below, however, the testing program shall be as per the approved Project Quality Plan agreed between the Client, PMC and the Contracting agency.

Sr. No.	Material	Tests to be carried out	Reference I. S. Code	External/Site Lab Testing Frequency	TPI's Role	Code of Confirmation.
1.	Borrowed Soil, Natural Soil	<ul style="list-style-type: none"> MDD OMC Liquid Limit Plastic Limit Plasticity Index 	<ul style="list-style-type: none"> IS: 2720 	<ul style="list-style-type: none"> Once per Source 	<ul style="list-style-type: none"> Review test reports 	IS: 2720
2.	Compacted Earth	<ul style="list-style-type: none"> FDD 	<ul style="list-style-type: none"> IS: 2720 	<ul style="list-style-type: none"> Per 250 Sqm. Per layer 	<ul style="list-style-type: none"> Review test reports Randomly Witness 	IS: 2720/CPWD
3.	Cement (PPC)	Physical Tests <ul style="list-style-type: none"> Initial Setting time Final Setting Time Compressive Strength Fineness Soundness Consistency 	<ul style="list-style-type: none"> IS: 4031 	<ul style="list-style-type: none"> Submission of MTC Per source of Brand Per Lot Per 50 Tonnes or part thereof 	<ul style="list-style-type: none"> Review of MTC & Test reports 	IS: 1489
		Chemical Tests <ul style="list-style-type: none"> % Insoluble Residue % magnesia % Sulphuric Anhydride % Loss on ignition Chloride 	<ul style="list-style-type: none"> IS: 4032 	<ul style="list-style-type: none"> Submission of MTC Per Source of Brand 	<ul style="list-style-type: none"> Review of MTC & Test Reports 	IS: 1489
4.	Coarse Aggregate	Percentage of Soft or deleterious material	<ul style="list-style-type: none"> IS: 2386 	Once per Month Per Source	<ul style="list-style-type: none"> Review test reports Random Witness 	IS 383:2016
		Particle Size		Per 40 Cum. Per Source.		

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		Water Absorption		Per Month		
		Moisture Content		Per Day		
		Specific Gravity		Per Source		
				Per Month		
		Bulk Density		Per Source		
				Per Month		
		Aggregate Crushing Strength/10% fine Value		Per 40 Cum.		
		Aggregate Impact Value		Per Source		
				Per 40 Cum.		
				Per Source		
		Combined Flakiness & Elongation Test		Per Source		
		Soundness Test		Per Month		
				Per Source		
		Alkali Aggregate Reactivity		Per Source		



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Sr. No.	Material	Tests to be carried out	Reference I. S. Code	Testing Frequency	TPI's Role	Code of Confirmation.
5.	Fine Aggregate	Organic Impurities	• IS: 2386	Per Source	<ul style="list-style-type: none"> Review test reports Randomly Witness 	IS 383:2016
		Material Finer than 75 μ Sieve		Per 20 m ³ or part thereof		
		Sieve Analysis		Per Source		
		Bulking of Sand (only River Sand)		Per 20 m ³ or part thereof		
		Water Absorption		Per 40 m ³ receiving		
		Moisture Content		Per 20 m ³ receiving		
6.	Construction Water	pH Value.	IS 3025	Per Month	<ul style="list-style-type: none"> Review test reports 	IS: 456-2000
		Limits of Acidity Limits of Alkalinity Percentage of Solids a) Chlorides b) Suspended Matter c) Sulphates d) Inorganic Solids e) Organic Solids		Each Source Every 3 month		
7.	Reinforced cement concrete (Design Mix & Ready mix)	Slump Test Cube Test	Appendix 'D' of Chapter 4 CPWD Spec IS 516	Per Day Per 50 cum of Concrete As per IS-456	As per Design Mix	IS : 456-2000
8.	Autoclaved cellular Aerated concrete blocks	Dimensional Tolerance	<ul style="list-style-type: none"> IS:6441 (part-1) 1972 (RA-2017) IS: 3346-1980 	<ul style="list-style-type: none"> Per source Per brand Per 10000 bricks 	<ul style="list-style-type: none"> Review of test report and MTC. 	IS: 2185 Part 3-2015
		Compressive Strength				
		Density				
		Thermal Conductivity				

		Drying Shrinkage	(RA-2017)			
9.	Reinforcement Steel	Physical Test	IS: 1786:2008 (RA-2013) IS:1608(part-1) 2018 IS:1599:2012 (RA2017)	i)Under 10mm dia one sample for each 25 tonne or part thereof ii)10mm to 16mm dia one sample for each 35 tonnes iii)over 16mm dia one sample for each 45 tonne	Review MTC & test reports	IS : 1786-2013
		Chemical Test		Per Brand/Source Per Diameter.		
			Chemical test ASTM-E415:2017			
10.	Bricks	Dimensional Tolerance	IS:3495(part-2) 1992 (RA2016)	Per Brand. >=2000 20 Bricks 2001-10000 40 Bricks 10001-35000 60 Bricks 35001-50000 80 Bricks	Review of Test reports Randomly Witness	IS : 1077-1992 (RA 2016)
		Compressive Strength		Per Brand. >=2000 5 Bricks		



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		Water Absorption	IS:3495(part-1) 1992 (RA2016)	2001-10000 5 Bricks 10001-35000 10 Bricks 35001-50000 15 Bricks		
		Efflorescence	IS:3495(part-3) 1992 (RA2016)			
11.	Structural Steel (Beam, Column, Channel & Angle Sections & Plates)	Tensile Strength	IS1599:2012(RA 2017)	<ul style="list-style-type: none"> To be Procured from approved make Submission of MTC Once Per 20 MT. 	<ul style="list-style-type: none"> Review MTC & test reports 	IS: 2062-2011 IS:808- 1989(RA 2014) IS:1852-1985(RA 2013)
		Bend Test				
12.	Structural Steel (Hollow Sections)	Tensile Strength	IS 1608	<ul style="list-style-type: none"> To be Procured from approved make Submission of MTC Once Per 8 MT. 	<ul style="list-style-type: none"> Review MTC & test reports 	IS: 4923-2017
		Bend Test	IS 2329			
		Flattening Test	IS 2328			
13.	Anti Termite	All tests as per IS : 8944-2005	IS: 8944 IS:6940 IS:1448 IS:8963	<ul style="list-style-type: none"> To be procured from approved brand Submission of MTC Per Brand 	<ul style="list-style-type: none"> Review MTC & test reports 	IS: 8944-2005
14.	EPDM	<ul style="list-style-type: none"> Thickness Unit Weight Tensile Strength Elongation % Water Absorption Tearing resistance UV Resistance Minimum service temperature Maximum service temperature 	ASTM: D412 ASTM: D471 ASTM: D624 ASTM: D1204 ASTM: D2240 ASTM: E154	<ul style="list-style-type: none"> To be procured from approved brand. Submission of MTC Per Brand Per 1000 Sqm. 	<ul style="list-style-type: none"> Review MTC & Test reports 	ASTM: D412 ASTM: D471 ASTM: D624 ASTM: D1204 ASTM: D2240 ASTM: E154
15.	Admixture	<ul style="list-style-type: none"> Dry Material Content Ash content Relative Density 	IS: 9103-1999	<ul style="list-style-type: none"> To be procured from approved brand Submission of MTC Per 5 MT. 	<ul style="list-style-type: none"> Review of test reports & MTC 	IS: 9103-1999

		<ul style="list-style-type: none"> Chloride content pH 				
16.	Glazed Tiles/ Vitrified tiles	<ul style="list-style-type: none"> All test as per IS : 15622-2006 Water absorption Modulus of rupture Scratch hardness Crazing resistance 	<ul style="list-style-type: none"> IS: 13630part-1 & part-15 2006 (RA-2017) 	<ul style="list-style-type: none"> Per Batch Per 3000 Nos. To be procured from approved manufacturer 	<ul style="list-style-type: none"> Review of test reports 	IS: 15622-2006
17.	Marble	<ul style="list-style-type: none"> Moisture Absorption Hardness Specific Gravity 	IS: 1122-1974 IS: 1124-1974	<ul style="list-style-type: none"> Per source Per 100 Sqm. or part thereof 	<ul style="list-style-type: none"> Review of test reports 	IS : 1130-1969
18.	Granite	<ul style="list-style-type: none"> Moisture Content Water Absorption Hardness Specific Gravity 	IS: 13030-1991 IS: 1124-1972 IS: 1122-1974	<ul style="list-style-type: none"> Per source per 100 Sqm or part thereof 	<ul style="list-style-type: none"> Review of test reports 	IS-14223-1995 (Part-1)
19.	Kota Stone	<ul style="list-style-type: none"> Water Absorption Transverses Strength Durability 	IS: 1124-1974 IS: 1121 IS: 1126-2013	<ul style="list-style-type: none"> Per source 100 Sqm or part thereof 	<ul style="list-style-type: none"> Review of test reports 	IS: 1128-1974
20.	Sand Stone	<ul style="list-style-type: none"> Water Absorption Transverses Strength Resistance to wear Durability 	IS: 1124 IS: 1121 IS: 1706-1974 IS: 1126-2013	<ul style="list-style-type: none"> Per source 100 Sqm or part thereof 	<ul style="list-style-type: none"> Review of test reports 	IS: 3622-1977

21.	Cement concrete tiles	<ul style="list-style-type: none"> Dimension Water Absorption Wet Transverse Strength Resistance to wear 	IS:13801-2013 IS:1237-2012	<ul style="list-style-type: none"> Per Brand Per 1000 Sqm. 	<ul style="list-style-type: none"> Review of test reports 	IS: 13801-2013
22.	Concrete Paver Blocks	<ul style="list-style-type: none"> Dimension Water absorption Compressive strength Abrasion resistance 	IS: 15658-2006 RA-2011 IS: 15658-2006 RA-2011	<ul style="list-style-type: none"> Per Brand Per 10000 nos 	<ul style="list-style-type: none"> Review of test report 	IS: 15658-2006
23.	Wood	<ul style="list-style-type: none"> Moisture content 	As per CPWD specifications	<ul style="list-style-type: none"> Per Source Per 1 Cum or part thereof 	<ul style="list-style-type: none"> Review of Test reports 	As per CPWD specifications
24.	Aluminum Section	<ul style="list-style-type: none"> Thickness of anodic / powder coating 0.2% proof stress, Tensile strength Elongation Chemical Composition 	IS:504-1963 IS:1608-2005(part-1)2018	<ul style="list-style-type: none"> To be Procured from approved brand Per Brand Per Section Per 5 MT 	<ul style="list-style-type: none"> Review of Test Reports and MTC 	IS: 733-1983 IS: 1285-2002 IS: 6477-1983 IS: 2673-2002
25.	Gypsum Board	<ul style="list-style-type: none"> Transverse strength 	IS: 2542-1978	<ul style="list-style-type: none"> To be procured from approved brand. Once per 1000 Sqm. 	<ul style="list-style-type: none"> Review of test reports and MTC 	IS: 2095-2011



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Sr. No.	Material	Tests to be carried out	Reference I. S. Code	Testing Frequency	TPI's Role	Code of Confirmation.
26.	Granular sub base	<ul style="list-style-type: none"> Gradation Combined Flakiness & Elongation Index Aggregate Impact Value/10% fine value /Los Angles Abrasion Test 	IS : 2386-1963 IS: 383-2016 BIS: 812 IS 2720	<ul style="list-style-type: none"> Per 100 Cum Per Source 	<ul style="list-style-type: none"> Review of Test reports Randomly witness 	As per CPWD specifications/ IRC/MoRTH
		<ul style="list-style-type: none"> Water absorption CBR Liquid Limit Plastic Limit MDD & OMC Deleterious Material 		<ul style="list-style-type: none"> Per Source Per 200 Cum 	<ul style="list-style-type: none"> Review of Test reports Randomly witness 	
		<ul style="list-style-type: none"> Density of Compacted Layer Moisture Content 		<ul style="list-style-type: none"> Per Source 	<ul style="list-style-type: none"> Review of Test Report 	
				<ul style="list-style-type: none"> Per 500 sq. m 	<ul style="list-style-type: none"> Review of Test reports Randomly witness 	



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Sr. No.	Material	Tests to be carried out	Reference I. S. Code	Testing Frequency	TPT's Role	Code of Confirmation.
27.	Wet Mix Macadam	<ul style="list-style-type: none"> Gradation Combined Flakiness & Elongation Index Aggregate Impact Value/10% fine value /Los Angles Abrasion Test 	IS : 2386-1963 IS: 383-2016 BIS: 812	<ul style="list-style-type: none"> Per 100 Cum Per Source 	<ul style="list-style-type: none"> Review of Test reports Randomly witness 	As per CPWD specifications/ IRC/MoRTH
				<ul style="list-style-type: none"> Per Source Per 200 Cum 	<ul style="list-style-type: none"> Review of Test reports Randomly witness 	
		<ul style="list-style-type: none"> Water absorption Liquid Limit Plastic Limit MDD & OMC 	IS 2720	<ul style="list-style-type: none"> Per Source 	<ul style="list-style-type: none"> Review of Test Report 	
		<ul style="list-style-type: none"> Density of Compacted Layer Moisture Content 		<ul style="list-style-type: none"> Per 500 sq. m 	<ul style="list-style-type: none"> Review of Test reports Randomly witness 	



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Sr. No.	Material	Tests to be carried out	Reference I. S. Code	Testing Frequency	TPI's Role	Code of Confirmation.
28.	Bitumen	<ul style="list-style-type: none"> Penetration at 25°C Softening Point Absolute Viscosity at 60°C Kinematic Viscosity at 135 °C Flash Point Solubility in trichloroethylene Tests on residue from thin film oven test <ul style="list-style-type: none"> Viscosity Ratio at 60°C Ductility at 25°C 	<ul style="list-style-type: none"> IS 1203 IS 1205 IS 1206 IS 1206 IS 1448 IS 1216 IS 1206 IS 1208 	Upto 50 container - 3 Samples 51- 150 “ “ - 5 Samples 151-500 “ “ - 7 Samples 501-above “ “ - 10 Samples Upto 50 container - 3 Samples (Combined to form 1 Sample) 51- 150 “ “ - 5 Samples (Combined to form 1 Sample) 151-500 “ “ - 7 Samples (Combined to form 1 Sample) 501-above “ “ - 10 Samples (Combined to form 1 Sample)	<ul style="list-style-type: none"> Review of Test reports Review of Test reports 	IS 73-2013
29.	Bitumen Penetration Macadam/ Premix Carpet	<ul style="list-style-type: none"> Binder Aggregate Impact Value/Los Angles Abrasion Test Combined Flakiness & Elongation Test Grading of Aggregate Stripping Value 	<ul style="list-style-type: none"> IS 73 IS 2386 IS 6241 	As per IS 73 <ul style="list-style-type: none"> Per 100 cum Per Source Two Test Per Day Per Plant <ul style="list-style-type: none"> Per 100 cum Per Source 	<ul style="list-style-type: none"> Review of Test reports Random Witness 	IS 73-2013 As per CPWD Specs/MoRTH



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Sr. No.	Material	Tests to be carried out	Reference I. S. Code	Testing Frequency	TPI's Role	Code of Confirmation.
30.	Concrete Pavement (Tremix)	<ul style="list-style-type: none"> Flexural Strength 	IS 526	<ul style="list-style-type: none"> One test consisting of 8 specimens for 30 cum of Concrete. 	<ul style="list-style-type: none"> Review of Test reports Witness 	As per CPWD Specs.
31.	Kerb stone	<ul style="list-style-type: none"> Dimension Water absorption Compressive strength Transverse Strength 	IS:1578:1984	<ul style="list-style-type: none"> To be procured from approved brand Submission of MTC Per 500 Nos. 	<ul style="list-style-type: none"> Review MTC & test reports 	IS: 5758-1984
32.	Aluminum Composite Panels	<ul style="list-style-type: none"> Panel Thickness Aluminum Thickness Unit Weight Deflection Temperature Compressive strength Tensile strength Water resistance Flexural strength 	Relevant IS Code and ASTM codes	<ul style="list-style-type: none"> To be procured from approved brand Submission of MTC Per 500 Sqm. 	<ul style="list-style-type: none"> Review MTC & test reports 	Relevant IS and ASTM codes
33.	Stainless steel (Steel tubular pipes)	<ul style="list-style-type: none"> Tensile Strength Yield Stress Elongation Mass per meter Chemical Composition 	ASTME 1086 :2014	<ul style="list-style-type: none"> To be procured from approved brand Submission of MTC Per brand Per 8 MT. 	<ul style="list-style-type: none"> Review MTC & test reports 	IS: 6911:1992



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AN ISO 9001 & 14001 COMPANY

TENDER DOCUMENT

TENDER No: WRO/CON/EMRS/867/335

FOR

Construction of Eklavya Model Residential School (EMRS) in Single- Phase comprise of school building, Boys hostel (240 students), Girls-hostel (240 students), Kitchen & Dinning block, 2 blocks of Type-III quarters including guest house (8+8 Nos), Type-II quarters (10 Nos), Principal Residence, Warden Residence (Boys & Girls), electrical provision, water supply and Sanitary installations, External sewerage system and Drainage facility, Campus development such as road, Compound wall (Civil, Electrical, Furniture & Kitchen Equipment) etc at Khedbrahma in Sabar Kantha District of Gujarat State.”

VOLUME- III

EXECUTING AGENCY

Engineering Projects (India) Limited

Western Regional Office: Mumbai

Tender Inviting Authority: ENGINEERING PROJECTS (INDIA) LIMITED, WESTERN REGIONAL OFFICE- MUMBAI

Name of Work: Construction of Eklavya Model Residential School (EMRS) in Single- Phase comprise of school building, Boys hostel (240 students), Girls-hostel (240 students), Kitchen & Dinning block, 2 blocks of Type-III quarters including guest house (8+8 Nos), Type-II quarters (10 Nos), Principal Residence, Warden Residence (Boys & Girls), electrical provision, water supply and Sanitary installations, External sewerage system and Drainage facility, Campus development such as road, Compound wall (Civil, Electrical, Furniture & Kitchen Equipment) etc at Khedbrahma in Sabar Kantha District of Gujarat State."

Contract No: WRO/CON/EMRS/867/335 Dtd 11.03.2024

Name of the Bidder/ Bidding Firm / Company :						
<div>PRICE SCHEDULE</div> <div>(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevent columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only)</div>						
NUMBER #	TEXT #	NUMBER #	TEXT #	NUMBER	NUMBER #	TEXT #
Sl. No.	Item Description	Quantity	Units	Estimated Cost (Including 18% GST) in Rs. P	TOTAL AMOUNT With Taxes (Including 18% GST) in Rs. P	TOTAL AMOUNT (Including 18% GST) In Words
1	2	3	4	5	6	7
1	EMRS-KHEDBRAHMA-GUJARAT					
1.01	Construction of Eklavya Model Residential School (EMRS) in Single- Phase comprise of school building, Boys hostel (240 students), Girls-hostel (240 students), Kitchen & Dinning block, 2 blocks of Type-III quarters including guest house (8+8 Nos), Type-II quarters (10 Nos), Principal Residence, Warden Residence (Boys & Girls), electrical provision, water supply and Sanitary installations, External sewerage system and Drainage facility, Campus development such as road, Compound wall etc etc at Nandod in Narmada District of Gujarat State."	1.000	Nos	34,79,62,823.00	34,79,62,823.00	INR Thirty-Four Crores Seventy-Nine Lakhs Sixty-Two Thousand Eight Hundred Twenty-Three Only
	NOTE: 1. Tenderer has to quote the percentage rates above / at par / below exclusive of all Taxes, Duties & GST.					
Total in Figures					34,79,62,823.00	INR Thirty-Four Crores Seventy-Nine Lakhs Sixty-Two Thousand Eight Hundred Twenty-Three Only
Quoted Rate in Figures			Select			
Quoted Rate in Words						

Cost Estimate (on DSR 2021/ Market rate basis) of Single Phase is

₹ 37,83,72,500

Name of work : Construction of Eklavya Model Residential School (EMRS) at Village - Khedbrahma District - Sabarkantha, Gujrat. (Single Phase)

SUMMARY SHEET

S.No	PARTICULARS	AMOUNT (IN RS)	
		DSR	NON DSR
CIVIL WORKS			
1	Earth Work	66,50,621.70	
2	Concrete Work	99,28,473.36	
3	Reinforced Cement Concrete	13,71,38,708.03	
4	Masonry Work	2,56,40,894.80	
5	Stone Work	42,65,639.20	
6	Cladding Work	50,52,104.25	
7	Wood & PVC Work	41,45,845.30	
8	Steel Work	1,27,29,391.47	
9	Flooring	2,06,03,115.08	
10	Roofing	3,40,706.25	
11	Finishing	2,54,49,846.45	
12	Aluminium Work	3,82,984.15	
13	Water Proofing	82,13,110.95	
14	Road Work	1,00,25,931.56	
15	Non-Schedule Items		31,26,566.00
TOTAL AMOUNT (DSR)		27,05,67,373	0
TOTAL AMOUNT (NON DSR)		0	31,26,566
	Add enhancemnet @ zero percent being cost considered at par with DSR 2021.	0.00	
GRAND TOTAL (CIVIL WORKS) (In Rs)		27,05,67,373.00	27,36,93,939.00
PLUMBING WORKS			
16	Sanitary Installations	25,29,383.53	4,64,738.40
17	Drainage Installations	3,81,047.40	12,69,415.10
18	Water supply Installations	21,74,640.75	15,262.25
19	External Sewage Drainage System	40,22,656.80	
20	External Storm Water Drainage System	24,56,789.73	
21	External Fresh Water Supply System	9,83,452.10	
22	Bore well	3,47,906.10	
TOTAL AMOUNT (DSR)		1,28,95,876.40	
TOTAL AMOUNT (NON DSR)			17,49,415.75
	Add enhancemnet @ zero percent being cost considered at par with DSR 2021.	0.00	
GRAND TOTAL (PLUMBING WORKS) (In Rs)			1,46,45,292.15
FIRE FIGHTING WORKS			
23	Piping & Valves	6,38,081.30	2,025.00
24	Fire Hydrant Accessories	1,56,150.00	
25	Fire Extinguishers & Miscellaneous Items		89,226.00
26	Fire Pumps & Accessories	3,13,341.00	1,04,967.00
TOTAL AMOUNT (DSR)		11,07,572.30	
TOTAL AMOUNT (NON DSR)			1,96,218.00
	Add enhancemnet @ zero percent being cost considered at par with DSR 2021.	0.00	
GRAND TOTAL (FIRE FIGHTING WORKS) (In Rs)			13,03,790.30
ELECTRICAL WORKS (Internal)			
27	Internal Wiring	87.79,234.00	

Cost Estimate (on DSR 2021/ Market rate basis) of Single Phase is

₹ 37,83,72,500

Name of work : Construction of Eklavya Model Residential School (EMRS) at Village - Khedbrahma District - Sabarkantha, Gujrat. (Single Phase)

SUMMARY SHEET

S.No	PARTICULARS	AMOUNT (IN RS)	
		DSR	NON DSR
CIVIL WORKS			
28	Distribution Boards & MCB's	12,09,164.00	17,556.00
29	Telephone, Television & Data System (socket,wiring & conduting only)	5,59,322.00	17,622.00
30	Light Fixtures & Fan	7,27,283.00	20,75,357.00
TOTAL AMOUNT (DSR)		1,12,75,003.00	
TOTAL AMOUNT (NON DSR)			21,10,535.00
	Add enhancemnet @ zero percent being cost considered at par with DSR 2021.	0.00	
GRAND TOTAL (ELECTRICAL WORKS INTERNAL) (In			1,33,85,538.00
ELECTRICAL WORKS (External)			
31	Transformer and HT Panel		11,80,113.00
32	LT Panel, Feeder Pillar and Capacitor Panels		13,56,362.00
33	LT Cables	8,48,811.00	18,49,495.00
34	HT Cables	45,294.00	1,21,000.00
35	Miscellaneous	9,277.00	19,903.00
36	Earthing	24,88,588.00	
37	Pole Erection	3,17,586.00	
38	External Lighting System	4,85,890.00	14,39,410.00
39	UPS - 10 kVA		2,25,052.00
40	Lightning Arrestor System for Transformer		11,904.00
41	Pumps		2,50,246.00
42	CCTV System	1,81,560.00	5,71,067.00
43	Lightning Conductor	3,61,529.00	
44	25 KVA DG Set and associated works		5,60,886.00
TOTAL AMOUNT (DSR)		47,38,535.00	
TOTAL AMOUNT (NON DSR)			75,85,438.00
	Add enhancemnet @ zero percent being cost considered at par with DSR 2021.	0.00	
GRAND TOTAL (ELECTRICAL WORKS EXTERNAL) (In			1,23,23,973.00
Equipment etc. for Kitchen & Pantry			
45	Equipment for Kitchen & Pantry, Kitchen ventilation system and Kitchen LPG system		24,26,216.00
TOTAL AMOUNT (DSR)		0	
TOTAL AMOUNT (NON DSR)			24,26,216.00
	Add enhancemnet @ zero percent being cost considered at par with DSR 2021.	0.00	
GRAND TOTAL (KITCHEN & PANTRY) (In Rs)			24,26,216.00
Furniture			

Cost Estimate (on DSR 2021/ Market rate basis) of Single Phase is		₹ 37,83,72,500	
Name of work : Construction of Eklavya Model Residential School (EMRS) at Village - Khedbrahma District - Sabarkantha, Gujrat. (Single Phase)			
SUMMARY SHEET			
S.No	PARTICULARS	AMOUNT (IN RS)	
		DSR	NON DSR
CIVIL WORKS			
46	Classroom dual desks, office table, 12-seater meeting table, library table, computer work station, open book shelf, glass door storage, sofa, steel bed, SS dining table, lab stool, executive chairs, metal locker, writing board etc.		1,24,91,050.00
TOTAL AMOUNT (DSR)		0	
TOTAL AMOUNT (NON DSR)			1,24,91,050.00
	Add enhancemnet @ zero percent being cost considered at par with DSR 2021.	0.00	
GRAND TOTAL (FURNITURE) (In Rs)			1,24,91,050.00
TOTAL (A with 12% GST) (In Rs)			33,02,69,798.45
		Base Cost without 12%	29,48,83,748.62
	Add Contingencies @ 1.5% on A		49,54,046.98
	Add ESI & EPF @ 4% on A		1,26,14,101.30
	Add PSU Consultancy Fee @ 3.42% on A1	(B)	1,00,85,024.20
	Add GST @ 18% on B		18,15,304.36
	GRAND TOTAL (in Rs.)	Gross Amount with	35,97,38,275.28
	GRAND TOTAL (in Rs.) say	say Rs.	35,97,38,300
		Total Amount with 18% GST using multiplying factor of (118/112) on A (in Rs) (C)	34,79,62,823.00
	Add Contingencies @ 1.5% on C		52,19,442.35
	Add ESI & EPF @ 4% on C		1,32,89,856.71
	Add PSU Consultancy Fee @ 3.42% on A1	(D)	1,00,85,024.20
	Add GST @ 18% on D		18,15,304.36
	GRAND TOTAL (in Rs.)	Gross Amount with 18% GST (in Rs)	37,83,72,450.61
	GRAND TOTAL (in Rs.) say	say Rs.	37,83,72,500

SCHEDULE OF QUANTITIES

Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat

ABSTRACT OF COST

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
		CIVIL WORKS				
1.0	2	Earth Work				
1.01	2.1	Earth work in surface excavation not exceeding 30 cm in depth but exceeding 1.5 m in width as well as 10 sqm on plan including getting out and disposal of excavated earth upto 50 m and lift upto 1.5 m, as directed by Engineer-in-Charge:		-		
	2.1.1	All kinds of soil	Cum	5,800.00	107.00	6,20,600.00
1.02	2.6	Earth work in excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50m and for all lift as directed by Engineer-in-charge.		-		
	2.6.1	All kinds of soil	Cum	7,636.65	149.00	11,37,860.85
				-		
1.03	2.7	Earth work in excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50m and lift upto 1.5m, as directed by Engineer-in-charge.		-		
	2.7.1	Ordinary Rock	Cum	-	412.95	-
	2.7.3	Hard rock (blasting prohibited)	Cum	-	1,184.30	-
				-		
1.04	2.8	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, 1 for all ift, including getting out the excavated soil and disposal of surplus excavated soil as directed within al lead of 50m.		-		
	2.8.1	All kinds of soil.	Cum	2,948.60	218.60	6,44,563.96
				-		
1.05	2.9	Excavation work by mechanical means (Hydraulic excavator)/ manual means in foundation trenches or drains (not exceeding 1.5m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift upto 1.5m, including getting out the excavated soil and disposal of surplus excavated soils as directed within a lead of 50m.		-		
	2.9.1	Ordinary Rock	Cum	1,027.00	523.50	5,37,634.50

SCHEDULE OF QUANTITIES						
Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat						
ABSTRACT OF COST						
S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
	2.9.3	Hard rock (blasting prohibited)	Cum	86.00	1,258.60	1,08,239.60
				-		
1.06	2.25	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead upto 50m and for all lift.	Cum	19,282.12	161.60	31,15,990.59
				-		
1.07	2.25 (a)	Excavating, supplying, stacking and filling of local earth (including royalty) by mechanical transport upto a lead of 5km also including ramming and watering of the earth in layers not exceeding 20cm in foundation trenches, plinth, sides of foundation etc. complete for all lift.	Cum	-	564.00	-
1.08	2.27	Supplying and filling in plinth with sand under floors, including watering, ramming, consolidating and dressing complete.	Cum	427.00	2,161.20	9,22,832.40
				-		
1.09	2.31	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth up to 30 cm measured at a height of 1 m above ground level and removal of rubbish upto a distance of 50m outside the periphery of the area cleared.	Sqm	13,553.00	14.50	1,96,518.50
1.10	2.36	Extra for levelling & neatly dressing of disposed soil completely as directed by Engineer-in-charge.	Cum	(8,261.00)	76.70	(6,33,618.70)
				-		
		Total of sub-head (1.0)			66,50,621.70	66,50,621.70
				-		
2.0	4	Concrete Work		-		
2.01	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :		-		
	4.1.8	1:4:8 (1 Cement : 4 coarse sand (zone-III) derived from natural sources : 8 graded stone aggregate 40 mm nominal size derived from natural sources)	Cum	81.00	5,789.60	4,68,957.60
	4.1.10	1:5:10 (1 cement : 5 coarse sand (zone-III) derived from natural sources: 10 graded stone aggregate 40 mm nominal size derived from natural sources)	Cum	1,005.10	6,050.65	60,81,508.32
	4.1.3	1:2:4 (1 Cement : 2 coarse sand (zone-III) : 4 graded stone aggregate 40 mm nominal size)	Cum	129.79	7,365.15	9,55,900.72
				-		

