



**INKEL Limited**

**Regd. & Corp. Office: Door No. 7/473ZA - 5 & 6,  
2nd Floor, Ajiyal Complex, Kakkanad, Cochin-682030**

**Phone: 0484-6491138; Fax 0484-2978102**

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**TENDER DOCUMENT**

**FOR THE CONSTRUCTION OF**

**WAREHOUSE & COMMON UTILITIES CENTRE, KINFRA DEFENCE PARK,  
OTTAPALAM, PALAKKAD (DT), KERALA**

**A PROJECT FOR KERALA INDUSTRIAL INFRASTRUCTURE DEVELOPMENT CORPORATION  
(KINFRA)**

(This document, in original, to be submitted as Financial Bid in Envelope 2)



## **Notice Inviting Tender (NIT)**

**(INKEL - 6)**

**Tender No** : **PMC/2016/02 dated 28/09/2016**

**Name of Work** : **WAREHOUSE & COMMON UTILITIES CENTRE, KINFRA  
DEFENCE PARK, OTTAPALAM, PALAKKAD (DT), KERALA**

**PAC** : **Rs. 11,54,00,000/-**

**EMD** : **Rs. 21,54,000/-**

**Period of Completion** : **10 Months**



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Tender No : PMC/2016/02 dated 28/09/2016  
Name of Work : WAREHOUSE & COMMON UTILITIES  
CENTRE, KINFRA DEFENCE PARK,  
OTTAPALAM, PALAKKAD (DT), KERALA

Locality : OTTAPPALAM  
Last date of Receipt of Tender : 14.10.2016  
Name of Bidder : .....

Address of Bidder : .....  
.....  
.....  
.....

Registration and Class : .....

Validity period of Registration : .....

## INDEX

Sl No	Details	Pages
1.	Press Notice	1
2.	General Guidelines	2
3.	Information & Instruction to the bidders	3-10
4.	Item Rate Tender & Contract for Works (Form INKEL 7/8)	11-18
5.	General Guidelines for Bidders	19-22
6.	Information Regarding Eligibility Letter of Transmittal Form A, B, C, D, E, F, G & H	23-32
7.	Proforma for Preliminary Agreement	33-34
8.	Other Instructions to bidders	35
9.	Scope of work	36
10.	Particular Specifications of Contract	37-47
11.	Schedule of Quantities & Summary	48-94



## Press Notice

INKEL Limited on behalf of Kerala Industrial Infrastructure Development Corporation (KINFRA) invites Item Rate Tenders from registered eligible contractors of PWD/CPWD/MES/BSNL/PSUs for the following works:

NIT No & date	Name of Work	PAC	EMD	Period of completion
PMC/2016/1 dt 28/09/2016	Common Facilities Centre	Rs.51.15 crores	Rs. 61.15 lakhs	16 months
PMC/2016/2 dt 28/09/2016	Warehouse & Common Utilities centre	Rs. 11.54 crores	Rs.21.54 lakhs	10 months

Last date of receipt of tender: 14.10.2016. The bid forms and other details can be obtained from website [www.inkel.in](http://www.inkel.in).

## GENERAL GUIDELINES

1. This book of “Notice Inviting Tender (NIT)” is applicable to Item rate tenders. “Notice Inviting Tender” shall be available in downloadable manner from website [www.inkel.in](http://www.inkel.in) and [www.kinfra.org](http://www.kinfra.org)
2. The Notice Inviting Tender, Schedules A to F, special conditions/specifications and drawings can be downloaded from the websites mentioned above. The General Clauses of Contract and Technical Specifications are also available in the websites.
3. **Intending tenderers need not submit the General Clauses of Contract and Technical Specifications along with the tender. However, both will also form part of the agreement with the successful tenderer. As such, it is deemed that the tenderer have made reference to both these documents in the website of [www.inkel.in](http://www.inkel.in) or otherwise and have full knowledge of its contents, although it is not signed and attached with the tender.**
4. Provisions of NIT shall supercede the provisions of other documents.
5. The intending bidders shall quote their rates in Schedule A ie. Schedule of Quantities.

## Information & Instructions to the Bidders for Tendering (Forming part of Bid Document)

Managing Director, INKEL invites Item rate tenders in three cover bid system for the following work in the prescribed form, from competent and eligible contractors/firms with Class A registration in PWD/CPWD/MES/BSNL/PSUs, who fulfil the eligibility criteria prescribed.

Sl No	NIT No	Name of work & Location	Estimated cost put to bid	EMD	Period of Completion	Last date of submission of Tender document, EMD, Tender Fee & Other documents as specified in NIT	Time & Date of opening of bid
1	2	3	4	5	6	7	8
1.	PMC/2016/02 dated 28.09.2016	WAREHOUSE & COMMON UTILITIES CENTRE, KINFRA DEFENCE PARK, OTTAPALAM, PALAKKAD (DT), KERALA	Rs. 11.54 Crores	Rs. 21.54 lakhs	10 months	14.10.2016 at 15:00 hours	14.10.2016 at 15:30 hours

1. Contractors who fulfil the following requirements shall be eligible to apply. Joint ventures are not accepted.
  - (a) Should have satisfactorily completed the works as mentioned below ending last day of the month previous to the one in which tenders are invited.
    - (i) Three similar works each costing not less than **Rs.4.62 crores**  
OR  
Two similar works each costing not less than **Rs. 6.92 crores**  
OR  
One similar work costing not less than **Rs.9.23 crores**  
AND
    - (ii) One work of any nature (either part of (i) above or a separate one) costing not less than **Rs.4.62 crores** with some Central/State Government Department/ Central Autonomous Body/ Central Public Sector Undertaking.

Similar work shall mean works of construction of Warehouse & Godowns of Pre-Engineered structures / buildings (minimum 3000 sqm). The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum; calculated from the date of completion to last date of receipt of applications for bids.

Contractors who do not have experience/do not meet Prequalification requirements in PEB/electrical/plumbing works may also participate in tender subject to proposing a qualified subcontractor/s who meets the requirements as per particular specifications. The qualification details of subcontractor if any should be submitted along with the tender and tenders which do not have details of such subcontractors shall be rejected.

- (b) Should have had average annual financial turnover of **Rs.3.46 crores** on construction works during the last three years ending 31st March 2016 (copy of Certificate from CA to be submitted)
- (c) Should not have incurred any loss in more than two years during the last five years ending 31st March 2016
- (d) Should have a solvency of **Rs.4.62 crores** (copy of original solvency to be submitted)
- 1.1 All the intending bidders should have successfully completed works as per details above during the last 7 years with Central Government Department/ State Government Department/ Central/State Autonomous Body/ Central/State Public Sector undertaking, ending last day of the month previous to the one in which tenders are invited.
  - 1.2 Registration of contractors should be valid on the last date of submission of bids. In case the last date of submission of bid is extended, the registration of contractor should be valid on the original date of submission of bids.
  - 1.3 The eligibility of bidders will correspond to the combined estimated cost of different components put to bid.
  - 1.4 Intending bidder is eligible to submit the bid provided he has definite proof from the appropriate authority, which shall be to the satisfaction of the competent authority, of having satisfactorily completed similar works of magnitude specified below:  
A certificate to this effect shall be produced by the bidder from an officer of the rank not below the rank of Executive Engineer in the Government or PSUs/ Chief Project Manager or equivalent in other organisations.
  - 1.5 To become eligible for bid, the bidders shall have to furnish an affidavit as under:-

*“I/We undertake and confirm that eligible similar works(s) has/have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the notice of INKEL/KINFRA, then I/we shall be debarred for bidding in INKEL/KINFRA in future forever. Also, if such a violation*



*comes to the notice before date of start of work, I/we shall forfeit the entire amount of Earnest Money Deposit/Performance Guarantee.”*

2. The intending bidder must read the terms and conditions of **INKEL-6** carefully. He should only submit his bid if he considers himself eligible and he is in possession of all the documents required.
3. Information and Instructions for bidders posted on website shall form part of bid document.
4. The tender document(s), may be downloaded free of cost. Only those bidders having a valid and active registration, on the date of bid submission, shall submit bids. However, Tender Processing fee (Non refundable) of Rs 10,500/- in the form of DD drawn from a scheduled bank in favour of INKEL limited payable at Cochin shall be submitted along with the bid.
5. Earnest Money Deposit (EMD) shall be furnished as **Demand Draft in favour of INKEL Limited payable at Cochin.**
6. All bids shall be submitted in envelope(s)/ cover(s), as per the type of tender. All documents shall be Signed and sealed by the authorized personnel.
7. The bidders are advised to submit the bids well before the stipulated date & time. INKEL shall not be responsible for postal/courier delays. All bids received after the stipulated date and time shall be summarily rejected.
8. Ineligible bidders or bidders who do not possess valid & active registration, on the date of bid submission, are strictly advised to refrain themselves from participating in this tender. If such instances are noticed, the same shall be treated as “fake bidding” by the respective bidder and such bidder shall be blacklisted as per INKEL rules in force. The bidders accept that they have clearly understood and agreed the terms and conditions including the Forms/ Annexures of this tender. Mention of price details at any place other than the designated place, shall disqualify the bid and the bid shall be summarily rejected.
9. Tender duly signed by authorized representatives shall be submitted on or before 3 PM, on 14.10.2016 at the following address:  
The Managing Director  
INKEL Limited  
Door No. 7/473ZA - 5 & 6, 2nd Floor, Ajiyal Complex,  
Kakkanad, Cochin-682030  
Ph:0484-6491138

10. General Conditions of Contract shall be available in downloadable manner from [www.inkel.in](http://www.inkel.in) and shall form part of the agreement with the successful tenderer.
11. **Certificate of Financial Turnover:** At the time of submission of bid, contractor may submit Affidavit/ Certificate from CA mentioning Financial Turnover of last 3 years or for the period as specified in the bid document and further details if required may be asked from the contractor after opening of technical bids.
12. The Technical bid shall be opened first on due date and time as mentioned above. The time and date of opening of financial bid of contractors qualifying the technical bid shall be communicated to them at a later date.
13. For any queries / clarifications regarding this tender, the parties may contact our office on all working days. (Ph. No : 8086833117, 0484-6491138, mail: [pmc@inkelkerala.com](mailto:pmc@inkelkerala.com))
14. INKEL reserves the right to reject any prospective application without assigning any reason and to restrict the list of qualified contractors to any number deemed suitable by it, if too many bids are received satisfying the laid down criterion.
- 14.1. **List of Documents to be submitted in Envelope 1 as part of bid submission:**
- I. Tender Processing Fee
  - II. Earnest Money Deposit
  - III. Registration certificate of the Contractor.
  - IV. Certificates of Work Experience.
  - V. Certificate of Financial Turnover from CA. (Form A)
  - VI. Bank Solvency Certificate (Form B)
  - VII. Any other Document as specified in this NIT.
  - VIII. Certificate of Registration for Sales Tax / VAT and acknowledgement of up to date filed return if required.
  - IX. Certificate of Registration for Service Tax and acknowledgement of up to date filed return, if required.
  - X. Preliminary Agreement in stamp paper worth Rs. 200/-
  - XI. Affidavit as per clause 1.5 of INKEL- 6
  - XII. Filled Forms A, B, C, D, E, F, G & H

Technical evaluation of bids shall be carried out only if tender processing Fee and EMD is submitted as stipulated in this NIT.

**14.2. List of Documents to be submitted in Envelope 2**

1. Price Bid (Schedule A- Schedule of Quantities as per BOQ)
2. The soft copy of filled up BOQ(in excel format) shall also be submitted on CD

Envelope No 2 will be opened only of those tenderers whose technical proposals furnished in Envelope No I are in order.

### 14.3. Envelope 3

Sealed envelopes 1 & 2 as above shall be placed in another envelope 3 and sealed properly.

***All the envelopes shall be superscribed with name of work, Tender no. and Envelope No.***

15. Agreement shall be drawn with the successful bidder. Bidders shall quote his rates as per various terms and conditions of this NIT, which will form part of the agreement.

16. The time allowed for carrying out the work will be **10 months** from the date of start as defined in schedule 'F' or from the first date of handing over of the site, whichever is later, in accordance with the phasing, if any, indicated in the bid documents.

17. The site for the work is available.

**The architectural and structural drawings shall be made available in phased manner, as per requirement of the same as per approved programme of completion submitted by the contractor after award of work.**

18. The bid document consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents and General Conditions of Contract Form can be seen on website [www.inkel.in](http://www.inkel.in) and shall form part of bid document.

19. Tender documents may be downloaded free of cost. The bid submitted shall be opened at **3.30 PM on 14.10.2016**

20. Earnest Money Deposit (EMD) amounting to Rs ..... (to be filled in by bidder) (Rupees ..... only) shall be furnished as **Demand Draft in favour of INKEL Limited payable at Cochin.**

21.

a) **Performance Guarantee**, the amount collected at the time of executing contract agreement, will be 5% of the contract value (agreed PAC) and the deposit will be retained till the expiry of Defect Liability Period of THREE years. At least 50% of this deposit shall be collected in the form of Bank Guarantee from Nationalized Bank.