SCHEDULE OF QUANTITIES**Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat****ABSTRACT OF COST**

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
2.02	Derived from basic rates of DSR 2021	Providing and laying broken autoclaved aerated cement (AAC) blocks and/or bats (light weight, having density 550-650 kg/m ³) of nominal size 25mm to 65mm in the sunken portion of toilets upto floor five level all complete as per the direction of Engineer-in-charge.	Cum	195.00	2,488.20	4,85,199.00
2.03	4.2	Providing and laying cement concrete in retaining walls, return walls, walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window sills, fillets, sunken floor etc., up to floor five level, excluding the cost of centering, shuttering and finishing:		-		
	4.2.3	1:2:4 (1 Cement : 2 coarse sand (zone-III) derived from natural sources : 4 graded stone aggregate 20 mm nominal size derived from natural sources)	Cum	74.00	9,047.30	6,69,500.20
				-		
2.04	4.3	Centering and shuttering including strutting, propping etc. and removal of form work for :		-		
	4.3.1	Foundations, footings, bases for columns	Sqm	856.40	332.10	2,84,410.97
				-		
2.05	4.10	Providing and laying damp-proof course 40mm thick with cement concrete 1:2:4 (1 cement : 2 coarse sand (zone-III) derived from natural sources: 4 graded stone aggregate 12.5mm nominal size derived from natural sources)	Sqm	640.00	370.85	2,37,344.00
				-		
2.06	4.13	Providing & applying a coat of residual petroleum bitumen of grade of VG-10 of approved quality using 1.7kg per square metre on damp proof course after cleaning the surface with brushes and finally with a piece of cloth lightly soaked in kerosene oil.	Sqm	640.00	113.85	72,864.00
				-		
2.07	4.17	Making plinth protection 50mm thick of cement concrete 1:3:6 (1 cement : 3 coarse sand (zone-III) derived from natural sources : 6 graded stone aggregate 20 mm nominal size derived from natural sources) over 75mm thick bed of dry brick ballast 40 mm nominal size, well rammed and consolidated and grouted with fine sand, including necessary excavation, levelling & dressing & finishing the top smooth.	Sqm	987.00	681.65	6,72,788.55
				-		

SCHEDULE OF QUANTITIES						
Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat						
ABSTRACT OF COST						
S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
		Total of sub-head (2.0)			99,28,473.36	99,28,473.36
				-		
3.0	5	Reinforced Cement Concrete		-		
				-		
3.01	5.9	Centering and shuttering including strutting, propping etc. and removal of form for :		-		
	5.9.1	Foundations, footings, bases of columns, etc. for mass concrete	Sqm	2,522.00	332.10	8,37,556.20
	5.9.2	Walls (any thickness) including attached pilasters, butteresses, plinth and string courses etc.	Sqm	1,798.00	702.00	12,62,196.00
	5.9.3	Suspended floors, roofs, landings, balconies and access platform	Sqm	9,988.00	766.55	76,56,301.40
	5.9.4	Shelves (Cast in situ)	Sqm	235.00	766.55	1,80,139.25
	5.9.5	Lintels, beams, plinth beams, girders, bressumers and cantilevers	Sqm	14,125.50	608.35	85,93,247.93
	5.9.6	Columns, Pillars, Piers, Abutments, Posts and Struts	Sqm	8,694.00	804.25	69,92,149.50
	5.9.7	Stairs, (excluding landings) except spiral-staircases	Sqm	270.00	657.75	1,77,592.50
	5.9.14	Extra for shuttering in circular work(20% of respective centering and shuttering items)	Sqm	35.00	146.61	5,131.35
	5.9.15	Small lintels not exceeding 1.5 m clear span, moulding as in cornices, window sills, string courses, bands, copings, bed plates, anchor blocks and the like	Sqm	28.00	332.10	9,298.80
	5.9.16	Edges of slabs and breaks in floors and walls		-		
	5.9.16.1	Under 20 cms wide	Metre	580.00	181.90	1,05,502.00
	5.9.19	Weather shade, Chajjas, corbels etc., including edges	Sqm	1,109.00	814.95	9,03,779.55
				-		
3.02	5.11	Extra for additional height in centering, shuttering where ever required with adequate bracing, propping etc., including cost of de-shuttering and decentering at all levels, over a height of 3.5 m, for every additional height of 1 metre or part thereof (Plan area to be measured).		-		
	5.11.1	Suspended floors, roofs, landing, beams and balconies (Plan area to be measured)	Sqm	2,737.00	319.25	8,73,787.25

SCHEDULE OF QUANTITIES

Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat

ABSTRACT OF COST

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
3.03	5.16	Providing, hoisting and fixing above plinth level up to floor five level precast reinforced cement concrete in shelves, including setting in cement mortar 1:3 (1cement : 3 coarse sand), cost of required centering, shuttering and finishing with neat cement punning on exposed surfaces but , excluding the cost of reinforcement, with 1:1.5:3 (1 cement : 1.5 coarse sand(zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources).	Cum	50.00	18,038.25	9,01,912.50
	5.22	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.		-		
	5.22.6	Thermo-Mechanically Treated bars of grade Fe-500D or more.	kg	1,71,686.00	89.65	1,53,91,649.90
				-		
	5.22A	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete above plinth level.		-		
	5.22A.6	Thermo-Mechanically Treated bars of grade Fe-500D or more.	kg	4,61,973.00	89.65	4,14,15,879.45
				-		
	5.30	Add for plaster drip course/ groove in plastered surface or moulding to R.C.C. projections.	Metre	1,058.00	64.70	68,452.60
				-		
3.04	5.33	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge. (Note :- Cement content considered in this item is @ 330 kg/cum. Excess/ less cement used as per design mix is payable/recoverable separately).		-		
	5.33.1	All works upto plinth level				

SCHEDULE OF QUANTITIES

Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat

ABSTRACT OF COST

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
	5.33.1.1	Concrete of M25 grade with minimum cement content of 330 kg /cum	Cum	1,661.00	8,683.80	1,44,23,791.80
	5.33.1.2	Concrete of M30 grade with minimum cement content of 350 kg /cum		208.00	8,823.35	18,35,256.80
	5.33.2	All works above plinth level upto floor V level.				
	5.33.2.1	Concrete of M25 grade with minimum cement content of 330 kg /cum	Cum	3,389.00	8,964.75	3,03,81,537.75
	5.33.2.2	Concrete of M30 grade with minimum cement content of 350 kg /cum	Cum	171.00	9,106.35	15,57,185.85
3.05	Derived from DSR 2021 basic rates	Deduct for providing M-20 grade concrete instead of M-25 grade machine batched and machine mixed design mix for reinforced cement concrete work (Note:- Cement content considered in M-25 and M-20 is @ 330 kg/cum and 300 kg/cum respectively) (this item is applicable for RCC in grade slab only)	Cum	255.00	(229.85)	(58,611.75)
3.06	5.35	Add for using extra cement in the items of design mix over and above the specified cement content therein.	quintal	1,681.61	688.45	11,57,704.40
				-		
3.07	5.43	Providing and fixing in position Stainless steel Grade 304 plate-1.0 mm thick as per design for expansion joints.		-		
	5.43.1	200 mm wide.	Metre	119.00	747.25	88,922.75
				-		
3.08	5.44	Providing and fixing of expansion joint system related with floor location as per drawings and direction of Engineer-In-Charge. The joints system will be of extruded aluminum base members, self aligning / self centering arrangement and support plates etc. as per ASTM B221-02. The system shall be such that it provides floor to floor /floor to wall expansion control system for various vertical location in load application areas that accommodates multi directional seismic movement without stress to it's components. System shall consist of metal profiles with a universal aluminum base member designed to accommodate various project conditions and		-		

SCHEDULE OF QUANTITIES**Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat****ABSTRACT OF COST**

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
		The cover plate shall be designed of width and thickness required to satisfy projects movement and loading requirements and secured to base members by utilizing manufacturer's pre-engineered self- centering arrangement that freely rotates / moves in all directions. The Self - centering arrangement shall exhibit circular sphere ends that lock and slide inside the corresponding aluminum extrusion cavity to allow freedom of movement and flexure in all directions including vertical displacement. Provision of Moisture Barrier Membrane in the Joint System to have watertight joint is mandatory requirement all as per the manufactures design and as approved by Engineer -in-Charge. (Material shall confirm to ASTM 6063).		-		
	5.44.1	Floor Joint of 100 mm gap	Metre	119.00	5,800.15	6,90,217.85
				-		
3.09	5.45	Providing and fixing of expansion joint system related with wall joint (internal/ external) location as per drawings and direction of Engineer-In- Charge. The joints shall be of extruded aluminum base members, self aligning / centering arrangement and support plates as per ASTM B221- 02. The material shall be such that it provides an Expansion Joints System suitable for vertical wall to wall/ wall to corner application, both new and existing construction in office Buildings & complexes with no slipping down tendency amongst the components of the Joint System. The Joint System shall utilize light weight aluminum profiles exhibiting minimal exposed aluminum surfaces mechanically snap locking the multicellular to facilitate movement. (Material shall confirm to ASTM 6063.)		-		
	5.45.1	Wall Joint of 100 mm gap	Metre	251.00	4,835.50	12,13,710.50
				-		

SCHEDULE OF QUANTITIES

Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat

ABSTRACT OF COST

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
3.10	5.46	Providing and fixing of expansion joint system of approved make and manufactures for various roof locations as per approved drawings and direction of Engineer-In-Charge. The joints shall be of extruded aluminum base members with, self aligning and self centering arrangement support plates asper ASTM B221-02. The system shall be such that it provides watertight roof to roof/roof to corner joint cover expansion control system that is capable of accommodating multidirectional seismic movement without stress to its components. System shall consist of metal profile that incorporates a universal aluminum base member designed to accommodate various project conditions and roof treatments.		-		
		The cover plate shall be designed of width and thickness required to satisfy movement and loading requirements and secured to base members by utilizing manufacturer's preengineered self-centering arrangement that freely rotates / moves in all directions. The Self centering arrangement shall exhibit circular sphere ends that lock and slide inside the corresponding aluminum extrusion cavity to allow freedom of movement and flexure in all directions including vertical displacement. The Joint System shall resists damage or deterioration from the impact of falling ice, exposure to UV, airborne contaminants and occasional foot traffic from maintenance personnel. Provision of Moisture Barrier Membrane in the Joint System to have water tight joint is mandatory requirement. (Material shall confirm to ASTM 6063).		-		
	5.46.1	Roof Joint of 100 mm gap	Metre	87.00	5,424.20	4,71,905.40
				-		
3.11	19.19	Providing and fixing in position pre-cast R.C.C. manhole cover and frame of required shape and approved quality		-		
	19.19.1	LD-2.5		-		
	19.19.1.1	Rectangular shape 600x450mm internal dimensions	Each	2.00	1,255.25	2,510.50
				-		
		Total of sub-head (3.0)		13,71,38,708.03		13,71,38,708.03
				-		
4.0	6	Masonry Work		-		
				-		

SCHEDULE OF QUANTITIES

Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat

ABSTRACT OF COST

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
4.01	6.1	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth in:		-		
	6.1.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	Cum	595.00	6,046.20	35,97,489.00
				-		
4.02	6.4	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and sizes in :		-		
	6.4.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	Cum	526.00	8,288.35	43,59,672.10
				-		
4.03	6.38	Providing and laying Autoclaved Aerated concrete (AAC) blocks masonry 100 mm/ 125 mm thick with Grade-I AAC blocks of density 551 to 650 kg/ cum conforming to IS: 2185 (Part 3) in super structure above plinth level up to floor V level in cement mortar 1:4 (1 cement : 4 coarse sand). The rate includes providing and placing in position 2 Nos 6 mm dia M.S. bars at every third course of masonry work.	Cum	220.00	8,890.80	19,55,976.00
4.04	6.47	Providing and laying Autoclaved Aerated concrete (AAC) blocks masonry 150mm to 300mm thick AAC with Grade-I blocks of density 551 to 650 kg/ cum conforming to IS: 2185 (Part 3) in super structure above plinth level up to floor V level with RCC band at sill level and lintel level with approved block laying polymer modified adhesive mortar all complete as per direction of Engineer-in-Charge. (The payment of RCC band and reinforcement shall be made for seperately).	Cum	2,019.00	7,213.50	1,45,64,056.50
				-		
4.05	6.13	Half brick masonry with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level.		-		
	6.13.2	Cement mortar 1:4 (1 cement :4 coarse sand)	Sqm	1,053.60	1,018.05	10,72,617.48
				-		
4.06	6.15	Extra for providing and placing in position 2 Nos 6mm dia. M.S. bars at every third course of half brick masonry.	Sqm	1,053.60	86.45	91,083.72
				-		
		Total of sub-head (4.0)		2,56,40,894.80		2,56,40,894.80
5.0		Stone Work				

SCHEDULE OF QUANTITIES

Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat

ABSTRACT OF COST

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
5.01	7.1	Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) upto plinth level with :				
	7.1.1	Cement mortar 1:6 (1 cement : 6 coarse sand)	Cum	564.00	6,653.45	37,52,545.80
5.02	7.2	Random rubble masonry with hard stone in superstructure above plinth level and upto floor five level, including leveling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) at sindow sills, ceiling level and the like.				
	7.2.1	Cement mortar 1:6 (1 cement : 6 coarse sand)	Cum	62.00	8,275.70	5,13,093.40
		Total of sub-head (5.0)				42,65,639.20
				-		
6.0	8	Cladding Work		-		
				-		
6.01	8.2	Providing and fixing 18 mm thick gang saw cut, mirror polished, premoulded and prepolished, machine cut for kitchen platforms, vanity counters, window sills, facias and similar locations of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish etc. complete at all levels.		-		
	8.2.2	Granite of any colour and shade		-		
	8.2.2.1	Area of slab upto 0.50 sqm	Sqm	31.00	4,679.35	1,45,059.85
	8.2.2.2	Area of slab over 0.50 sqm	Sqm	218.00	4,425.35	9,64,726.30
				-		
				-		
6.02	8.4	Extra for fixing marble /granite stone, over and above corresponding basic item, in facia and drops of width upto 150 mm with epoxy resin based adhesive, including cleaning etc. complete.	Metre	221.00	475.55	1,05,096.55
				-		

SCHEDULE OF QUANTITIES

Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat

ABSTRACT OF COST

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
6.03	8.5	Extra for providing opening of required size & shape for wash basin/ kitchen sink in kitchen platform, vanity counter and similar location in marble/ Granite/ stone work, including necessary holes for pillar taps etc. including moulding, rubbing and polishing of cut edges etc. complete.	Each	53.00	808.15	42,831.95
				-		
				-		
6.04	8.31	Providing and fixing Ist quality ceramic glazed wall tiles conforming to IS: 15622 (thickness to be specified by the manufacturer), of approved make, in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge, in skirting, risers of steps and dados, over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm, including pointing in white cement mixed with pigment of matching shade complete.	Sqm	3,568.00	1,063.45	37,94,389.60
				-		
		Total of sub-head (6.0)		50,52,104.25		50,52,104.25
				-		
7.0	9	Wood Work & PVC Work		-		
7.01	9.12	Extra for providing frosted glass panes 4 mm thick instead of ordinary float glass panes 4 mm thick in doors, windows and clerestory window shutters. (Area of opening for glass panes excluding portion inside rebate shall be measured).	Sqm	146.00	148.50	21,681.00
				-		
7.02	9.21	Providing and fixing ISI marked flush door shutters conforming to IS : 2202 (Part I) non-decorative type, core of block board construction with frame of 1st class hard wood and well matched commercial 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters:		-		
	9.21.1	35 mm thick including ISI marked Stainless Steel butt hinges with necessary screws	Sqm	528.00	2,015.75	10,64,316.00
				-		
7.03	9.23	Extra for providing lipping with 2nd class teak wood battens 25 mm minimum depth on all edges of flush door shutters (over all area of door shutter to be measured).	Sqm	529.00	401.40	2,12,340.60
				-		
7.04	9.26	Extra for cutting rebate in flush door shutters (Total area of the shutter to be measured).	Sqm	5.00	93.65	468.25
				-		

SCHEDULE OF QUANTITIES

Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat

ABSTRACT OF COST

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
7.05	9.47	Providing and fixing nickel plated M.S. pipe curtain rods with nickel plated brackets :		-		
	9.47.2	25 mm dia (heavy type)	Metre	1,055.00	159.35	1,68,114.25
				-		
7.06	9.48	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. including priming coat with approved steel primer all complete		-		
	9.48.1	Fixed to steel windows by welding	kg	8,907.00	181.00	16,12,167.00
				-		
7.07	9.24	Extra for providing vision panel not exceeding 0.1 sqm in all type of flush doors (cost of glass excluded) (overall area of door shutter to be measured):		-		
	9.24.1	Rectangular or square	Sqm	477.00	173.95	82,974.15
				-		
7.08	9.55	Deduction for not providing and fixing ISI marked M.S. pressed butt hinges bright finished with necessary screws etc. complete :		-		
	9.55.2	100x58x1.90 mm	Each	2,699.00	(39.05)	(1,05,395.95)
				-		
7.09	9.96	Providing and fixing aluminium sliding door bolts, ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868), transparent or dyed to required colour or shade, with nuts and screws etc. complete :		-		
	9.96.1	300x16 mm	Each	4.00	260.30	1,041.20
	9.96.2	250x16 mm	Each	569.00	234.90	1,33,658.10
7.10	9.68	Providing and fixing oxidised M.S. casement stays (straight peg type) with necessary screws etc. complete.		-		
	9.68.1	300 mm weighing not less than 200 gms	Each	3,162.00	59.25	1,87,348.50
				-		
				-		
7.11	9.84	Providing and fixing aluminium extruded section body tubular type universal hydraulic door closer (having brand logo with ISI, IS : 3564, embossed on the body, door weight upto 36 kg to 80 kg and door width from 701 mm to 1000 mm), with double speed adjustment with necessary accessories and screws etc. complete.	Each	70.00	856.30	59,941.00
				-		
7.12	9.85	Providing and fixing bright finished brass casement window fastener with necessary screws etc. complete.	Each	3,162.00	76.30	2,41,260.60
				-		
				-		

SCHEDULE OF QUANTITIES

Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat

ABSTRACT OF COST

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
7.13	9.97	Providing and fixing aluminium tower bolts, ISI marked, anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade, with necessary screws etc. complete :		-		
	9.97.1	300x10 mm	Each	581.00	117.65	68,354.65
	9.97.4	150x10 mm	Each	489.00	75.55	36,943.95
				-		
7.14	9.100	Providing and fixing aluminium handles, ISI marked, anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade, with necessary screws etc. complete :		-		
	9.100.1	125 mm	Each	658.00	60.05	39,512.90
	9.100.2	100 mm	Each	532.00	53.25	28,329.00
				-		
7.15	9.101	Providing and fixing aluminium hanging floor door stopper, ISI marked, anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade, with necessary screws etc. complete.		-		
	9.101.2	Twin rubber stopper	Each	342.00	62.25	21,289.50
				-		
7.16	9.154	Providing and fixing frame work for partitions/ wall lining etc. made of 50x50x1.6 mm hollow MS tube, placed along the walls, ceiling and floor in a grid pattern with spacing @ 60 cm centre to centre both ways (vertically & horizontally) or at required spacing near opening, with necessary welding at junctions and fixing the frame to wall/ ceiling/ floors with steel dash fasteners of 8 mm dia, 75 mm long bolt, including making provision for opening for doors, windows, electrical conduits, switch boards etc., including providing with two coats of approved steel primer etc. complete, all as per direction of Engineer-in-charge.	Kg	2,036.00	133.35	2,71,500.60
		Total of sub-head (7.0)		41,45,845.30		41,45,845.30
				-		
8.0	10	Steel Work		-		
				-		
8.01	10.3	Providing and fixing in position collapsible steel shutters with vertical channels 20x10x2 mm and braced with flat iron diagonals 20x5 mm size, with top and bottom rail of T-iron 40x40x6 mm, with 40 mm dia steel pulleys, complete with bolts, nuts, locking arrangement, stoppers, handles, including applying a priming coat of approved steel primer.	Sqm	86.00	9,397.35	8,08,172.10

SCHEDULE OF QUANTITIES**Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat****ABSTRACT OF COST**

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
				-		
8.02	10.6	Supplying and fixing rolling shutters of approved make, made of required size M.S. laths, interlocked together through their entire length and jointed together at the end by end locks, mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete, including the cost of providing and fixing necessary 27.5 cm long wire springs manufactured from high tensile steel wire of adequate strength conforming to IS: 4454 - part 1 and M.S. top cover of required thickness for rolling shutters.				
	10.6.1	80x1.25 mm M.S. laths with 1.25 mm thick top cover	Sqm	27.00	3,008.80	81,237.60
8.03	10.7	Providing and fixing ball bearing for rolling shutters.	Each	3.00	424.20	1,272.60
8.04	10.8	Extra for providing mechanical device chain and crank operation for operating rolling		-		
	10.8.1	Exceeding 10.00 sqm and upto 16.80 sqm in the area	Sqm	15.00	1,108.70	16,630.50
8.05	10.11.2(M)	Providing and fixing factory made M.S. Tubular shutter for doors, windows and ventilators side /top /centre hung, with Z / T and like tubular profile of required size, made of 1.60mm thick M.S. sheet, joints mitred and flash butt welded, including providing and fixing 95mm long ball type hinges of diameter 16mm, including priming coat of approved steel primer, but excluding the cost of other fittings, all complete as per approved design (sectional weight of only M.S. tubular profile shall be measured for payment).	kg	16,301.93	109.00	17,76,910.37
8.06	10.12 (Modified)	Providing and fixing steel beading of size 10 x 10 x 1.6 mm (box type), approved shape and section with screws in steel doors, windows, ventilators, composite units and M.S. tubular frame etc.	Metre	1,155.00	45.42	52,460.10
				-	.	
8.07	10.13	Providing and fixing T-iron frames for doors of mild steel Tee-sections, joints mitred and welded, including fixing of necessary butt hinges and screws and applying a priming coat of approved steel primer.		-		

SCHEDULE OF QUANTITIES

Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat

ABSTRACT OF COST

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
	10.13.1	Fixing with 15x3 mm lugs 10 cm long embedded in cement concrete block 15x10x10 cm of C.C. 1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size).	kg	10,513.00	114.65	12,05,315.45
8.08	10.15	Providing and fixing M.S. Tubular frames for doors, windows, ventilators and cupboard with rectangular/ L-Type sections, made of 1.60 mm thick M.S. Sheet, joints mitred, welded and grinded finish, with profiles of required size, including fixing of necessary butt hinges and screws and applying a priming coat of approved steel primer.				
	10.15.1	Fixing with 15x3 mm lugs 10 cm long embedded in cement concrete block 15x10x10 cm of C.C. 1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size).	kg	16,269.00	146.55	23,84,221.95
				-		
8.09	10.16	Steel work in built up tubular (round, square or rectangular hollow tubes etc.) trusses etc., including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc. complete.		-		
	10.16.1	Hot finished welded type tubes	kg	8,551.00	154.90	13,24,549.90
				-		
8.10	10.25	Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.		-		
	10.25.2	In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works	kg	2,137.00	142.30	3,04,095.10
	10.25.1	In stringers, treads, landings etc. of stair cases, including use of chequered plate wherever required, all complete	kg	1,627.00	102.25	1,66,360.75
8.11	10.26	Providing and fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railing, staircase railing and similar works, including applying priming coat of approved steel primer.		-		
	10.26.1	M.S. tube	kg	1,824.00	157.15	2,86,641.60
				-		

SCHEDULE OF QUANTITIES

Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat

ABSTRACT OF COST

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
8.12	10.28	Providing and fixing stainless steel (Grade 304) railing made of Hollow tubes, channels, plates etc., including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete, i/c fixing the railing with necessary accessories & stainless steel dash fasteners, stainless steel bolts etc., of required size, on the top of the floor or the side of waist slab with suitable arrangement as per approval of Engineer-in-charge, (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.).	kg	3,775.00	612.25	23,11,243.75
				-		
8.13	10.29	Providing & fixing fly proof wire gauze to windows, clerestory windows & doors with M.S. Flat 15x3 mm and nuts & bolts complete.		-		
	10.29.2	Stainless steel (grade 304) wire gauze of 0.5 mm dia wire and 1.4 mm aperture on both sides	Sqm	658.00	971.55	6,39,279.90
				-		
8.14	10.30	Providing & fixing glass panes with putty and glazing clips in steel doors, windows, clerestory windows, all complete with :		-		
	10.30.1	4.0 mm thick glass panes (weights not less than 10 kg/ sqm)	Sqm	1,261.00	940.30	11,85,718.30
				-		
	10.30.2	5.0 mm thick glass panes (weights not less than 12.50 kg/ sqm)	Sqm	149.00	1,243.50	1,85,281.50
				-		
		Total of sub-head (8.0)		1,27,29,391.47		1,27,29,391.47
				-		
9.0	11	Flooring		-		
9.01	11.3	Cement concrete flooring 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate) finished with a floating coat of neat cement, including cement slurry, but excluding the cost of nosing of steps etc. complete.		-		
	11.3.1	40 mm thick with 20 mm nominal size stone aggregate	Sqm	69.00	545.00	37,605.00
				-		

SCHEDULE OF QUANTITIES

Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat

ABSTRACT OF COST

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
9.02	11.5	62 mm thick cement concrete flooring with concrete hardener topping, under layer 50 mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) and top layer 12mm thick cement hardener consisting of mix 1:2 (1 cement hardener mix : 2 graded stone aggregate, 6mm nominal size) by volume, hardening compound mixed @ 2 litre per 50 kg of cement or as per manufacture's specifications. This includes cost of cement slurry, but excluding the cost of nosing of steps etc. complete.	Sqm	1,316.00	928.65	12,22,103.40
	11.8	Extra for making chequers of approved pattern on cement concrete floors, steps, landing, pavements etc.	Sqm	1,216.00	69.30	84,268.80
9.03	11.13	Providing and fixing glass strips in joints of terrazo/ cement concrete floors.		-		
	11.13.1	40 mm wide and 4 mm thick	Metre	203.00	79.50	16,138.50
				-		
9.04	11.23	Marble stone flooring with 18 mm thick marble stone, as per sample of marble approved by Engineer-in-charge, over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with grey cement slurry, including rubbing and polishing complete with : Note : Qty. shall be executed in marble strips of width upto 50mm.		-		
	11.23.3	Agaria White	Sqm	347.00	2,608.15	9,05,028.05
				-		
	11.23.5	Udaipur green marble	Sqm	-	2,100.40	-
				-		
9.05	11.26	Kota stone slab flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab, including rubbing and polishing complete with base of cement mortar 1 : 4 (1 cement : 4 coarse sand) :		-		
	11.26.1	25 mm thick.	Sqm	6,516.52	1,706.60	1,11,21,093.03
				-		
9.06	11.27	Kota stone slabs 20 mm thick in risers of steps, skirting, dado and pillars laid on 12 mm (average) thick cement mortar 1:3 (1 cement: 3 coarse sand) and jointed with grey cement slurry mixed with pigment to match the shade of the slabs, including rubbing and polishing complete.	Sqm	806.00	2,038.55	16,43,071.30
				-		

SCHEDULE OF QUANTITIES**Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat****ABSTRACT OF COST**

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
9.07	11.31	Extra for pre finished nosing in treads of steps of Kota stone/ sand stone slab.	Metre	1,068.00	157.35	1,68,049.80
				-		-
9.08	11.40	Providing and laying rectified Glazed Ceramic floor tiles of size 300x300 mm or more (thickness to be specified by the manufacturer), of 1st quality conforming to IS : 15622, of approved make, in all colours, shades, except White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick Cement Mortar 1:4 (1 Cement : 4Coarse sand), jointing with grey cement slurry @ 3.3 kg/ sqm including pointing the joints with white cement and matching pigments etc., complete.	Sqm	1,292.00	1,225.10	15,82,829.20
				-		
9.09	11.41	Providing and laying full body (Homogeneous) Vitrified floor tiles in different sizes (thickness to be specified by the manufacturer) with water absorption less than 0.08% and conforming to IS: 15622, of approved make, in all colours and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand), jointing with grey cement slurry @ 3.3kg/sqm including grouting the joints with white cement and matching pigments etc., complete.		-		
	11.41.2	Size of Tile 600x600 mm	Sqm	1,645.00	1,416.65	23,30,389.25
				-		
9.10	11.46	Providing and laying full body (Homogeneous) Vitrified tiles in different sizes (thickness to be specified by manufacturer), with water absorption less than 0.08 % and conforming to I.S. 15622, of approved make, in all colours & shade, in skirting, riser of steps, over 12 mm thick bed of cement mortar 1:3 (1 cement: 3 coarse sand), jointing with grey cement slurry @ 3.3kg/sqm including grouting the joint with white cement & matching pigments etc. complete.		-		
	11.46.2	Size of Tile 600x600 mm	Sqm	199.00	1,466.50	2,91,833.50
				-		
9.11	23.7	Supplying, filling, spreading & leveling coarse sand of size range 1.5 mm to 2 mm in recharge pit, in required thickness over gravel layer, for all leads & lifts, all complete as per direction of Engineer -incharge.	Cum	6.00	1,309.00	7,854.00
				-		

SCHEDULE OF QUANTITIES

Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat

ABSTRACT OF COST

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
9.12	16.89	Providing and laying matt finished vitrified tile of size 300x300x9.8mm having with water absorption less than 0.5% and conforming to IS: 15622 of approved make in all colours and shades in for outdoor floors such as footpath, court yard, multi modals location etc., laid on 20mm thick base of cement mortar 1:4 (1 cement : 4 coarse sand) in all shapes & patterns including grouting the joints with white cement mixed with matching pigments etc. complete as per direction of Engineer-in-Charge.	Sqm	863.00	1,250.75	10,79,397.25
				-		
9.13	16.90	Providing and laying tactile tile (for vision impaired persons as per standards) of size 300x300x9.8mm having with water absorption less than 0.5% and conforming to IS:15622 of approved make in all colours and shades in for outdoor floors such as footpath, court yard, multi modals location etc., laid on 20mm thick base of cement mortar 1:4 (1 cement : 4 coarse sand) in all shapes & patterns including grouting the joints with white cement mixed with matching pigments etc. complete as per direction of Engineer-in-Charge.	Sqm	66.00	1,719.00	1,13,454.00
		Total of sub-head (9.0)		2,06,03,115.08		2,06,03,115.08
				-		
10.0	12	Roofing		-		
				-		
10.01	12.21	Providing gola 75x75 mm in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 stone aggregate 10 mm and down gauge), including finishing with cement mortar 1:3 (1 cement : 3 fine sand) as per standard design :		-		
	12.21.1	In 75x75 mm deep chase	Metre	20.00	260.20	5,204.00
				-		
10.02	12.22	Making khurras 45x45 cm with average minimum thickness of 5 cm cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate of 20 mm nominal size) over P.V.C. sheet 1 m x1 m x 400 micron, finished with 12 mm cement plaster 1:3 (1 cement : 3 coarse sand) and a coat of neat cement, rounding the edges and making and finishing the outlet complete.	Each	126.00	266.60	33,591.60

SCHEDULE OF QUANTITIES

Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat

ABSTRACT OF COST

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
10.03	12.47	Providing & fixing UV stabilised fiberglass reinforced plastic sheet roofing up to any pitch, including fixing with polymer coated 'J' or 'L' hooks, bolts & nuts 8mm dia. G.I plain/bitumen washers complete but excluding the cost of purlins, rafters, trusses etc. The sheets shall be manufactured out of 2400 TEX panel rovgis incorporating minimum 0.3% ultra-violet stabiliser in resin system under approximately 2400 psi and hot cured. They shall be of uniform pigmentation and thickness without air pockets and shall conform to IS 10192 and IS 12866.The sheets shall be opaque or translucent, clear or pigmented, textured or smooth as specified.		-		
	12.47.2	2 mm thick flat	Sqm	-	1,048.50	-
				-		
10.04	12.50	Providing and fixing precoated galvanised iron profile sheets (size, shape and pitch of corrugation as approved by Engineer-in-charge) 0.50 mm (+ 0.05 %) total coated thickness with zinc coating 120 grams per sqm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns. Sheet should have protective guard film of 25 microns minimum to avoid scratches during transportation and should be supplied in single length upto 12 metre or as desired by Engineer-in-charge. The sheet shall be fixed using self drilling /self tapping screws of size (5.5x 55 mm) with EPDM seal, complete upto any pitch in horizontal/ vertical or curved surfaces, excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.	Sqm	391.00	671.55	2,62,576.05
10.05	12.51	Providing and fixing precoated galvanised steel sheet roofing accessories 0.50 mm (+0.05 %) total coated thickness, Zinc coating 120 grams per sqm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns using self drilling/ self tapping screws complete :		-		
	12.51.2	Flashings/ Aprons.(Upto 600 mm)	Metre	12.00	412.85	4,954.20
	12.51.4	Barge board (upto 300 mm)	Metre	23.00	384.20	8,836.60
	12.51.6	Gutter (600 mm over all girth)	Metre	23.00	1,110.60	25,543.80
				-		
		Total of sub-head (10.0)				3,40,706.25
				-		

SCHEDULE OF QUANTITIES						
Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat						
ABSTRACT OF COST						
S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
11.0	13	Finishing		-		
				-		
11.01	13.4	12 mm cement plaster of mix		-		
	13.4.2	1:6 (1 cement: 6 coarse sand)	Sqm	15,470.00	294.35	45,53,594.50
				-		
11.02	13.5	15 mm cement plaster on rough side of single or half brick wall of mix:		-		
	13.5.2	1:6 (1 cement: 6 coarse sand)	Sqm	8,829.00	339.10	29,93,913.90
				-		
11.03	13.16	6 mm cement plaster of mix		-		
	13.16.1	1:3 (1 cement : 3 fine sand)	Sqm	14,382.00	253.05	36,39,365.10
11.04	13.18	Neat cement punning	Sqm	140.00	67.80	9,492.00
				-		
11.05	13.11	18 mm cement plaster in two coats under layer 12 mm thick cement plaster 1:5 (1 cement : 5 coarse sand) finished with a top layer 6 mm thick cement plaster 1:6 (1 cement : 6 fine sand)	Sqm	9,668.00	442.75	42,80,507.00
				-		
11.06	13.21	Extra for providing and mixing water proofing material in cement plaster work in proportion recommended by the manufacturers.	per bag of 50kg cement used in the mix	1,331.00	60.55	80,592.05
11.07	13.26	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.	Sqm	-	214.30	-
11.08	13.27 (M)	Extra for lining out plaster to imitate stone or concrete blocks or brick walling.	sqm	204.00	93.75	19,125.00
				-		
11.09	13.37	White washing with lime to give an even shade :		-		
	13.37.1	New work (three or more coats)	Sqm	360.00	32.45	11,682.00
				-		
11.10	13.42	Distempering with 1st quality acrylic distemper (ready mixed) having VOC content less than 50 gms/litre, of approved manufacturer, of required shade and colour complete, as per manufacturer's specification.		-		
	13.42.1	Two or more coats on new work	Sqm	39,523.00	92.75	36,65,758.25
				-		
11.11	13.43	Applying one coat of water thinnable cement primer of approved brand and manufacture on wall surface :		-		
	13.43.1	Water thinnable cement primer	Sqm	39,523.00	64.45	25,47,257.35
				-		
11.12	13.47	Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade:		-		

SCHEDULE OF QUANTITIES

Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat

ABSTRACT OF COST

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
	13.47.1	New work (Two or more coats applied @ 1.43 ltr/10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/10 sqm)	Sqm	15,116.00	162.35	24,54,082.60
				-		
11.13	13.50	Applying priming coat:		-		
	13.50.3	With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanised iron/ steel works	Sqm	508.00	55.50	28,194.00
11.14	13.50	Finishing with Epoxy paint (two or more coats) at all locations prepared and applied as per manufacturer's specifications including appropriate priming coat, preparation of surface, etc. complete.		-		
	13.52.2	On concrete work	Sqm	1,996.00	198.40	3,96,006.40
				-		
11.15	13.61	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade :		-		
	13.61.1	Two or more coats on new work	Sqm	4,521.00	131.45	5,94,285.45
				-		
11.16	13.80	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.	Sqm	1,421.00	123.85	1,75,990.85
		Total of sub-head (11.0)		2,54,49,846.45		2,54,49,846.45
				-		
12.0	21	Aluminium Work		-		
				-		
12.01	21.1	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling and dash fasteners to be paid for separately) :		-		

SCHEDULE OF QUANTITIES

Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat

ABSTRACT OF COST

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
	21.1.1	For Fixed Portion		-		
	21.1.1.2	Powder coated aluminium (minimum thickness of powder coating 50 micron)	kg	270.00	466.30	1,25,901.00
12.02	21.1.2	For shutters of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber / neoprene gasket required (Fittings shall be paid for separately)		-		
	21.1.2.2	Powder coated aluminium (minimum thickness of powder coating 50 micron)	kg	308.00	553.55	1,70,493.40
				-		
12.03	21.3	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with EPDM rubber / neoprene gasket etc. complete as per the architectural drawings and the directions of Engineer-in-charge . (Cost of aluminium snap beading shall be paid in basic item):		-		
	21.3.1	With float glass panes of 4.00 mm thickness	Sqm	-	1,019.80	-
	21.3.2	With float glass panes of 5 mm thickness (weight not less than 12.50 kg/ sqm)	Sqm	28.00	1,325.55	37,115.40
				-		
	21.3.3	With float glass panes of 8 mm thickness (weight not less than 20 kg/ sqm)	Sqm	14.00	1,496.15	20,946.10
				-		
12.04	21.4	Providing and fixing double action hydraulic floor spring of approved brand and manufacture conforming to IS : 6315, having brand logo embossed on the body / plate with double spring mechanism and door weight upto 125 kg, for doors, including cost of cutting floors, embedding in floors as required and making good the same matching to the existing floor finishing and cover plates with brass pivot and single piece M.S. sheet outer box with slide plate etc. complete as per the direction of Engineer-in-charge.		-		
	21.4.1	With stainless steel cover plate minimum 1.25 mm thickness	Each	10.00	2,448.85	24,488.50
				-		
12.05	21.13	Providing and fixing Brass 100mm mortice latch and lock with 6 levers without pair of handles (best make of approved quality) for aluminium doors including necessary cutting and making good etc. complete.	Each	5.00	449.55	2,247.75
				-		

SCHEDULE OF QUANTITIES

Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat

ABSTRACT OF COST

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
	21.16	Providing and fixing aluminium round shape handle of outer dia 100 mm with SS screws etc. complete as per direction of Engineer-incharge		-		
	21.16.2	Powder coated minimum thickness 50 micron aluminium	Each	20.00	89.60	1,792.00
				-		
				-		
		Total of sub-head (12.0)		3,82,984.15		3,82,984.15
				-		
13.0	22	Water Proofing		-		
				-		
13.01	22.3	Providing and laying water proofing treatment to vertical and horizontal surfaces of depressed portions of W.C., kitchen and the like consisting of:		-		
		(i) Ist course of applying cement slurry @ 4.4 kg/sqm mixed with water proofing compound conforming to IS 2645 in recommended proportions including rounding off junction of vertical and horizontal surface.		-		
		(ii) IInd course of 20 mm cement plaster 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound in recommended proportion including rounding off junction of vertical and horizontal surface.		-		
		(iii) IIIrd course of applying blown or residual bitumen applied hot at 1.7 kg. per sqm of area.		-		
		(iv) IVth course of 400 micron thick PVC sheet. (Overlaps at joints of PVC sheet should be 100 mm wide and pasted to each other with bitumen @ 1.7 kg/sqm).	Sqm	1,170.00	774.25	9,05,872.50
				-		
13.02	22.4	Providing and Placing in position suitable PVC water stops conforming to IS:12200 for construction/ expansion joints between two RCC members and fixed to the reinforcement with binding wire before pouring concrete etc. complete :		-		
	22.4.1	Serrated with central bulb (225 mm wide, 8-11 mm thick)	Sqm	-	285.60	-
				-		
13.03	22.7	Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc consisting of following operations:		-		

SCHEDULE OF QUANTITIES

Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat

ABSTRACT OF COST

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
		a) Applying a slurry coat of neat cement using 2.75 kg/sqm of cement admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in-charge over the RCC slab including adjoining walls upto 300 mm height including cleaning the surface before treatment.		-		
		b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115 mm size with 50% of cement mortar 1:5 (1 cement : 5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement :5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs.		-		
		c) After two days of proper curing applying a second coat of cement slurry using 2.75 kg/ sqm of cement admixed with water proofing compound conforming to IS : 2645 and approved by Engineerin-charge.		-		
		d) Finishing the surface with 20 mm thick jointless cement mortar of mix 1:4 (1 cement :4 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineerin-charge including laying glass fibre cloth of approved quality in top layer of plaster and finally finishing the surface with trowel with neat cement slurry and making pattern of 300x300 mm square 3 mm deep.		-		
		e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test.“All above operations to be done in order and as directed and specified by the Engineer-in-Charge :		-		
	22.7.1	With average thickness of 120 mm and minimum thickness at khurra as 65 mm.	Sqm	4,481.00	1,522.95	68,24,338.95
				-		

SCHEDULE OF QUANTITIES

Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat

ABSTRACT OF COST

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
13.04	22.23	Providing and applying integral crystalline slurry of hydrophilic in nature for waterproofing treatment to the RCC structures like retaining walls of the basement, water tanks, roof slabs, podiums, reservoir, sewage & water treatment plant, tunnels / subway and bridge deck etc., prepared by mixing in the ratio of 5 : 2 (5 parts integral crystalline slurry : 2 parts water) for vertical surfaces and 3 : 1 (3 parts integral crystalline slurry : 1 part water) for horizontal surfaces and applying the same from negative (internal) side with the help of synthetic fiber brush. The material shall meet the requirements as specified in ACI-212-3R-2010 i.e by reducing permeability of concrete by more than 90% compared with control concrete as per DIN 1048 and resistant to 16 bar hydrostatic pressure on negative side. The crystalline slurry shall be capable of self-healing of cracks up to a width of 0.50mm. The work shall be carried out all complete as per specification and the direction of the engineer-in-charge. The product performance shall carry guarantee for 10 years against any leakage.		-		-
	22.23.1	For vertical surface two coats @ 0.70 kg per sqm	Sqm	872.00	406.25	3,54,250.00
	22.23.2	For horizontal surface one coat @1.10 kg per sqm.	Sqm	413.00	311.50	1,28,649.50
				-		
		Total of sub-head (13.0)		82,13,110.95		82,13,110.95
				-		
14.0	16	Road Work		-		
				-		
14.01	16.1	Preparation and consolidation of sub grade with power road roller of 8 to 12 tonne capacity after excavating earth to an average of 22.5 cm depth, dressing to camber and consolidating with road roller including making good the undulations etc. and re-rolling the sub grade and disposal of surplus earth with all lead and lift.	Sqm	10,309.00	180.50	18,60,774.50
14.02	16.7	Brick edging in full brick width and half brick depth including excavation, refilling and disposal of surplus earth lead upto 50 metres.	mtr	1,036.00	179.50	1,85,962.00
				-		-
14.03	16.6.1	Supplying, stacking and Spreading 6 mm thick red bajri, watering and rolling complete including preparation of the surface and rolling.	sqm	1,700.00	21.80	37,060.00

SCHEDULE OF QUANTITIES**Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat****ABSTRACT OF COST**

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
14.04	16.11	Dry stone pitching 22.5 cm thick including supply of stones and preparing surface complete	Sqm	140.00	821.95	1,15,073.00
	16.43.2 (M)	Making provision for contraction/ expansion, construction & longitudinal joints of size 10 mm wide x 50 mm deep by groove cutting machine. As per direction of Engineer-in-charge.	Cum	325.00	141.80	46,085.00
	16.46	Providing and filling in position rubberized bitumen hot sealing compound for sealing of expansion joints in roads / pavements all complete as per direction of the Engineer-in-Charge.		-		
	16.46.1	Using grade 'A' sealing compound conforming to IS: 1834.	Sqm	2,749.00	7.50	20,617.50
				-		
14.05	16.11 (Modified)	Deduct for using available stone of size 15 cm x 22.5 cm for dry stone pitching. (Rate is below relevant item)	Sqm	-	(242.95)	-
				-		
14.06	16.53	Providing and fixing concertina coil fencing with punched tape concertina coil 600 mm dia 10 metre openable length (total length 90 m), having 50 nos rounds per 6 metre length, upto 3 m height of wall with existing angle iron 'Y' shaped placed 2.4m or 3.00 m apart and with 9 horizontal R.B.T. reinforced barbed wire, stud tied with G.I. staples and G.I. clips to retain horizontal, including necessary bolts or G.I. barbed wire tied to angle iron, all complete as per direction of Engineerin-charge, with reinforced barbed tape(R.B.T.) / Spring core (2.5mm thick) wire of high tensile strength of 165 kg/ sq.mm with tape (0.52 mm thick) and weight 43.478 gm/ metre (cost of M.S. angle, C.C. blocks shall be paid separately)	Metre	968.00	303.65	2,93,933.20
				-		
14.07	16.19	Supplying at site Angle iron post & strut of required size including bottom to be split and bent at right angle in opposite direction for 10 cm length and drilling holes upto 10 mm dia. etc. complete.	kg	2,949.00	99.95	2,94,752.55
				-		
				-		

SCHEDULE OF QUANTITIES**Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat****ABSTRACT OF COST**

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
14.08	16.62	Providing and applying 2.5 mm thick road marking strips (retro- reflective) of specified shade/ colour using hot thermoplastic material by fully/ semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour, T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-in-charge and accordance with applicable specifications.	Sqm	167.00	623.80	1,04,174.60
14.09	16.66	Excavating holes upto 0.10 cum, including getting out the excavated soil, then returning the soil as deported in layers not exceeding 20 cm in depth, including consolidating and deposited layer by ramming watering etc., disposing of surplus excavated soil as directed with in a lead of 50 mm and lift upto 1.5 m.				
	16.66.1	All kind of soil	each	16.00	26.45	423.20
				-		
14.10	16.68	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M-30 grade made by block making machine with strong vibratory compaction, of approved size, design & shape, laid in required colour and pattern over and including 50mm thick compacted bed of coarse sand, filling the joints with line sand etc. all complete as per the direction of Engineer-in-charge.	Sqm	140.00	951.00	1,33,140.00
				-		
14.11	16.69	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge).	Cum	71.00	8,613.55	6,11,562.05
				-		

SCHEDULE OF QUANTITIES

Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat

ABSTRACT OF COST

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
14.12	16.75	Providing and laying C.C. pavement of mix M-25 with ready mixed concrete from batching plant. The ready mixed concrete shall be laid and finished with screed board vibrator , vacuum dewatering process and finally finished by floating, brooming with wire brush etc. complete as per specifications and directions of Engineer-in-charge. (The panel shuttering work shall be paid for separately). (Note:- Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/ recoverable separately).	Cum	325.00	8,964.00	29,13,300.00
				-		
14.13	16.76	Deduct for using of M-20 grade concrete instead of M-25 grade concrete in C.C. pavement.	Cum	325.00	(191.10)	(62,107.50)
				-		
14.14	16.3	Supplying and stacking at site.		-		
	16.3.2	63 mm to 45 mm size stone aggregate	Cum	336.00	1,624.50	5,45,832.00
				-		
14.15	16.3.3	53 mm to 22.4 mm size stone aggregate	Cum	336.00	1,837.25	6,17,316.00
				-		
14.16	16.3.10	Moorum	Cum	358.00	888.30	3,18,011.40
				-		
14.17	16.3.9	Good Earth	Cum	2,042.65	624.55	12,75,737.06
14.18	16.4	Laying, spreading and compacting stone aggregate of specified sizes to WBM specifications in uniform thickness, hand picking, rolling with 3 wheeled road/vibratory roller 8-10 tonne capacity in stages to proper grade and camber, applying and brooming requisite type of screening / binding material to fill up interstices of coarse aggregate, watering and compacting to the required density .	Cum	825.00	865.80	7,14,285.00
				-		
		Total of sub-head (14.0)		1,00,25,931.56		1,00,25,931.56
				-		
				-		
15.00		Non-Schedule Items - Civil		-		
				-		
				-		

SCHEDULE OF QUANTITIES						
Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat						
ABSTRACT OF COST						
S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
15.01	MR 1	Providing signage viz display/name plate and like of required size made out of 20 gauge thick stainless steel (304 grade) including engraved subject matter, message (Hindi/English and / or bi-lingual), symbols, borders and logo etc. The engraved letter, borders etc. to be finished with paint etc. of required colour scheme and the plate to be fixed to wooden/wall surface with 25mm long stainless steel spacer/stud all complete as per direction of Engineer-in-charge.	Sq. inch	3,750.00	17.00	63,750.00
				-		
15.02	MR 2	Providing and fixing factory made prelaminate flush door comprises core of block board construction with frame of 1st class hard wood and well matched commercial 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters conforming to IS: 2202 (part 1) followed with machine pressed 1.00mm thick lamination on both faces of shutter in required finish and shade with suitable adhesive including providing and fixing 3 to 5 mm thick teak lipping along edges of shutter all complete as per direction of Engineer-in-charge. a) 35 mm thick including ISI marked Stainless Steel butt hinges (heavy weight) 100mm x 60mm x 2.5mm with necessary screws.	Sqm	588.00	5,040.00	29,63,520.00
				-		-
15.03	MR 3	Providing & fixing G.I. chicken wire mesh of nominal size upto 20mm having 24 gauge thick with G.I. nails etc. to wall surface of dissimilar material viz RCC and brick work etc.all complete.	Sqm	640.00	155.15	99,296.00
		Total of sub-head (15.0) (Non DSR)		31,26,566.00		31,26,566.00
PLUMBING WORKS						
				-		
16.0		Sanitary Installation (As per D.S.R.)		-		
				-		
16.01	8.10	Providing & fixing stone slab table rubbed, edges rounded and polished of size 75 X 50 cm deep and 1.8 cm thick fixed in urinal partitions by cutting a chase of appropriate width with chase cutter and embedding the stone in chase with epoxy grout or with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 6mm nominal size) as per Engineer-in-charge and finished smooth		-		
	8.10.2	Granite Stone of approved shade	sqm	7.50	3,542.85	26,571.38

SCHEDULE OF QUANTITIES

Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat

ABSTRACT OF COST

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
				-	-	-
16.02	17.10	Providing and fixing Stainless Steel A ISI 304 (18/8) kitchen sink as per IS: 13983 with CI brackets and stainless steel waste with plug 40mm including painting of fittings and brackets, cutting and making good the walls wherever required.		-	-	-
	17.10.2	Sink without drain board		-	-	-
	17.10.2.2	610X460 mm bowl depth 200mm.	Each	67.00	3,337.85	2,23,635.95
				-	-	-
16.03	17.11	Providing and fixing white vitreous china laboratory sink with C.I. brackets, C.P. brass chain with rubber plug, 40 mm C.P brass waste and 40mm C.P. brass trap with necessary C.P. brass unions complete, including painting of fittings and brackets, cutting and making good the wall wherever required :		-		
	17.11.2	Size 600x450x200 mm	Each	18.00	5,610.85	1,00,995.30
				-		
16.04	17.2	Providing and fixing white vitreous china pedestal type water closet (European type W.C. pan) with seat and lid, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever), conforming to IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required :		-		
	17.2.1	W.C. pan with ISI marked white solid plastic seat and lid	Each	57.00	5,540.55	3,15,811.35
				-		
16.05	17.16A	Providing and fixing 8 mm dia C.P./S.S. Jet with flexible tube upto 1 metre long with S.S. triangular plate to European type W.C. of quality and make as approved by Engineer - in-charge	Each	57.00	299.35	17,062.95
				-	-	
16.06	17.70	Providing and fixing PTMT Bottle Trap for Wash basin and sink.		-	-	
	17.70.1	Bottle trap 31mm single piece moulded with height of 270 mm, effective length of tail pipe 260 mm from the centre of the waste coupling, 77 mm breadth with 25 mm minimum water seal, weighing not less than 260 gms.	Each	63.00	325.10	20,481.30
				-		-
16.07	17.5.1	Providing and fixing single white vitreous china flat back half stall urinal of size 580x380x350 mm with spreaders, unions, waste fitting and other couplings (all in C.P. brass) including making good the walls wherever required.	Each	30.00	3,322.60	99,678.00

SCHEDULE OF QUANTITIES**Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat****ABSTRACT OF COST**

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
				-	-	-
16.08	17.72	Providing & fixing PTMT towel ring trapezoidal shape 215 mm long 200 mm wide with minimum distance of 37 mm from wall face with concealed fittings arrangement of approved quality and colour weighing not less than 88 gms	Each	103.00	204.70	21,084.10
				-	-	-
16.09	18.49	Providing and fixing C.P. brass bib cock of approved quality conforming to IS:8931 :		-	-	
	18.49.1	15mm nominal bore	Each	150.00	434.20	65,130.00
16.10	18.50	Providing and fixing C.P. brass long nose bib cock of approved quality conforming to IS standards and weighing not less than 810 gms.		-		-
	18.50.1	15mm nominal bore	Each	299.00	715.05	2,13,799.95
16.11	18.54	Providing and fixing PTMT bib cock of approved quality and colour.		-	-	-
	18.54.1	15mm nominal bore, 86 mm long, weighing not less than 88 gms	Each	-	109.85	-
	18.54.3	15 mm nominal bore, 165 mm long, weighing not less than 110 gms	Each	-	156.65	-
				-	-	-
16.12	18.55	Providing and fixing PTMT stop cock of approved quality and colour.		-		
	18.55.3	Concealed stop cock, 15 mm nominal bore, 108 mm long, weighing not less than 108 gms (For Shower)	Each	-	183.40	-
				-		
16.13	18.52	Providing and fixing C.P. brass stop cock (concealed) of standard design and of approved make conforming to IS:8931.				
	18.52.1	15 mm nominal bore (For Shower)	Each	197.00	594.75	1,17,165.75
						-
16.14	18.53	Providing and fixing C.P. brass angle valve for basin mixer and points of approved quality conforming to IS:8931				-
	18.53.1	15 mm nominal bore (For Shower)	Each	496.00	500.35	2,48,173.60
16.15	18.63	Providing and fixing PTMT angle stop cock 15 mm nominal bore, weighing not less than 85	Each	-	136.60	-
16.16	18.75	Providing and fixing PTMT extension nipple for water tank pipe, fittings of approved quality and colour.	Each			

SCHEDULE OF QUANTITIES						
Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat						
ABSTRACT OF COST						
S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
	18.75.3	a) 25 mm nominal bore , weighing not less than 62 gms		73.00	100.55	7,340.15
				-		-
16.17	17.7	Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brass pillar taps, 32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require:	Each			
	17.7.4	White Vitreous China Flat back wash basin size 550x400 mm with single 15 mm C.P. brass pillar tap		135.00	1,679.60	2,26,746.00
16.18	17.7B	Providing and fixing wash basin with C.I. brackets, 15 mm PTMT pillar cock, 32 mm PTMT waste coupling of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever required. White Vitreous China Flat back wash basin size 550x400 mm with single 15 mm PTMT pillar cock	Each	-	1,404.00	-
				-	-	-
16.19	17.28	Providing & fixing PVC waste pipe for sink including PVC waste fitting Complete		-	-	-
	17.28.2	Flexible Pipe		-	-	-
	17.28.2.1	32mm Dia	Each	214.00	104.35	22,330.90
				-		
16.20	17.34	Providing and fixing toilet paper holder :		-	-	-
	17.34.1	C.P. brass	Each	51.00	680.80	34,720.80
				-		
16.21	18.21	Providing and fixing uplasticised PVC connection pipe with brass unions		-	-	-
	18.21.2	45 cm length		-	-	-
	18.21.2.1	15 mm nominal bore	Each	382.00	85.20	32,546.40
				-	-	-
16.22	17.1	Providing and fixing water closet squatting pan (Indian type W.C. pan) with 100 mm sand cast Iron P or S trap, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever) IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required:		-		-
	17.1.1	White Vitreous china Orissa pattern W.C. pan of size 580 x 440 mm with integral type foot rests	Each	113.00	5,781.35	6,53,292.55
				-	-	-
16.23	18.65	Providing and fixing PTMT soap Dish Holder having length of 138mm, breadth 102mm, height of 75mm with concealed fitting arrangements, weighing not less than 106 gms.	Each	162.00	96.75	15,673.50

SCHEDULE OF QUANTITIES

Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat

ABSTRACT OF COST

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
				-	-	-
16.24	17.71	Providing and fixing PTMT liquid soap container 109 mm wide, 125 mm high and 112 mm distance from wall of standard shape with bracket of the same materials with snap fittings of approved quality and colour, weighing not less than 105 gms.	Each	104.00	146.30	15,215.20
16.25	17.73	Providing and fixing PTMT towel rail complete with brackets fixed to wooden cleats with CP brass screws with concealed fittings arrangement of approved quality and colour.		-	-	-
	17.73.2	600 mm long towel rail with total length of 645 mm, width 78 mm and effective height of 88 mm, weighing not less than 190 gms.	Each	58.00	600.35	34,820.30
				-		
16.26	18.64	Providing and fixing PTMT swivelling shower, 15 mm nominal bore, weighing not less than 40 gms	Each	134.00	106.15	14,224.10
	17.69	Providing and fixing PTMT Waste Coupling for wash basin and sink, of approved quality and colour.	Each	-		-
	17.69.1	Waste coupling 31 mm dia of 79 mm length and 62mm breadth weighing not less than 45 gms	Each	28.00	103.00	2,884.00
	18.56	Providing and fixing PTMT pillar cock of approved quality and colour.	Each	-		-
	18.56.1	15 mm nominal bore, 107 mm long, weighing not less than 110 gms	Each	-	180.80	-
		Sanitary Installations work (Non-Scheduled Items)		-		
				-		
16.27	MR 09	Providing and fixing U-shaped stainless steel grab bar (for differntly abled person) of size 600mm wall mounted, movable (horizontally and vertically) with necessary dash fastener etc. all complete. (Basic rate of material shall not be less than Rs.3900 each)	Each	5.00	5,700.00	28,500.00
				-		

SCHEDULE OF QUANTITIES

Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat

ABSTRACT OF COST

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
16.28	MR 10	Providing and fixing white vitreous china oval shape wash basin (counter top) of size 560x400mm with C.I. brackets/rag bolt of required size, 32 mm C. P. brass waste coupling of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require complete as per direction of Engineer in Charge	Each	34.00	5,537.00	1,88,258.00
				-		
16.29	MR 11	Providing and fixing 600 x 450 mm beveled edge mirror of superior glass (of approved quality) fixed with stainless steel studs, complete with cutting, making holes, studs, all fittings, screws, washers and making good the walls.	Each	180.00	849.59	1,52,926.20
16.30	MR 12	Providing & fixing stainless steel robe plate/pegs (hook) having three pegs (hook) in one strip (weight shall not be less than 120 grams) of superior quality with necessary screws etc. complete.	Each	172.00	281.00	48,332.00
16.31	MR 13	Providing and fixing C.P. brass swan neck foam flow pillar cock of approved quality and conforming to IS standards. a) 15mm nominal bore	Each	34.00	844.20	28,702.80
16.32	MR 14	Providing and fixing C.P. brass long body nozzle bib cock (two way) of approved quality conforming to IS standards and weighing not less than 810 gms.				
		a) 15 mm nominal bore	Each	28.00	643.55	18,019.40
	MR 15	Providing & fixing stainless steel butterfly robe pegs (hook) having three hooks of superior quality with necessary screws etc. complete.	EACH	175.00	207.00	
				-		
	MR 16	Providing and fixing PTMT extension nipple for water tank pipe, fittings of approved quality and colour.				
		a) 32 mm nominal bore		35.00	141.50	
		b) 40 mm nominal bore		2.00	201.70	
		Total of sub-head (16.0) (DSR)				25,29,383.53
		Total of sub-head (16.0) (Non DSR)				4,64,738.40
17.0		Internal Drainage Installations (As per D.S.R.)				