- b) **Additional Performance Guarantee** will be required in all cases where quoted rate falls below 10% of the estimate cost but the maximum permissible lower limit is 25% below estimate. The 10% standard exemption will be applicable to all estimates quoted below estimate cost upto 25%. If the rate quoted by the contractor is x% below estimate cost (x lies above 10% upto 25%) the additional performance guarantee for an amount equal to (x-10)% of the estimate amount shall be obtained from the contractor.
22. **Performance Security Deposit:** It is the retention amount deducted from the running bill of the contractors in addition to the Performance Guarantee. This will be @2.5% of the gross amount of each running bill so that the amount so retained shall be 2.5% of the value of the work done till then. This can be released against Bank Guarantee on its accumulation to a minimum amount of Rs. 5 lakhs subject to the condition that the amount of Bank Guarantee except last one shall not be less than 5 Lakhs. This amount will be released after passing of final bills as in the case of refund of deposit.
23. The bid submitted shall become invalid if :
- a) The bidder is found ineligible.
  - b) The bidder does not submit the documents (including service tax registration/ VAT registration/Sales Tax registration) as stipulated in the bid document.
24. **The Bidders responsibilities and understanding of the work:** Intending Bidders are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their bids as to the nature of the ground and sub-soil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their bid. A bidders shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed. The bidders shall be responsible for arranging and maintaining at his own cost all materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of bid by a bidder implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and local conditions and other factors having a bearing on the execution of the work.
25. The competent authority on behalf of Managing Director, INKEL does not bind itself to accept the lowest or any other bid and reserves to itself the authority to reject any or all the bids received without assigning any reason thereof. All bids in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the bidders shall be summarily rejected.

26. Canvassing whether directly or indirectly, in connection with bidders is strictly prohibited and the bids submitted by the contractors who resort to canvassing will be liable for rejection.
27. The competent authority on behalf of Managing Director, INKEL reserves to himself the right of accepting the whole or any part of the bid and the bidders shall be bound to perform the same at the rate quoted.
28. The contractor shall not be permitted to bid for works if he/she is the near relative of an officer posted by INKEL.
29. No Engineer of Gazetted Rank or other Gazetted Officer employed in Engineering or Administrative duties in an Engineering Department of the Government of Kerala is allowed to work as a contractor for a period of one year after his retirement from Government service, without the prior permission of the Government of Kerala in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Government of Kerala as aforesaid before submission of the bid or engagement in the contractor's service.
30. ***The bid for the works shall remain open for acceptance for a period of ninety (90) days from the date of opening of bids.*** If any bidder withdraws his bid before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the bid which are not acceptable to INKEL, then INKEL shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. Further the bidders shall not be allowed to participate in the rebidding process of the work.
31. This notice inviting Bid shall form part of the contract document. The successful bidder/contractor, on acceptance of his bid by the Accepting Authority shall within 7 days from the stipulated date of start of the work, sign the contract consisting of:-
- a) The Notice Inviting Bid, all the documents including additional conditions, specifications and drawings, if any, forming part of the bid as submitted at the time of invitation of bid and the rates quoted at the time of submission of bid and acceptance thereof together with any correspondence leading thereto.
  - b) Standard INKEL Form 7/8 or other standard INKEL Form as applicable
32. **For Composite Bids**
- 32.1. The tender processing fee and Earnest Money will be fixed with respect to the combined estimated cost put to tender for the composite bid.
- 32.2. The bidders must associate himself, with agencies of the appropriate class eligible to bid for each of the minor component individually.

- 32.3. The eligible bidders shall quote rates for all items of major component as well as for all items of minor components of work.
- 32.4. After acceptance of the bid by competent authority, INKEL shall issue letter of award. On receipt of performance guarantee, the main contractor will have to enter into an agreement with INKEL.
- 32.5. Entire work under the scope of composite bid including major and all minor components shall be executed under one agreement.
- 32.6. The main contractor may associate with agency(s) for minor component(s) conforming to eligibility criteria as defined in the bid document and has to submit detail of such agency(s) to Engineer-in-charge of minor component(s) within prescribed time. Name of the agency(s) to be associated shall be approved by Engineer-in-charge of minor component(s).
- 32.7. In case the main contractor intends to change any of the above agency/agencies during the operation of the contract, he shall obtain prior approval of Engineer-in-charge of minor component. The new agency/agencies shall also have to satisfy the laid down eligibility criteria. In case Engineer-in-charge is not satisfied with the performance of any agency, he can direct the contractor to change the agency executing such items of work and this shall be binding on the contractor.
- 32.8. The main contractor has to enter into agreement with contractor(s) associated by him for execution of minor component(s). Copy of such agreement shall be submitted to INKEL. In case of change of associate contractor, the main contractor has to enter into agreement with the new contractor associated by him under intimation to INKEL.
- 32.9. Running payment for the major & minor components shall be made by INKEL
- 32.10. ***The composite work shall be treated as complete when all the components of the work are complete. The completion certificate of the composite work shall be recorded by Engineer-in-charge of major component after record of completion certificate of all other components***

**INKEL****Item Rate Tender & Contract for Works****(A) Tender for the work of :- WAREHOUSE & COMMON UTILITIES CENTRE, KINFRA DEFENCE PARK, OTTAPALAM, PALAKKAD (DT), KERALA**

- (i) To be submitted by 15.00 hours on 14.10.2016
- (ii) To be opened in presence of tenderers who may be present at 15:30 hours on 14.10.2016 in the office of INKEL Limited, Cochin.

I/We have read and examined the notice inviting tender, schedule A, B, C, D, E, F, G & H, Specifications applicable, Drawings & Designs, General Rules and Directions, Conditions of Contract, clauses of contract, Special conditions, Schedule of Quantities & other documents and Rules referred to in the conditions of contract and all other contents in the tender document for the work.

I/We hereby tender for the execution of the work specified for INKEL within the time specified in Schedule 'F' viz., schedule of quantities and in accordance in all respect with the specifications, designs, drawing and instructions in writing referred to in Rule-1 of General Rules and Directions and in Clause 11 of the Conditions of contract and with such materials as are provided for, by, and in respect of accordance with, such conditions so far as applicable.

We agree to keep the tender open for ninety (90) days from the due date of its opening and not to make any modification in its terms and conditions.

A sum of Rs. 21.54 lakhs has been deposited in prescribed manner as Earnest Money Deposit (EMD). If I/We, fail to furnish the prescribed performance guarantee within prescribed period, I/We agree INKEL without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely. Further, if I/We fail to commence work as specified, I/We agree that INKEL shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said performance guarantee absolutely. The said Performance Guarantee shall be a guarantee to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.3 of the tender form.

Further, I/We agree that in case of forfeiture of Earnest Money or Performance Guarantee as aforesaid, I/We shall be debarred for participation in the re-tendering process of the work.

I/We undertake and confirm that eligible similar work(s) has/have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the notice of INKEL, then I/We shall be debarred for tendering in INKEL in future forever. Also, if such a violation comes to the notice before date of start of work, I/We shall forfeit the entire amount of Earnest Money Deposit/Performance Guarantee.

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

Date:

Signature of Bidder

Postal Address:

Witness:

Address:

Occupation:



**Certificate regarding near relatives**

**DECLARATION**

(To be submitted by the Contractor regarding near relatives working in INKEL/KINFRA as per clause 28 of INKEL-6)

“I ..... s/o Shri.....Resident of.....  
.....hereby certify that none of my relative(s) as defined in clause 28 of INKEL -6 is/are employed in concerned Department of INKEL/KINFRA.

In case at any stage, it is found that the information given by me is false/incorrect, INKEL shall *have* the absolute right to take any action as deemed fit without any prior information to me.”

**Signature of Bidder**

## Proforma Of Schedules

*(Separate Proforma for Civil, Elect. & Hort. Works in case of Composite Tenders)  
(Operative Schedules to be supplied separately to each intending tenderer)*

### SCHEDULE 'A'

Schedule of quantities (as per BOQ)

### SCHEDULE 'B'

Schedule of materials to be issued to the contractor. **NIL**

Sl No	Description of item	Quantity	Rates in figures & words at which the material will be charged to the Contractor	Place of Issue
1	2	3	4	5

### SCHEDULE 'C'

Tools and plants to be hired to the contractor. **NIL**

Sl No	Description	Hire Charges per day	Place of issue
1	2	3	4

### SCHEDULE 'D'

Extra schedule for specific requirements/document for the work, if any. - **NIL**

### SCHEDULE 'E'

Name of work: **WAREHOUSE & COMMON UTILITIES CENTRE, KINFRA DEFENCE PARK, OTTAPALAM, PALAKKAD (DT), KERALA**

Estimated cost of work: Rs. 11.54 crores

(i) Earnest money: Rs. 21.54 lakhs (to be returned after receiving performance guarantee)

(ii) Performance Guarantee: 5% of tendered value

(iii) Security Deposit: 2.5% of each bill

### SCHEDULE 'F'

GENERAL RULES & Office inviting tender  
DIRECTIONS:

INKEL Limited

Maximum percentage for quantity of items of work to be executed beyond which rates are

See below

to be determined in accordance with clauses 12.2 & 12.3

**Definitions:**

2(v)	Engineer-in-charge	AGM , INKEL limited
2(viii)	Accepting Authority	Managing Director, INKEL Ltd.
2(x)	Percentage on cost of materials and labour to cover all overheads and profits	15%
2(xi)	Standard Schedule of rates	CPWD DSR2014
2(xii)	Department	INKEL Limited
9(ii)	INKEL LTD. 7/8 modified & corrected upto	27/09/2016

**Clause 1**

- |     |  |        |
|-----|--|--------|
| i)  | Time allowed for submission of Performance Guarantee from the date of issue of letter of acceptance                              | 7 days |
| ii) | Maximum allowable extension with late fee @ 0.1% per day of Performance Guarantee amount beyond the period provided in (i) above | Nil    |

**Clause 2**

Authority for fixing compensation under clause 2.	Managing Director, INKEL Limited
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**Clause 2A**

Whether Clause 2A shall be applicable	Yes
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**Clause 5**

Number of days from the date of issue of letter of acceptance for reckoning date of start	14 days
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Milestone as per table given below:

Sl No	Description of Milestone (Physical)	Time Allowed in days (from date of start)	Amount to be with-held in case of non achievement of milestone
-------	-------------------------------------	---	--

1.	1/8 <sup>th</sup> (of whole work)	1/4 <sup>th</sup> of the whole work	In the event of not achieving the necessary progress as assessed from the running payments, 1%of the tendered value of work will be withheld for failure of each milestone
2.	3/8 <sup>th</sup> (of whole work)	1/2 of the whole work	
3.	3/4 <sup>th</sup> (of whole work)	3/4 <sup>th</sup> of the whole work	
4.	Full	Full	

Time allowed for execution of work - 10 months

Authority to decide:

- a. Extension of time-Managing Director, INKEL LTD
- b. Rescheduling of mile stones Managing Director, INKEL LTD
- c. Shifting of date of start in case of delay in handing over of site -Managing Director, INKEL LTD

#### Clause 6, 6A

Clause applicable - (6 or 6A)

6A

#### Clause 7

Gross work to be done together with net payment /adjustment of advances for material collected, if any, since the last such payment for being eligible to interim payment

Rs 1.5 Crore

#### Clause 10A

List of testing equipment to be provided by the contractor at site lab

As per Special conditions of Contract

#### Clause 10B(ii)

Whether Clause 10 B (ii) shall be applicable

Yes

#### Clause 11

Specifications to be followed for execution of work

CPWD Specifications Volume I & II with uptodate corrections slips to be followed

#### Clause 12

Type of work- Project and original work.

12.2 & 12.3

Deviation Limit beyond which clauses 12.2 and 12.3 shall apply for building work **As per Clause 12**

**Clause 16**

Competent Authority for deciding reduced rates. **Managing Director INKEL Limited**

**Clause 18**

List of mandatory machinery, tools & plants to be deployed by the contractor at site:-

**Earth moving equipment                      Equipment for road work**

1.Excavators (various sizes)-2      1. Road rollers-1

**Equipment for concrete**                      2. Spreaders-1

**work**    3. Earth rammers-1

1.Concrete mixer (diesel)-1              4. Vibratory road rollers-1

2. Needle vibrator (petrol)-1              **Equipment for**

**Equipment for building**                      **transportation**

**work**    1. Tippers-1

1. Block making machine                      2. Trucks-1

2. Bar bending machine-1                      **De-watering equipment**

3. Bar cutting machine-1                      1. Pump (diesel)-1

4. Welding generators-1                      **Power equipment**

5. Cube testing machines-1                      1. Diesel generators-1

6. Steel shuttering-500 sq m

7. Steel scaffolding- 500 sqm

**Clause 31**

Contractor shall make his/their own arrangement for water required for the work and nothing extra will be paid for the same. Water if available may be supplied to the contractor by INKEL LTD., the water charges @1% shall be recovered on gross amount of the work done.

**Clause 36(i)**

Sl No	Minimum qualification of Technical Representative	Discipline	Designation (Principal Technical/ Technical representative)	Minimum Experience	Number	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of clause 36(i)	
						Figures	Words
1.	Project Manager with degree in	Civil	Project Manager	10	1	30,000/- per month	Rupees Thirty Thousand Per

	corresponding discipline of Engineering						Month
2.	Graduate Engineer	Civil	Project Engineer	5	1	25,000/- per month	Rupees Twenty five Thousand Per Month
3.	Graduate Engineer	Electrical	Project Engineer	5	1	25,000/- per month	Rupees Twenty five Thousand Per Month
4.	Graduate Engineer/ Diploma	Civil	Project Engineer	2	2	15,000/- per month	Rupees Fifteen Thousand Per Month
	Diploma			5			
5.	Graduate Engineer/ Diploma	Electrical	Project Engineer	2	2	15,000/- per month	Rupees Fifteen Thousand Per Month
	Diploma			5			

Assistant Engineers retired from Govt services that are holding Diploma will be treated at par with Graduate Engineers.

Diploma holder with minimum 10yr relevant experience with a reputed construction company can be treated at par with Graduate Engineers for the purpose of such deployment subject to the condition that such diploma holders should not exceed 50% of requirement of Degree Engineers.