SCHEDULE OF QUANTITIES**Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat****ABSTRACT OF COST**

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
17.01	18.58	Providing and fixing PTMT grating of approved quality and colour		-	-	
	18.58.1	Circular type		-		
	18.58.1.1	100 mm nominal dia	Each	244.00	33.20	8,100.80
				-		
	18.58.1.2	125 mm nominal dia with 25mm waste hole.	Each	137.00	45.25	6,199.25
				-	-	
17.02	12.41	Providing & fixing on wall face unplasticised - Rigid PVC rain water pipes conforming to IS:13592 Type A included jointing with seal ring conforming to IS:5382 leaving 10 mm gap for thermal expansion. (i)Single socketed pipes.		-	-	
	12.41.2	110 mm diameter	Metre	821.00	319.75	2,62,514.75
				-	-	
17.03	12.42.	Providing, fixing on wall face unplasticised - PVC moulded fittings /accessories for unplasticised - Rigid PVC rain water pipes conforming to IS ; 13592 Type A including jointing with seal ring conforming to IS ; 5382 leaving 10 mm gap for thermal expansion.		-	-	
	12.42.1.2	Coupler -110 mm diameter	Each	118.00	119.95	14,154.10
	12.42.5.2	Bend -87.5 deg -110 mm diameter	Each	102.00	132.00	13,464.00
	12.42.6.2	Shoe -110mm shoe	Each	79.00	115.95	9,160.05
				-	-	
	12.43	Providing and fixing unplasticised -PVC pipe clips of approved design to unplasticised - PVC rain water pipes by means of 50x50x50 mm hard wood plugs, screwed with M.S. screws of required length, including cutting brick work and fixing in cement mortar 1:4 (1 cement : 4 coarse sand) and making good the wall etc. complete.		-		
	12.43.2	110mm	Each	217.00	310.85	67,454.45

SCHEDULE OF QUANTITIES

Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat

ABSTRACT OF COST

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
17.04	MR 17	Providing, fixing, jointing and testing in position of ISI marked UV stabilized uPVC pipes for soil, waste, and vent, Type-B as per IS : 13592 suitable for rubber ring joints, including all necessary specials and fittings (confirming to IS:14735) i.e. bends, tees, junctions (with or without doors), reducers, WC connectors, couplers, expansion joints / bellows, cowels, clamps, rubber rings, clean outs etc. fixing at wall/ ceiling/ floor level supported by clamp & hangers etc. in concealed / inside duct / under floor & basement ceiling / external work etc. including chase cutting as required, excavation and back filling in all kind of soils, suspended from floor under false ceiling or embedding the pipes laid under floors / building in 75 mm. around 1:2:4 cement concrete (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including cost of shuttering for proper completion of the work, breaking and making good the walls and floors etc. after pipes have been duly laid and tested. The rubber ring shall confirm to IS:5382. The Pipes will be supported with threaded G I rods & U clamps with nuts, washers etc on 50x50x5 mm slotted angle. The cost will				
		a) 110 mm dia (Wall Thickness - 3.2 to 3.8 mm)	Metre	2,016.00	536.00	10,80,576.00
		75 mm dia (Wall Thickness - 3.2 to 3.8 mm)			416.00	
17.05	MR 18	Providing and fixing uPVC floor trap of self cleaning design including jointing with solvent and embedding in cement concrete all complete.				
		a) 110 mm inlet & 110 mm outlet	Each	211.00	225.00	47,475.00
17.06	MR 19	Providing and fixing uPVC inlet fitting (Hopper) maximum with 2 or 3 inlets of 40 to 63 mm OD size fabricated from 110 OD uPVC pipe fixed to uPVC trap jointing with solvent cement joint and set in a cement concrete 1:2:4 mix complete including cost of cutting and making good the walls and floors wherever	Each	195.00	334.50	65,227.50
17.07	MR 20	Providing and fixing uPVC floor drain with uPVC reducing elbow including all fitting and accessories fixed in cement mortar complete in all respect.				
		110 mm OD x 63 mm OD	Each	56.00	175.00	9,800.00

SCHEDULE OF QUANTITIES

Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat

ABSTRACT OF COST

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
17.08	MR 21	Providing and fixing of uPVC Waste pipes 6 kg/cm ² (IS: 4985:2000) including with all fittings e.g. couplings, tees, bends, reducers and screwed adoptors jointing with solvent cement as per Manufacturer's specifications complete including cutting holes or chases in wall and making good the same wherever required. (Waste pipe from fixtures).				
		40 mm OD	Metre	192.00	268.00	51,456.00
17.09	MR 22	Providing and fixing uPVC cleanout plug conforming to IS:14735 – 1999 complete with all fitting, accessories etc. complete.				
		a) 110 mm dia	Each	84.00	177.15	14,880.60
						-
		Total of sub-head (17.0) (DSR)				3,81,047.40
		Total of sub-head (17.0) (Non DSR)				12,69,415.10
18.0		Water Supply Installations (As per D.S.R.)				
				-	-	
18.01	18.7	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings including fixing the pipe with clamps at 1.00 m spacing. this includes jointing of pipes and fittings with one step CPVC solvent cement and testing of joints complete as per direction of engineer in charge.		-	-	
		Internal work -Exposed on Wall		-	-	
	18.7.3	25 mm nominal dia pipes	Metre	506.00	408.55	2,06,726.30
	18.7.4	32 mm nominal dia pipes	Metre	389.00	500.95	1,94,869.55
	18.7.5	40 mm nominal dia pipes	Metre	406.00	674.35	2,73,786.10
	18.7.6	50 mm nominal dia pipes	Metre	10.00	927.00	9,270.00
				-	-	
18.02	18.8	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes having the thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings including fixing the pipe with clamps at 1.00 m spacing. this includes jointing of pipes and fittings with one step CPVC solvent cement and the cost of cutting chases and making good the wall same including testing of joints complete as per the direction of engineer incharge		-	-	
		Concealed work including cutting chases and making good the wall etc.		-	-	
	18.8.2	20 mm nominal dia pipes	Metre	714.00	513.75	3,66,817.50
	18.8.3	25 mm nominal dia pipes	Metre	588.00	626.05	3,68,117.40

SCHEDULE OF QUANTITIES						
Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat						
ABSTRACT OF COST						
S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
	18.8.4	32 mm nominal dia pipes	Metre	304.00	712.75	2,16,676.00
				-	-	
18.03	18.10	Providing and fixing G.I. pipes complete with GI fittings and clamps including cutting and making good the walls etc. (internal work)		-	-	
		Internal work - Exposed on wall		-	-	
	18.10.3	25 mm dia, nominal bore	Metre	172.00	491.20	84,486.40
	18.10.4	32 mm dia, nominal bore	Metre	79.00	563.60	44,524.40
	18.10.5	40 mm dia, nominal bore	Metre	24.00	725.15	17,403.60
	18.10.6	50 mm dia, nominal bore	Metre	148.00	893.20	1,32,193.60
				-	-	
18.04	18.38	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade		-	-	
	18.10.3	25 mm dia, nominal bore	Metre	172.00	491.20	84,486.40
	18.10.4	32 mm dia, nominal bore	Metre	79.00	563.60	44,524.40
	18.10.5	40 mm dia, nominal bore	Metre	24.00	725.15	17,403.60
				-	-	
18.05	18.17	Providing and fixing gun metal gate valve with CI wheel of approved quality (screwed ends)		-	-	
	18.17.1	25mm dia, nominal bore	Each	20.00	532.35	10,647.00
	18.17.2	32 mm dia, nominal bore	Each	100.00	589.90	58,990.00
	18.17.3	40 mm dia, nominal bore	Each	30.00	707.30	21,219.00
				-	-	
18.06	18.19	Providing and fixing gun metal non- return valve of approved quality (screwed end)		-	-	
	18.19.1.2	25 nominal bore	Each	5.00	573.50	2,867.50
	18.19.2.2	32 nominal bore	Each	5.00	777.90	3,889.50
	18.19.3.2	40 nominal bore	Each	15.00	1,049.50	15,742.50
18.07	MR 23	Providing and fixing C.P.V.C. ball valve in C.P.V.C. pipe including jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge. (Astral/Prince/Prakash make or equivalent)				
		15 mm dia nominal bore	Each	10.00	226.50	2,265.00
		20 mm dia nominal bore	Each	10.00	274.65	2,746.50
		25 mm dia nominal bore	Each	15.00	375.65	5,634.75
		32 mm dia nominal bore	Each	10.00	461.60	4,616.00
		Total of sub-head (18.0) (DSR)				21,74,640.75
		Total of sub-head (18.0) (Non DSR)				15,262.25
						-
19.0		EXTERNAL SEWERAGE SYSTEM				-
						-

SCHEDULE OF QUANTITIES**Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat****ABSTRACT OF COST**

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
19.01	2.10	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, by mechanical/manual means ramming of bottoms, for all depth, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m :				
	2.10.1	All kinds of soils				
	2.10.1.2	Pipes, cables etc. exceeding 80 mm dia. but not exceeding 300 mm dia	Metre	1,316.00	293.40	3,86,114.40
19.02	19.1	Providing, laying and jointing glazed stoneware pipes class SP-1 with stiff mixture of cement mortar in the proportion of 1:1 (1 cement : 1 fine sand) including testing of joints etc. complete :		-	-	-
	19.1.2	150 mm diameter	Metre	1,240.00	591.40	7,33,336.00
	19.1.4	250 mm diameter	Metre	76.00	1,293.90	98,336.40
				-		-
19.03	19.3	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) up to haunches of S.W. pipes including bed concrete as per standard design :		-		-
	19.3.2	150 mm dia S.W pipe	Metre	620.00	689.75	4,27,645.00
	19.3.4	250 mm dia S.W pipe	Metre	38.00	943.90	35,868.20
19.04	19.2	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) all-round S.W. pipes including bed concrete as per standard design :		-		-
	19.2.2	150 mm diameter S.W. pipe	Metre	620.00	1,095.15	6,78,993.00
	19.2.4	250 mm diameter S.W. pipe	Metre	38.00	1,476.35	56,101.30
						-

SCHEDULE OF QUANTITIES

Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat

ABSTRACT OF COST

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
19.05	19.7	Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 coarse sand) with R.C.C. top slab with 1:1.5:3 mix (1cement : 1.5 coarse sand (zone-III) : 3 graded stone aggregate 20mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4coarse sand (zone-III) : 8 graded stone aggregate 40 mm nominalsize), inside plastering 12 mm thick with cement mortar 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement andmaking channels in cement concrete 1:2:4 (1 cement : 2 coarsesand : 4 graded stone aggregate 20 mm nominal size) finished witha floating coat of neat cement complete as per standard design :				-
	19.7.1	Inside size 90x80 cm and 45 cm deep including C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover and frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg) :				-
	19.7.1.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	44.00	11,687.10	5,14,232.40
	19.7.2	Inside size 120x90 cm and 90 cm deep including C.I. Cover with frame (medium duty) 500 mm internal diameter, total weight of cover and frame to be not less than 116 kg (weight of cover 58 kg and weight of frame 58 kg) :				
	19.7.2.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	14.00	24,405.90	3,41,682.60
19.06	19.8	Extra for depth for manhole with F.P.S. bricks				
	19.8.1	Size 90 X 80 cm				
	19.8.1.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Metre	10.00	8,127.45	81,274.50
	19.8.2	Size 120 X 90 cm				
	19.8.2.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Metre	3.00	9,744.25	29,232.75
						-

SCHEDULE OF QUANTITIES**Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat****ABSTRACT OF COST**

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
19.07	19.9	Constructing brick masonry circular type manhole 0.91 m internal dia at bottom and 0.56m dia at top in cement mortar 1:4 (1 cement : 4 coarse sand), inside cement plaster 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement, foundation concrete 1:3:6 mix (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size), and making necessary channel in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement, all complete as per standard design :				-
	19.9.1	0.91 m deep with S.F.R.C. cover and frame (heavy duty, HD-20 grade designation) 560 mm internal diameter conforming to I.S. 12592, total weight of cover and frame to be not less than 182 kg., fixed in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including centering, shuttering all complete. (Excavation, foot rests and 12mm thick cement plaster at the external surface shall be paid for separately) :				-
	19.9.1.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	1.00	11,038.10	11,038.10
19.08	19.10	Extra depth for circular type manhole 0.91m internal dia (at bottom) beyond 0.91 m to 1.67 m				
	19.10.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Metre	1.00	6,986.80	6,986.80
19.09	19.11	Constructing brick masonry circular manhole 1.22 m internal dia at bottom and 0.56 m dia at top in cement mortar 1:4 (1 cement :4coarse sand) inside cement plaster 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement foundation concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) and making necessary channel in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement, all complete as per standard design :				

SCHEDULE OF QUANTITIES

Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat

ABSTRACT OF COST

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
	19.11.1	1.68 m deep with SFRC Cover and frame (heavy duty HD- 20 grade designation) 560 mm internal diameter conforming to I.S. 12592, total weight of cover and frame to be not less than 182 kg. fixed in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including centering, shuttering all complete. (Excavation, foot rests and 12 mm thick cement plaster at the external surface shall be paid for separately) :				
	19.11.1.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5		1.00	22,951.95	22,951.95
19.10	19.12	Extra depth for circular type manhole 1.22 m internal dia (at bottom) beyond 1.68 m to 2.29 m :				
	19.12.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5		1.00	9,068.35	9,068.35
				-	-	-
19.11	19.16	Providing orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS : 10910, on 12 mm dia steel bar conforming to IS : 1786, having minimum cross section as 23 mmx25 mm and over all minimum length 263 mm and width as 165 mm with minimum 112 mm space between protruded legs having 2 mm tread on top surface by ribbing or chequering besides necessary and adequate anchoring projections on tail length on 138 mm as per standard drawing and suitable to with stand the bend test and chemical resistance test as per specifications and having manufacture's permanent identification mark to be visible even after fixing, including fixing in manholes with 30x20x15 cm cement concrete block 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) complete as per design.	each	125.00	487.10	60,887.50
				-	-	-
19.12	19.19	Providing and fixing in position pre-cast R.C.C. manhole cover and frame of required shape and approved quality				
	19.19.4	EHD-35				
	19.19.4.1	Circular shape 560 mm internal dia	each	58.00	1,882.20	1,09,167.60

SCHEDULE OF QUANTITIES						
Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat						
ABSTRACT OF COST						
S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
19.13	19.4	Providing and fixing square-mouth S.W. gully trap class SP-1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70kg as per standard design:		-	-	-
	19.4.3.1	180x150 mm size P type With FPS bricks	each	42.00	2,534.00	1,06,428.00
				-	-	-
19.14	19.21.1	Making connection of drain or sewer line with existing manhole including breaking into and making good the walls, floors with cement concrete 1:2:4 mix (1cement: 2 coarse sand : 4 graded stone aggregate 20mm nominal size) cement plastered on both sides with cement mortar 1:3 (1cement : 3 coarse sand) finished with a floating coat of neat cement and making necessary channels for the drain etc. complete for pipes 100 to 230mm dia.	each	3.00	683.70	2,051.10
19.15	19.32	Making soak pit 2.5 m diameter 3.0 metre deep with 45 x 45 cm dry brick honey comb shaft with bricks and S.W. drain pipe 100 mm diameter, 1.8 m long complete as per standard design.				
	19.32.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	11.00	28,029.15	3,08,320.65
19.16	19.33	Constructing soak pit 1.20x1.20x1.20 m filled with brickbats including S.W. drain pipe 100 mm diameter and 1.20 m long complete as per standard design.	Each	1.00	2,940.20	2,940.20
		Total of sub-head (19.0) (DSR)				40,22,656.80
20.0		External Storm Water Drainage System				
20.01	2.10	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, for all depth, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50m:				
	2.10.1	All kinds of soil				
	2.10.1.2	Pipes, cables etc. exceeding 80 mm dia. but not exceeding 300 mm dia	Metre	581.00	293.40	1,70,465.40

SCHEDULE OF QUANTITIES

Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat

ABSTRACT OF COST

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
	2.10.1.3	Pipes, cables etc. exceeding 300 mm dia but not exceeding 600 mm	Metre	23.00	458.10	10,536.30
20.02	2.13	Excavating trenches of required width for pipes, cables, etc, including excavation for sockets, depth upto 1.5 m, including getting out the excavated materials, returning the soil as required in layers not exceeding 20 cm in depth, including consolidating each deposited layers by ramming, watering etc., stacking serviceable material for measurements and disposal of unserviceable material as directed, within a lead of 50 m :				
	2.13.1	Ordinary rock				
	2.13.1.2	Pipes, cables etc. exceeding 80 mm dia but not exceeding 300 mm dia	Metre	65.00	825.30	53,644.50
	2.13.1.3	Pipes, cables exceeding 300 mm dia but not exceeding 600 mm dia	Metre	3.00	949.60	2,848.80
20.03	19.6	Providing and laying non-pressure NP2 class (light duty) RCC pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete. (for storm drainage)				
	19.6.2	150 mm dia RCC pipe	Metre	300.00	493.10	1,47,930.00
	19.6.3	250 mm dia RCC pipe	Metre	210.00	811.15	1,70,341.50
	19.6.4	300 mm dia RCC pipe	Metre	135.00	902.05	1,21,776.75
	19.6.5	450 mm dia RCC pipe	Metre	25.00	1,481.55	37,038.75
				-	-	
20.04	19.3	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) up to haunches of S.W. pipes including bed concrete as per standard design :		-	-	
	19.3.2	150 mm diameter S.W. pipe /RCC pipes	Metre	225.00	689.75	1,55,193.75
	19.3.4	250 mm diameter S.W. pipe /RCC pipes	Metre	157.50	943.90	1,48,664.25
	19.3.5	300 mm diameter S.W. pipe/RCC pipes	Metre	135.00	1,089.10	1,47,028.50
	analysed	450 mm diameter S.W. pipe/RCC pipes	Metre	25.00	1,155.00	28,875.00
				-	-	
20.05	19.2	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) all-round S.W. pipes including bed concrete as per standard design :				
	19.2.2	150 mm diameter S.W. pipe	Metre	75.00	1,095.15	82,136.25
	19.2.4	250 mm diameter S.W. pipe	Metre	52.50	1,476.35	77,508.38

SCHEDULE OF QUANTITIES

Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat

ABSTRACT OF COST

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
20.06	19.27	Constructing brick masonry road gully chamber 50x45x60 cm with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) including 500x450 mm pre-cast R.C.C. horizontal grating with frame complete as per standard design :		-	-	
	19.27.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	62.00	5,589.45	3,46,545.90
				-	-	
20.07	19.19	Providing and fixing in position pre-cast R.C.C. manhole cover and frame of required shape and approved quality		-	-	
	19.19.1	L D- 2.5		-	-	
	19.19.1.1	Rectangular shape 600x450mm internal dimensions	Each	6.00	1,255.25	7,531.50
				-	-	
20.08	9.50	Providing and fixing hard drawn steel wire fabric 75x25 mm mesh of weight not less than 7.75 Kg per sqm to window frames etc. including 62x19 mm beading of second class teak wood and priming coat with approved steel primer all complete.	Sqm	20.00	1,484.70	29,694.00
				-	-	
20.09	12.41	Providing & fixing on wall face unplasticised - Rigid PVC rain water pipes conforming to IS:13592 Tyape A included jointing with seal ring conforming to IS:5382 leaving 10 mm gap for thermal expansion. (i)Single socketed pipes.		-	-	
	12.41.2	110 mm diameter	Metre	72.00	319.75	23,022.00
				-	-	
20.10	23.1	Boring/drilling bore well of required dia for casing/ strainer pipe, by suitable method prescribed in IS:2800(Part I), including collecting sample from different strata , preparing and submitting strata chart/ bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer-in-charge, upto 90m depth below ground level.		-	-	
	23.1.1	All types of Soil		-	-	
	23.1.1.1	300 mm dia	Metre	200.00	592.05	1,18,410.00
				-	-	
20.11	23.3	Supplying, assembling, lowering and fixing in vertical position in bore well, unplasticized PVC. medium well casing (CM) pipe of required dia, conforming to IS: 12818, including required hire & labour charges, fittings & accessories, all complete, for all depths, as per direction of Engineer-in-charge.		-	-	

SCHEDULE OF QUANTITIES

Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat

ABSTRACT OF COST

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
	23.3.2	150mm nominal size dia	Metre	100.00	668.50	66,850.00
				-	-	
20.12	23.4	Supplying, assembling, lowering and fixing in vertical position in bore well, unplasticized PVC. medium well screen(RMS) pipes with ribs, conforming to IS: 12818, including required hire & labour charges, fittings & accessories, all complete, for all depths, as per direction of Engineer-in-charge.		-	-	
	23.4.2	150 mm nominal size dia	Metre	80.00	681.90	54,552.00
				-	-	
20.13	23.5	Supplying, filling, spreading & levelling stone boulders of size range 5cm to 20cm, in recharge pit, in the required thickness, for all leads & lifts, all complete as per direction of Engineer-in-charge.	cum	4.00	1,302.30	5,209.20
				-	-	
20.14	23.6	Supplying, filling, spreading & levelling gravel of size range 5mm to 10mm, in recharge pit, over the existing layer of boulders, in required thickness, for all leads & lifts, all complete as per direction of Engineer-in-charge.	cum	4.00	1,309.00	5,236.00
				-	-	
20.15	23.7	Supplying, filling, spreading & levelling coarse sand of size range 1.5mm to 2mm, in recharge pit, in required thickness over gravel layer, for all leads & lifts, all complete as per direction of Engineer-in-charge.	cum	4.00	1,309.00	5,236.00
20.16	23.9	Providing and fixing factory made precast RCC perforated drain covers, having concrete of strength not less than M-25, of size 1000 x 450x50 mm, reinforced with 8 mm dia four nos longitudinal & 9 nos cross sectional T.M.T. hoop bars, including providing 50 mm dia perforations @ 100 to 125 mm c/c, including providing edge binding with M.S. flats of size 50 mm x 1.6 mm complete, all as per direction of Engineer-in- charge.	Each	150.00	1,213.25	1,81,987.50
				-	-	
20.17	23.15	Providing and fixing Bail plug/ Bottom plug of required dia to the bottom of pipe assembly of tube well as per IS:2800 (part I).		-	-	
	23.15.1	100 mm dia	each	6.00	228.25	1,369.50

SCHEDULE OF QUANTITIES

Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat

ABSTRACT OF COST

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
20.18	Derived from DSR 2021	Constructing brick masonry open surface drain with bricks of class designation 75 in cement mortar 1:4 (1 cement : 4 fine sand) including 10 cm thick bed concrete 1:5:10 (1 cement: 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and 25 mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5 mm nominal size) for filling haunches including 12 mm cement plaster 1:4 (1 cement : 4 coarse sand) with a floating coat of neat cement inside the drain, its top and exposed side including disposal of surplus earth complete as per standard design:		-	-	
		a) 25 cm drain 30 cm average depth, With F.P.S. bricks	each	150.00	1,685.85	2,52,877.50
20.19	Derived from DSR 2021	Extra for additional depth for brick masonry open surface drain : a) 25 cm drain 30 cm depth, with common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Metre	10.00	428.05	4,280.50
		Total of sub-head (20.0) (DSR)				24,56,789.73
21		EXTERNAL WATER SUPPLY SYSTEM AND PUMPS			-	
		DISTRIBUTION NETWORK FOR FRESH WATER SUPPLY			-	
21.01	18.12	Providing and fixing G.I. pipes complete with G.I. fittings including ,trenching and refilling external works			-	
	18.12.3	25mm nominal bore	Metre	80.00	417.95	33,436.00
	18.12.4	32mm nominal bore	Metre	110.00	457.70	50,347.00
	18.12.5	40mm nominal bore	Metre	145.00	558.35	80,960.75
	18.12.6	50mm nominal bore	Metre	165.00	654.20	1,07,943.00
	18.12.7	65mm nominal bore	Metre	195.00	768.60	1,49,877.00
	18.12.8	80mm nominal bore	Metre	140.00	919.10	1,28,674.00
21.02	18.40	Painting GI pipes and fittings with two coats of anti corrosive bitumastic paint of approved quality			-	
	18.40.3	25 mm dia, nominal bore	Metre	80.00	15.25	1,220.00
	18.40.4	32 mm dia, nominal bore	Metre	110.00	18.40	2,024.00
	18.40.5	40 mm dia, nominal bore	Metre	145.00	20.95	3,037.75
	18.40.6	50 mm dia, nominal bore	Metre	165.00	25.25	4,166.25
	18.40.7	65 mm dia, nominal bore	Metre	195.00	31.30	6,103.50
	18.40.8	80mm nominal bore	Metre	140.00	36.40	5,096.00
					-	

SCHEDULE OF QUANTITIES

Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat

ABSTRACT OF COST

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
21.03	18.17	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :			-	
		external works		-	-	
	18.17.1	25mm nominal bore	Each	12.00	532.35	6,388.20
	18.17.2	32 mm dia, nominal bore	Each	14.00	589.90	8,258.60
	18.17.4	50mm nominal bore	Each	5.00	707.30	3,536.50
	18.17.5	65mm nominal bore	Each	2.00	1,490.70	2,981.40
	18.17.6	80mm nominal bore	Each	2.00	2,227.60	4,455.20
				2.00	-	
21.04		Providing and filling sand of grading zone V or coarser grade all-round the G.I. pipes in external work.		-	-	
	18.41.3	25mm dia pipe	Metre	80.00	164.10	13,128.00
	18.41.4	32mm dia pipe	Metre	110.00	168.35	18,518.50
	18.41.5	40mm dia pipe	Metre	145.00	170.50	24,722.50
	18.41.6	50mm dia pipe	Metre	165.00	176.90	29,188.50
	18.41.7	65mm dia pipe	Metre	195.00	279.20	54,444.00
	18.41.8	80mm dia pipe	Metre	140.00	287.70	40,278.00
				-	-	
21.05	18.59	Providing and fixing C.I. double acting air valve of approved quality with bolts, nuts, rubber insertions etc. complete (The tail pieces, tapers etc if required will be paid separately) :		-	-	
	18.59.1	50 mm dia	Each	2.00	5,171.75	10,343.50
	18.59.2	80 mm dia	Each	1.00	6,255.45	6,255.45
				-	-	
	18.32.1	Constructing masonry chamber 30x30x50 cm,inside with 75 class designation brick work in cement mortar 1:4 (1 cement:4 coarse sand) for stop cock complete with C.I. surface box 100x100x75mm (inside) with locking arrangement and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand: 4 graded stone aggregate 20mm nominal size) necessary excavation foundation concrete 1:5:10 (1 cement:5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design.	Each	2.00	1,712.15	3,424.30
				-	-	

SCHEDULE OF QUANTITIES

Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat

ABSTRACT OF COST

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
21.06	18.33	Constructing masonry Chamber 60x60x75 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.I. surface box 100mm top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) , i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design :		-	-	
	18.33.1	With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	Each	10.00	10,102.50	1,01,025.00
21.07	18.34	Constructing masonry Chamber 90x90x100 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.I. surface box 100 mm top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) , i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design : 18.34.1 With common burnt clay F.		-	-	
	18.34.1	With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	Each	2.00	17,577.90	35,155.80
				-	-	
21.08	18.13	Making connection of G.I. distribution branch with G.I. main of following sizes by providing and fixing tee, including cutting and threading the pipe etc. complete :				
	18.13.2	50 to 80 mm nominal bore	Item	2.00	1,513.70	3,027.40
				-	-	
21.09	ELECT. DSR 2022/ 16.11.1	BUTTERFLY VALVE (MANUAL) with C I body SS disc nitrile sheet & O - ring & PN 16 pressure rating as specified.		-	-	
	16.11.1.6	65 nominal bore	Each	2.00	3,821.00	7,642.00
	16.11.1.5	80 nominal bore	Each	2.00	4,055.00	8,110.00
					-	

SCHEDULE OF QUANTITIES

Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat

ABSTRACT OF COST

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
21.10	ELECT. DSR 2022 / 16.11.2	NON - RETURN VALVE with dual plate of C I body SS plates vulcanized NBR seal flanged end & PN 16 pressure rating as specified.			-	
	16.11.2.5	80 nominal bore	Each	2.00	3,477.00	6,954.00
				-	-	
21.11	ELECT. DSR 2022 / 14.13	Providing and fixing GI pipes medium class conforming to IS 1239 with GI fittings including cutting hole chase painted with primer, two coats of enamel paints etc		-	-	
	14.13.3	100 mm dia, NB	Metre	5.00	1,806.00	9,030.00
	14.13.4	150 mm dia, NB	Metre	5.00	2,740.00	13,700.00
					-	
		Total of sub-head (21.0) (DSR)				9,83,452.10
					-	
22.0		Bore Well Installations (As per D.S.R)			-	
					-	
22.01	23.1	Boring/drilling bore well of required dia for casing/ strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/ bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer -in-charge, upto 90 metre depth below ground level.			-	
	23.1.1	All types of soil			-	
	23.1.1.1	300 mm dia	metre	120.00	592.05	71,046.00
	23.1.2	Rocky strata including Boulders		-	-	
	23.1.2.1	300 mm dia	metre	30.00	1,416.30	42,489.00
				-	-	
	23.3	Supplying, assembling, lowering and fixing in vertical position in bore well, unplasticized PVC medium well casing (CM) pipe of required dia, conforming to IS: 12818, including required hire and labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer -in-charge.	Meter			
	23.3.3	200mm nominal dia	Meter	100.00	951.95	95,195.00
22.02	23.4	Supplying, assembling, lowering and fixing in vertical position in bore well unplasticized PVC medium well screen (RMS) pipes with ribs, conforming to IS: 12818, including hire & labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer-in-charge.		-	-	
	23.4.3	200 mm nominal size dia	metre	40.00	1,099.25	43,970.00
				-	-	

SCHEDULE OF QUANTITIES

Construction of EMRS at Block- Khedbrahma, District- Sabarkantha, Gujarat

ABSTRACT OF COST

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
22.03	23.8	Gravel packing in tubewell construction in accordance with IS: 4097, including providing gravel fine/ medium/ coarse, in required grading & sizes as per actual requirement, all complete as per direction of Engineer-in-charge.	cum	14.00	1,479.25	20,709.50
				-	-	
				-	-	
22.04	23.12	Development of tube well in accordance with IS : 2800 (part I) and IS: 11189, to establish maximum rate of usable water yield without sand content (beyond permissible limit), with required capacity air compressor, running the compressor for required time till well is fully developed, measuring yield of well by "V" notch method or any other approved method, measuring static level & draw down etc. by step draw down method, collecting water samples & getting tested in approved laboratory, i/c disinfection of tubewell, all complete, including hire & labour charges of air compressor, tools & accessories etc., all as per requirement and direction of Engineer-in-charge.	hour	72.00	916.80	66,009.60
22.05	23.13	Providing and fixing suitable size threaded mild steel cap or spot welded plate to the top of bore well housing/ casing pipe, removable as per requirement, all complete for borewell of:				
	23.13.3	200 mm nominal size dia	Each	2.00	280.95	561.90
				-	-	
22.06	23.14	Providing and fixing M.S. clamp of required dia to the top of casing/ housing pipe of tubewell as per IS: 2800 (part I), including necessary bolts & nuts of required size complete.		-	-	
	23.14.3	200 mm clamp	Each	4.00	1,827.00	7,308.00
				-	-	
22.07	23.15	Providing and fixing Bail plug/ Bottom plug of required dia to the bottom of pipe assembly of tubewell as per IS:2800 (part I).		-	-	
	23.15.3	200 mm dia	Each	2.00	308.55	617.10
		Total of sub-head (22.0) (DSR)				3,47,906.10

SCHEDULE OF QUANTITIES

Name of work : Construction of Eklavya Model Residential School (EMRS) at Village - Khedbrahma District - Sabarkantha, Gujrat. (Single Phase)

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
Electrical work						
		FIRE FIGHTING WORKS				
23.0	DSR-2022	PIPING & VALVES				
23.01	18.7	Providing, laying, testing & commissioning of 'C' class heavy duty MS pipe conforming to IS 3589/IS 1239 including Welding, fittings like elbows, tees, flanges ,tapers, nuts bolts, gaskets etc. and fixing the pipe on the wall/ceiling with suitable clamp/support frame and painting with two or more coats of synthetic enamel paint of required shade complete as required :				
	18.7.1	25 mm dia.	Metre	18.00	744.00	13,392.00
	18.7.5	65 mm dia.	Metre	60.00	1614.00	96,840.00
	18.7.6	80 mm dia.	Metre	170.00	1885.00	3,20,450.00
	7.7	100mm dia	Metre	45.00	2550.00	1,14,750.00
23.02	14	Providing, installation, testing and commissioning of non-return valve of following sizes confirming to IS:5312 complete with rubber gasket, GI bolts, nuts,washers etc.as required :				
	14.5	80mm dia	Nos	3.00	7691.00	23,073.00
23.03	18.17	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :				
	18.17.1	25 mm dia.	Nos	18.00	532.35	9,582.30
23.04	11	Supplying, fixing, testing and commissioning of butterfly valve of PN 1.6 rating with bronze/gunmetal seat duly ISI marked complete with nuts, bolts, washers, gaskets conforming to IS 13095 of following sizes as required :				
	11.5	100 mm dia.	Nos	6.00	6667.00	40,002.00
23.05	15	Providing, installation, testing and commissioning of stainless steel Y-strainer fabricated out of 1.6 mm thick stainless steel, Grade 304, sheet with 3 mm dia holes with stainless steel flange.				
	15.2	100mm dia	Each	3.00	6664.00	19,992.00
23.06	MR 1	Providing and fixing 150 mm dial diameter size Pressure gauge (0-15 Kg/Cm2) complete with shut off valve duly calibrated before installation complete as required & as per enclosed specification.	Nos	3.00	675.00	2,025.00

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
		Total of sub-head (23.0) (DSR)				6,38,081.30
		Total of sub-head (23.0) (NON DSR)				2,025.00
24.0		FIRE HYDRANT ACCESSORIES		-		-
24.01	18.17	Supplying and fixing first-aid Hose Reel with MS construction spray painted in post office red, conforming to IS 884 complete with the following as required. 20 mm nominal internal dia water hose thermoplastic (Textile reinforced) type -2 as per IS: 12585 20 mm nominal internal dia gun metal globe valve & nozzle. Drum and brackets for fixing the equipments on wall. Connections from riser with 25 mm dia stop gun metal valve & M.S. Pipe and socket.		-		-
	17.1	30m	Nos	18.00	8,675.00	1,56,150.00
				-		-
		Total of sub-head (24.0) (DSR)				1,56,150.00
				-		-
25.0		FIRE EXTINGUISHERS & MISC. ITEMS		-		-
25.01	MR	Providing and fixing Carbon-di-oxide fire extinguishers consisting of welded M.S cylindrical body, squeeze lever discharge valve fitted with internal discharge tube, 30cms long high pressure discharge hose, discharge nozzle, suspension bracket, confirming to IS : 15683 finished externally with red enamel paint and fixed to wall with brackets with rawl plug/dash fasteners complete with internal charge. Capacity 4.5 kg. ISI Marked.(Contractor should submit test certificate form manufacturer along with serial number of every extinguishers supplied.)	Nos	2.00	7,131.00	14,262.00
		`		-		-
25.02	MR	Providing and fixing (ABC Dry Chemical Powder) type Fire Extinguisher of Capacity 6 kg Confirms to IS 15683, bearing ISI mark complete with brass forged squeeze grip type valve fitted with pressure gauge , pressurize with dry Nitrogen gas filled, with discharge nozzle with wall mounting bracket (rubber gripped) complete with internal charges. (Contractor should submit test certificate form manufacturer along with serial number of every extinguishers supplied.)	Nos	24.00	2,825.00	67,800.00

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
25.03	MR	Providing and fixing water Carbon-di-oxide (ISI marked) extinguishers including all accessories as per IS specification with wall bracket with rawl plug complete as reqd.(Contractor should submit test certificate form manufacturer along with serial number of every extinguishers supplied.)	Nos	2.00	3,582.00	7,164.00
		Capacity 9 Litres				
				-		-
		Total of sub-head (25.0) (Non DSR)				89,226.00
				-		-
26.0		FIRE PUMPS & ACCESSORIES		-		-
26.01	18.4	Supplying, installation, testing and commissioning of electric driven terrace pump suitable for automatic operation and consisting of following, complete in all respects, as required: (Terrace Pump)		-		-
				-		-
		(a) Horizontal type, multistage, centrifugal, split casing pump of cast iron body & bronze impeller with stainless steel shaft, mechanical confirming to IS : 1520		-		-
		b) Suitable HP squirell cage induction motor TEFC type suitable for operation on 415 volts, 3 phase, 50 Hz, AC supply with IP55 class of protection for enclosure, horizontal foot mounted type with Class-'F' insulation, conforming to IS-325.		-		-
		(c) M.S.fabricated common base plate, coupling, coupling guard, foundation bolts etc.as required.		-		-
		(d) Suitable cement concrete foundation duly plastered and with anti vibration pads.		-		-
	18.4.1	450 lpm at 35 m Head	Set	3.00	86,203.00	2,58,609.00
26.02	MR	Providing and fixing rubber expansion joint (to provide relief from stresses at pipe flanges) as per specification of the manufacturers and direction of Engineer in chief PN-16 rating		-		-
		(a) 100 mm dia	Nos	3.00	560.00	1,680.00
26.03	18.20	Supplying and fixing air vessel made of 250 mm dia, 8 mm thick MS sheet, 1200 mm in height with air release valve on top and flanged connection to riser, drain arrangement with 25 mm dia gun metal wheel valve with required accessories, pressure gauge and paintingwith synthetic enamel paint of approved shade as required.	Nos	3.00	18,244.00	54,732.00

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
				-		-
26.04	MR	"Providing, fixing, testing and commissioning of control panel for Terrace Booster pumps. Incoming: MCCB 35A 1 set of Phase indicating lamps, 1 set of 35A Al bus bars, 1No Ammeter, 1No Voltmeter with phase selector switch Feeder for Booster Pumps - 1 No. 1 No. 32A TP MCCB without releases. DOL starter with over load relay, single phase preventor and indicating lamps with ON/OFF push buttons. 1 No. Automanual selector switch. Suitable for booster pumps"	Nos	3.00	34,429.00	1,03,287.00
		Total of sub-head (26.0) (DSR)				3,13,341.00
		Total of sub-head (26.0) (Non DSR)				1,04,967.00
		ELECTRICAL WORKS (Internal)				
27.0		Internal Wiring				
		Point wiring in PVC conduit, with modular type switch :-				
27.01	1.10	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required.				
	1.10.1	Group A	Point	1275.00	1015.00	12,94,125.00
	1.10.2	Group B	Point	78.00	1182.00	92,196.00
	1.10.3	Group C	Point	498.00	1467.00	7,30,566.00
27.02	1.55	Wiring for group controlled (looped) light point/ fan point/ exhaust fan point/ call bell point (without independent switch etc) with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed PVC conduit, and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc as required. (Note: To be provided in class rooms in school bldg./ common areas/ toilets/ corridors etc.)				
	1.55.1	Group A	Point	285.00	649.00	1,84,965.00
	1.55.2	Group B	Point	6.00	753.00	4,518.00
	1.55.3	Group C	Point	234.00	858.00	2,00,772.00

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
27.03	1.11	Wiring for twin control light point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, 2 way modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper	Point	40.00	1562.00	62,480.00
		Power plug wiring in PVC conduit (2 x 4 Sq.Mm.) :-				
27.04	1.12	Wiring for light/ power plug with 2X4 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ recessed medium class PVC conduit alongwith 1 No. 4 sq. mm FRLS PVC insulated copper conductor single core cable for loop earthing as required.	Metre	5431.00	334.00	18,13,954.00
		Power plug wiring in PVC conduit (4 x 4 Sq.Mm.) :-				
27.05	1.13	Wiring for light/ power plug with 4X4 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ recessed medium class PVC conduit alongwith 2 No. 4 sq. mm FRLS PVC insulated copper conductor single core cable for loop earthing as required.	Metre	922.00	537.00	4,95,114.00
		Circuit / Sub main wiring in PVC conduit :-				
27.06	1.14	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit				
	1.14.1	2 X 1.5 sq. mm + 1 X 1.5 sq. mm earth wire.	Metre	4490.00	233.00	10,46,170.00
	1.14.4	2 x 6 sq.mm. + 1 x 6 sq.mm. Earth wire	Metre	995.00	439.00	4,36,805.00
	1.14.5	2 x 10 sq.mm. + 1 x 6 sq.mm. Earth wire	Metre	950.00	570.00	5,41,500.00
	1.14.9	4 x 6 sq.mm. + 2 x 6 sq.mm. Earth wire	Metre	910.00	754.00	6,86,140.00
	1.14.10	4 x 10 sq.mm. + 2 x 6 sq.mm. Earth wire	Metre	410.00	1005.00	4,12,050.00
		S/F light plug point Modular Type Accessories :-				
27.07	1.31	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 3 pin 5/6 A modular socket outlet and 5/6 A modular switch, connections etc. as required.	Each	960.00	477.00	4,57,920.00
		S/F power plug point modular Type Accessories :-				

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
27.08	1.32	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 6 pin 5/6 & 15/16 A modular socket outlet and 15/16 A modular switch, connections etc. as required.	Each	400.00	586.00	2,34,400.00
27.09	2.18	Supplying and fixing 20 A, 240 V, SPN Industrial type socket outlet, with 2 pole and earth, metal enclosed plug top alongwith 20 A "C" curve, SP, MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required.	Each	32.00	1621.00	51,872.00
27.10	1.38	Supplying and fixing call bell/ buzzer suitable for single phase, 230 V, complete as required.	Each	33.00	99.00	3,267.00
27.11	1.56	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 2 nos. of 3 pin 5/6 A modular socket outlet and 2 nos. of 5/6 A modular switch, connections etc. as required.		45.00	676.00	30,420.00
		Total of sub-head (27.0) (DSR)				87,79,234.00
28.0		Distribution Boards & MCB'S				
28.01	2.10	Supplying and fixing 5 A to 32 A rating, 240/415 V, 10 kA, "C" curve , miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as Required.				
	2.10.1	Single pole	Each	1392.00	256.00	3,56,352.00
	2.10.5	Triple pole and neutral	Each	1.00	1228.00	1,228.00
28.02	2.11	Supplying and fixing single pole blanking plate in the existing MCB DB complete etc. as required.	Each	26.00	13.00	338.00
28.03	2.4	Supplying and Fixing Following way, Horizontal Type Three Pole and Neutral, Sheet Steel, MCB Distribution Board, 415 V , on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator).				
	2.4.1	4 Way (4 + 12), Double Door	Each	5.00	4091.00	20,455.00
	2.4.2	6 Way (4 + 18), Double Door	Each	22.00	4974.00	1,09,428.00

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
	2.4.3	8 Way (4 + 24), Double Door	Each	20.00	5967.00	1,19,340.00
28.04	2.3	Supplying and fixing following way, Single Pole and Neutral , sheet steel, MCB distribution board, 240 V, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator).				
	2.3.1	6 Way Double door.	Each	20.00	2206.00	44,120.00
	2.3.2	8 Way Double door.	Each	3.00	2573.00	7,719.00
	2.3.3	12 Way Double door.	Each	26.00	2315.00	60,190.00
						-
		S/F DP Isolator				
28.05	2.12	Supplying and fixing following Rating, Double pole, 240 V, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as Required.				
	2.12.1	40 Amps	Each	20.00	435.00	8,700.00
	2.14.3	63 Amps	Each	29.00	527.00	15,283.00
		S/F 4P Isolator				
28.06	2.13	Supplying and fixing following rating, four pole, 415 V, isolator in the existing MCB DB complete with connections, testing and commissioning				
	2.13.1	40 Amps	Each	2.00	970.00	1,940.00
	2.13.2	63 Amps	Each	42.00	1034.00	43,428.00
	2.13.3	100 Amps	Each		1227.00	
		S/F DP (RCCB)				
28.07	2.14	Supplying and fixing following rating, double pole, (single phase and neutral), 240 V, residual current circuit breaker (RCCB), having a sensitivity current 30 mA in the existing MCB DB complete with connections, testing and commissioning etc. as Required.				
	2.14.2	40 Amps	Each	20.00	2642.00	52,840.00
	2.14.3	63 Amps	Each	29.00	2722.00	78,938.00
28.08	2.15	Supplying and fixing following rating, Four pole, (Threee phase and neutral), 415 V, residual current circuit breaker (RCCB), having a sensitivity current 30 mA in the existing MCB DB complete with connections, testing and commissioning etc. asrequired.				
	2.15.2	40 Amps	Each	2.00	3188.00	6,376.00
	2.15.3	63 Amps	Each	42.00	2872.00	1,20,624.00

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
28.09	2.5	Supplying and fixing of following ways surface/ recess mounting, vertical type, 415 V, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200 A tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCBs (but without MCBs and incomer) as required . (Note : Vertical type MCB TPDB is normally used where 2 phase outlets are required.)				
	2.5.1	4 way (4 + 12), Double door	Each	4.00	7512.00	30,048.00
28.10	2.23	Supplying and fixing Cable End Box (Loose Wire Box) suitable for following single pole and neutral, sheet steel, MCB distribution board, 240 Volts, on surface/ recess, complete with testing and commissioning etc. as required.				
	2.23.1	For 6 way, Double door SPN MCBDB	Each	20.00	752.00	15,040.00
	2.23.2	For 8 way, Double door SPN MCBDB	Each	3.00	832.00	2,496.00
	2.23.3	For 14 way, Double door SPN MCBDB	Each	26.00	902.00	23,452.00
28.11	2.24	Supplying and fixing Cable End Box (Loose Wire Box) suitable for following tripole pole and neutral, sheet steel, MCB distribution board, 415 Volts, on surface/ recess, complete with testing and commissioning etc. as required.				
	2.24.1	For 4 way, Double door TPN MCBDB	Each	5.00	1080.00	5,400.00
	2.24.2	For 6 way, Double door TPN MCBDB	Each	22.00	1124.00	24,728.00
	2.24.3	For 8 way, Double door TPN MCBDB	Each	20.00	1340.00	26,800.00
28.12	2.16	Supplying and fixing DP sheet steel enclosure on surface/recess along with 25/32 A 240V "C" Curve DP MCB complete with connections, testing and commissioning etc. as required. (For Qtrs Emergency Supply)	Each	29.00	1169.00	33,901.00
28.13	MR	Supplying and fixing following rating, Single/ double/ three pole, 230/ 415 volts, MCB "C" curve in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
		63 amps FP MCB	Each	12.00	1463.00	17,556.00
		Total of sub-head (28.0) (DSR)				12,09,164.00
		Total of sub-head (28.0) (Non-DSR)				17,556.00
29.0		Telephone, Television & Data System (Socket,Wiring & Conduiting Only)				

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
		S/F Modular Boxes, Base & Cover Plate :-				
29.01	1.27	Supplying and Fixing Following Size/ Modules, GI Box Alongwith Modular Base & Cover Plate for Modular Switches in Recess etc. as Required.				
	1.27.1	1 or 2 Module (75 mm x 75 mm)	Each	184.00	298.00	54,832.00
	1.27.2	3 Module (100mmX75mm)	Each	45.00	327.00	14,715.00
		S/F Modular Type Switch / Socket :-				
29.02	1.24	Supplying and Fixing Following Modular Switch/ Socket on The Existing Modular plate & Switch Box including connections But Excluding Modular Plate etc. as required.				
	1.24.6	Telephone Socket outlet.	Each	62.00	148.00	9,176.00
	1.24.7	TV Antenna socket outlet.	Each	43.00	148.00	6,364.00
29.03	1.21	Supplying and fixing of following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required.				
	1.21.1	20 mm.	Metre	2055.00	128.00	2,63,040.00
	1.21.2	25 mm.	Metre	505.00	145.00	73,225.00
29.04	1.18	Supplying and drawing following pair 0.5 mm dia FRLS PVC insulated annealed copper conductor, Unarmored Telephone cable in the existing surface/ recessed steel/ PVC conduit as required.				
	1.18.2	2 Pair	Metre	1115.00	38.00	42,370.00
29.05	1.19	Supplying and drawing co-axial TV cable RG-6 grade, 0.7 mm solid copper conductor PE insulated, shielded with fine tinned copper braid and protected with PVC sheath in the existing surface/ recessed steel/ PVC conduit as required.	Metre	700.00	47.00	32,900.00
29.06	1.53	Supplying and drawing of UTP 4 pair CAT 6 LAN Cable in the existing surface/ recessed Steel/ PVC conduit as required.				
	1.53.1	1 run of cable	Metre	1100.00	57.00	62,700.00
29.07	MR 1	SITC Modular Type Computer jack RJ 45 ISI mark 1 Module on existing Mounting plate and box Complete.	Each	89.00	198.00	17,622.00
		Total of sub-head (29.0) (DSR)				5,59,322.00
		Total of sub-head (29.0) (Non DSR)				17,622.00

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
30.0		Internal Lighting Fixtures & Fans				
30.01	MR 2	Supply of 20 Watt LED light Wall Mounted BRACKET light fitting Sutaible for 220 volts Single Phase A C Supply complete with all accessories as required	Each	1.00	800.00	800.00
30.02	MR 3	Supply of Surface Mounted Energy Efficient, LED Luminaires 12W LED DOWN LIGHT (Round) Sutaible for 220v Single Phase Supply complete with driver circuit including making connections etc.as required. (Technical Data - System power 12W, CRI ≥80, Power Factor ≥0.95, System Luminous Efficacy ≥94).	Each	78.00	739.00	57,642.00
30.03	MR 4	Supply of Surface Mounted Energy Efficient, LED Luminaires 15W LED DOWN LIGHT (Round) Sutaible for 220v Single Phase Supply complete with driver circuit including making connections etc.as required. (Technical Data - System power 15W, CRI ≥80, Power Factor ≥0.95, System Luminous Efficacy ≥94).	Each	35.00	792.00	27,720.00
30.04	MR 5	Supplying and fixing brass batten/ angle holder including 20 w LED Lamp, connection etc. as required.	Each	499.00	300.00	1,49,700.00
30.04	MR 5	Supply, of Linear & Compact 10W Mirror Light with Decorative Grey Caps, Polycarbonate Body & Ribbed Opal Diffuser. (Technical Data - System power 10W, CRI ≥80, Power Factor ≥0.95, System Luminous Efficacy ≥100)	Each	1.00	273.00	273.00
30.05	MR 6	Supply of LED Luminaires BATTEN 40W LED Tube Light of Box Type prewired Indoor Luminaire with Energy Efficient Electronic Ballast, with End Caps Complete as Required. (Technical Data - System power 40W, CRI ≥80, Power Factor ≥0.95, System Luminous Efficacy ≥95)	Each	342.00	898.00	3,07,116.00
30.06	MR 7	Supply of LED Luminaires BATTEN 20W LED Tube Light of Box Type Prewired Indoor Luminaire with Energy Efficient Electronic Ballast, with End Caps Complete as Required.(Technical Data - System power 20W, CRI ≥80, Power Factor ≥0.95, System Luminous Efficacy ≥100)	Each	725.00	379.00	2,74,775.00

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
30.07	MR 8	Supplying and fixing of Bulk Head with 10 Watt LED lamp fitting Suitable for 230 volts Single Phase A C Supply complete with all accessories as required.	Each	30.00	1203.00	36,090.00
		SUPPLY FANS & EXHAUST FANS				
30.08	MR 8	Supply, of following size sweep, BEE 5 star rated, white colour ceiling fan with all accessories i.e. 3 nos. blades, 30 cm long down rod, 2 nos. canopies, shackle kit, safety rope, copper winding, safety pin, nut bolts, washers, , suitable for 230 V, 50 Hz, single phase AC Supply, earthing etc. complete as required.				
		(a) 1200 mm Sweep	Each	569.00	1775.00	10,09,975.00
30.09	MR9	Supply of following sweep heavy duty metal body exhaust fan/wall fan/ fresh air (ventilating) plastic body fan with guard suitable operation on single phase 230 V, 50Hz. AC Supply, with lowers / shutters in the existing opening. (Crompton - Trans Air 300/200mm/Approved Equivalent in Usha/Havells/Bajaj)				
		(a) 200 mm sweep 900 RPM (in plastic body)Ventila	Nos	27.00	1033.00	27,891.00
		(b) 200 mm sweep 900 RPM (in plastic body)Ventilating fan		26.00	1,543.00	40,118.00
		(c) 300 mm sweep 900 RPM (In metal body) exhaust fan	Nos	41.00	2,873.00	1,17,793.00
		(d) 450 mm sweep 900 RPM (In metal body) exhaust fan	Nos	4.00	4,530.00	18,120.00
		e) 400 mm sweep oscillating type four speed wall mounting fan	Nos.	3.00	2,448.00	7,344.00
		Erection Of Lighting Fixtures And Fans				
30.10	1.41	Installation, testing and commissioning of pre-wired, fluorescent fitting / compact fluorescent fitting of all types, complete with all accessories and tube/lamp etc. directly on ceiling/ wall, including connections with 1.5 sq. mm FRLS PVC insulated, copper conductor, single core cable and earthing etc. as	Each	1182.00	206.00	2,43,492.00
30.11	1.45	Installation, testing and commissioning of ceiling fan, including wiring the down rods of standard length (upto 30 cm) with 1.5 sq. mm FRLS PVC insulated, copper conductor, single core cable, including providing and fixing phenolic laminated sheet cover on the Fan Box etc. as Required.	Each	569.00	339.00	1,92,891.00

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
30.12	1.50	Installation of Exhaust/wall fan in the existing opening, including making good the damage, Connection, Testing, Commissioning etc. as Required.				
	1.50.1	Upto 450 mm sweep	Each	101.00	450.00	45,450.00
		S/F modular type electronic fan regulator:				
30.13	1.25	Supplying and fixing Two Module Stepped Type Electronic Fan Regulator on the existing modular plate switch box including connections but excluding modular plate etc. as required.	Each	569.00	369.00	2,09,961.00
		Fixing Louvers / Shutters for Exhaust Fan:				
30.14	1.51	Extra for Fixing the Louvers/ Shutters Complete with Frame for a Exhaust Fan of all sizes.	Each	45.00	207.00	9,315.00
		Extra Down GI Pipe 15mm Dia:				
30.15	1.47	Supplying and Fixing Extra Down Rod of 10 cm Length G.I. pipe, 15 mm dia, heavy gauge including painting etc. as required. (Note : More than 5 cm length shall be rounded to the nearest 10 cm and 5 cm or less shall be ignored).	Each	569.00	46.00	26,174.00
		Total of sub-head (30.0) (Non DSR)				20,75,357.00
		Total of sub-head (30.0) (DSR)				7,27,283.00
		ELECTRICAL WORKS (External)				
31.0		Transformer and HT Panel				
31.01	MR 1	11KV HT VCB PANEL - IN DOOR TYPE				
		Supplying, installation, testing and commissioning of IN DOOR Type, floor mounting, 11KV HT panel unit made out of M.S sheet steel clad dust and vermin proof with necessary control fuses/MCBs, Termination arrangements for Incoming and Outgoing Cable of 3Cx120 Sq.mm Al.HT XLPE cable, and earthed cable, Terminal Blocks, Earthing, Powder coated painting, Sign writing and Base channels etc. with complete all accessories as required. as per Requirements comprising of the following.				

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
		INCOMING : i) 630Amps, 11kV, 3 phase 50Hz, 21KA / 3Sec, Draw-out type Vacuum Circuit Breaker. fitted with 230V AC spring charging motor, 110V DC tripping and closing coils, 8NO+8NC Aux. conductor mechanical on off indicator, spring charging / discharge Indication, automatic safety shutter and with anti-pumping feature with necessary required accessories.				-
		ii) 3 phase 11 KV/110 Volts PT, class 1 accuracy and 100 VA burden with 1 No Voltmeter (0-15 kV), Digital type, selector switch for voltmeter and protection fuses for HT metering upto 12 kV on incomer.				
		iii) Dual core dual ratio 3 CTs 400/200/5+5A of 15 VA burden and accuracy class1.0 for metering and class 5P10 for protection.				
		iv) (0-400 A) Ammeter, digital type with selector switch for Ammeter.				
		v) Digital Multifunction Meter.				
		vi) Microprocessor based numerical relay for Over current and Earth fault protection with directional control.				
		vii) Phase indicating lamps with HRC fuses.				
		viii) Indicating lamps to indicate, RYB, ON, OFF, OPEN, CLOSE, TRIP, SPRING CHARGED, TRIP CIRCUIT HEALTHY				
		ix) Test terminal block				
		x) Trip/Neutral/close switch				
		xi) Copper bus bar for earthing (common)				
		xii) master trip relay & trip circuit healthy supervision relay.				
		BusBar: 630 Amps, 11kV, 50Hz, 3Phase, 25 KA / 3Sec. Copper busbars.				
		The11KV HT VCB PANEL shall be complete with as per SLD and specifications.	set	1.00	448633.00	4,48,633.00
31.02	MR 2	11KV TRANSFORMER (11 KV /0.433 KV) (250 KVA)				

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
		Supplying, installation, testing and commissioning of 250 kVA, (Energy efficiency Level -2) 11kV / 433 Volts, 3 phase, 50Hz,vector group Dyn11 (delta -star connected), Indoor 'ONAN' type, copper wound transformer with OFF load tap changing arrangement on HV side in steps of +/- 2.5%, +/- 5% & +/- 7.5%, on H.V. side with HT cable chamber suitable for Heat shrinkable joint with XLPE cable (cable entry from bottom) and LT connection chamber suitable for connecting Bus duct arrangement and equipped with other essential accessories including providing complete with all fittings, accessories etc. and lifting lugs i/c first filling of filtered dehydrated oil, supplying grouting suitable MS Channel on the plinth for placing the transformer etc., complete and confirming to IS 1180 (Part-1): 2014, level - 2 & section 3 of CPWD General specification for Electrical works (Part -IV Substation 2013 as amended up to date) and as per specifications.	set	1.00	731480.00	7,31,480.00
		(PLEASE NOTE THE TRANSFORMER SHALL BE IN COMPLIANCE WITH NEW REGULATION IS 1180 or Equivalent IEC Standard FOR LOSSES AND EFFICIENCY and ammended upto date)				
		Total of sub-head (31.0) (Non DSR)				11,80,113.00
32.0		PANELS				
	MR	Emergency Panel				
		Supply , installation, testing, Design, manufacture, supply inspection, handling, assembling, affecting proper connections, testing and commissioning of 1.6/2mm CRCA sheet steel fabricated cubical type Main L.T. Panel floor mounting Extensible Type, dust & vermin proof, front operated construction, enclosure class - IP 42, As per IEC 60439 after proper treatment with 9 tank process with top/bottom removable gland plates, as required, double compression type cable glands, earth bus, hinged and lockable doors to achieve dust and vermin proof complete with all inter connections small wiring by min. 1.5-2.5 sq. mm EP copper wires, etc, labels etc.				
		INCOMING:				
		1 nos. 50 A 415V, 4P MCCB of 25kA with thermal magnetic release, overload, short circuit and Earth fault protection.				