#### Clause 42

- i. Schedule/statement for determining theoretical quantity of cement & bitumen on the basis of Delhi Schedule of Rates 2014 printed by C.P.W.D.
- ii. Variations permissible on theoretical quantities:
  - a) Cement  
For works with estimated cost put to tender not more than Rs. 5 lakh. 3% plus/minus.
  - For works with estimated cost put to tender more than Rs.5 lakh. 2% plus/minus.
  - b) Bitumen All Works 2.5% plus & only & nil on minus side.
  - c) Steel Reinforcement and structural steel sections for each diameter, section and category 2% plus/minus.

d) All other materials.

Nil

## GENERAL GUIDELINES FOR BIDDERS

### 1. General:

- 1.1. Letter of transmittal and forms for deciding eligibility are given in Section III.
- 1.2. All information called for in the enclosed forms should be furnished against the relevant columns in the forms. If for any reason, information is furnished on a separate sheet, this fact should be mentioned against the relevant column. Even if no information is to be provided in a column, a “nil” or “no such case” entry should be made in that column. If any particulars/query is not applicable in case of the bidder, it should be stated as “not applicable”. The bidders are cautioned that not giving complete information called for in the application forms or not giving it in clear terms or making any change in the prescribed forms or deliberately suppressing the information may result in the bid being summarily disqualified. Bids made by telegram or telex and those received late will not be entertained.
- 1.3. The bid should be type-written. The bidder should sign each page of the application.
- 1.4. Overwriting should be avoided. Correction, if any, should be made by neatly crossing out, initialling, dating and rewriting. Pages of the eligibility criteria document are numbered. They should be submitted as a package with signed letter of transmittal.
- 1.5. References, information and certificates from the respective clients certifying suitability, technical knowledge or capability of the bidder should be signed by an officer not below the rank of Executive Engineer or equivalent.
- 1.6. The bidder may furnish any additional information which he thinks is necessary to establish his capabilities to successfully complete the envisaged work. He is, however, advised not to furnish superfluous information. No information shall be entertained after submission of eligibility criteria document unless it is called for by the Employer.
- 1.7. Any information furnished by the bidder found to be incorrect either immediately or at a later date, would render him liable to be debarred from tendering/taking up of work in INKEL LTD.

### 2. Definitions:

- 2.1 In this document the following words and expressions have the meaning hereby assigned to them.
- 2.2 Employer: Means the Managing Director, INKEL LTD.
- 2.3 Bidder: Means the individual, proprietary firm, firm in partnership, limited company private or public or corporation.
- 2.4 “Year” means “Financial Year” unless stated otherwise.

### **3. Method of application:**

- 3.1 If the bidder is an individual, the application shall be signed by him above his full type written name and current address.
- 3.2 If the bidder is a proprietary firm, the application shall be signed by the proprietor above his full type written name and the full name of his firm with its current address.
- 3.3 If the bidder is a firm in partnership, the application shall be signed by all the partners of the firm above their full typewritten names and current addresses, or, alternatively, by a partner holding power of attorney for the firm. In the later case a certified copy of the power of attorney should accompany the application. In both cases a certified copy of the partnership deed and current address of all the partners of the firm should accompany the application.
- 3.4 If the bidder is a limited company or a corporation, the application shall be signed by a duly authorized person holding power of attorney for signing the application accompanied by a copy of the power of attorney. The bidder should also furnish a copy of the Memorandum of Articles of Association duly attested by a Public Notary.

### **4. Final decision making authority.**

The employer reserves the right to accept or reject any bid and to annul the process and reject all bids at any time, without assigning any reason or incurring any liability to the bidders.

### **5. Particulars provisional**

The particulars of the work given are provisional. They are liable to change and must be considered only as advance information to assist the bidder.

### **6. Site visit**

The bidder is advised to visit the site of work, at his own cost, and examine it and its surroundings to himself collect all information that he considers necessary for proper assessment of the prospective assignment.

### **7. Initial criteria for eligibility**

- 7.1 The Bidder should have satisfactorily completed works ending last day of the month previous to the one in which tenders are invited. For this purpose cost of work shall mean gross value of the completed work including cost of material supplied by the Government/Client but excluding those supplied free of cost. This should be certified by an officer not below the rank of Executive Engineer/Project Manager or equivalent.
- 7.2 The bidder should own constructions equipment as per list required for the proper and timely execution of the work. Else, he should certify that he would be able to manage the equipment by hiring etc., and submit the list of firms from whom he proposes to hire.



7.3 The bidder should have sufficient number of Technical and Administrative employees for the proper execution of the contract. The bidder should submit a list of these employees stating clearly how these would be involved in this work.

7.4 The bidder's performance for each work completed in the last Seven years and in hand should be certified by an officer not below the rank of Executive Engineer or equivalent and should be obtained in sealed cover.

## **8. Evaluation criteria**

The details submitted by the bidders will be evaluated by technical committee formed for the work.

Even though any bidder may satisfy the above requirements, he would be liable to disqualification if he has:

- a. made misleading or false representation or deliberately suppressed the information in the forms, statements and enclosures required in the eligibility criteria document,
- b. Record of poor performance such as abandoning work, not properly completing the contract, or financial failures / weaknesses etc.

## **9. Financial information**

Bidder should furnish the following financial information:

Annual financial statement for the last five year in (Form "A") and solvency certificate in (Form "B")

## **10. Experience in works highlighting experience in similar works**

10.1 Bidder should furnish the following:

- a. List of all works of similar nature successfully completed during the last seven years in (Form "C").
- b. List of the projects under execution or awarded in (Form "D").

10.2 Particulars of completed works and performance of the bidder duly authenticated/certified by an officer not below the rank of Executive Engineer or equivalent should be furnished separately for each work completed or in progress in (Form "E").

10.3 Information in (Form "D") should be complete and no work should be left out.

## **11. Organisation information**

Bidder is required to submit the information in respect of his organization in Forms "F & G"

## **12. Construction plant and equipment**

Bidder should furnish the list of construction plant and equipment including steel shuttering, centering and scaffolding to be used in carrying out the work (in Form “H”). Details of any other plant & equipment required for the work not included in Form “F” and available with the applicant may also be indicated.

### **13. Letter of transmittal**

The bidder should submit the letter of transmittal attached with the document.

### **14. Opening of Price bid**

Financial bids of only the qualified and technically acceptable bidders shall be opened at the notified time, date and place in the presence of the qualified bidders or their representatives. The bid shall remain valid for ***a period of 90 days from the date of opening of technical bids.***

### **15. Award criteria**

15.1 The employer reserves the right, without being liable for any damages or obligation to inform the bidder, to:

- a. Amend the scope and value of contract to the bidder.
- b. Reject any or all the applications without assigning any reason.

15.2 Any effort on the part of the bidder or his agent to exercise influence or to pressurize the employer would result in rejection of his bid. Canvassing of any kind is prohibited.

**INFORMATION REGARDING ELIGIBILITY**

**LETTER OF TRANSMITTAL**

From:

.....  
.....  
.....  
.....

To

MANAGING DIRECTOR  
INKEL LIMITED, COCHIN-682030

Sir,

Subject: Submission of bids for the work of .....

Having examined the details given in press notice and bid document for the above work, I/we hereby submit the relevant information.

1. I/we hereby certify that all the statement made and information supplied in the enclosed forms A to H and accompanying statement are true and correct.
2. I/we have furnished all information and details necessary for eligibility and have no further pertinent information to supply.
3. I/we submit the requisite certified solvency certificate and authorize the Managing Director to approach the Bank issuing the solvency certificate to confirm the correctness thereof. I/we also authorize Managing Director to approach individuals, employers, firms and corporation to verify our competence and general reputation.
4. I/we submit the following certificates in support of our suitability, technical knowledge and capability for having successfully completed the following works:

Name of work:

Enclosures

Date of submission:

**Signature(s) of Bidder(s).**

(Seal of bidder)

**FORM 'A'****FINANCIAL INFORMATION**

- I. Financial Analysis - Details to be furnished supported by figures in balance sheet/ profit & loss account for the last five years duly certified by the Chartered Accountant, as submitted by the applicant to the Income Tax Department (Copies to be attached).

Years		
2013-14	2014-15	2015-16

- (i) Gross Annual turnover on construction works.  
(ii) Profit/Loss.
- II. Financial arrangements for carrying out the proposed work.
- III. Solvency Certificate from Bankers of the bidder in the prescribed Form "B".

**Signature of Chartered Accountant with Seal****Signature of Bidder(s)**

**FORM "B"**

**FORM OF BANKERS' CERTIFICATE FROM A SCHEDULED BANK**

This is to certify that to the best of our knowledge and information that M/s./ Shri.....having marginally noted address, 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. Bank's certificates should be on letter head of the Bank, sealed in cover addressed to tendering authority.
2. In case of partnership firm, certificate should include names of all partners as recorded with the Bank.

### FORM 'C'

#### DETAILS OF ALL WORKS OF SIMILAR CLASS COMPLETED DURING THE LAST 7 YEARS ENDING LAST DAY OF THE MONTH OF AUGUST, 2016

Sl No	Name of work/ Project and Location	Owner of sponsoring organization	Cost of work in crores of rupees	Date of commencement as per contract	Stipulated date of completion	Actual date of completion	Litigation/ arbitration cases pending/ in progress with details*	Name & address/ Telephone number of officer whom reference may be made	Remarks
1	2	3	4	5	6	7	8	9	10

\* Indicate gross amount claimed and amount awarded by the Arbitrator.

**Signature of Bidder(s)**

## FORM 'D'

### PROJECTS UNDER EXECUTION OR AWARDED

Sl No	Name of work/ Project and Location	Owner of sponsoring organization	Cost of work in crores of rupees	Date of commencement as per contract	Stipulated date of completion	Upto date percentage progress of work	Slow Progress if any and reasons thereof	Name & address/ Telephone number of officer whom reference may be made	Remarks
1	2	3	4	5	6	7	8	9	10

Certified that the above list of works is complete and no work has been left out and that the information given is correct to my knowledge and belief.

**Signature of Bidder(s)**

**FORM 'E'**

**PERFORMANCE REPORT OF WORKS REFERRED TO IN FORMS "C" & "D"**

1. Name of work/project & location
2. Agreement no.
3. Estimated cost
4. Tendered cost
5. Date of start
6. Date of completion
  - a. Stipulated date of completion
  - b. Actual date of completion
7. Amount of compensation levied for delayed completion, if any
8. Amount of reduced rate items, if any
9. Performance Report

Dated:

**Executive Engineer or Equivalent**



**FORM "F"****STRUCTURE & ORGANISATION**

1. Name & address of the bidder
2. Telephone no./Fax no.
3. Legal status of the bidder (attach copies of original document defining the legal status)
  - a. An Individual
  - b. A proprietary firm
  - c. A firm in partnership
  - d. A limited company or Corporation
4. Particulars of registration with various Government Bodies (attach attested photocopy)

**Organisation/Place of registration****Registration No.**

- a)
- b)
- c)
5. Names and titles of Directors & Officers with designation to be concerned with this work.
6. Designation of individuals authorized to act for the organization
7. Was the bidder ever required to suspend construction for a period of more than six months continuously after he commenced the construction? If so, give the name of the project and reasons of suspension of work.
8. Has the bidder, or any constituent partner in case of partnership firm, ever abandoned the awarded work before its completion? If so, give name of the project and reasons for abandonment.
9. Has the bidder, or any constituent partner in case of partnership firm, ever been debarred/black listed for tendering in any organization at any time? If so, give details.
10. Has the bidder, or any constituent partner in case of partnership firm, ever been convicted by the court of law? If so, give details.
11. In which field of Civil Engineering construction the bidder has specialization and interest?
12. Any other information considered necessary but not included above.

**Signature of Bidder(s)**

**FORM 'G'**

**DETAILS OF TECHNICAL & ADMINISTRATIVE PERSONNEL TO BE EMPLOYED FOR THE WORK**

Sl No	Designation	Total Number	Number available for this work	Name	Qualification	Professional experience and details of work carried out	How these would be involved in this work	Remarks
1	2	3	4	5	6	7	8	9
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								

**Signature of Bidder(s)**

### FORM 'H'

#### DETAILS OF CONSTRUCTION PLANT AND EQUIPMENT LIKELY TO BE USED IN CARRYING OUT THE WORK

Sl No	Name of Equipment	Nos	Capacity	Age	Condition	Ownership status			Current Location	Remarks
						Presently owned	leased	To be purchased		
1	2	3	4	5	6	7	8	9	10	11
	<b>Earth moving equipment</b> 1.Excavators (various sizes)									
	<b>Equipment for hoisting &amp; lifting</b> 1.Tower 2.Builder's hoist									
	<b>Equipment for concrete work</b> 1.Concrete batching plant 2.Concrete pump 3.Concrete transit mixer 4.Concrete mixer (diesel) 5.Concrete mixer (electrical) 6. Needle vibrator (electrical) 7.Needle vibrator (petrol) 8.Table vibrator (elect./ petrol)									
	<b>Equipment for building work</b> 1. Block making machine 2. Bar bending machine 3. Bar cutting machine 4. Wood thickness planer 5. Drilling machine 6. Circular saw machine 7. Welding generators 8. Welding transformer									

9. Cube testing machines									
10. M.S. Pipes									
11. Steel shuttering									
12. Steel scaffolding									
13. Grinding/polishing machines									
<b>Equipment for road work</b>									
1. Road rollers									
2. Bitumen paver									
3. Hot mix plant									
4. Spreaders									
5. Earth rammers									
6. Vibratory road rollers									
<b>Equipment for transportation</b>									
1. Tippers									
2. Trucks									
<b>Pneumatic equipment</b>									
1. Air compressor (diesel)									
<b>De-watering equipment</b>									
1. Pump (diesel)									
2. Pump (electric)									
<b>Power equipment</b>									
1. Diesel generators									
(Any other plant/equipment)									

Signature of Bidder(s)

## PROFORMA FOR PRELIMINARY AGREEMENT

(To be executed on stamp paper of value Rs.200/- and submitted along with tender).