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
		1 no. Digital type Multifunction Meters to show (V, A, kWh, KVAh, KW, KVA, KVAR, PF, Hz.) with cast resin CTs.				
		1 Set of phase indicating lamps with MCB protection.				
		OUTGOING				
		9 nos. 20 A 4P MCB				
		4 nos. 32 A , 4P MCB				
		2 nos. 20 A 415V, 4P MCB of 10kA with 40A 4P Contactor & timer switch .		1.00	75206.00	75,206.00
						-
32.01	MR 4	Main LT PANEL				
		NOTE:- MCCB's wherever specified upto 250A shall be Thermal Magnetic & Above 250A will be Microprocessor based inbuilt protections.				
		Supply , installation, testing, Design, manufacture, supply inspection, handling, assembling, affecting proper connections, testing and commissioning of 1.6/2mm CRCA sheet steel fabricated cubical type Main L.T. Panel floor mounting Extensible Type, dust & vermin proof, front operated construction, enclosure class - IP 42, As per IEC 60439 after proper treatment with 9 tank process with top/bottom removable gland plates, as required, double compression type cable glands, earth bus, hinged and lockable doors to achieve dust and vermin proof complete with all inter connections small wiring by min. 1.5-2.5 sq. mm. FR copper wires, ckt labels etc. The panel feeders shall be suitable for terminating suitable nos. 3.5 / 4 core armoured aluminium cable as required.				
		All MCCB's shall be Ics = 100% Icu, with rotary handle & pad locking arrangement. All TP MCCB shall be with heavy duty solid isolable neutral link.				
		The breaking capacity specified for all MCCB's breakers is Ics value (service rating).				
		Each Incoming (ACB/MCCB) shall have ON/OFF/Trip/ LED indication on panel Front door.				
		The incoming MCCB shall be Microprocessor based with inbuilt O/L & S/C release with E/F protection and all Outgoings MCCB's shall be thermal-magnetic based with inbuilt O/L & S/C release.				

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
		Incoming From TRANSFORMER 1 (250 KVA) - 1 NOS. (Phase I)				
		Incomer : 1 Nos 400A TP MCCB 36KA with Thermal Magnetic Release				
		1 No. Digital Ammeter				
		1 No. Digital Voltmeter				
		1 set of 3 CT's of ratio 400/5A, Class 1.0 accuracy 15 VA burden for Metering.				
		1 set of 3 CT's of ratio 400/5A, Class 1.0 accuracy 15 VA burden for APFCR.				
		3 Nos. LED Type phase indicating lamps, each lamp shall be with backup MCB				
		3 Nos. LED Type Indicating lamp for indicating the status of feeder - ON / OFF / TRIP. Each lamp shall be with backup MCB.				
		6A SP 10KA MCB				
		Incoming From Supply Source-2 - 1 Nos 400A TP MCCB 36KA with Thermal Magnetic Release (Phase II) - for future Feeder				
		BUS COUPLER : 1 Nos 400A TP MCCB 36KA . It should be positioned in such manner so that all electrical loads are separated by separate bus bar chamber in the panel.				
		Interlocking : Electrical as well as Mechanical Interlocking between incomers and bus coupler shall be executed in such a manner that only two sources should be in circuit at a time.				
		BUS BAR				
		TPN Aluminium Bus Bars of Minimum 500 Amp with Heat shrinkable coloured sleeves , Shrouds at Joints and including DMC/SMC bus bars supports at required interval complete for cross section, side supports and their spacing etc.				
		OUT GOING				
		19 Nos. Outgoing Feeders :-				
		1 Nos. 250A, FP 25KA MCCB (CAPACITOR PANEL)				
		9 Nos. 160A, FP 25KA MCCB				
		1 Nos. 200A, FP 25KA MCCB				
		4 Nos. 100A, FP 25KA MCCB				
		4 No 63 AMP 4P 10KA MCCB				
		Spare space for 100A MCCB - 02 Nos.				
		Complete Panel as Above and complete	set	1.00	453310.00	4,53,310.00
						-

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
32.02	MR 5	AUTOMATIC POWER FACTOR CORRECTION PANEL (CAPACITOR PANEL) - 90 KVAR				
		Supplying, Installation, Testing and Commissioning of cubicle type capacitor panel suitable for 415 & 3				
		a) 250 Amps TP MCCB with Thermal Magnetic Based release (Ics=100% Icu) - 1 No.				
		b) 250A, 4 strip Tinned Aluminium busbar -1 Set				
		c) Micro processor based automatic Power factor control relay i/c power factor metre in 8 steps				
		d) Multi functional meters with suitable CTS and protection MCBS 1 set.				
		e) 3 Nos. Phase indicating light (lamp) with MCBs protection.				
		OUTGOINGS -				
		2 Set - 63A Amp TP MCCB 10 KA and Capacitor duly switching contactor for 20 KVAR capacity auto mannual selector switch start/stop puch button on/off indicatting lamp with protection MCB & delay timer complete i/c 20 KVAR Normal Duty 440V capacitor bank with inter Connection				
		4 Set -32 Amp TP MCCB 10 KA and Capacitor duly switching contactor for 10 KVAR capacity auto mannual selector switch start/stop puch button on/off indicatting lamp with protection MCB & delay timer complete i/c 10 KVAR Normal Duty 440V capacitor bank with inter Connection				
		2 Set - 16 Amp TP MCCB 10 KA and Capacitor duly switching contactor for 5 KVAR capacity auto mannual selector switch start/stop puch button on/off indicatting lamp with protection MCB & delay timer complete i/c 5 KVAR Normal Duty 440V capacitor bank with inter Connection				
		Capacitor panel should switch OFF when DG starts. Control wiring should be done for it.				
		complete panel as above and complete	set	1.00	166042.00	1,66,042.00
						-
32.03	MR 6	SCHOOL BUILDING MAIN DISTRIBUTION PANEL				

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
		Design, manufacture, supply, installation, testing and commissioning of cubicle type panel fabricated out of CRCA sheet steel , floor mounted totally enclosed switchbaord suitable for use of 415 volts , 3 phase, 50 HZ complete with aluminium bus bar and all accessories including supply and fixing of following incoming and outgoing switchgears, Panel Should Have Double Earthing Provision which connected to the nearest earth grid.				
		NOTE:- MCCB's wherever specified upto 250A shall be Thermal Magnetic & Above 250A will be Microprocessor based inbuilt protections.				
		INCOMER : 160 AMP FP MCCB				
		3 Nos. Phase Indication light (lamp) with MCBs protection.				
		Multi functional meters (VAF) with suitable CTS and protection MCBS 1 set.				
		BUS BAR : 200 AMP, 500 Volts, 3 phase 50 HZ 4P high conductivity electrolytic Aluminium bus bar of suitable length, insulated by heat shrinkable sleeves. The current density of bus bar shall be minimum 0.6 sq mm / amp.				
		The Maximum allowable temperature for the Bus bar to be restricted to 90 deg C. The temperature rise should be restricted to 45 deg C above ambient temperature.				
		OUT GOINGS :				
		18 No 63 AMP FP MCB				
		2 No 40 AMP DP MCB				
		2 No 63 AMP DP MCB				
		complete panel as above and complete	set	1.00	126660.00	1,26,660.00
						-
32.04	MR 7	UPS PANEL				
		Design, manufacture, supply, installation, testing and commissioning of cubicle type panel fabricated out of CRCA sheet steel , floor mounted totally enclosed switchbaord suitable for use of 415 volts , 3 phase, 50 HZ complete with aluminium bus bar and all accessories including supply and fixing of following incoming and outgoing switchgears, Panel Should Have Double Earthing Provision which connected to the nearest earth grid.				
		INCOMER : 1 Nos 63 AMP FP MCCB (Thru Bypass Switch 10 KVA UPS)				

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
		BUS BAR : 100 AMP, 500 Volts, 3 phase 50 HZ FP high conductivity electrolytic Aluminium bus bar of suitable length, insulated by heat shrinkable sleeves. The current density of bus bar shall be minimum 06 sq mm / amp.				
		The Maximum allowable temperature for the Bus bar to be restricted to 90 deg C. The temperature rise should be restricted to 45 deg C above ambient temperature.				
		OUT GOINGS :				
		3 No 63 AMP DP MCB i/c spare				
		3 No 40 AMP DP MCB i/c spare				
		complete panel as above and complete	set	1.00	22567.00	22,567.00
						-
32.05	MR 8	BOYS HOSTEL MAIN DISTRIBUTION BOARD				
		Design, manufacture, supply, installation, testing and commissioning of cubicle type panel fabricated out of CRCA sheet steel , floor mounted totally enclosed switchbaord suitable for use of 415 volts , 3 phase, 50 HZ complete with aluminium bus bar and all accessories including supply and fixing of following incoming and outgoing switchgears, Panel Should Have Double Earthing Provision which connected to the nearest earth grid.				
		NOTE:- MCCB's wherever specified upto 250A shall be Thermal Magnetic & Above 250A will be Microprocessor based inbuilt protections.				
		INCOMER : 125 AMP FP MCCB				
		3 Nos. Phase Indication light (lamp) with MCBs protection.				
		Multi functional meters (VAF) with suitable CTS and protection MCBS 1 set.				
		BUS BAR : 160 AMP, 500 Volts, 3 phase 50 HZ 4P high conductivity electrolytic Aluminium bus bar of suitable length, insulated by heat shrinkable sleeves. The current density of bus bar shall be minimum 0.6 sq mm / amp.				
		The Maximum allowable temperature for the Bus bar to be restricted to 90 deg C. The temperature rise should be restricted to 45 deg C above ambient temperature.				
		OUT GOINGS :				
		14 No 63 AMP FP MCB				
		2 No 40 AMP DP MCB				
		2 No 63 AMP DP MCB				
		complete panel as above and complete	set	1.00	97919.00	97,919.00
						-

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
32.06	MR 9	GIRLS HOSTEL MAIN DISTRIBUTION BOARD				
		Design, manufacture, supply, installation, testing and commissioning of cubicle type panel fabricated out of CRCA sheet steel , floor mounted totally enclosed switchbaord suitable for use of 415 volts , 3 phase, 50 HZ complete with aluminium bus bar and all accessories including supply and fixing of following incoming and outgoing switchgears, Panel Should Have Double Earthing Provision which connected to the nearest earth grid.				
		NOTE:- MCCB's wherever specified upto 250A shall be Thermal Magnetic & Above 250A will be Microprocessor based inbuilt protections.				
		INCOMER : 125 AMP FP MCCB				
		3 Nos. Phase Indication light (lamp) with MCBs protection.				
		Multi functional meters (VAF) with suitable CTS and protection MCBS 1 set.				
		BUS BAR : 160 AMP, 500 Volts, 3 phase 50 HZ 4P high conductivity electrolytic Aluminium bus bar of suitable length, insulated by heat shrinkable sleeves. The current density of bus bar shall be minimum 0.6 sq mm / amp.				
		The Maximum allowable temperature for the Bus bar to be restricted to 90 deg C. The temperature rise should be restricted to 45 deg C above ambient temperature.				
		OUT GOINGS :				
		14 No 63 AMP FP MCB				
		2 No 40 AMP DP MCB				
		2 No 63 AMP DP MCB		1.00	97919.00	97,919.00
		complete panel as above and complete				
32.07	MR 10	TYPE -II & III STAFF QTRS. DISTRIBUTION BOARD				
		Design, manufacture, supply, installation, testing and commissioning of cubicle type panel fabricated out of CRCA sheet steel , floor mounted totally enclosed switchbaord suitable for use of 415 volts , 3 phase, 50 HZ complete with aluminium bus bar and all accessories including supply and fixing of following incoming and outgoing switchgears, Panel Should Have Double Earthing Provision which connected to the nearest earth grid.				

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
		NOTE:- MCCB's wherever specified upto 250A shall be Thermal Magnetic & Above 250A will be Microprocessor based inbuilt protections.				
		INCOMER : 125 AMP FP MCCB				
		3 Nos. Phase Indication light (lamp) with MCBs protection. Multi functional meters (VAF) with suitable CTS and protection MCBS 1 set.				
		BUS BAR : 160 AMP, 500 Volts, 3 phase 50 HZ 4P high conductivity electrolytic Aluminium bus bar of suitable length, insulated by heat shrinkable sleeves. The current density of bus bar shall be minimum 0.6 sq mm / amp The Maximum allowable temperature for the Bus bar to be restricted to 90 deg C. The temperature rise should be restricted to 45 deg C above ambient temperature.				
		OUT GOINGS :				
		12 Nos 63 AMP DP MCB (For each Qtr.DBs and Spare)		3.00	48057.00	1,44,171.00
		complete panel as above and complete				
32.08	MR 11	EXTERNAL LIGHT FEEDER PILLAR				
		Design, Manufacture, Supply, Installation, Testing and Commissioning of Panel Fabricated out of 16 SWG CRCA sheet steel, IP 54, wall / floor mounting type with rain canopy The sheet steel shall undergo minimum 7 tank treatment followed by finishing powder coating of min 60 micron thickness. the board includes 415 /240 V electrolytic Aluminium Bus Bar, removable gland plates, cable glands, including connection with outgoing feeders complete in all respect, Panel Should Have Double Earthing Provision Which Connected to the Nearest Earth Grid.				
		INCOMER:				
		1 no. 100A, 25KA 4P MCCB with Thermal Magnetic based releases, ON indication, + 3 Nos 63A DP MCB For each Phase.with 3 Nos Astronomical Weekly programmable time switch (SST- 1min) ON Phase for automaitc switching of landscape light fixtures at sun set and sun rise or twilight (auto on/ auto off and auto mode) with manual override faiclity with 12/24 hour display format with suitable battery and indication for relay status i/c programming at site.				
		BUS BAR				
		TPN Aluminium bus bar with heat Shrink Sleeve				
		OUTGOING				

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
		18 nos 16A DP MCB (For Compound Group Light + Spare)				
		4 Nos 16KA 40A FP MCCB (Spare)				
		1 nos 40A FP MCCB (BORE WELL STAND BY)				
		Other items such as				
		1 Set of control wiring				
		1 Set of designation plates				
		All Items complete as above	set	2.00	86284.00	1,72,568.00
		Total of sub-head (32.0) (Non DSR)				13,56,362.00
33		Supply Of L.T. Cable:				
		Supplying of Following Sizes of 1.1 kV Grade Multicore Aluminium Conductor XLPE Power Cable Insulated armoured cable conforming to IS:7098 (Part - I) or as per Relevant IS Code complete with all Amendments etc and should be NABL certified as required.				
	MR	3.5 C X 300 Sq.mm Al. XLPE arm.	Metre	30.00	2365.00	70,950.00
	MR	3.5 C X 150 Sq.mm Al. XLPE arm.	Metre	765.00	1192.00	9,11,880.00
	MR	3.5 C X 120 Sq.mm Al. XLPE arm.	Metre	90.00	1015.00	91,350.00
	MR	3.5 C X 95 Sq.mm Al. XLPE arm.	Metre		827.00	-
	MR	3.5 C X 70 Sq.mm Al. XLPE arm.	Metre		661.00	-
	MR	3.5 C X 50 Sq.mm Al. XLPE arm.	Metre	275.00	489.00	1,34,475.00
	MR	3.5 C X 35 Sq.mm Al. XLPE arm.	Metre		365.00	-
	MR	3.5 C X 25 Sq.mm Al. XLPE arm.	Metre	2165.00	296.00	6,40,840.00
	DSR 7	LT Cable Laying				
33.01	DSR 7.1	Laying of One Number PVC Insulated And PVC Sheathed / XLPE Power Cable of 1.1 kV Grade of Following Size Direct in Ground Including Excavation, Sand Cushioning, Protective Covering and Refilling the Trench etc. as required.				
	DSR7.1.1	Upto 35 sq. mm	Metre	600.00	387.00	2,32,200.00
	DSR 7.1.2	Above 35 sq. mm and upto 95 sq. mm	Metre	70.00	405.00	28,350.00
	DSR 7.1.3	Above 95 sq. mm and upto 185 sq. mm	Metre	250.00	422.00	1,05,500.00
33.02	DSR 7.2	Laying of one number additional PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size direct in ground in the same trench in one tier horizontal formation including excavation, sand cushioning, protective covering and refilling the trench etc as required.				
	DSR 7.2.1	Upto 35 sq. mm	Metre	600.00	269.00	1,61,400.00
	DSR 7.2.2	Above 35 sq. mm and upto 95 sq. mm	Metre	70.00	286.00	20,020.00

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
	DSR 7.2.3	Above 95 sq. mm and upto 185 sq. mm	Metre	250.00	304.00	76,000.00
33.03	DSR 7.3	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size direct in ground including excavation and refilling the trench etc as required. but excluding sand cushioning and protective covering.				
	DSR 7.3.1	Upto 35 sq. mm	Metre	500.00	200.00	1,00,000.00
	DSR7.3.2	Above 35 sq. mm and upto 95 sq. mm	Metre	60.00	217.00	13,020.00
	DSR 7.3.3	Above 95 sq. mm and upto 185 sq. mm	Metre	200.00	234.00	46,800.00
33.04	DSR 7.5	Laying of one number PVC insulated & PVC sheathed/ XLPE Power cable of 1.1 KV grade of following size in the existing RCC/HUME/METAL pipe as required.				
	DSR 7.3.1	Upto 35 sq. mm	Metre	200.00	37.00	7,400.00
	DSR 7.5.2	Above 35 sq. mm and upto 95 sq. mm	Metre	30.00	57.00	1,710.00
	DSR 7.5.3	Above 95 sq. mm and upto 185 sq. mm	Metre	50.00	77.00	3,850.00
33.05	DSR 7.7	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on wall surface as required.				
	DSR 7.7.1	Upto 35 sq. mm (clamped with 1mm thick saddle)	Metre	50.00	55.00	2,750.00
	DSR 7.7.3	Above 35 sq. mm and upto 95 sq. mm (clamped with 25x3mm MS flat clamp)	Metre	15.00	130.00	1,950.00
	DSR 7.7.3	Above 95 sq. mm and upto 185 sq. mm (clamped with 25/40x3mm MS flat clamp)	Metre	50.00	153.00	7,650.00
33.06	DSR 7.6	Laying of one number PVC insulated & PVC sheathed/ XLPE Power cable of 1.1 KV grade of following size in the existing masonry open duct as required.				
	DSR 7.6.1	Upto 35 sq. mm	Metre	215.00	28.00	6,020.00
	DSR 7.6.2	Above 35 sq. mm and upto 95 sq. mm	Metre	30.00	45.00	1,350.00
	DSR 7.6.3	Above 95 sq. mm and upto 185 sq. mm	Metre	55.00	63.00	3,465.00
	DSR 7.6.4	Above 185 sq. mm and upto 400 sq. mm	Metre	30.00	115.00	3,450.00
	DSR 9	LT CABLE JOINTING & END TERMINATION				
33.07	DSR 9.1	Supplying and Making End Termination With Brass Compression Gland and Aluminium lugs for Following Size of PVC Insulated and PVC Sheathed / XLPE Aluminium Conductor Cable of 1.1 kV Grade as Required.				
	DSR 9.1.20	3½ X 25 sq. mm (28mm)	Each	34.00	313.00	10,642.00
	DSR 9.1.21	3½ X 35 sq. mm (32mm)	Each		369.00	-
	DSR 9.1.22	3½ X 50 sq. mm (35mm)	Each	8.00	413.00	3,304.00

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
	DSR 9.1.23	3½ X 70 sq. mm (38mm)	Each		468.00	-
	DSR 9.1.24	3½ X 95 sq. mm (45mm)	Each		588.00	-
	DSR 9.1.25	3½ X 120 sq. mm (45mm)	Each	2.00	613.00	1,226.00
	DSR 9.1.26	3½ X 150 sq. mm (50mm)	Each	12.00	697.00	8,364.00
	DSR 9.1.30	3½ X 300 sq. mm (70mm)	Each	2.00	1195.00	2,390.00
		Total of sub-head (33.0) (Non DSR)				18,49,495.00
		Total of sub-head (33.0) (DSR)				8,48,811.00
34.0		HT Cable And Accessories				
34.01	MR 18	Supply of H.T. Cable				
		Supply & Testing of following 11 KV(UE) grade multicore Aluminium conductor XLPE insulated cable, insulation screening with extruded semi conducting compound in combination with copper tape armoured cores laid up, inner sheath of PVC tape, galvanised steel flat strip armoured and overall PVC sheathed cable conforming to IS: 7098 (Part - II) and complete with all latest amendments etc. complete as required.				
		3 C x 70 Sq. mm 11 KV (UE)	Metre	100.00	1210.00	1,21,000.00
34.02	DSR 8	H.T. Cable Laying-DSR Item				
		H V CABLE LAYING				
		Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 11 KV grade of size upto 120 sq.mm. as under :-				
	DSR 8.1.1	(a) direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc as required.	Metre	60.00	525.00	31,500.00
	DSR 8.2.1	(b)direct in ground in the same trench in one tier horizontal formation including excavation, sand cushioning, protective covering and refilling the trench etc as required.	Metre		362.00	-
	DSR 8.3.1	(c) in the existing RCC/HUME/METAL pipe as required.	Metre	20.00	77.00	1,540.00
	DSR 8.4.1	(d) in the existing masonry open duct as required.	Metre	20.00	63.00	1,260.00
	DSR 10.1	H.T Termination: DSR Item				
34.03	DSR 10.1	Supply and making Indoor cable end jointing with cast resin compund, including lugs and other jointing materials for following size of 3 core, XLPE aluminium conductor cable of 11KV (UE) grade as required.				
	10.1.1	3 C x 70 Sq.mm (11KV UE)	Sets	3.00	2075.00	6,225.00

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
34.04	DSR 10.2	Supply and making Outdoor cable end jointing with cast resin compund, including lugs and other jointing materials for following size of 3 core, XLPE aluminium conductor cable of 11KV (UE)grade as required.				
	10.2.2	3 C x 70 Sq.mm (11KV UE)	Sets	1.00	4769.00	4,769.00
		Total of sub-head (34.0) (Non DSR)				1,21,000.00
		Total of sub-head (34.0) (DSR)				45,294.00
35.0	DSR 2	Miscellaneous Items - DSR				
35.01	2.21	Providing and fixing M.V. danger notice plate of 200 mm X 150 mm, made of mild steel, at least 2 mm thick, and vitreous enameled white on both sides, and with inscription in single red colour on front side as required.	Nos.	12.00	269.00	3,228.00
35.02	2.22	Providing and fixing H.T. danger notice plate of 250 mm X 200 mm, made of mild steel, at least 2 mm thick, and vitreous enameled white on both sides, and with inscription in single Red colour on front side as required.	Nos.	2.00	292.00	584.00
35.03	7.90	Supplying and making cable route marker with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) of size 60 cm X 60 cm at the bottom and 50 cm X 50 cm at the top with a thickness of 10cm including inscription duly engraved as required.	Each	5.00	585.00	2,925.00
35.04	7.10	Supplying and fixing cable route marker with 10 cm X 10 cm X 5 mm thick G.I. plate with inscription there on, bolted /welded to 35 mm X 35 mm X 6 mm angle iron, 60 cm long and fixing the same in ground as required.	Each	5.00	508.00	2,540.00
		Miscellaneous Items - MR Items				
35.05	MR 19	SITC of shock treatment chart (prescribed under I.E.rules) duly framed with glass and supported from back with hard board with supply of all material labour T & P etc for proper completion of work. (Approx front area = 1.20 sq M)	Nos.	2.00	450.00	900.00
35.06	MR 20	SITC of First aid box as approved by Indian red cross conforming to IS : 2217.	Nos.	2.00	331.00	662.00
35.07	MR 21	SITC of Fire Bucket stand made of M S angle suitable for and with 4 Nos Fire Buckets of 9.5 Ltrs capacity filled with	Set	2.00	3245.00	6,490.00
35.08	MR 22	SITC of of rubber gloves of 11 KV grade as per IS : 4770.	Set	2.00	424.00	848.00

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
35.09	MR 23	Supplying and fixing of high voltage insulation mat of class B having 11 KV dielectric strength, 1000mm width and thickness of 2.5mm ISI approved as required including cutting to required lengths.	Metre	1.00	3650.00	3,650.00
35.10	MR 24	Supplying and fixing of high voltage insulation mat of class B having 1.1 KV dielectric strength, 1000mm width and thickness of 2.0 mm ISI approved as required including cutting to required lengths.	Metre	3.00	2451.00	7,353.00
		Total of sub-head (35.0) (DSR)				9,277.00
		Total of sub-head (35.0) (Non DSR)				19,903.00
36.0	DSR 5	Earthing				
36.01	5.4	Earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with cover plate having locking	Set	18.00	7472.00	1,34,496.00
36.02	5.6	Earthing with copper earth plate 600 mm X 600 mm X 3 mm thick including accessories, and providing	Set	4.00	13838.00	55,352.00
36.03	5.2	Earthing with G.I. earth pipe 4.5 metre long, 40 mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal/	SET	4.00	6855.00	27,420.00
36.04	5.15	Providing and fixing 25 mm X 5 mm G.I. strip on surface or in recess for connections etc. as required.	Metre	215.00	244.00	52,460.00
36.05	5.18	Providing and fixing 6 SWG dia G.I. wire on surface or in recess for loop earthing along with existing surface/ recessed conduit/ submain wiring/ cable as required.	Metre	7170.00	42.00	3,01,140.00
36.06	5.14	Providing and fixing 25 mm X 5 mm copper strip on surface or in recess for connections etc. as required.	Metre	40.00	1162.00	46,480.00
36.07	5.12	Providing and laying earth connection from earth electrode with 6 SWG dia G.I. Wire in 15 mm dia G.I. pipe from earth electrode including connection with G.I. thimble excavation and re-filling as required.	Metre	6520.00	287.00	18,71,240.00
		Total of sub-head (36.0) (DSR)				24,88,588.00
37.0	DSR 11	Pole Erection				

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
37.01	11.3	Erection of metallic pole of following length in cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) foundation including excavation and refilling etc. as required.				
	11.3.1	Above 4.5 metre and upto 6.5 metre	Each	41.00	5121.00	2,09,961.00
37.02	11.6	Supplying and embedding following dia G.I. pipe (medium class) in pole collar/ foundation (during casting) for cable entry including bending the pipe to the required shape , Hole Seeling to be done complete as required.				
	11.6.1	32 mm dia	Metre	205.00	525.00	1,07,625.00
		Total of sub-head (37.0) (DSR)				3,17,586.00
38.0		External Lighting System				
38.01	MR 26	Supply , Installation, Testing & Commissioning of Integrated Post Top Lantern With 45W LED Lamp including suitable size dia G.I.Pipe Pole i/c connection with 3 x 2.5 sq.mm single core PVC insulated copper conductor cable from junction box to fixture as required.	Nos.	2.00	4475.00	8,950.00
38.02	MR 27	Supply , Installation, Testing & Commissioning of 60 W LED with complete with pot optic reflector i/c connection with 3x2.5sq.mm single core PVC insulated copper conductor cable from junction box to fixture as required	Nos.	29.00	3276.00	95,004.00
38.03	MR 28	SITC of Hybrid All In One Integrated Solar LED Street Light fitting rated for 40W output with integrated solar laminate of 80 Wp (or more) based on Mono crystalline cell technology, along with battery of rating 12.8V 30Ah (or more) based on Lithium Ferro Phosphate Chemistry (LiFePO4), with a light output of greater than 6000 Lumens (>6000), LEDs with a life greater than >50000Hrs and Lumen efficacy greater than 150Lm/W , with an autonomy of 2 days (24 hrs.)or more with dimming, INBUILT PROTECTIONS FOR LONGER RELIABILITY -	Nos.	12.00	42800.00	5,13,600.00

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
		<p>(B)The following certificates/documents are mandatory at the time of supply and after execution as and where applicable :-</p> <ol style="list-style-type: none"> 1. EN50530 – MPPT Efficiency 2. IEC61547 3. IEC61000-3-2 – EMC 4. IEC 60598 – Part 1 – General requirement 5. IEC 62109 6. LM 79 REPORT 7. IK 08 8. IP 65 <p>The Executant must submit the TDS, LM 79 report , IK 08 & IP 65 report of third party NABL lab , LM80 report of chip manufacturer in the department for obtaining the approval from the authority prior to start of work/ procurement of Solar street lights. Reports of inhouse lighting company Lab having NABL accreditation will not be acceptable.</p> <p>Test reports like EN50530 – MPPT Efficiency , IEC61547 ,IEC61000-3-2 – EMC , IEC 60598 – Part 1 – General requirement , IEC 62109 obtained from Third party NABL Lab/ TUV/UL/MNRE Lab's test report are required to be submitted by the executant along with manufacturer's warranty certificate in the name of concerned department for providing 5 years complete system warranty & providing</p>				
						1,57,500.00
38.04	MR 29	<p>Building Outer Light (60W LED) :- Supply, fitting, fixing and testing of building outer lighting luminaire aerodynamically shaped single piece pressure die-cast Aluminum luminaire with high power LEDs as light source and electronic driver (IP66), along with 60W LED Lamp as Energy saving as per drawing prescribed reflector and heat resistant toughened flat glass cover, with 5ft long 40mm dia G.I. pipe with 3 Nos. of iron clamps , anchor nut bolts with double washers as per direction of E/I or consultant as per drawing prescribed reflector and heat resistant toughened flat glass</p>	Each	5.00	5030.00	25,150.00

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
38.05	MR 30	Supply, Installation, Testing and Commissioning of 200x160x98 (KVPC) Polycarbonate thermoplastics enclosure - junction box with I.P - 65 Protection with Terminals & cable hinged cover of approved design complete having gasket of internally embedded & made of polyetherene & should be weather proof, rust proof, dust proof, water proof - box shall be tested as per IEC - 60670-2/60670-22. the box shall have self threaded holes & provision for mounting din rail. with 2 Nos cable gland including supplying & fixing crimping 2 nos lugs	Nos.	5.00	1109.00	5,545.00
38.06	MR 31	Supply and fixing of GI/MS swaged round/octagonal tubular pole of 6 Metre length (Above Ground) with Top-70 mm, bottom-135 mm, Base Plate 220x220x12 mm, PCD-205 mm, Foundation Bolts-M20X600, suitable for single/double arm bracket for Solar/ LED fitting. The pole shall be provided with suitable base plate arrangement for fixing on pedestal and looping box complete with MCB, brass connectors etc complete i/c making c.c.foundation as required. The street lighting		41.00	6219.00	2,54,979.00
38.07	MR 32	Supplying/fixing of following light pole arm Bracket fabricated out of GI pipe having thickness and length as per manufacturer design complete etc as reqd.				
	a	Single arm bracket		29.00	728.00	21,112.00
	b	Double arm bracket			1258.00	-
38.08		Supplying of Following sizes 1100 volt grade XLPE insulated PVC sheathed aluminium				
	a	2x6 sqmm	Metre	2610.00	137.00	3,57,570.00
38.09		Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 kV grade of size up to 35 sq. mm				
	7.3.1	(a) direct in ground including excavation and refilling the trench etc. as required, but excluding sand cushioning and protective covering.	Metre	1570.00	200.00	3,14,000.00
	7.7.1	(b) On Surface	Metre	660.00	55.00	36,300.00
38.10	7.5.1	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 kV grade of following size in the existing RCC/ HUME/ METAL pipe as required.				
		Upto 35 sq. mm	Metre	380.00	37.00	14,060.00

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
38.11	14.15.1	Supplying and laying of following size DWC HDPE pipe ISI marked along with all				
		63 mm dia (OD-63 mm & ID-51 mm nominal)	Metre	150.00	127.00	19,050.00
38.12	5.18	Providing and fixing 6 SWG dia G.I. wire on surface or in recess for loop earthing along with	Metre	2440.00	42.00	1,02,480.00
		Total of sub-head (38.0) (DSR)				4,85,890.00
		Total of sub-head (38.0) (Non DSR)				14,39,410.00
39.0		Uninterrupted Power Supply (UPS) - 10 kVA				
0.01	MR 34	Supply of 10 kVA Online UPS , IGBT UPS (Transformer-less Design).				
		Supply of SMF Batteries (12Volt VRLA, 26 Ah, 40 Numbers or as per standard Nos to provide 30 Minutes Backup in total for 10 kVA UPS at 0.8PF and ECV=1.7V.				
		Fully rated Inbuilt static switch at the inverter output and 100% rated Inbuilt static switch at the static bypass line integrated in UPS module.				
		Supply of Local Accessories (like Cabling Between UPS and the Battery onsidering Cable Routing ,Battery Interlinks ,Battery Rack etc).				
		Backfeed protection at Mains & Bypass (Inbuilt / External).				
		Installation and Commissioning of 10 kVA UPS, Battery and Accessories.	set	1.00	218204.00	2,18,204.00
39.01	MR 35	Supply , installation , testing and commissioning 63A FP MCB of 10kA breaking Capacity in metal sheet enclosure with ON/OFF, TYB Indication lamps for Incoming of UPS Complete in All Respect as Required.	set	2.00	3424.00	6,848.00
		Total of sub-head (39.0) (Non DSR)				2,25,052.00
40.0	MR 36	Lightening Arrester System For Transformer				
		Supply, Installation, Testing & Commissioning of Lightening Arrester HT-12 kV expulsion type complete with all Fitting transission class discharge capacity 10 kA complete all as as specified	Each	3.00	3968.00	11,904.00
		Total of sub-head (40.0) (Non DSR)				11,904.00

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
41.0		Pumps (Non Scheduled Items)				
41.01	MR	Borewell Submersible Pump	Set	2.00	54871.00	1,09,742.00
		Supplying & Installation of suitable borewell submersible pump set coupled with 6" motor and complete with lowering in existing borewell with the help of chain pulley block including supplying and fixing motor starter suitable for the selected pump complete as required.(Note : The suction/delievery pipe lines are not included in this item)				
		Flow Rate : 350 to 400 LPM				
		min. Head : 60 M				
		Min. Motor HP : 7.5 H.P.				
41.02	MR	Supplying and Fixing of PVC covered 6 mm dia flexible steel rope for handling/protecting the submersible Pump set including U-lock arrangement etc. complete as required.	Metre	300.00	56.00	16,800.00
41.03	MR	Supplying and Fixing of suitable size of MS clamp set suitable for holding submersible pump & 40 mm dia pipe assembly lowered in bore well including suitable drilled hole and nut bolts etc. complete as required.	Each	4.00	731.00	2,924.00
41.04	MR	Supplying and Fixing of following size of PVC insulated PVC sheathed Copper conductor flat submersible cable including fixing the cable with nylon tie along with GI pipes in existing borewell, connection with submersible pump cable with the help of water proof jointing kit provided with the pump complete as required				
		(a) 3 x 2.5 sqmm	Metre	150.00	115.00	17,250.00
		S/Fixing of 8 " dia MS cover with locking arrangement i/c drilling hole and s/f nut bolts etc. complete as reqd.		2.00	1032.00	2,064.00
41.05	MR	Openwell Submersible Monobloc Pump Set	Set	2.00	50733.00	1,01,466.00

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
		S.I.T.C. of 7.5/5.5 (H.P./Kw) Openwell Submersible Monobloc Pump Set comprising of Electrical Driven inline pumping with all accessories as per manufacturer's design. such as C.I. Base, S.S /bronze impeller, shaft, mechanical seal, S.S. Shaft directly coupled to motor suitable for operation on 400/440 volts, 3 phase 50c/s A.C.Supply complete in the existing G.I.Pipelines fittingsi/c s/fixing motor starter suitable for this pump set i/c connections testing, commissioning etc as reqd. (Note : The suction/delievery pipe lines are not included in this item)				
		Flow Rate : 4.5 to 5.0 LPS				
		Min. Head : 50 M				
		Min. Motor HP : 7.5 H.P. (Each)				
		Total of sub-head (41.0) (Non DSR)				2,50,246.00
42		CCTV SYSTEM				
42.01	1.53	Supplying and drawing of UTP 4 pair CAT 6 LAN Cable in the existing surface/ recessed Steel/ PVC conduit as required.				
	1.53.1	1 run of cable	Mtr.	1430.00	57.00	81,510.00
42.02	1.21	Supply and fixing of following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required :				
	1.21.2	25 mm	Mtr.	690.00	145.00	1,00,050.00
42.03	MR36	1/2.8" Progressive Scan CMOS, PAL:1920 * 1080, 0.1 Lux/ F1.2 (0Lux, IR ON), 10~15 Meters (With Min. 24 units IR LED), 2 MP Fixed IR DOME CAMERA With Options Of 2.8mm , 4mm , 6mm Lens , IP66 , POE with installation.	Each	12.00	6488.00	77,856.00
42.04	MR37	1/2.8" Progressive Scan CMOS, PAL:1920 * 1080, 0.1 Lux/ F1.2 (0Lux, IR ON), 10~15 Meters (With Min. 24 units IR LED), 2 MP Fixed IR Bullet CAMERA With Options Of 2.8mm , 4mm , 6mm Lens , IP66 , POE with installation.	Each	22.00	6488.00	1,42,736.00



S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
42.05	MR38	Supplying, installation, fixing, testing and commissioning of 16 ch Linux, H. 264 / H.265 NVR with Minimum 1080p / UXGA / 720p / VGA / 4CIF / DCIF / 2CIF / CIF / QCIF rec. resolutions, 4 HDD slot supports upto 4 TB Each, RS 485 x 1 & USB2.0 x1, HDMI ,Local And Remote Access Over Internet In complete in all respect with installation (Make: - CP PLUS , Dahua ,Hikvision or equivalent)	Each	5.00	28413.00	1,42,065.00
42.06	MR39	4 TB Surveillance Sata HDD (WD Purple , Seagate Surveillance or Equivalent)	Each	2.00	10526.00	21,052.00
42.07	MR40	16 Port POE Switch (Cisco , Netgear , Dlink or Equivalent)	Each	2.00	17716.00	35,432.00
42.08	MR41	Supply, installation, testing and commissioning of Independent 1 kVA UPS system with 230V single phase input and 230V Single phase output with all required accessories & battery bank for 30 mins back up with covered SMF battery and battery rack for all new required loads covered as required, including connections as per specifications etc. complete as required.	Each	3.00	28899.00	86,697.00
42.09	MR42	S.I.T.C.32" Color flat panel LED Monitor,Full HD Professional Series 1920 x 1080 resolution, inputs. 100-230VAC/50 Hz.	Each	3.00	21743.00	65,229.00
		Total of sub-head (42.0) (DSR)				1,81,560.00
		Total of sub-head (42.0) (Non DSR)				5,71,067.00
43		LIGHTNING CONDUCTOR				
43.01	6.2	Providing and fixing of lightning conductor finial, made of 25mm dia 300mm long, G.I tube, having single prong at top with 85mm dia 6mm thick G.I base plate including holes etc. complete as required.	Each	36.00	518.00	18,648.00
43.02	6.7	Providing and fixing G.I tape 20 mm x 3 mm thick on parapet or surface of wall for lightning conductor complete as required. (for horizontal run)	Mtrs.	1250.00	126.00	1,57,500.00

S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
43.03	6.8	Providing and fixing G.I tape 20 mm x 3 mm thick on parapet or surface of wall for lightning conductor complete as required. (for vertical run)	Mtrs.	275.00	197.00	54,175.00
43.04	6.4	Jointing copper / G.I. tape (with another copper/ G I tape, base of the finial or any other metallic object) by riveting / nut bolting/ sweating and soldering etc as required.	Each	86.00	113.00	9,718.00
43.05	6.12	Providing and fixing testing joint, made of 20 mm X 3 mm thick G.I. strip, 125 mm long, with 4 nos. of G.I. bolts, nuts, chuck nuts and spring washers etc. complete as required.	Each	16.00	121.00	1,936.00
43.06	5.4	Earthing with G.I. earth plate 600mm x 600mm x 6mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7Mtr long etc. with charcoal/ coke and salt as required.	Set.	16.00	7472.00	1,19,552.00
		Total of sub-head (43.0) (DSR)				3,61,529.00
44		D.G.Set and associated works				
44.01	A	D.G.Set 25 KVA				
		Providing, Installing, Testing and Commissioning of 'Silent Type' Diesel Generating set alongwith having Prime Power Rating of 25 KVA, 415 volts at 1500 RPM, 0.8 lagging power factor at 415 V suitable for 50 Hz, 3 phase system & for 0.85 Load Factor and consisting of the followings				
	(a)	Diesel Engine:				
		Diesel engine 4 stroke water cooled, electric start, of suitable BHP at 1500 RPM suitable for above output of alternator at 40 Degree C, 50% RH & at 1000 Meter MSL and conforming to BS 5514, BS 649, IS 10000, capable of taking 10% over loading for one hour after 12 hours of continuous operation. The engine will be fitted complete with all the required accessories.				
	(b)	Engine mounted Instrument Panel fitted with and having digital display for following:				
		(i) Start-stop switch with key				
		(ii) Water temperature indication				
		(iii) Lubrication oil pressure indication				
		(iv) Lubrication oil temperature indication				
		(v) Battery charging indication				
		(vi) RPM indication				
		(vii) Over speed indication				
		(viii) Low lub. Oil trip indication				






S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
		(ix) Engine Hours indication				
	(c)	Alternator :				
		Synchronous alternator rated at 25 KVA, 415 volts at 1500 RPM, 3 phase 50 Hz, AC supply with 0.8 lagging power factor at 40 Degree C, 50% RH & at 1000 Meter MSL. The alternator shall be having SPDP enclosure, brushless, continuous duty, self-excited and self-regulated through AVR conforming to IS: 4722/BS 2613 suitable for tropical conditions and with class- F/H insulation				
	(d)	Base Frame & Foundation:				
		Both the engine and alternator shall be mounted on suitable base frame made of MS channel with necessary reinforcement which shall be installed on suitable cement concrete foundation and vibration isolation arrangement as per recommendations of manufacturer.				
	(e)	Fuel Tank:				
		Daily service fuel tank of minimum 60 liters capacity fabricated out of 3 mm thick M.S. sheet complete with all standard accessories and fuel piping between fuel tank and diesel engine with MS class 'C' pipes of suitable dia. Complete with valves, level indications & accessories as required as per specifications.				
	(f)	Exhaust System:				
		Dry exhaust manifold with hospital exhaust silencer and catalytic convertor.				
	(g)	Starting System:				
		12V/24V DC starting system comprising of starter motors: voltage regulator and arrangement for initial excitation complete with suitable nos. of batteries (25 plates, 180 Amp. Hour capacity lead acid type) as required as per specifications.				
	(h)	Accoustic and weather proof enclosure with arrangement for fresh air intake for cooling of the engine & alternator, extraction, discharging hot air in to the atmosphere as per specifications & CPCB Norms.				
		Engine & Alternator stands warranty for minimum period of 24 months or 5000 hours of operation whichever earlier				
	B	AMF system for 25 KVA DG Set Part of DG.				








S. No.	DSR 2021	Description	Unit	Quantity	Rate (In Rs)	Amount (In Rs)
		Fabricating, Installing, Testing & Commissioning of automatic mains failure control including auto bypass panel, suitable for 25 KVA silent type DG set complete with relays, timers, set of CTs for metering & protection and energy analyser to indicate currents, phase and line voltages, frequency, power factor, KWH, KVARH & provision for overload, short circuit, restricted earth fault, under frequency, control cabling from AMF panel to diesel engine and elsewhere if required, all complete and inter locking including the following:				
	(a)	(i) 1 No. 63 415V, 4P MCCB of 35kA.				
		(ii) 2 Nos. 63 A, 415V 4P Contactor				
	(b)	Auto/Manual/Test/Off selector switch				
	(c)	2 Nos over voltage relay, 2 Nos reverse power relay and 2 Nos under voltage relay.				
	(d)	3 Sets of current transformers 15 P 10 accuracy for protection and 15 VA class-I for metering				
	(e)	Energy analyser unit to indicate current voltage frequency power factor and KWH				
	(f)	Indicating lamps for load on mains and load on set				
	(g)	Fuse for instruments				
	(h)	Battery charger, complete with transformer/ rectifier, D.C. voltmeter and ammeter, selector switch for trickle, off and boost and current adjustment.				
	(i)	Main supply failure monitor				
	(j)	Supply failure timer				
	(k)	Restoration timer				
	(l)	Control unit with three impulse automatic engine start/stop and failure to start lockout.				
	(m)	Impulse counter with locking and reset facility.				
	(n)	ON/OFF/Control circuit switch with indicator				
	(o)	Audio/Video annunciation for				
		(i) High water temperature				
		(ii) Low lubricating oil pressure				
		(iii) Engine over speed				
		(iv) Engine fails to start		1.00	555766.00	5,55,766.00
		(v) Full load/maximum load warning				
44.02	MR	Supplying and fixing exhaust gas piping of 75mm dia. welded black MS, B Class pipe conforming to IS:3589 cut to required lengths and installed with necessary bends, supports and clamps, anti-vibration mountings, insulation of exhaust system with mineral wool/Rockwool, 50 mm thick wiremesh & aluminum cladding etc., as required as per specifications.		4.00	1280.00	5,120.00
		Total of sub-head (44.0) (Non DSR)				5,60,886.00

Abstract of Furniture							
Item No	Specification	Items	Sample Image	Quantity	Unit	Rate with 12% GST and 15% CP & OH	Amount with 12% GST and 15% CP & OH
1	Knock down class room dual desk is specially designed for rugged use. The desk are made of pressed formed MS CRCA section & CRCA tube fitted with pre laminated Particle board top, seat & back with Machine pressed PVC egde banding 2 mm thick glued with industrial adhesive and diffused with board monolithically . Hanger for water bottle and bag. Space for keeping pen, pencil and scale. The overall appearance of the product shall be as per indicative potographs attached: DESK TOP –18mm Both Side laminate(BSL) PreLam Partical Board 400 mm wide BENCH TOP – 18mm BSL PreLam Partical Board 330 mm wide FRONT SHELF – 18mm BSL PreLam Partical Board 300(Wide)mm. BENCH BACK – 18mm BSL PreLam Partical Board 250(W)mm. Modesty Panel – 18mm BSL PreLam Partical Board 300 (W)mm. Supporting Understrucure- Left Hand and Right Hand FRAME consisting of vertical, horizontal and Cross Member made up of 25 x 1.2 mm outer dia ERW tube confirming to IS Grade 4923 and shall be finised with epoxy polyester powder coated finish with DFT 50-60 Micron confirming IS 13871:1993. The support system of Bench and Shelf shall also made up of made up of 25 x 1.2 mm outer dia ERW tube confirming to IS Grade 4923 and shall be finised with epoxy polyester powder coated DFT 50-60 Micron confirming IS 13871:1993.. Resting support plate made of Table top , provided on the top of vertical members shal be made up of 3mm Thk CRCA sheet Conforming IS code 513. Legs shall be fitted with PVC Leveler. Construction is fully welded with MIG welding and assembled using M6 trilobularscrews(As per DIN 7500)with Zn blue plating. Compact top, seat and back panels are assembled using M6 Countersunk Trilobular screws(as per DIN 7500) with Zn Black Plating (As per IS 1472:1992)	Duel Desk					
1(a)	Dual Desk-(Overall Size 1100 (W) x 930-950(D) x 650 (H) - Desk Depth 390-400 mm. Seat Height 375 mm for Classs 6-8)			96.00	Each	9,145.00	8,77,920.00
1(b)	Dual Desk-(Overall Size 1100 W x 940-975(D) x 750 H - Desk Depth 400 mm. Seat Height 450 mm for Classs 9-10)			160.00	Each	9,789.00	15,66,240.00
2	Supply and installation of Office table as per approved design and as directed by Engineer-in-charge Work Top - Work top shall be made 25mm thick Pre-lam MDF board confirming to IS 12406:2003 with post forming on front , back and machine pressed PVC egde banding 2 mm thick glued with industrial adhesive and diffused with board monolithically on other two sides Understructure- C-type leg shall be made of 50X50X1.6mm thick vertical member and 40x40x1.6mm thick M.S. pipe of Horizontal/Cross member confirming IS-Grade 4923 and shall be finished with epoxy polyester powder coated DFT 50-60 Micron. Legs shall be fitted to the ground with M8 screw leveler with the height adjustment up to 12mm to 15mm.Cross members shall be mounted by end brackets made of 3mm thick CRCA sheet confirming IS 513: 2008 and finished with epoxy polyester powder coated DFT 50-60 Micron confirming IS 13871:1993. Wire management - Electrical wires shall be carried from horizontal/ vertical duct made of 0.7mm CRCA sheet confirming to IS 513:2008. Switch Plate or Cromet depending upon requirement shall also be provided for electrical/LAN connection on table top. Modesty Panel -Modesty Panel of height 450 mm shall be made of 1.5mm thick CRCA sheet confirming to IS 513: 2008 and shall be finised with epoxy polyester powder coated DFT 50-60 Micron. Storage body- Storage top shall also be made of 25mm thick Pre-lam MDF board confirming to IS 12406:2003 with post forming on two sides and machine pressed PVC egde banding 2 mm thick glued with industrial adhesive and diffused with board monolithically on other two sides. The body of storage units shall be made of 0.8mm thick CRCA Sheet and skirting shall be of 1.2mm thick CRCA sheet confirming to IS 513: 2008 finished with epoxy powder coated of DFT 50-60 Micronconfirming IS 13871:1993. Internal Shelves shall be also made up of 0.8mm CRCA sheet confirming to IS 513: 2008 and shall be mounted with the Metal shelf support pin made of 2mm thick	Principal & Vice Principal Table					
2a	Table of Size 1800 W x 750 D x 750 H with Side Storage of Size 900W x 450W X 750H and Back Storage 1800 W x 450 D x 750H	Principal Table		1.00	Each	54,740.00	54,740.00
2b	Table of Size 1650 W x 750 D x 750 H with Side Storage of Size 900W x 450W X 750H and Back Storage 1800 W x 450 D x 750H	Vice Principal Table		1.00	Each	48,300.00	48,300.00
2c	Office table with overall Size of desk 1350 x 750 x 750 mm & Side Storage Unit of size 900 x 450 x 750 mm	Office Table		6.00	Each	26,404.00	1,58,424.00
3	Office Table made of Pre-laminated table top of size 1199 X 590 X 735 mm with one drawer unit made of 0.5mm thick CRCA sheet. The table top shall be supported over legs consists of MS ERW round tube of 25.4 x 1.2mm and Cross Horizontal Members including Leg rest of 25.4 x 1.2 mm ERW tube. All steel components be shall be finised with epoxy polyester powder coated DFT 50-60 Micron.	Teacher's table		22.00	Each	6,376.00	1,40,272.00
4	Supply and installation of 12 Seater Meeting Table of of overall size 3600 x 1350 (Avergae) x 750 mm (Knock down construction). Table Top and Gable End shall be made of 25mm thick Pre-Laminate Partical Board with 2mm thick Machine pressed PVC edge banding glued with industrial adhesive and monolithically diffused. Supporting Understructure consists of 2 Metal C Legs on either ends of table support frame made of 50 x 50 x 1.6 mm MS ERW tube and One number Wire Carrier leg at middle of 50X50X1.6 mm. 4 numbers Horizontal connector of 40mm X 40mm X 1.6mm thick MS Pipe between supporting vertical legs. All The MS Pipes and Sheet shall be finished with epoxy powdercoated of DFT 50-60 Micron. C typed metal legs shall be kept 150 mm inside from end of table. WIRE MANAGEMENT - The Vertical (snake) & Horizontal(cable tray) wire carriers are placed below worktop, made up of CRCA with epoxy powder Coating & Fixed to the understructure with specially designed brackets. Provision of placing switch plates/Cromet in the cable tray .	Meeting Table		2.00	Each	49,140.00	98,280.00

Abstract of Furniture							
Item No	Specification	Items	Sample Image	Quantity	Unit	Rate with 12% GST and 15% CP & OH	Amount with 12% GST and 15% CP & OH
5	Supply and Istallation of Library Table in sizes of 2400 L x 900 W x 750 H mm consisting of follwing specification:- Work Top - Work top shall be made 25mm thick Prelam (One Side laminated) particle board confirming to IS 12823: 1990 post formed edge moulding on two sides and 2 mm thick Machine pressed PVC edge banding glued with industrial adhesive and monolithically diffused with board on other two sides. Understructure Supporting frame consists of two Metal C Legs on either ends of table made up of 50X50X1.6 mm and are joined by two numbers Horizontal connector made of 40mm X 40mm X 1.6mm thick MS Pipe between supporting vertical legs. All Metal Pipes shall confirm to IS 4923 and steel plates are mde up of CRCA sectionm pconfirming to IS 513 and shall be shall be finised with epoxy polyster powder coated DFT 50-60 Micron. C typed metal legs shall be kept 150 mm inside from from end of table. Legs shall be fitted to the ground with M8 screw leveler with the height adjustment up to 12mm to 15mm(Payment Shall be per running metre length)	Library Table		10.00	Per Unit	13,524.00	1,35,240.00
6	Supply and Istallation of Computer Work Station of unit Size 750 mm X 600 mm X 750 mm. Work Top- Work top shall be made 25mm thick Prelam particle board confirming to IS 12823: 1990 with post formed edge moulding on one side and 2 mm thick Machine pressed PVC edge banding glued with industrial adhesive and monolithically diffused with board on other three sides. Understructure supporting frame consist of Metal C Legs type made up of 50 x 50 x 1.6 mm and Wire Carrier leg of 50X50X1.6 mm in placed alternatively and are connected with horizontal cross connectors of of 40mm X 40mm X 1.6mm thick MS Pipe between supporting vertical legs. The MS Pipes shall be finished with epoxy powdercoated with DFT of 50-60 Micron confirming to IS 13871:1993. Legs shall be fitted to the ground with M8 screw leveler with the height adjustment up to 12mm to 15mm. Wire management-The Vertical /Electrical duct & Horizontal Cable tray (wire carriers) are made of CRCA section & fixed to the understructure below worktop with specially designed brackets. Provision for fixing Switch plates are provided in the cable tray for easy access through wire mangaer or PVC grommet. Screens / privacy panel: - Screen height will be 300 above work-top made of prelam particle board/White Board alternatively as approved by Engineer-in-Charge.	Computer Work Station		36.00	Per Unit	12,236.00	4,40,496.00
7	Supply and Istallation of Library Open book Shelf (Single Side)of Sizes 1800 mm x 900 mm x 316 mm body made up of 0.8mm thick CRCA Sheet and skirting of 1.2mm thick CRCA sheet confirming to IS 513: 2008 with epoxy powder coated finish (DFT minimum 50-60 micron). Shelves shall also be made up of 0.8mm CRCA sheet confirming to IS 513: 2008 and fixed with CRCA sheet brackets of approved design . Number of adjustable shelf shall be five with six loading levels . Load bearing capacity of the shelf shall be 30Kgs UDL. The construction shall be aesthetically appealing completely welded. M10 screw leveler is given with height adjustment up to 12mm to 15mm	One Side book Shelf		10.00	Per Unit	16,100.00	1,61,000.00
8	Supply & Placing of Glassdoor Storage of Size 916mm(W)x486mm(D)x1980mm(H). It should have shelf thickness of 0.7 mm, Back thickness of 0.8mm, Door thickness of 0.8mm (high yield strength) and all other components shall have a thickness of 0.9mm. These components shall be made of CRCA sheet 'D' grade high yield strength as per IS:513. The glass door storwel shall have a brass handle and a 2 way locking mechanism with shooting bolt. It should have a height wise adjustable shelf mounting which shall have a Uniformly Distributed Load Capacity of max 40 Kg. It should also have a M10 Screw type Leveller with Hex plastic base.All metal components would be epoxy polyster powder coated DFT 50-60 Micron confirimg to IS 13871:1993	Steel Glass Door Almira		6.00	Per Unit	30,912.00	1,85,472.00
9	Supply & Placing of Metal Almirah of Size 916mm(W)x486mm(D)x1980mm(H). It should have the shelf thickness of 0.7 mm, Back thickness of 0.8mm, Door thickness of 0.8mm (high yield strength) and all other components shall have a thickness of 0.9mm. These components shall be made of CRCA sheet 'D' grade high yield strength as per IS:513. The Storwel Plain should have a Mazak handle and Three way locking mechanism with Shooting Bolts. It should have a height wise adjustable shelf mounting which shall have a Uniformly Distributed Load Capacity of max 40 Kg. It shall have 4 no.s full shelves. A4 size box file(85 W x 285 D x 345 H mm) can be stored vertically on three shelves and the clear space above fourth shelf is 240mm. It should also have a M10 Screw type Leveller with Hex plastic base. All metal components would be powder coated with epoxy powder coating of	Steel Almira		10.00	Per Unit	27,048.00	2,70,480.00
10	Supply and Istallation of One 2- Seater Sofa (1550 X 785 X 675 mm) one 3-Seater Sofa of overall size (1950 X 785 X 675 mm),understructure is made up of Natural Hard wood battens and 12mm THK COMMERCIAL PLYWOOD. High density foam is used for seat and back , The seat is made up of PU foam with density 32+/-2 Kg/m3 having an additional top layer of PU foam with density 28+/-2 Kg/m3, upholstered with leatherette. The back is made up of 28+/-2 Kg/m3 with additional top layer of PU foam with density 23+/-2 Kg/m3, upholstered with leatherette. LEATHERITE -ABRASION RESISTANCE in excess of 80,000 cycles, Legs are made up of 600 to 650 GSM PVC composition Legs are made of SS 304	Sofa Set 2 Seater + 3 Seater		1.00	Per Set	76,069.00	76,069.00
11	Supply and Installation of two 2- Seater Sofa (1550 X 785 X 675 mm) .understructure is made up of Natural Hard wood battens and 12mm THK COMMERCIAL PLYWOOD. High density foam is used for seat and back , The seat is made up of PU foam with density 32+/-2 Kg/m3 having an additional top layer of PU foam with density 28+/-2 Kg/m3, upholstered with leatherette. The back is made up of 28+/-2 Kg/m3 with additional top layer of PU foam with density 23+/-2 Kg/m3, upholstered with eatherette. LEATHERITE -ABRASION RESISTANCE in excess of 80,000 cycles, 600 to 650 GSM PVC composition Legs are made of SS 304	Sofa Set 2 Seater + 2 Seater		2.00	Per Set	70,943.00	1,41,886.00
12	Supply and istallation of Steel bed of overall size 1775-1825(L)x870(W)x650/450mm(H) consisting of following specification:- HEADBOARD: Head Board consists of MS tube of 25 x 50 x 1.6 mm thick vertical legs connected with 2 number horizontal members of MS ERW tube 25x50x1.6mm thick and one number MS ERW tube of 25 x 25 x 1.6 mm at middle confirming to IS-Grade 4923. Construction is partially welded with MIG welding confirming to IS standard IS 816:1969 and is also tested as per the IS grade IS 822:1970. Legs shall be fitted to the ground with M8 screw leveler with the height adjustment up to 12mm to 15mm if required. Head Board and Tail board are connected to middle frame with 2 mm thick CRCA bracket confirming to IS 513: 2008.Connecting bracket is welded on vertical pipe. End to end dimensions for the Headboard is 870(W) x 650mm (H). Whole Assembly is finished with epoxy powder coated of a minium thickness of DFT 50-60 Micron confirming to IS 13871:1993. TAILBOARD-Tail Board consists of vertical legs of MS ERW tube of 25x50x1.6mm thick connected with one number horizontal MS pipe 25x50x1.6mm thick Confirming IS-Grade 4923. Construction is partially welded with MIG welding confirming to IS standard IS 816:1969 and welding is also tested as per the IS grade IS 822:1970. Legs shall be fitted to the ground with M8 screw leveler with the height adjustment up to 12mm to 15mm if required .To connect Tailboard with middle frame 2mm thick CRCA sheet bracket is used conforming IS 513: 2008 . Connecting bracket is welded on vertical pipe. End to end dimensions for the Tailboard is 870(W)x450mm(H). Whole Assembly is finished with epoxy powder coated of a minium thickness of DFT 50-60 Micron confirming to IS 13871:1993. Bed Stagging- Head board and Tail board are joined together by bed stage made up of 12 mm Merine grade ply confirming to IS 710 , supported over steel framework consisting of two outer MS ERW Pipe 25x50x1.2mm thick IS-Grade 4923 and four numbers of 25 x25 x 1.6 mm MS ERW tubes as a cross bracing welded to each other by MIG welding. FINAL ASSEMBLY: Headboard, Tailboard, and middle frame shall be assebled and connected by 4 Nos of connecting Brackets & M8x16 Allen Bolt. The bed stage shall be 10-12 mm below side frame to provide proper fixity to mattress. End to end dimensions for the bed is 1775-1825 (L) x 870(W)x 650/450mm(H). Finish- All metal components are given anti-rust surface treatment and are finised with epoxy polyster powder coated DFT 50-60 Micron confirming to IS 13871:1993.	Metal Bed		246.00	Each	10,948.00	26,93,208.00