Preliminary agreement entered into on this..... / day of ..... **Two thousand Sixteen** between **INKEL LTD.) Cochin** (Hereinafter called owner on one part and..... (name and address of the Contractor) (Hereinafter called the Contractor) on the other part for the execution of the agreement as well as the work of ..... dated ..... And whereas the notice inviting tenders it is stated as follows. Before commencing the work of within a week of the date when the acceptance of tender has been intimated to him, shall be remitted to INKEL LTD., an amount of 5% of the work order value as Performance Security Deposit. 50 % of this amount shall be in the form of Bank Guarantee from a Scheduled/ Nationalized bank and execute the contract agreement within seven days from the date of the letter of acceptance or ten days from the date of work order whichever is earlier. The validity of BG shall be up to the period of completion of work / the extended period of completion of work with an additional claim period of three months.

If he fails to do this or fail to maintain a specified rate of progress, the EMD shall be forfeited to INKEL LTD and fresh tenders shall be called for or the matter otherwise disposed. If as a result of such measures due to the default of the tender to pay the requisite deposit sign contracts to take possession of the work any loss to the INKEL LTD. results, the same will be recovered from him as arrears of revenue but should it be a saving to INKEL LTD. the original contractor shall have no claim whatever to the difference. Recoveries to this or any other account will be made from the sum that may be due to contractor on this or any other contracts or under the Revenue Recovery Act or otherwise as the INKEL LTD may decide.

Now therefore these present witness and it is mutually agreed as follows:

1.The terms and condition for the said contract having been stipulated in the said tender form to which the contractor has agreed, a copy of which is appended, and which forms part of this agreement, it is agreed that the terms and conditions stipulated there in shall bind the parties to this agreement, except to the extent to which they are abrogated or altered by express terms and conditions herein, agreed to and in which respect the express provisions herein shall supersede those of the said tender form.

2. The Contractor hereby agree and undertake the perform and fulfil all the operation and obligations connected with the execution of the said contract work viz. - ..... for INKEL Ltd, Cochin

3. If the Contractor does not come forward to execute the original agreement after the said work is awarded and letter of acceptance issued in his favour or commits breach of any of the Conditions of the Contract as stipulated in the Notice inviting Tenders as quoted above within the period stipulated, INKEL LTD may rearrange the works

otherwise or get it done otherwise at the risk and cost of the contractor and the loss so sustained by INKEL LTD can be realizing from the contractor under the Revenue Recovery Act as if arrears of land revenue as assessed, quantified and fixed by an adjudicating authority consisting of INKEL LTD or any other officer or officers authorised by INKEL LTD taking into consideration the prevailing rates and after giving due notice to the Contractor. The decision taken by such authorised officer or officers shall be final and conclusive and shall be binding on the contractor.

4. The contractor further agrees that any amount found due to INKEL LTD under or by virtue of this agreement shall be recoverable from the Contractor from his E.M.D. and his properties, movable and immovable as arrears of land revenue under the provision of the Revenue Recovery Act for the time being in force or in any other manner as INKEL LTD may deem fit in this regard.

In witness where of ....., Managing Director, INKEL LTD and the Contractor, have set their hands on the day and year first above written, signed by Sri..... Managing Director, INKEL Ltd, Cochin

In the presence of witness

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

Signed and delivered by Sri....., Contractor,

in the presence of witness.

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

## OTHER INSTRUCTIONS TO BIDDERS

1. All other relevant forms shall be in the format prescribed CPWD Manual.
2. All Statutory approvals both initial & final wherever necessary for the execution of work from concerned authorities shall be obtained by Contractor at his own expense. However statutory fees will be reimbursed on submission of receipts.
3. All queries regarding the tender shall be sent to us by email [pmc@inkelkerala.com](mailto:pmc@inkelkerala.com) on or before 5:00PM on 07.10.2016. Addendum if any shall be posted in the website [www.inkel.in](http://www.inkel.in) till 07.10.2016
4. Representatives of bidders/firms participating in the pre-bid meeting shall produce authorisation from the firm.

## SCOPE OF WORK

### 1. SCOPE OF WORK :

- 1) The proposed building is a pre-engineered building (PEB), the foundation with RCC isolated footing. Dock area for a width of 3m and for full length of the main building on front and rear of the building is also proposed.
- 2) Clear height - Clear height of the building is 6m (eve height). There must not be any obstructions or cross bracings between columns up to 6m.
- 3) Super structure - Pre-engineered Building (PEB)
- 4) Walls - Solid block masonry wall up to 3m and sheet cladding there off.
- 5) Roofing - Galvalume polyurethane puff sandwich panel 30mm thick fibre glass insulation roofing shall be provided. Suitable drainage is to be provided in the roofing with longitudinal eve gutter and down take pipes. Necessary mullion columns on either side of the rolling shutter and at all corners are also proposed in the building.
- 6) Natural lighting - The building would be designed to provide maximum natural lighting. Polycarbonate sheet roof lighting shall be provided. The total area of sky lighting shall be 5% of the total area.
- 7) Dock area - Canopy provided shall be 3m cantilever with 5.7m clear height from the ground level. However the canopy should not be supported from ground in loading bay.
- 8) Rolling shutters - All rolling shutters shall be 4 x 4.5 m with mechanical operating system.
- 9) Ramp - Ramp at the side of the dock area shall be located on either sides of the building conveniently.
- 10) Flooring - Flooring shall be industrial flooring with 52mm thick cement concrete with necessary expansion joints and vitrified tile flooring in office area.
- 11) Finishing - External walls will be finished with acrylic smooth exterior paint and interior walls with acrylic emulsion paint over approved priming coats. Provision for false ceiling is given only for office area.
- 12) Provision for services such as site development including cutting and levelling, retaining walls with RCC / RR masonry, sub grade preparation works for road, yard and parking area, RCC trenches and drains, RCC sump / overhead tank, RCC septic tank and soak pit, fire and domestic tanks is also included.
- 13) Provision for water supply and sanitary installations, internal and external electrification works are also envisaged under the scope of the work.



## PARTICULAR SPECIFICATIONS

### General Civil works

1. Steel reinforcement (Fe 500) for the work shall be procured from approved sources only. Please refer General conditions of contract for list of approved sources.
2. Cement used for the work shall be OPC only. The contractor has to give intimation with necessary invoice to the Engineer in charge appointed by INKEL on the arrival of the quantity of cement at site. Please refer General conditions of contract for list of approved sources.
3. M - Sand shall be sourced from approved manufactures only.
4. Concrete - Contractor shall mobilise in-house concrete batching plant of approved make and size and establish permanent pumping main to the various areas of concreting. No concrete shall be permitted in volumetric batches except PCC.
5. Field Testing Laboratory -  
The contractor has to set up a field testing laboratory with a qualified person for conducting the tests at site before commencement of work. The following equipments shall be used in the laboratory:
  - a) Balances:
    - i) 7kg to 10kg capacity, semi - self indicating type - accuracy 10gm
    - ii) 500gm capacity, semi - self indicating type - accuracy 1gm
    - iii) Pan Balance - 5kg capacity - accuracy 10gm
  - b) Ovens - electrically operated, thermostatically controlled upto 110°C - sensitivity loc.
  - c) Sieves: as per IS 460 - 1962.
    - i) IS Sieves - 450mm internal dia of sizes 100mm, 80mm, 63mm, 50mm, 40mm, 25mm, 20mm, 12.5mm, 10mm, 6.3mm, 4.75mm complete with lid and pan.
    - ii) IS Sieves - 200mm internal dia (brass frame) consisting of 2.36mm, 1.18mm, 500 microns, 425 microns, 300 microns, 212 microns, 150 microns, 90 microns, 75 microns with lid and pan.
  - d) Sieve shaker capable of 200mm and 300mm dia sieves, manually operated with timing switch assembly.
  - e) Equipment for slump test - slump cone, steel plate, tamping rod, steel scale, scoop.
  - f) Compression testing Machines
  - g) Cube test moulds-12 sets
  - h) Glass Jar

### APPENDICES

- Appendix 1 - Tender drawings (separately attached)
- Appendix 2 - General Clauses of contract (GCC)
- Appendix 3 - Technical Specifications

## SECTION - 1

### SCOPE

The pre-engineered steel building roofing system shall consist of all components required to construct the primary and secondary framing (wind ties, wall & roof purlins) plus the wall and roof cladding. Hardware of the structure is to be included.

Scope of work is as defined in the following sections which includes Design, Detailed engineering, preparation of design calculations using standard softwares viz. STADPRO/ equivalent, preparation of drawings, proof checking of design, approval of design & drawings, manufacture as per agreed QAP, supply & erection on site of PEB comprising of :

- Structural steel system
- metal roof system
- wall system (including side cladding, posts, runners & cleats)
- trims & flashings
- vertical fascia
- wind bracing
- Rain water gutters
- profiled U.V treated polycarbonate sheets, including all accessories as required for the successful
- and satisfactory completion of the work.

## SECTION-2

### DETAILED ENGINEERING

1. The tenderer should consider the load requirements of the building that may arise due to a mezzanine office floor considering a load of 300kg/m<sup>2</sup>
2. The tenderer shall submit the design all the structure and prepare all the required drawings needed for correct and accurate construction. The design shall be strictly in accordance with the 'Design specifications' and 'Building description' given in the following sections.
3. The tenderer shall submit the design basis, prepare GA drawings of buildings showing all structural elements including bracings, sap rods etc., carry out detailed design calculations using standard software like STADPRO or equivalent & prepare detailed drawings based on sizing calculations of the structure - the same proof checked by a qualified structural engineer. The contractor shall also furnish the foundation loading, base reaction and all other relevant data for the structure - both as Hard as well as soft copy.
4. Construction of the structure shall not be taken up till all the drawings are reviewed by Consultants and comments / suggestions given by consultants are incorporated.

5. Consultants / Owner reserves the right to review any / all or none of the designs and drawings. Review by Consultants shall not relieve the contractor of his responsibility for correct design and execution of the works.
6. The final design and RFC drawings shall directly adhere to the reviewed design basis and general arrangement and shall incorporate all the comments / suggestions given by Consultants without any extra cost to the Owner and any implication on time schedule for completion of work.
7. After the completion of erection and construction, the contractor shall submit to the Owner "AS BUILT" drawings in requisite number of copies (hard + soft) as specified elsewhere.
8. The quoted price for the PEB building should include Design, Engineering, and Preparation of erection drawings, manufacture, supply, transportation and erection of the Pre-Engineered Building including all equipments required for the purpose and insurance for man power and transit, Service tax, Works Contract Tax, Octroi, Entry Tax and any other taxes if applicable.
9. Electricity and Water is the responsibility of the Contractor.
10. The entire work is to be constructed as per relevant codes, specifications and/or as directed by INKEL. On completion of the works the PEB manufacturer should furnish the completion & warranty certificate for the structural stability of the PEB structure for a period of THIRTY YEARS. **It is the responsibility of the PEB Contractor to guide the civil contractor and to supervise the fixing of anchor bolts. The base plate and the anchor bolts required shall be supplied to the civil contractor within 15 days from the date of approval of working drawings.**

### SECTION-3

#### CONSTRUCTION

1. Erection of all structural works roofing, cladding, framed openings etc. including supply of all materials, labour, supervision, plant, tools and tackles etc. shall be carried out only by the certified erection agency approved by the PEB manufacturing company in writing to INKEL.
2. All materials and construction shall conform to the Material and Painting specifications given in this document.
3. Erection of PEB shall be done in the presence/ guidance of PEB Manufacturing experts. The PEB vender should make sure of proper erection of the members give a satisfactory erection report to the client.

4. The alignment and levels of foundation bolts shall be checked by the PEB Manufacturer's Engineer before casting of the pedestal.
5. Following requirements are to be followed by the Contractors:
  - a) All aspects of quality assurance, including procurement & testing of materials and other components of the work
  - b) Clearing of site and handing over of all the works
  - c) Any other requirements to commission the building in all respects in accordance with the provisions of the contract and /or to ensure the structural stability and safety during & after construction.

#### SECTION -4

#### BUILDING PARAMETERS

Refer enclosed literature and drawings for technical details.

1.	<b>Building Usage</b>	<b>Warehouse building</b>
2.	<b>No. of Buildings</b>	<b>Four</b>
3.	<b>General Features</b>	
3.1	<b>Type</b>	
3.2	<b>Width</b>	As shown in drawings
3.3	<b>Length</b>	As shown in drawings
3.4	<b>Eave height</b>	As shown in drawings
3.5	<b>Mezzanine floor</b>	Provision for future expansion
3.6	<b>Roof slope</b>	1:10
3.7	<b>Bay spacing</b>	As per drawings.
3.8	<b>Front End frame</b>	Rigid Frame
3.9	<b>Back End Frame</b>	Rigid Frame
4.	<b>Canopy (over loading deck area)</b>	yes
5.	<b>Fire Sprinklers</b>	Load to be taken in the design of PEB structure.
6.	<b>Chain pulley block arrangements</b>	Nil
7.	<b><i>Type of bracing on roof &amp; wall</i></b>	Diagonal Angle bracing (as per design)
8.	<b>Skylight sheets</b>	On side cladding
9.	<b>Roofing</b>	26 gauge, Hi-rib, coloured, Galvalium, profiled, 550Mpa high tensile profile steel panel or eqvt. to be approved.
10.	<b>Wall Cladding</b>	26 Gauge thick single skin Coloured Zinalume 550 Mpa high tensile profiles steel panels/ or equivalent to be approved
11.	<b>Gutters &amp; Down spouts</b>	As per Standard

## SECTION -5

### DESIGN SPECIFICATIONS

#### **General**

The design considerations given hereunder establish the minimum basic requirements for the design. However, structure shall be designed for the satisfactory performance of the functions for which the same is to be constructed.