Abstract of Furniture

Item No	Specification	Items	Sample Image	Quantity	Unit	Rate with 12% GST and 15% CP & OH	Amount with 12% GST and 15% CP & OH
13	<p>Metal Table with Integrated Storage 1750(L) x 600(W) x 750(H) for two students</p> <p>Work Top Shall be made up of 25mm thick Prelam (OSL) particle board conforming to IS 12823: 1990 with post formed edge moulding on one side and 2 mm thick Machine pressed PVC edge banding glued with industrial adhesive and monolithically diffused with board on other three sides.</p> <p>Supporting Strucure of table top consits of 4 vertical Legs of ERW tube 40 x40 x 1.6 mm and one storage unit at middle. The vertical legs are connected with 2 cross horizontal members of size ERW Tube of 40 x 40 x 1.6 mm provided at top a. The table shall have provisions of foot rest made up of 25 x25 x1.2 mm ERW pipe fitted in between two vertical legs and also support the storgae unit & acts as bracing member. All ERW pipes are pipe shall to confirm to IS grade IS 4923 and shall be finished with epoxy polyester powder coated DFT 50-60 Micron Confirming IS 13871:1993.</p> <p>Drawer Unit: SPECIFICATIONS :-</p> <p>Table shall have 2 numbers of Metal Storage consiting of Shutter of size consiting of 350 (W) x 550 (D) x 280 (H) mm Pad Lock provision . All metal component including shutter and Shelf shall be made of 0.8mm thick CRCA confirm to IS grade IS 513 and shall be powder coated with epoxy powder coating of 50 micron DFT Confirming IS 13871:1993.</p>	Metal Table with Integrated Storage 1750(L) x 600(W) x 750(H).		120.00	Each	12,236.00	14,68,320.00
14	<p>SS Dinning Table consists of Dinning Top is made up of and 1 mm thickness Stainless steel sheet of SS 304 Grade with overall dimension of 2400(L) X 760(D) X 750(H). The table top is reinforced with a 20 mm HDHMR Board. Dinning top sheet shall be extended to the sides for a depth of 24 mm in all directions including , edge rounding, grining and finishing ,etc all complete . The Table top shall finish in such a manner to avoid any sharp edges.</p> <p>Stool Seats are made of 300 mm dia SS 202 Grade formed Plates of 1 mm thickness welded over 3 mm thick MS Plate.</p> <p>Supporting understructure of table consists of 4 number C legged frame made up of 40 x40 x1.6 mm ERW tube and are connected to 6 numbers horizontal members of MS ERW tube 40 x 40 x 1.6 mm.</p> <p>The supporting vertical member of each stool seat consists of MS ERW tube 40 x 40 x 1.6 mmn and is connected to C legged frame of table top. All Metal components of entire assebmly confirm to IS 4923. Both the horizontal and vertical pipes are welded together by MIG welding conforming to IS standard IS 816:1969 and is tested for welding conforming to IS 822:1970. All CRCA Componets would be shall be finised with epoxy polyester powder coated DFT 50-60 Micron confirming IS 13871:1993.</p> <p>Understructure height of table will be 725mm from the ground, and the stool height will be 500mm from the ground.</p>	8 Seater SS Top Fixed Canteen Table 2400 x 750		4.00	Each	52,808.00	2,11,232.00
15	<p>SS Dinning Table consists of Dinning Top is made up of and 1 mm thickness Stainless steel sheet of SS 304 Grade with overall dimension of 1800(L) X 760(D) X 750(H). The table top is reinforced with a 20 mm HDHMR Board. Dinning top sheet shall be extended to the sides for a depth of 24 mm in all directions including , edge rounding, grining and finishing ,etc all complete . The Table top shall finish in such a manner to avoid any sharp edges.</p> <p>Stool Seats are made of 300 mm dia SS 202 Grade formed Plates of 1 mm thickness welded over 3 mm thick MS Plate.</p> <p>Supporting understructure of table consists of 3 number C legged frame made up of 40 x40 x1.6 mm ERW tube and are connected to 4 numbers horizontal members of MS ERW tube 40 x 40 x 1.6 mm.</p> <p>The supporting vertical member of each stool seat consists of MS ERW tube 40 x 40 x 1.6 mmn and is connected to C legged frame of table top. All Metal components of entire assebmly confirm to IS 4923. Both the horizontal and vertical pipes are welded together by MIG welding conforming to IS standard IS 816:1969 and is tested for welding conforming to IS 822:1970. All CRCA Componets shall be finised with epoxy polyester powder coated DFT 50-60 Micron confirming IS 13871:1993.</p> <p>Understructure height of table will be 725mm from the ground, and the stool height will be 500mm from the ground. .</p>	6 Seater SS Top Fixed Canteen Table 1800 x 750		30.00	Each	46,368.00	13,91,040.00
16	<p>Supply and installation of Lab Stool Seat made up of 300 mm dia SS 202 Grade formed Plates of 1 mm thickness welded over 3 mm thick MS Plate. The Stool seat is supported by four legs 19x19x1.2mm SQUARE Pipe. Stool shall be provided with foot rest made of 19 x 19 x 1.2 mm thick MS Tube at a height of 100 mm from ground. Height of stool is st from the ground shall be 540. Legs are provided with PU/PVC leveller at the bottom. All MS CRCA Componets are confirming to IS 4923 and finished with epoxy powder coated finish (DFT Minimum 45 micron) Confirming IS 13871:1993.</p>	Lab Stool		91.00	Each	2,937.00	2,67,267.00
17	<p>Supplying & placing in position Executive Chair as per indicative photograph and specification:</p> <p>(i) SEAT/BACK ASSEMBLY: The seat and back should be made up of 1.2 ±0.1cm. thick hot-pressed plywood and upholstered with .fabric upholstery covers and moulded Polyurethane foam. The back foam should be designed with contoured lumbar support for extra comfort. The seat has extra thick foam on front edge to give comfort to popliteal area.</p> <p>BACK SIZE 47.5 cm. (W) x 69.5 cm (H)</p> <p>SEAT SIZE 47.0 cm. (W) x 48.0 cm. (D)</p> <p>(ii) HIGH RESILIENCE (HR) POLYURETHANE FOAM: The HR polyurethane foam should be moulded with density = 45±2 kg/m3 and hardness load 16 ± 2 kgf for 25% compression.</p> <p>(iii) ARMRESTS :The one-piece armrests should be injection moulded from black Co-polymer Polypropylene.</p> <p>(iv) CENTER TILT</p> <p>SYNCHRO mechanism: The mechanism should be designed with the following features:</p> <ul style="list-style-type: none"> • 360° revolving type. • Upright-position locking • Tilt tension adjustment • Seat/back tilting ratio of 1:3. <p>(v).PNEUMATIC HEIGHT ADJUSTMENT: The pneumatic height adjustment has an adjustment stroke of 12.0 ±0.3cm.</p> <p>(vi).TELESCOPIC BELLOW ASSEMBLYThe bellow should be 3 piece telescopic type and injection moulded in black Polypropylene.</p> <p>(vii).PEDESTAL ASSEMBLY:The pedestal should be injection moulded in black 33% glass-filled Nylon-66 and fitted with 5 nos. twin wheel castors. The pedestal should be 66.3 ±0.5cm. pitch-center dia. (76.3 ±1.0cm with castors).</p> <p>(viii).TWIN WHEEL CASTORS:The twin wheel castors should be injection moulded in Black Nylon.</p>	High Back Chair		1.00	Each	14,024.00	14,024.00

Abstract of Furniture								
Item No	Specification	Items	Sample Image	Quantity	Unit	Rate with 12% GST and 15% CP & OH	Amount with 12% GST and 15% CP & OH	
18	<p>Supply & Installation of Medium Back Chair as per indicative photograph and specification:</p> <p>(i) SEAT/BACK ASSEMBLY: The seat and back should be made up of 1.2 ±0.1cm. thick hot-pressed plywood and upholstered with fabric upholstery covers and moulded Polyurethane foam. The back foam should be designed with contoured lumbar support for extra comfort. The seat has extra thick foam on front edge to give comfort to popliteal area</p> <p>BACK SIZE 47.5 cm. (W) x58.0 cm (H)</p> <p>SEAT SIZE 47.0 cm. (W) x 48.0 cm. (D)</p> <p>(ii) HIGH RESILIENCE (HR) POLYURETHANE FOAM: The HR polyurethane foam should be moulded with density = 45±2 kg/m3 and hardness load 16 ± 2 kgf for 25% compression.</p> <p>(iii) ARMREST- The one-piece armrests should be injection moulded from black Co-polymer Polypropylene.</p> <p>(iv) CENTER TILT SYNCHRO mechanism: The mechanism should be designed with the following features:</p> <ul style="list-style-type: none"> • 360° revolving type. • Upright-position locking • Tilt tension adjustment • Seat/back tilting ratio of 1:3. <p>(v) PNEUMATIC HEIGHT ADJUSTMENT: The pneumatic height adjustment has an adjustment stroke of 12.0 ±0.3cm.</p> <p>(vi). TELESCOPIC BELLOW ASSEMBLY : The bellow should be 3 piece telescopic type and injection moulded in black Polypropylene.</p> <p>(vii). PEDESTAL ASSEMBLY: The pedestal should be injection moulded in black 33% glass-filled Nylon-66 and fitted with 5 nos. twin wheel castors. The pedestal should be 66.3 ±0.5cm. pitch-center dia. (76.3 ±1.0cm with castors).</p> <p>(viii). TWIN WHEEL CASTORS: The twin wheel castors should be injection moulded in Black Nylon.</p>	Medium Back Chair		1.00	Each	12,537.00	12,537.00	
19	<p>Supply & Installation of Medium Back Chair as per indicative photograph and specification:</p> <p>(i). SEAT/BACK ASSEMBLY: The seat and back should be made up of 1.2 ±0.1cm. thick hot-pressed plywood and upholstered with fabric upholstery covers and moulded Polyurethane foam. The back foam should be designed with contoured lumbar support for extra comfort. The seat has extra thick foam on front edge to give comfort to popliteal area. BACK SIZE 47.5 cm. (W) x58.0 cm (H)</p> <p>SEAT SIZE 47.0 cm. (W) x 48.0 cm. (D)</p> <p>(ii). HIGH RESILIENCE (HR) POLYURETHANE FOAM: The HR polyurethane foam should be moulded with density = 45±2 kg/m3 and hardness load 16 ± 2 kgf for 25% compression.</p> <p>(iii) ARMRESTS : The one-piece armrests should be injection moulded from black Co-polymer Polypropylene.</p> <p>(iv) TUBULAR FRAME: The powder coated (DFT 40-60 microns) tubular frame should be cantilever type & made of 0 2.54 ±0.03cm. x 0.2 ±0.016cm.thk. M.S. ER.W. Tube.</p>	Visitor Chair		53.00	Each	9,494.00	5,03,182.00	
20	<p>Supply and placing of chair with MOULDED PLY SHELL: The Nosh shell is made up of moulded ply in Veneer or Laminate finish.</p> <p>Shell size - 420 mm (W) X 410 mm (D) X 440 (H) X Thickness 12 mm.</p> <p>UNDERSTRUCTURE:</p> <p>The Understructure is made up of Diameter 19 x 1.6 mm thk and 2mm MS plate welded with it. Powder Coating done in Texture Metallic Silver Color having DFT – 50 to 80 micron.</p>	Chair without arm		240.00	Each	2,769.00	6,64,560.00	
21	<p>Supply and installation of Wooden chair of Dimension - 480W x 420D x 820H</p> <p>UNDERSTRUCTURE: The Understructure is made from Hot pressed rubber wood.</p> <p>BACKREST: The backrest is made up of plywood and foam upholstered with polyester fabric.</p> <p>SEAT: The seat is made up of 12mm thick (7 layers) hot pressed plywood and moulded seat foam upholstered with fabric.</p> <p>SEAT FOAM: Foam made out of moulded Polyurethane foam with the following properties:</p> <ul style="list-style-type: none"> • Density (IS-7888-1976) : 50-55 Kg/m3. • Hardness: 28+/-3 Kgf. • Compression set (IS-7888-1976): 10% Max. • Tensile strength (IS-7888-1976): 0.9-1.2 Kg/cm2 • Tear strength (Min) (IS-8067) : 0.6 Kg/cm (min) • Resilience (IS-7888-1976): 40% - 60% • Elongation (IS-7888-1976): 110 % <p>GLIDE: The glide is made from Nylon.</p> <p>SEAT AND BACK FABRIC PROPERTIES: Content: 100% Polyester</p> <p>170 GSM Abrasion Resistance: Over 30000 cycle. Bursting Strength: 19.1 kg/cm² Tear Strength (NF):</p>	Chair without arm		135.00	Each	4,057.00	5,47,695.00	
21	<p>Supply and installation of Metal Lockers consisting of unit size of 381W x 381D x 1831H with 4 Lockers .</p> <p>Body-LH and RH Side and back panel is made up of 0.8mm thick CRCA sheet conforming to IS 513:2008 which is having standard dimension 1831 x380mm. Shelf hanging bracket is welded on both the side panel by spot welding. Shelf hanging bracket is made up of 0.8mm thick CRCA sheet conforming to IS 513:2008. front frame top and bottom part made up 0.8mm thick CRCA sheet conforming to IS 513:2008 and horizontal part is made up 1mm thick CRCA sheet conforming to IS 513:2008. On a front frame horizontally provision is given at a common distance to hold shutter bracket. Locker's top is made up of 0.8mm thick CRCA sheet conforming IS 513:2008 which is having standard dimension 375 x378mm. Shelf is also made up of 0.8 mm CRCA sheet conforming to IS 513:2008.</p> <p>Shutter- Is made up on 0.7mm thick CRCA sheet conforming to IS 513:2008. All the shutter are hung on shutter pin and shutter bracket, louvers are given shutter for air flow. PVC flush handle and name plate is used for handling and for name plate tagging. Standard PAD/CAM lock is used for locking each shutter.</p> <p>The bodies including shelves are given anti-rust surface treatment & are powder coated with epoxy polyester powder coating of DFT 50-60 Micron conforming to IS 13871:1993.</p>	Personal Locke Unit		8.00	Per Unit	13,975.00	1,11,800.00	
22(a)	<p>Super White' writing grade resin coated steel writing surface conforming to International Standards. A 100% smooth and 100% scratch-free surface ensures maximum pleasure of writing. The surface can also be used for sticking magnets or magnet impregnated objects</p> <p>Satin-finish alloy aluminium (6063-T6) frame and precision engineered paper honeycomb core to make the board 100% warp-free and 100% flat. Can be mounted in landscape as well as portrait orientation on a wall with the help of built-in wall hanging clips</p> <p>Excellent erasability with no ghost-marks, high scratch-resistance with easy- wipe properties and maximum readability with minimum glare makes the Genius series boards an ideal companion for all training, teaching, display and learning activities</p> <p>Material: Resin Coated Steel Writing Surface, Alloy Aluminum Frame, Paper Honeycomb Core & Virgin ABS Corners.</p> <p>Size of the board: 6 x 4 Feet</p>	Magnetic White Board- 6' x 4'		4.00	Each	13,382.00	53,528.00	
22(b)	<p>'Green' writing grade melamine writing surface (chalk sheet) conforming to IS:2046/1997. A 100% clean and 100% scratch-free surface ensures maximum pleasure of writing. The surface cannot be used for sticking magnets or magnet impregnated objects</p> <p>Satin-finish alloy aluminium (6063-T6) frame and precision engineered paper honeycomb core to make the board 100% warp-free and 100% flat. Can be mounted in landscape as well as portrait orientation on a wall with the help of built-in wall hanging clips</p> <p>Excellent erasability with no ghost-marks, high scratch-resistance with easy- wipe properties, maximum readability with minimum glare and minimum chalk dust formation with clean & continuous lines of chalk, makes the Genius series boards an ideal companion for all training, teaching, display and learning activities</p> <p>Board Size: 3x4 Feet (90x120 CM). Suitable for use at home, home offices, offices and schools. Works well with all standard chalk sticks</p>	Melamine Surface Non-Magnetic Chalk Board- 6' X 4'		18.00	Each	10,991.00	1,97,838.00	
Total Basic (X)							1,24,91,050.00	

ABSTRACT OF KITCHEN

S. No.	CODE	Description of works	SIZE	Quantity		Complete Rate including (GST 12%, Installation and Transportation 5% and CP 15%)	Amount (in Rs.)
1	01	SITC of SS One Burner STOCK POT RANGE Comprising: 16Ga. SS 304 GR Top, Body 20 Ga. 304 GR SS, 1 no. 400mm x 400mm Cast iron pan support, 1 no. burner with pilot lamp, 1 no. 20 Ga. SS drip tray with handle, 38mm SQ 16 Ga. SS pipe legs. With adjustable bullet feet. 100mm setback Body/legs for Gas pipe routing.	24 X 24 X 26 (inches)	3	Nos.	15,146.88	45,440.64
2	02	SITC of SS 2 BURNER INDIAN COOKING RANGE Comprising: 16Ga. SS 304 GR Top, Body 20 Ga. 304 GR SS, 2 no. 400mm x 400mm Cast iron pan support, 2 no. burner with pilot lamp, 2 no. 20 Ga. SS drip tray with handle, 38mm SQ 16 Ga. SS pipe legs. With adjustable bullet feet. 100mm setback Body/legs for Gas pipe routing.	44 X 24 X 34 (inches)	1	No.	30,429.00	30,429.00
3	03	SITC of SS SINGLE SINK UNIT Comprising:	24 X 24 X 34+6 (inches)	1	No.	16,228.80	16,228.80
4	04	SITC of SS TILTING TYPE BULK COOKER Comprising: Inner Cell of bottom 4 mm & side wall 1.5 mm thick Stainless Steel 304 grade, Outer wall- made of 18 GA SS 304 grade, Lid - 18 GA SS 304 grade with Heavy Duty Spring loaded for Easy open & close with SS Handle, Panels - made of 20 GA SS 304 grade, Stand - SS Pipe 50mm x 50mm,16GA. Tilting arrangement - On wheel with Gear arrangement and Interlock Brake. For Water - One Swivel Type Sink Cock fitted with SS pipe Long Nipple to Connect Existing Water Point. 1 no. burner with pilot lamp.	200 LTRS (Capacity)	1	No.	1,06,839.60	1,06,839.60
5	05	SITC of SS TILTING TYPE BOILING PAN Comprising: Inner Cell of bottom 4 mm & side wall 3 mm Stainless Steel 304 grade, Outer wall- made of 18 GA SS 304 grade, Lid - 18 GA SS 304 grade with Heavy Duty Spring loaded for Easy open & close with SS Handle, Panels - made of 20 GA SS 304 grade, Stand - SS Pipe 50mm x 50mm,16GA. Tilting arrangement - On wheel with Gear arrangement and Interlock Brake. For Water - One Swivel Type Sink Cock fitted with SS pipe Long Nipple to Connect Existing Water Point. 3 no. "RV" type burner with pilot lamp	200 LTRS (Capacity)	1	No.	1,01,430.00	1,01,430.00
6	06	SITC of SS SPICE TROLLY Comprising: 16 Ga.304 SS Top all side turned up 50mm, Two (2) no Full width 18 Ga. SS 304 grade Bottom shelves.Four (4) no. 100mm dia uprights on Castors.	18 X 24 X 34 (inches)	2	No.	14,876.40	29,752.80
7	07	SITC of SS WORK TABLE WITH 1 Bottom Shelf Comprising: 16 Ga. 304 SS Top. All sides turned down 50mm & in 12mm. 18 Ga. SS 304 Bottom shelves. Four (04) no. 38mm sq SS legs. With adjustable bullet feet.	44 X 24 X 34 (inches)	7	No.	15,552.60	1,08,868.20
8	08	SITC of CHAPATI HOT PLATE Comprising: Full 12 mm thick MS Plate with LHS puffer plate, Exterior 20 Ga. SS 304 cladding, Built-in pressure Controller regulator, 38mm SQ 16 Ga. SS pipe legs with adjustablebullet feet, Four (4) no. "RV" type burner with pilot lamp Smooth Plate.	52 X 26 X 34 (inches)	2	No.	46,657.80	93,315.60
9	09	SITC of SEMI AUTOMATIC CHAPATI MAKING MACHINE Comprising: Gas operated, with all gas fittings, burners and necessary electric motor of rating 0.75 KW, 220V ISI mark all complete.	800 Pcs /Hrs (capacity)	1	No.	3,01,585.20	3,01,585.20
10	10	SITC of CONVEYOR TYPE TOASTER Comprising: SS 20 GA body with necessary electrical motor and heating element of Power : 1.5 kw, 220V etc with timer controllar all complete ISI marks.	120-150Pcs /Hrs (Capacity)	2	Nos.	44,629.20	89,258.40
11	11	SITC of SS 4 DOOR VERTICAL CHILLER Comprising: Exterior/Interior wall of 20 Ga. 304 grade SS cladding, Internal temp range from 0 Deg to + 4 Deg Celsius, With doors 20 GA Inside and 18 GA. 304 grade SS outside Four (4) Nos. half size Insulated self closing type SS doors, complete with handle, gasket, Compressor (Emerson or equivalent make) & Controls 1 KW-220 V AC with adjustable bullet feet.	48 X 28 X 78 (inches) 900 LTRS capacity	2	Nos.	1,46,059.20	2,92,118.40
12	12	SITC of DEEP FREEZER: 50mm thick PU foam on all sides with plastric material body. Brand - Voltas or equivalent rating 1 KW 220 V AC all complete as per manufacturer specifications	500 LTRS (Capacity)	1	No.	47,334.00	47,334.00
13	14	SITC of DRY MASALA GRINDER Comprising: SS Jar of Capacity 5 kg, with electric motor of Power rating : 1/2 Hp, 220V of ISI mark all complete as per manufacturers specification .	5 KG (Capacity)	1	No.	22,990.80	22,990.80
14	15	SITC of PULVERISER Comprising: 20 GA SS body, electrically operated with electric motor of Power : 2 HP, 220V of ISI mark, etc all complete as per manufacturer specifications.	2 HP	1	No.	20,962.20	20,962.20

ABSTRACT OF KITCHEN

S. No.	CODE	Description of works	SIZE	Quantity		Complete Rate including (GST 12%, Installation and Transportation 5% and CP 15%)	Amount (in Rs.)
15	16	SITC of DOUGH KNEADER- Comprising: 16 GA bowl of SS and 20 GA SS body, electrically operated with motor of Power : 2 HP, 220V of ISI mark, etc all complete as per manufacturer specifications.	20 LTRS (Capacity)	1	No.	70,324.80	70,324.80
16	18	SITC of SS 6 VESSEL HOT BAIN MARIE WITH 1/1 Gastro-Norm PAN WITH FRONT TRAY RAIL Comprising: 16 Ga. SS 304 Grade Top, 1No tank 16 Ga.304 SS grade Bain Marie complete with water outlet, 4.0 k.w. heating element, 6 no. Gastro-Norm 1/1 Pan, 150mm deep with lid, Front Pipe Trai Rail, Full length 18 Ga. SS 304 grade Bottom shelve, Electrical panel complete with thermostat, on-off switch & light indicator with 4 No. 38mm sq. pipe 16 GA SS legs with adjustable bullet feet, all complete.	84 X 26+12 X 34 (inches)	2	Nos.	70,324.80	1,40,649.60
17	18A	SITC of SS 6 VESSEL HOT BAIN MARIE WITH 1/1 Gastro-Norm PAN WITH FRONT TRAY RAIL Comprising: 16 Ga. SS 304 Grade Top, 6 no. Gastro-Norm 1/1 Pan, 150mm deep with lid, Front Pipe Trai Rail, Full length 18 Ga. SS 304 grade Bottom shelve, with 4 No. 38mm sq. pipe 16 GA SS legs with adjustable bullet feet,all compelete.	84 X 26+12 X 34 (inches)	2	Nos.	56,800.80	1,13,601.60
18	19	SITC of PLATFROM TROLLY Comprising: 16 GA 25 mm dia SS 304 grade pipe pulling/pushing arrangement, 16 GA.304 SS platform Top all side turned down 50mm, Four (4) no. 100mm dia uprights on Castors.	34 X 24 X 34 (inches)	3	Nos.	19,609.80	58,829.40
19	20	SITC of KITCHEN UTILITY TROLLY Comprising: 16 GA 25 mm dia SS 304 grade pipe pulling/pushing arrangement, 16 GA.304 grade SS top all side turned up 50mm, Two (2) no Full width 18 Ga. SS 304 grade Bottom shelves with Four (4) no. 100mm dia uprights on Castors all complete.	34 X 24 X 34 (inches)	2	Nos.	21,638.40	43,276.80
20	21	SITC of SS POT RACK - 4 SHELF Comprising: Four (4) nos 20mm x 20mm x 16 Ga. SS squire pipe Grade 304 SS Shelves welded to SS square pipe uprights with 38mm x 38mm x 16GA 304 grade SS squire pipe, upright with adjustable bullet feet all complete.	60 X 30 X 66 (inches)	2	Nos.	38,475.78	76,951.56
21	22	SITC of SS STORAGE RACK - 4 SHELF Comprising: 18 Ga. 304 grade SS Shelves four (4) nos with frame of four nos. vertical angles size 38 x38x 3 mm of SS grade 304 all complete.	44 X 16 X 66 (inches)	6	Nos.	19,609.80	1,17,658.80
22	23	Supplying of HDPE PALLET of capacity 2200 to 2500 kg, High Density Polyethyle	48 X 40 X 8 (inches)	4	Nos.	9,466.80	37,867.20
23	24	SITC of POTATO MILLER Comprising: 20 GA SS body, electrically operated with electric motor of Power : 2 HP, 220V of ISI mark, all complete as per manufacturer specifications.	20 KG (Capacity)	1	No.	51,391.20	51,391.20
		KITCHEN VENTELATION SYSTEM				-	-
24	V1	SITC of SS HOOD WITH SS FILTER Comprising: 22 GA. SS Welded Body Construction, with Removable 20 GA. SS "V" section filters set in continuous channel, to be suspended on ceiling with hanger rods of sufficient capacity all complete.	54 X 30 X 24 (inches)	1	No.	27,048.00	27,048.00
25	V2	SITC of SS HOOD WITH SS FILTER Comprising: 22 GA. SS Welded Body Construction, Removable 20 GA. SS "V" section filters set in continuous channel, To be suspended on ceiling with hanger rods of sufficient capacity all complete.	36 X 30 X 24 (inches)	3	Nos.	17,581.20	52,743.60
26	V5	SITC of GI DUCTING FOR HOT AIR SUCTION Comprising: 22 GA. GI sheet ducting as per requiremt as site requirement all complete.	46 SQM	46.45	SQM	1,877.13	87,192.74
27	V6	SITC of FAN FOR HOT AIR SUCTION Comprising: Electric Motor of Compton or equivalent make - 3 HP Power/ 2.25 KW, 440V ISI mark as per manufacturer specifications complete.	3 HP AXIAL (motor Capacity)	1	No.	52,743.60	52,743.60
		KITCHEN LPG SYSTEM				-	-
28	L1	SITC of 10 CYLINDER (5 X 2 = 10) LPG GAS MANIFOLD SYSTEM WITH ALL FITTINGS COMPLITE SET Comprising: 1" dia pipe M.S. manifold, 10 no Non-Retrurn-Valve, 10 cylinder pigtail, 10 no clicon addaptor, 2 no ball valve, 1 no Double-Bottle-Connection 1 no perset regulator, 1 no adjustable regulator, 1 no pressure gauge, all complete	10 CYLINDER (capacity)	10	Nos.	2,975.28	29,752.80
29	L2	SITC of 1/2" DIA LPG PIPE LINE FROM MANIFOLD TO ALL LPG EQUIPMENTS WITH CONNECTION COMPLITE SET Comprising: 1/2" dia M.S. pipe line, 1 no pressure gauge with valve & Needle Control Valve, all connection - 1 no socket, 1no Needle Control Valve, 1no burnner pigtel clump, bend, socket, union set, painted with yellow paint etc including neccesary leakage testing all complete.	60 Metre APPROX	61.00	SQM	2,616.89	1,59,630.53
Total amount with GST12%							24,26,216.00
Cost with 18% GST							
Total amount without GST 18%							25,56,191.86