Apart from the IS codes mentioned in particular for wind, live and earthquake loads in the various clauses of this specifications, all other relevant codes such as American Standards (AISC, MBMA, AISI & AWS specifications) related to the specific job under consideration and / or referred to in the above mentioned codes may be followed wherever applicable, if the specifications for the same are not available in the relevant IS Codes.

In case of any variation / contradiction between the provisions of Codes and the specifications given hereunder, the provisions given in these specifications shall be followed.

#### **Design Loads (Live / Wind)**

The structure shall be designed for all loads, including the weight of structure, live load, wind or earthquake, sprinklers, lighting fixtures etc. Due consideration shall be given to loading during the construction/ erection phase and accounted for in the design. The design should cater for the proposed future expansion also.

The building is designed for the following Live Load and Wind Speed.

Dead Load	Self-weight of structure including Purlins, sheeting, Girts Bracing sprinklers, lighting fixtures etc.
Live Load	As per IS-875 Part III (1987). For sloped roof it shall be 0.75 KN/m <sup>2</sup>
Wind Load	Wind loads shall be as per IS: 875 Part III (1987). The Basic wind speed of the site is to be taken as 140 kmph.
	Values of the coefficients K <sub>1</sub> , K <sub>2</sub> and K <sub>3</sub> shall be K <sub>1</sub> =1.00 for permanent structures, K <sub>3</sub> =1.0, K <sub>2</sub> shall be taken for relevant class of the structure with Category 2 terrain with respect to the actual height of the structure.
	Design life span of all structures shall be taken as 50 years.
Earthquake load	Palakkad, Seismic Zone -III (0.16)
Seismic Zone (Zone (Z))	III (0.16) (as per IS 1893- 2002)
Alternate Load	0.90 KN on roof and purlins as live load (point load)
Maximum Permissible Deflections	Vertical : L/325
	Lateral : EH/325
	Purlins : L/180 (Under temporary load) As per MBMA
Frame Analysis	Frame shall be analyzed with pinned base, suitable for future expansion as given in the general arrangement drawings and Specifications
<b>APPLICABLE CODES</b>	
Loads on building	IS: 875 -III - 1987 (reaffirmed 1997) Code of Practice for design loads

are to be applied in accordance with	(other than earthquake) for buildings and structures
Hot rolled and Built up sections Design of Built-up tapered solid web sections	IS:800 - 1984 (reaffirmed 1998) Code of Practice for General construction in Steel. Manual of Steel Construction , 9 th Edition American Institute of Steel Construction (AISC)
Design of Cold formed members	IS: 801 - 1975 Code of Practice for use of cold formed light gauge steel structure members in general building construction (first rev.) Cold formed Steel Design manual , 1996 Edition American Iron and steel Institute (AISI)
Welding inspection and testing Permissible Stress	As per IS :816 and IS:822 /AW1  <i>33.33% increase in permissible stress may be considered (Vendor to confirm applicability) under temporary load</i>

## SECTION-6

### SCOPE OF SUPPLY

#### Standard Supplies:

The following are included to be supplied:

Rigid frame structural for rafters with end plates, purlins, girts.  
All necessary flashings, trims, eave gutter and down take pipes.  
Roofing & cladding sheets

Structural hardware & sheeting fasteners End lap sealant

Bracing

Anchor bolts and templates Roof overhang

Sand blasting, primer and site applied synthetic enamel paint on structural steel Members And all other required for the successful completion.

## SECTION -7

### STANDARD PRODUCT SPECIFICATIONS

**Primary members** fabricated from plates and sections with minimum yield strength of 345 Mpa or to suit design by continuous welding. Primary structural framing shall include the transverse rigid frames, mezzanine beams, joints and column, interior columns, bearing frames rafters, columns, end wall wind columns and crane gantry girders and column brackets.

**Secondary members** for Purlins and Girts shall conform to the physical specification of ASTM A 570 (Grade 50) or equivalent IS standards having a minimum yield strength of 345Mpa. The minimum thickness of secondary members shall be 1.5mm.

Secondary structural framing shall include the purlins, girts, eave struts, wind bracing, flange bracing, base angles, clips and other miscellaneous structural parts, suitable wind bracings, sag rods to be reckoned while designing the structure.

**Rod bracing** shall conform to the physical specifications IS 2062.

**All hot rolled sections** shall conform to the physical specifications of IS 2062. All other miscellaneous secondary members shall have minimum yield strength of 250Mpa.

**Roof panel :** Roof panels shall be made from 26 G thick Hi-Rib Coloured Zincalume 550 Mpa high tensile profiled steel panels / or equivalent to be approved conforming to ASTM A446 with Zincalume coating to AZ 1501 bare Zincalume, as per ASTM A -792-AZ to mark TCT of 0.47mm.

a) Single skin sheeting with TASMAN FS 118 Radiant Heat Barrier/equivalent under deck thermal insulation of roofing

**Wall panel:** 26 G thick single skin Coloured Zincalume 550 Mpa high tensile profiles steel panels/ or equivalent to be approved

**Girts:** Sidewall girts and endwall girts are mounted on the exterior face of the main column.

**Sheeting Fasteners:** Mechanically galvanized self tapping screws with head self-drilling fasteners with integral EPDM seals. To be colour coated to match roof and wall sheeting.

**Closures:** Solid or closed cell closures matching the profiles of the panel shall be installed along the ease, rake and other locations specified on drawing.

**Accessories:** Flashing wherever applicable, trims, eave gutters & square down take pipes till plinth level. Flashings and /or trim shall be furnished at the rake, corners, eaves and framed openings and wherever necessary to provide weather tightness and finished appearance. Colour shall be matching with the colour of wall. Material shall be 26 gauge thick conforming to the physical specifications of sheeting. Sealer to be applied at all side laps and end laps of roof panels and around window flashings. Sealer shall be pressure sensitive elastomeric Butyl tapes. Sealer shall be non asphaltic, non shrinking, non drying and non toxic and shall have superior adhesive qualities to metals, plastics and painted surfaces.

**Gutters and Down spouts:** Gutters and downspouts shall be adequately designed to ensure proper roof drainage system. Material shall be same as that of sheeting.

**Paint Finish:** All primary and secondary members shall be Sand blasted as per Sa 2.5 and supplied with factory applied one coat of epoxy primer and one coat of epoxy paint. Second coat of epoxy shall be applied after the completion of erection.

**Roof Extension:** Minimum Roof overhangs to be considered on all sidewalls for full length. All walls to be cladded to full height above brick masonry wall for godown building and all other as per drawing (by General Builder Contractor).

**Site Connections:**

a) All primary bolted connections shall be provided with galvanize high strength bolts, washers, nuts conforming to specifications IS 1367 Grade 4.6 / 8.8

b) All secondary bolted connections shall be furnished with bolts, nuts, washers conforming to the specifications of IS 1367 Grade 4.6 or ASTM A 307.

**Shop Connections:**

All shop connections shall be welded with appropriate arc welding Process and welding shall be in accordance with AWS D 1.1.98, as applicable.

**Roof & Wall Bracings:**

Roof and wall bracings shall have a minimum yield strength of 250 Mpa and shall conform to the specifications of IS 2062.



## SECTION 8

### PLUMBING WORKS

Sl. No.	Equipment/Materials	Brand Names Proposed
1	IGBC Rated Sanitary Fixtures and Accessories	Hindware / Jaquar / Parryware or equal.
2	IGBC Rated Tap (CP) Fittings and Accessories	Jaquar / Hindware / Parryware or equal.
3	uPVC Pipes and Fittings	Supreme / Astral / Prince or equal.
4	uPVC SWR Pipes and Fittings, Solvent Welded type and Ring Fit Joint type	Ashirvad / Astral / Prince or equal.
5	uPVC Pipes, Sch. 40 & 80 and Sch. 80 Fittings (ASTM D 1785 and ASTM D 2467)	Ashirvad /Astral/ Ajay or equal.
6	CPVC Pipes and Fittings (ASTM D 2846, SDR 11)	Ashirvad /Astral/ Ajay or equal.
7	Stainless Steel Grating, Cockroach Trap, Cover for Concealed Trap and Cover for Clean Out.	Chilly or equal
8	Rain Water Outlet	Neer / SGE or equal.
9	Butterfly Valve.	Intervolve /Kartar / Kirloskar or equal.
10	Forged Brass Ball Valves	RB/TBS/Zoloto or equal.
11	Sluice Valve	Kirloskar / H Sarker / Kartar or equal
12	Gun Meat Gate Valve	Orient / TBS/ Zoloto or equal
13	GM Non Return Valves.	RB / TBS / Zoloto or equal.
14	Pressure Reducing Valves	Hawk or equally approved
15	GM Float Valve.	Viking or equally approved.
16	Ball Type Foot Valve	Normex or equally approved
17	Air Release Valves.	RB/TBS/Zoloto or equal
18	Y-Strainer	Kartar / TBS / Zoloto or equal
19	Back Flow Preventing Devise	SGE or equal
20	Solid Interceptor	Ashivad Pipes or equal
21	Oil /Grease Interceptor	Ashivad Pipes / Aco / Kessel or equal
22	Packaged Hydro - Pneumatic Water Transfer/ Distribution Pump Set.	Kirloskar / Grundfos /CRI or equal
23	Electric Water Heater	Racold or equal
24	Cast/Ductile Iron Manhole Covers & Gratings	NECO CENTRI or equal
25	Pipe Supporting System, G. I.	HI-Tech Pipe Supports or Equal
26	Paint Protection System	Berger, India or equal

(Please refer General Clauses of Contract uploaded as part of this NIT in the INKEL website [www.inkel.in](http://www.inkel.in))

**SECTION 9**  
**ELECTRICAL WORKS**

<b>LIST OF APPROVED MAKES</b>		
<b>SL. NO.</b>	<b>DESCRIPTION</b>	<b>APPROVED MAKES</b>
1	11KV VCB PANEL	MEGAWIN/INTRANS
2	TRANSFORMER	KEL/MEGAWIN/INTRANS
3 a	GENERATOR - ENGINE	CUMMINS / CATERPILLAR / GREAVES/ PERKINS/ KIRLOSKAR
3 b	GENERATOR - ALTERNATOR	KIRLOSKAR / LEROY SOMER / KEL /AVKC/STAMFORD
4	HT CABLES	GLOSTER / UNIVERSAL / NICCO/KEI/POLYCAB
5	HT TERIMINATION KIT	RAYCHEM / M_SEAL/ 3M
6	LT PANELS / BUSDUCT	Any CPRI approved fabricator with better infra- structure and testing facility
7	ACB/MCCB / ISOLATORS	L & T/Siemens/ Schneider
8	CAPCITOR WITH DETUNED FILTERS	L&T /MEHAR / EPCOS
9	AUTOMATIC CHANGE OVER SWITCHES	HPL SOCOMEC /L&T/
10	CURRENT TRANSFORMER	AE / KAPPA / INTRANS / VOLTAMP
11	RELAYS	GEC ALSTOM / EASUN / RISHAB
12	INSTRUMENTS	AE / SIMCO / RISHLINE/MECO/ELMEASURE
13	INDICATING LAMPS-	TECHNIC / L&T
14	SELECTOR SWITCHES	SALZER / KAYCEE /ABB / L&T
15	FRLS WIRES & SINGLE CORE CABLES	FINOLEX / POLYCAB / RR-KABEL / KEI
16	LT CABLES AL /CU	UNIVERSAL / POLYCAB / KEI/GLOSTER
17	MS CONDUITS-ISI	GUPTA / BHARAT / AKG
18	PVC CONUITS-ISI	AVONPLAST /BALCO/KONSEAL/ PRECISION
19	DISTRIBUTION BOARDS	LEGRAND / SCHNEIDER / HAGER/ L&T
20	MCB, ELCB, RCBO	LEGRAND / SCHNEIDER / HAGER/ L&T
21	METAL CLAD PLUG & SOCKETS	LEGRAND / SCHNEIDER / HAGER/ L&T
22	IP-65 PLUG & SOCKETS AND FLP JUNCTION BOXES	LEGRAND / SCHNEIDER / HAGER/ L&T

23	SWITCHES & SOCKETS	LEGRAND Myrius/MK Wraparound / NORTH-WEST/ SCHNEIDER Opale
24	GI ANODISED METAL BOX	LEGRAND/MK / SCHNEIDER / NORTH-WEST / CRABTREE
25	CABLE GLANDS	VBI / COMET / JAINSO/ Dowells
26	CRIMPING SOCKETS	DOWELLS / JAINSON
27	SURGE SUPPRESSOR	OBO BETTERMAN / SIEMENS / HAGER
28	CABLE TRAYS	PROFAB
29	LIGHT FITTINGS/Street lights	PHILIPS / OSRAM/CROMPTON/WIPRO
30	EARTH ELECTRODE	ASHLOK / GALAXY / SAFE EARTH
31	CEILING FAN / ESHAUST FAN	ALMONARD / CROMPTON/BAJAJ
32	AUTOMATIC TRANFER SWITCH (ATS)	ASCO /Socomec/ Emerson
33	FLOOR RACE WAYS , JUNCTION BOXES , HEAVY DUTY FLOOR BOX	PROFAB
34	Multifunction meter	L&T, SECURE, SCHNEIDER, SATEC/EL-Measure
35	ENERGY METERS	HAVELLS/L&T/ABB/SIMCO / ENERCON
36	Street lighting	Bajaj /Crompton/Schreder/Wipro/OSRAM

(Please refer General Clauses of Contract uploaded as part of this NIT in the INKEL website [www.inkel.in](http://www.inkel.in))

**NAME OF WORK :CONSTRUCTION OF COMMON FACILITIES CENTRE INCLUDING DEVELOPMENT OF SITE, INTERNAL WATER SUPPLY AND SANITARY INSTALLATIONS, ELECTRIFICATION WORKS ETC**

**PRICE BID - SUMMARY**

<b>SL. NO.</b>	<b>DESCRIPTION</b>	<b>AMOUNT IN FIGURES</b>	<b>AMOUNT IN WORDS</b>
<b>1.00</b>	<b>TOTAL FOR PART - A: CIVIL WORKS</b>		
<b>2.00</b>	<b>TOTAL FOR PART - B: ELECTRICAL WORKS</b>		
	<b>GRAND TOTAL</b>		

**SEAL AND SIGNATURE OF AUTHORIZED SIGNATORY**



Name of work : Construction of Ware house Building (3 no.s) and Common Utilities Building (1 no.) including development of site, internal water supply and sanitary installations, electrification works etc

**SCHEDULE OF QUANTITIES**

Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
				In Figures	In Words	
	<b>PART A - CIVIL WORKS</b>					
<b>1.00</b>	<b>SUB HEAD 1.00 - EARTH WORK</b>					
1.01	<b>Clearing grass</b> and removal of the rubbish upto a distance of 50m outside the periphery of the area cleared.	sqm	18,720.00			
1.02	<b>Clearing jungle</b> including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth upto 30 cm measured at a height of 1m above ground level and removal of rubbish outside the periphery of the area cleared.	sqm	14,980.00			
1.03	<b>Felling trees</b> of the girth (measured at a height of 1 m above ground level), including cutting of trunks and branches, removing the roots and stacking of serviceable material and disposal of unserviceable materials away from the site.					
a	Beyond 30 cm girth upto and including 60 cm girth	each	10.00			

Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
b	Beyond 60 cm girth upto and including 120 cm girth	each	5.00			
1.04	Earth work in <b>surface excavation</b> not exceeding 30 cm in depth but exceeding 1.5 m in width as well as 10 sqm on plan including disposal of excavated earth <b>upto 100 m</b> and lift upto 1.5 m, the disposed earth to be used for filling the adjoining land in layers of 30cm depth, consolidating each deposited layer by rolling with 8 MT capacity road roller, watering, ramming and levelling etc complete as directed by the Engineer-in-charge (The rate is inclusive of the cost for cutting, lifting, loading and unloading, transportation, consolidating, watering, levelling etc complete): <b>All kinds of soil</b>	sqm	11,230.00			
1.05	<b>Earth work in excavation in all kinds of soil</b> by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm in depth. 1.5 m in width as well as 10 sqm on plan) the disposed earth to be used for filling the adjoining land in layers of 30cm depth, consolidating each deposited layer by rolling with 8 MT capacity road roller, watering, ramming and levelling etc complete as directed by the Engineer-in-charge (The rate is inclusive of the cost for cutting, lifting, loading and unloading, transportation, consolidating, watering, levelling etc complete)	cum	7,750.00			
1.06	<b>Earth work in excavation in Ordinary rock</b> by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth, <b>lead upto 200 m</b> and lift upto 1.5 m, disposed earth to be levelled and neatly dressed.	cum	2,820.00			

Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
1.07	<b>Earth work excavation in all kinds of soil</b> for foundation, trenches, grade beams, etc including strutting, shoring and packing cavities wherever required, bailing /pumping out water from any depth, if required and getting out the excvated soil and back filling the soil as required in layers not exceeding 20 cm in depth, consolidating each layer by watering, ramming etc and disposing of surplus excavated earth, stacking of serviceable stones, disposal of unserviceable materials away from site with <b>initial lead upto 100m</b> and lift upto 1.5m including breaking clods, watering, ramming and sectioning of soil bank etc complete as directed by the Engineer-in-charge.	cum	600.00			
1.08	<b>Earth work excavation in ordinary rock</b> for foundation, trenches, grade beams, etc including strutting, shoring and packing cavities wherever required, bailing /pumping out water from any depth, if required and getting out the excvated soil and back filling the soil as required in layers not exceeding 20 cm in depth, consolidating each layer by watering, ramming etc and disposing of surplus excavated earth with <b>initial lead upto 200m</b> and lift upto 1.5m including breaking clods, watering, ramming and sectioning of soil bank etc complete as directed by the Engineer-in-charge.	cum	1,140.00			
1.09	<b>Earth work excavation in Hard rock (controlled blasting)</b> with disposal upto 200 metres (Excavation for roadway in hard rock with controlled blasting by drilling, blasting and breaking, trimming of bottom and side slopes in accordance with requirements of lines, grades and cross sections, loading and disposal of cut road with in all lifts and leads upto 200 metres )	cum	2,540.00			

Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
1.10	<b>Extra for every additional lift</b> of 1.5m or part thereof in excavation/ banking excavated or stacked materials					
a	for all kinds of soil.	cum	130.00			
b	Ordinary or hard rock	cum	190.00			
1.11	<b>Filling available excavated earth</b> (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 100 m and lift upto 1.5 m.	cum	5,790.00			
1.12	Providing and applying pre constructional <b>anti termite treatment</b> by injecting chemical emulsion concentrate 1% chloropyrifos or chlordane emulsiable concentrate 1% for creating a chemical barrier as per IS 6313 including drilling holes, injecting chemical emulsion as per specifications, making good the drilled portion etc complete and making good the drilled portion etc complete and conforming to manufacturers specifications and as directed by the Engineer-in-charge.	sqm	3,630.00			
	<b>TOTAL FOR SUB HEAD 1.00 - EARTH WORK</b>					
<b>2.00</b>	<b>SUB HEAD 2.00 - CONCRETE AND ALLIED WORKS</b>					-



Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
2.01	Providing and laying 1:4:8 (1 cement : 4 coarse sand :8 graded stone aggregate 40 mm nominal size) machine mixed and properly consolidated with hand rammers, including the cost and conveyance of all materials, labour, centering and shuttering, curing, lead lift etc complete at all levels upto plinth level and as directed by Engineer-in-charge.	cum	660.00			
	<b>TOTAL FOR SUB HEAD 2.00 - CONCRETE AND ALLIED WORKS</b>					
<b>3.00</b>	<b>SUB HEAD 3.00 - RCC WORKS</b>					
3.01	<b>Walls of any thickness</b> - Reinforced cement concrete work in walls (any thickness) using 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts etc. up to floor five level, cost of centering, shuttering, finishing and excluding cost of reinforcement etc complete					
a)	Wall thickness upto 150mm	cum	160.00			
b)	Wall thickness above 150mm	cum	430.00			
3.02	<b>Drain bottom slab</b> - Providing and laying in position specified grade of reinforced cement concrete, the cost of centering, shuttering, finishing and excluding cost of reinforcement - All works up to plinth level : 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	360.00			

Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
3.03	<b>Cast insitu Cover slab for drain</b> - Reinforced cement concrete work in beams, suspended floors, roofs having slope up to 15° landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral stair cases up to floor five level, the cost of centering, shuttering, finishing and excluding the cost of reinforcement, with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	60.00			
3.04	<b>Pre-cast cover slab for drain</b> - Providing and fixing up to floor five level precast cement concrete string or lacing courses, cover slabs, copings, bed plates, anchor blocks, plain window sills, shelves, louvers, steps, stair cases, etc., in 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including hoisting and setting in position with cement mortar 1:3 (1 Cement : 3 coarse sand), cost of required centering complete.	cum	30.00			
3.05	<b>RCC lintel band</b> - Reinforced cement concrete work in beams, suspended floors, roofs having slope up to 15° landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral stair cases up to floor five level, including the cost of centering, shuttering, finishing and excluding the cost of reinforcement, with 1:2:4 (1cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size).	cum	20.00			

Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
3.06	Providing and laying in position machine batched and machine mixed <b>design mix M-25</b> grade cement concrete for reinforced cement concrete work for all heights, using cement content as per approved design mix, including pumping of concrete to site of laying but including the cost of centering, shuttering, finishing and excluding cost of 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 or less cement used as per design mix is payable or recoverable separately as per CPWD Specifications.					
a	All works upto plinth level					
i)	Foundations, footings, bases of columns etc for mass concrete	cum	140.00			
ii)	Grade beam	cum	140.00			
b	All work above plinth level					
i)	Columns, mullions, pillars, abutments, etc	cum	30.00			
ii)	Lintels, Beams, cantilevers etc	cum	20.00			
iii)	Suspended floors, roofs, landings, balconies etc	cum	20.00			

Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
3.07	<b>Extra for providing richer mixes</b> at all floor levels : Providing <b>M-30 grade concrete</b> instead of M-25 grade BMC /RMC. (Note:- Cement content considered in M-30 is @ 340 kg/ kg/cum). Excess/less cement over the specified cement content used is payable /recoverable separately.	cum	350.00			
3.08	Add for using extra cement in the items of design mix over and above the specified cement content therein.	kg	7,700.00			
3.09	<b>Reinforcement steel</b> -Providing and fixing reinforcement for RCC work with High Yeild Strength Deformed (HYSD) bar of various diameters and grade of steel as specified below confirming to IS 1786 in grade Fe-500 HYSD or equivalent BS specification including cutting, bending, hoisting, fabricating and placing in position according to drawings and binding the reinforcement with galvanised annealed binding wire of double fold of 18 gauge and providing PVC cover blocks for placing the reinforcement in position and for maintaining the cover specified and or according to relevant IS or equivalent BS code. Note: Unless noted otherwise the measurements in accordance with IS1200 or equivalent BS shall be provided. Cover block, wastage and binding wire will not be measured and shall be included in the quoted rates.	kg	324,473.00			
3.10	Providing and fixing anchor bars of the following diamters tor steel in foundation up to 1.5 m deep in rock and 1.5 m above rock for following diameter tor steel dowel bar in foundation including drilling suitable diameter bore hole in rock with necessary bending, hooking, tying reinforcement in position and grouting etc and excluding the cost of reinforcement complete as per drawing and specifications.					

Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
a	16mm dia	each	1,128.00			
b	20mm dia	each	928.00			
c	25mm dia	each	928.00			
	<b>TOTAL FOR SUB HEAD 3.00 - RCC WORKS</b>					
<b>4.00</b>	<b>SUB HEAD 4.00 - MASONRY WORKS</b>					
4.01	<b>Random rubble masonry with hard stone</b> in foundation and plinth including leveling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) at window sills, ceiling level and the like with Cement mortar 1:6 (1 cement : 6 coarse sand) and also including raking out of joints, curing, cost and conveyance of all materials, lead, lift etc complete as directed by the Engineer-in-charge.	cum	80.00			

Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
4.02	Random rubble masonry with hard stone available at site, in foundation and plinth including leveling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) at window sills, ceiling level and the like with Cement mortar 1:6 (1 cement : 6 coarse sand) and also including raking out of joints, curing, cost and conveyance of all materials but <b>excluding cost of rubble</b> , lead, lift etc complete as directed by the Engineer-in-charge.	cum	260.00			
4.03	Masonry with solid concrete blocks in foundation and plinth in blocks of size 30x20x20cm, grade D of block density not less than 1800 kg/cum and average compressive strength of 4 N/mm <sup>2</sup> and minimum strength of individual blocks 3.2 N/mm <sup>2</sup> (as specified in IS 2185 part I 1979 Grade D) blocks constructed with cement mortar 1:6 for 20cm thick walls including cost and conveyance of all materials to site, labour charges, hire and labour for scaffolding, curing etc complete.	cum	70.00			
4.04	Masonry with solid concrete blocks above plinth, blocks of size 30x20x20cm, grade D of block density not less than 1800 kg/cum and average compressive strength of 4 N/mm <sup>2</sup> and minimum strength of individual blocks 3.2 N/mm <sup>2</sup> (as specified in IS 2185 part I 1979 Grade D) blocks constructed with cement mortar 1:6 for 20cm thick walls including cost and conveyance of all materials to site, labour charges, hire and labour for scaffolding, curing etc complete.	cum	160.00			

Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
4.05	Masonry with <b>solid concrete blocks</b> , blocks of size <b>30x10x20cm</b> , grade D of block density not less than 1800 kg/cum and average compressive strength of 4 N/mm <sup>2</sup> and minimum strength of individual blocks 3.2 N/mm <sup>2</sup> (as specified in IS 2185 part I 1979 Grade D) blocks constructed with cement mortar 1:5 for 10cm thick walls including cost and conveyance of all materials to site, labour charges, hire and labour for scaffolding, curing etc complete	cum	40.00			
	<b>TOTAL FOR SUB HEAD 4.00 - MASONRY WORKS</b>					
<b>5.00</b>	<b>SUB HEAD 5.00 - JOINERY WORKS</b>					

Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
5.01	<p>Providing and fixing <b>Fiber Glass Reinforced Plastic (FRP) doors with frames</b> of cross section 90mmx 45mm having single rebate of 32mm x 15mm to receive shutter of 30mm thickness. The laminate shall be moulded with fire resistant grade unsaturated ployster resin and chopped mat. Door frame laminated shall be 2 mm thick and shall be filled with suitable wooden block in all the three legs. The frame shall mbe covered with fiber glass from all sides. M.S stay shall be provided at the bottom to steady the frame. And fixing the existing door frames 30mm thick Fiber Glass Reinforced Plastic (FRP) panelled door shutter of required colour and approved brand and manufacture, made with fire - retardant grade unsaturated polyester resin, moulded to 3mm thick FRP laminate for forming hollow rails and styles, with wooden frame and suitable blocks of seasoned wood inside at required places for fixing of fittings, tower bolts, handles etc cast monolithically with 5mm thick FRP laminate for panels conforming to IS 14856, including fixing to frames and the coat shall be including all fittings, aldrops, tower bolts, handles etc complete</p>	sqm	30.00			



Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
5.02	Providing and fixing powder coated Aluminium Louvered Ventilators (minimum thickness of powder coating 50 microns) of approved colour HINDALCO 9771, with 5mm thick frosted glass of approved make for aluminium U channel louvers including necessary grooves in frames for fixing glass.	sqm	80.00			

Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
5.03	Providing and fixing in position powder coated aluminium doors - Single leaf partly glazed and partly panelled with 12mm thick prelaminated particle board flat pressed three layer or graded wood particle board conforming to IS:12823 Grade I Type II of exterior grade with decorative lamination on both sides, using HINDALCO 9223, 9222, 9202, 9201, 9200, 4682 with 5mm thick toughened glass as per architects details, fabricated out of extruded sections confirming to BIS IS 733 as detailed in the drawing of specified size and shape of approved shade, powder coating minimum 50 micron of approved shade, including supplying and fixing necessary holdfasts/CP brass and Stainless steel screws for fixing, cleats, 12mm dia tie rods both at top and bottom chromium coated screws, powder coated aluminium handles of approved shape, size and finish, for each leaf on both the sides, tower bolt in matching finish 300mmlong at the top and 200mm long at the bottom, 125mm SS butt hinges or pivots and all fixtures fastenings as per requirement, 5mm thick toughened glass fixed with special EPDM gasket felt and powder coated aluminium fittings, leaf mounted open door closer of DORMA TS 68 make, with all labour and materials complete as per drawings and as directed.	sqm	10.00			
	<b>TOTAL FOR SUB HEAD 5.00 - JOINERY WORKS</b>					
<b>6.00</b>	<b>SUB HEAD 6.00 - FINISHING WORKS</b>					

Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
6.01	<b>External plastering</b> - 18mm thick cement plaster in 2 coats under layer 12mm thick cement plaster 1:5 finished with a top layer 6mm thick cement plaster 1:5., first coat with water proofing compound with grooves and the rate shall include the cost of water proofing compound, grooves, PVC chicken mesh, moulding etc as directed by Engineer-in-charge.	sqm	1,250.00			
6.02	<b>Internal plastering</b> with cement mortar 1:5, 12mm thick one coat over the surfaces of cement blockwork /brick work including making plaster grooves where ever necessary in all heights including cost and conveyance of all materials, labour charges, curing scaffolding etc complete in all floors.	sqm	1,340.00			
6.03	<b>Ceiling plastering</b> with cement mortar 1:3, 6mm thick one coat over concrete the surfaces in all heights including cost and conveyance of all materials, labour charges, curing scaffolding etc complete in all floors.	sqm	50.00			
6.04	<b>Plastering inside water tank</b> - 12 mm cement plaster finished with a floating coat of neat cement of mix : 1:4 (1 cement: 4 fine sand) including adding necessary water proofing compound as per prescribed ratio	sqm	60.00			

Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
6.05	<b>External Painting</b> - Finishing walls with Acrylic Smooth exterior paint of required shade: New work (Two or more coat applied @ 1.67 ltr/10 sqm over and including priming coat of exterior primer applied @ 2.20kg/ 10 sqm), including cost and conveyance of all materials to site, labour charges, hire charges for scaffolding etc complete for all levels.	sqm	1,250.00			
6.06	<b>Internal Painting</b> - Painting the interior walls with ready mix acrylic emulsion paint of approved quality 2 or more coats to smooth even finish, over a priming coat on ceiling and walls including cost and conveyance of all materials to site, labour charges, hire charges for scaffolding etc complete for all levels.	sqm	1,340.00			
6.07	Painting with 2 or more coats on new work <b>synthetic enamel paint</b> of approved brand and manufacture to give an even shade over a coat of ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel work	sqm	400.00			
6.08	<b>Pointing</b> on stone work with cement mortar 1:3 (1cement : 3 fine sand) : Flush/ Ruled pointing	sqm	290.00			
6.09	Supplying, assembling, lowering and fixing in vertical/ horizontal position as weep holes in RCC/ RR works, 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 : 100 mm nominal size dia	Rm	180.00			

Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
6.10	Providing <b>50mm wide Raised Band</b> using 12 mm thick plain cement mortar bands in cement mortar 1:4 (1 cement: 4 fine sand) :	Rm	110.00			
6.11	Dry stone pitching 22.5 cm thick including supply of stones and preparing surface complete.	sqm	280.00			
	<b>TOTAL FOR SUB HEAD 6.00 - FINISHING WORKS</b>					
<b>7.00</b>	<b>SUB HEAD 7.00 - STEEL WORKS</b>					

Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
7.01	<p><b>Rolling Shutters including ball bearing, mechanical device etc-</b>                      Supplying and fixing rolling shutters of approved make, made of requiredsize M.S. laths, interlocked together through their entire length and jointed together at the end by end locks, mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete, including the cost of providing and fixing necessary 27.5 cm long wire springs manufactured from high tensile steel wire of adequate strength conforming to IS: 4454 - part 1 and M.S. top cover of required thickness for rolling shutters - 80x1.25 mm M.S. laths with 1.25 mm thick top cover including providing mechanical device chain and crank operation for operating rolling shutters - exceeding 10.00 sqm and upto 16.80 sqm in the area and the cost shall also be including providing and fixing ball bearing, the application of two or more coats of synthetic enamel paint over a coat of approved primer as necessary (measurements to be considered for payment shall be the clear size of opening plus guide channels on both sides for width and 450mm on top for drum height as per drawing).</p>	sqm	800.00			

Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
7.02	<b>Extra for grill work in RS</b> - Extra for providing grilled rolling shutters manufactured out of 8 mm dia M.S. bar instead of laths as per design approved by Engineer-in- charge and the cost shall also be including the application of two or more coats of synthetic enamel paint over a coat of approved primer as necessary, (area of grill to be measured).	sqm	100.00			
7.03	<b>Grill work in ventilators including painting</b> - Providing and fixing M.S. grills of required pattern in frames of doors, windows, ventilators etc. with M.S. flats, square or round bars etc. including finishing with 2 coats of synthetic enamel paint and a priming coat with approved steel primer, 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) or fixed to openings /wooden frames with rawl plugs screws and all necessary fixtures etc all complete	kg	890.00			
7.04	<b>GI handrail</b> - Providing and fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railing, staircase railing and similar works, including applying two or more coats of synthetic enamel paint over priming coat of approved steel primer- G.I. pipes	kg	1,590.00			

Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
7.05	<b>Structural Steel work-</b> Providing, fabricating and fixing in position MS inserts such as nosing, corner angles of columns, plates, flats, tee's, protection channels of reception dock, supports, brackets and monorails, hooks, frame around cut-out, MS pipe sleeves etc as per drawings and specifications, in true line and level including embedding the same in to the permanent works at the time of casting of RCC works or fixing with or without base plate fixed to RCC element with appropriate size expansion bolts as per design with necessary welding, grinding and painting with 2 or more coats of approved quality synthetic enamel paint over a coat of primer etc complete as directed.	kg	1,180.00			
	<b>TOTAL FOR SUB HEAD 7.00 STEEL WORKS</b>					
<b>8.00</b>	<b>SUB HEAD 8.00 - FLOORING WORKS</b>					
8.01	<b>Cement concrete flooring 40 mm thick</b> with 20 mm nominal size stone aggregate 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 but including the cost for providing and fixing 4mm thick glass strips for panels etc. complete.	sqm	3,560.00			



Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
8.02	<b>Vitrified tile flooring</b> - Providing and laying vitrified floor tiles in different sizes with water absorption less than 0.08% and conforming to IS : 15622, of approved make and thickness 10mm to 12mm, in all colours and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand), including grouting the joints with white cement and matching pigments etc., complete. (basic cost of vitrified tile shall be rs. 750/sqm)	sqm	40.00			
8.03	<b>Ceramic tile flooring</b> - Providing and laying Ceramic glazed floor tiles of size 300x300 mm of 1st quality conforming to IS : 15622 of approved make in colours such as White, Ivory, Grey, Fume Red Brown, and thickness 6mm to 8mm, laid on 20 mm thick cement mortar 1:4 (1 Cement : 4 Coarse sand), including pointing the joints with white cement and matching pigment etc, complete (basic cost of ceramic tile shall be rs. 450/sqm)	sqm	30.00			

Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
8.04	<b>Ceramic wall tile finish</b> - Providing and fixing 1st quality ceramic glazed wall tiles conforming to IS: 15622 of approved make, in all colours, shades except burgundy, bottle green, black of any size and thickness 6mm to 8mm 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. (basic cost of ceramic tile shall be rs. 450/sqm)	sqm	30.00			
	<b>TOTAL FOR SUB HEAD 8.00 FLOORING WORKS</b>					
<b>9.00</b>	<b>SUB HEAD 9.00 - ROOFING WORKS</b>					
9.01	Providing and fixing powder coated aluminium work (minimum thickness of powder coating 50 micron) consisting of tee/ angle sections, of approved make conforming to IS : 733 in frames of false ceiling including aluminium angle cleats with necessary C.P. brass/ stainless steel sunk screws, aluminium perimeter angles fixed to wall with stainless steel rawl plugs @ 450 mm centre to centre and fixing the frame work to G.I. level adjusting hangers 6 mm dia. with necessary cadmium plated machine screws, level adjusting hangers, ceiling cleats and expansion hold fasteners, etc complete as per approved architectural drawings and direction of the Engineer-in-charge	kg	360.00			

Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
9.02	<p>Providing and fixing false ceiling with 12 mm thick plain/ semi perforated or with design ceiling tiles of BWP type phenol formaldehyde synthetic resin bonded pressed particle board conforming to IS:3087, finished with a coat of aluminium primer on both sides &amp; edges, including two coats of synthetic enamel paint of approved quality on exposed face, fixed to a grid made out of anodised aluminium (with 15 micron anodic coating) Tsections 35 x15x1.5 mm size main runners, cross runners 23.5x19x1.5 mm fixed to main runners placed 600 mm centre to centre both ways so as to form a grid of 600 mm square. The frame work shall be suspended from ceiling by level adjusting hangers of 6 mm dia M.S rod fixed to roof slab by means of ceiling cleats and dash fastener. The suspenders shall be placed 600 x 1200 mm centre to centre including fixing to the frame with C.P brass screws and applying a priming coat of zinc chromate yellow primer</p>	sqm	40.00			
	<b>TOTAL FOR SUB HEAD 9.00 ROOFING WORKS</b>					
<b>10.00</b>	<b>SUB HEAD 10.00 - PEB WORKS</b>					

Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
10.01	<p>Design, fabrication, supply and erection of PEB structure by using the built up sections are made from hot rolled platers conforming to ASTM A - 572 GR 50 and other sections except beams are mill sections complying with IS :2062 and the section should be provided with 2 coats of Zinc Phosphate anti corrosion paint after sand blasting and 2 coats of enamel paints as per the approved colour. Bracing rods and sag rods are made of steel bars conforming to IS 2062 with a minimum yield strength of 240 MPA. All the fasteners should be confirmed as per the IS/ ASTM specifications. The roofing and fascia board should be Zinc Aluminium alloy coated colour roof sheet of 0.47mm nominal thickness, cold roll formed from a cold rolled coil conforming to ASTM A 792 GRADE 80 WITH A MINIMUM YIELD STRENGTH OF 550 MPa. THE EAVE GUTTER SHOULD be provided with Zinc Aluminium alloy coated steel sheet of 0.8T with GI Gutter hangers. Downspouts should be provided with 100mm size of Zinc Aluminium coated sheets with GI with GI laced straps. Galvanized purlin should be adopted as per the required size. The quoted price should include the supply and fixing charges of MS inserts in the concrete day light sheets in the roof.</p>					

Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
	The cost should include roofing sheets, ridge ventilators, providing roof insulation of 30mm thick fibre glass insulation and 24 kg/cum density with vinyl facing, canopy, structural steel system, metal roofing and cladding sheets, anchor bolts, down take pipes, turbo vents and all other accessories required to complete the project as per drawings attached (For the purpose of payment the outside area of the main building only will be considered for measurement. (loading / unloading bay will not be measured separately.)	sqm	3,010.00			
	<b>TOTAL FOR SUB HEAD 10.00 PEB WORKS</b>					
<b>11.00</b>	<b>SUB HEAD 11.00 - ROAD WORKS</b>					
11.01	<b>Extra for compaction of earth work in embankment under optimum moisture conditions to give at least 95% of the maximum dry density (proctor density).</b>	cum	3,870.00			

Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
11.02	Construction of <b>granular sub-base</b> by providing close graded Material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by tippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineerin - Charge : With material conforming to Grade-I (size range 75 mm to 0.075 mm) having CBR Value-30	cum	1,580.00			
11.03	Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm ) to <b>wet mix macadam (WMM)</b> specification including premixing the material with water at OMC in for all leads & lifts, laying in uniform layers with mechanical paverfinisher in sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achievethe desired density, complete as per specifications and directions of Engineer-in-Charge.	cum	2,630.00			
11.04	Supplying and fixing C.I. cover with frame for manholes : 560 mm diameter C.I. cover (heavy duty) the weight of the cover to be not less than 108 kg and weight of frame not less than 100 kg.	each	18.00			
<b>TOTAL FOR SUB HEAD 11.00 - ROAD WORKS</b>						

Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
12.00	<b>SUB HEAD 12.00 - MISCELLANEOUS WORKS</b>					
12.01	Constructing brick masonry chamber for <b>underground C.I. inspection chamber</b> and bends with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover with frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg), R.C.C. top slab with 1:2:4 mix (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand), finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete as per standard design: Inside dimensions 455x610 mm and 45 cm deep for single pipe line : With common burnt clay F.P.S. (non modular) bricks of class designation 7.5.	each	11.00			

Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
12.02	Constructing brick masonry manhole in cement mortar 1:4 ( 1 cement : 4 coarse sand ) with R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement complete as per standard design : Inside size 90x80 cm and 45 cm deep including C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover and frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg) : With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	9.00			
12.03	Extra for depth for manholes of Size 90x80 cm : With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	3.00			
12.04	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: With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	1.00			
	<b>TOTAL FOR SUB HEAD 12.00 MISCELLANEOUS WORKS</b>					
<b>13.00</b>	<b>SANITARY FIXTURES, BATH FITTINGS AND ACCESSORIES</b>					



Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
13.01	Providing and fixing <b>IGBC /Green Rated white vitreous china Floor Mounted EWC, Complete Set with 2/4 LPF Dual Cistern</b> , including Cistern Fittings, Soft Close Seat Cover, bolts, nuts, washers, expansion/ Rawl Sleeves, gasket etc. complete.	Set	16.00			
13.02	Providing and fixing white vitreous china <b>IGBC /Green Rated Urinal with Integral P-Trap and with Integrated Electronic Flushing System with Passive and Extra Sensitive Infra Red Sensor</b> (with Battery / AC Operated, as per final requirement), of approved shape and size, having pre & post flushing with water, with a <b>Total Flushing Rate of 0.75 LPF</b> (250 ml & 500 ml respectively), and with water inlet from back side, including fixing to wall with suitable brackets, all as per manufacturer's specification and direction of Engineer-in-charge.	Set	8.00			
13.03	Providing and fixing White Vitreous China <b>Counter Top/Bottom Lavatory, compatible for a washing rate of 6 LPM</b> or less, including 32mm. CP Waste Coupling, C.P. Brass Chain with rubber plug, and fixing to counter with suitable fixtures, all as per manufacturer's specification and the direction of Engineer-in-charge.	Nos.	16.00			

Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
13.04	Providing and fixing <b>IGBC /Green Rated CP Pillar Tap, Self Closing Type with Pre Set time 5 to 6 Sec, with a controlled flow rate of 6 LPM</b> or less, for Wash Basin, including all necessary accessories, all as per manufacturer's specification and direction of the Engineer-in-charge.	Set	16.00			
13.05	Providing and fixing <b>IGBC /Green Rated Health Faucet, with a controlled flow rate of 6 LPM</b> or less with necessary accessories, all as per manufacturer's specification and direction of Engineer-in-charge.	Set	16.00			
13.06	Providing and fixing <b>C. P. Brass Angle Valve</b> for Wash Basin of approved quality conforming to IS:8931 (a) 15 mm nominal bore.	Nos.	20.00			
13.07	Providing and Fixing <b>CP ABS P-Trap</b> for Wash Basins and Kitchen Sink. (Optional Item)	Set	20.00			
13.08	Providing and fixing <b>Heavy Duty Flexible Braided Connectors</b> for Wash Basin of approved quality conforming to IS:8931 (a) 15 mm nominal bore.	Nos.	20.00			

Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
13.09	Providing and fixing following C. P. Bath Room/Toilet Fittings/Accessories, including cutting and making good the walls and floors, wherever required. Quantities are tentative only and shall change as per final architectural/interior design/requirement.					
i	CP Towel Rail, 600mm. Long	Set	8.00			
ii	C. P. Towel Ring. (Optional)	Set	8.00			
iii	Metallic Soap Dispenser	Set	8.00			
vi	600x450 mm beveled edge mirror of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers complete.	Nos.	16.00			
	<b>TOTAL FOR SANITARY FIXTURES AND ACCESSORIES</b>					
<b>14.00</b>	<b>SOIL, WASTE AND VENT SYSTEMS</b>					
14.01	PIPE WORK CONCEALED IN WALLS AND CEILING VOID					

Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
a	Providing and fixing, water test and commission Drainage Pipe Work with uPVC Pipes 6Kg/Cm2 (IS: 4985) and injection moulded PVC fittings (IS: 7834) such as bends, tees, couplers, Y-junctions, reducers, adaptors, sockets, end plugs etc. jointed with solvent cement and fixing in position with clamps, hanging supports, fasteners, masonry supports etc, as per requirement, including cutting, chasing, drilling etc, in Block Walls etc. wherever required and making good walls, floors, duct etc. Core Cutting in RCC Structure shall measured separately.					
i	50 mm. O.D.	Mtr.	200.00			
ii	63 mm. O.D.	Mtr.	200.00			
14.02	Providing and Fixing, water test and commission Drainage Pipe Work with uPVC SWR Pipes (IS 13592) Type - B, solvent cement welded type, and SWR solvent cement welded type fittings such as bends, tees, couplers, Y-junctions, reducers, adaptors, sockets, end plugs etc. jointed with solvent cement and fixing in position with clamps, hanging supports, fasteners, masonry supports etc, as per requirement, including cutting, chasing, drilling etc, in Block Walls etc. wherever required and making good walls, floors, duct etc. Core Cutting In RCC Structure shall measured separately.					
i	75mm. O.D.	Mtr.				

Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
			210.00			
ii	110mm. O.D.	Mtr.	450.00			
II	<b>FLOOR TRAPS AND ACCESSORIES</b>					
14.03	Providing and Fixing <b>uPVC Floor Traps with deep seal</b> including all inlet and outlet connections to pipes using solvent cement, complete.	Set	16.00			
14.04	Providing and Fixing Stainless Steel Gratings and Cockroach Trap, from for Floor Traps.	Set	16.00			
	<b>TOTAL FOR SOIL, WASTE AND VENT SYSTEMS</b>					
<b>15.00</b>	<b>COLD WATER SUPPLY SYSTEM</b>					
15.01	CONCEALED PIPE WORK					
	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for Cold Water Supply, including all CPVC plain & brass threaded fittings, i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge.					

Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
i	15 mm. dia. (1/2").	Mtrs.	200.00			
ii	25 mm. dia. (1")	Mtrs.	200.00			
15.02	<b>VALVES AND ACCESSORIES</b>					
i	Providing and fixing Brass Stop Cock (Item can be Forged Brass Ball Valves, as per final requirement) of approved quality :					
a	15mm.	Nos.	20.00			
	<b>TOTAL FOR COLD WATER SUPPLY SYSTEM</b>					
16.00	<b>EXTERNAL WORK</b>					
	<b>All quantities in this section are approximate only and shall vary as per final requirement and site conditions.</b>					
16.01	<b>EXTERNAL (UNDER GROUND) SOIL, WASTE &amp; VENT SYSTEM</b>					
i	<b>UNDER GROUND SOIL, WASTE &amp; VENT PIPE WORK.</b>					
	Providing, fixing, water test and commission Under Ground Drainage Pipe Work with uPVC Pipes 6Kg/Cm <sup>2</sup> (IS: 4985) jointed and laid in trenches with required slopes, as specified, and kept in position with masonry supports, thrust blocks, anchors, vent pipe etc.					

Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
a	110mm. O.D.	Mtr.	300.00			
ii	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), in side cement plaster 12 mm thick with cement mortar 1:3 (1 B994 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 :					
a	0.91 m deep with Heavy Duty Cast Iron cover and frame 560 mm internal diameter conforming to I.S. 1726, total weight of cover and frame to be not less than 208 kg (weight of cover 108 kg and weight of frame 100 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) :	Nos.	16.00			
16.02	EXTERNAL WATER SUPPLY SYSTEM					
	UNDER GROUND PIPE WORK.					

Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
	<b>Note: As per CPWD Rates, higher Sizes, 50mm. and above, CPVC Pipes and Fittings are costly compared to other Piping System. Hence for higher sizes of Pipes and Fittings for External Water Supply System, High Pressure PVC Sch. 80 Pipes and Fittings are advisable. Hence the proposal and rates.</b>					
i	Providing, fixing, pressure test and commission Under Ground Under Ground Cold Water Services Pipe Work, with High Pressure uPVC Pipes, Sch. 80 (ASTM D 1785) and high pressure fittings, Sch. 40 (ASTM D 2467) such as bend, tees, couplers, reducers, unions, flanges, male and female threaded couplings, adaptors, sockets, end plugs etc. jointed with solvent cement for pressure pipes & fittings and laid in trenches, as specified, and kept in position with masonry supports, thrust blocks, anchors etc.					
a	65mm. Dia.	Mtr.	200.00			
ii	Excavating trenches of required width for pipes, including excavation for sockets, depth up to 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 :					
	In all kinds of Soil					
a	Pipes not exceeding 80mm. dia.	Mtr.	200.00			



Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
	<b>TOTAL FOR EXTERNAL WORK</b>					
	<b>GRAND TOTAL FOR CIVIL WORKS - PART A</b>					
	<b>PART B - ELECTRICAL WORKS</b>					
<b>1</b>	<b>Metering Panel for ware houses &amp; SB for workshop</b>					
	Design fabrication, supply at site , installation, erection testing and commissioning of the following cubicle type fully compartmentalised dust tight, vermine proof L.T. Switch boards fabricated out of 1.626mm thickness CRCA sheet powder coated as per standards and having appropriate rating busbars & earth bus and of approved shade. The busbars should be of suitably rated TPN Aluminium having the specified normal and short circuit capacities and should be insulated with heat shrinkable colour coded PVC sleeves and supported by DMC/SMC pillar/finger type busbar supports. Design and fabrication of the switch boards should be as per standards of State electrical inspectorate, K.S.E.B, and Bureau of Indian standards. The board shall be completed with earth bus of adequate capacity and double earth connection to all switches. Internal rigid connection etc. complete with hinged doors, name plates, heavy duty rubber gaskets, removable gland plates. Panel drawings should get prior approval from the consultants before fabrication.					
1.1	<b>Metering panel 1,2,3,</b>	No	3.00			
	Incomer					
	Space and provision for 3 phase energy meter , 3 numbers 63 A HRC fuse base with 32 A fuse , 63 A neutral link one number.					
	<b><u>OUT GOING</u></b>					

Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
	63 A,TPN 25 KA, MCCB TM release - 1 Nos					
1.2	<b>SB for work shop</b>	No	1.00			
	Incomer					
	125 A TP MCCB with TM release 1 No					
	RYB indicator 1No					
	<b><u>OUT GOING</u></b>					
	50 to 63 A,TPN 25 KA, MCCB TM release - 5 Nos					
<b>2</b>	<b>Cabling</b>					
	Supplying of XLPE insulated, heavy duty, aluminium conductor. 1.1KV grade armoured. MV cable of the following sizes as required, generally conforming to IS:1554/Part-I/1970					
2.1	3.5Cx 50 Sqmm Ar, Al.	Meter	125.00			
2.2	4Cx25 Sqmm Ar, Al.	Meter	75.00			
2.3	4Cx16 Sqmm Ar, Al.	Meter	250.00			
2.4	4Cx10 Sqmm Ar, Al.	Meter	100.00			
3	Laying and fixing of one number PVC insulated and PVC sheathed/ XLPE power cable of 1.1 KV grade of following size in the existing masonry open duct as required					
3.1	Upto 35 sq. mm	Meter	100.00			
3.2	Above 35 sq. mm and upto 95 sq. mm	Meter	100.00			
4	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 requires					
4.1	Upto 35 sq. mm (clamped with 1mm thick saddle)	Meter	100.00			

Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
4.2	Above 35 sq. mm and upto 95 sq. mm (clamped with 25x3mm MS flat clamp)	Meter	25.00			
5	Laying and fixing of one number PVC insulated and PVC sheathed/ XLPE power cable of 1.1 KV grade of following size on cable tray as required.					
5.1	Upto 35 sq. mm (clamped with 1mm thick saddle)	Meter	225.00			
6	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.					
6.1	3.5Cx 50 Sqmm Ar, Al.	Each	2.00			
6.2	4Cx25 Sqmm Ar, Al.	Each	2.00			
6.3	4Cx16 Sqmm Ar, Al.	Each	12.00			
6.4	4Cx10 Sqmm Ar, Al.	Each	4.00			
6.5	3Cx6 Sqmm Ar, Al.	Each	4.00			
7	<b>CABLE TRAY</b>					
	Supplying and installing following size of perforated pre-painted M.S. cable trays with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc as required.					
7.1	100 mm width X 50 mm depth X 1.6 mm thickness	Mtr	1,000.00			
7.2	150 mm width X 50 mm depth X 1.6 mm thickness	Mtr	500.00			

Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
8	Supplying and installing following size of perforated pre-painted M.S. cable trays bends with perforation not more than 17.5%, joined with connectors, suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc as required.					
8.1	100 mm width X 50 mm depth X 1.6 mm thickness	No	60.00			
8.2	150 mm width X 50 mm depth X 1.6 mm thickness	No	40.00			
<b>9</b>	<b>Earthing</b>					
9.1	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/ coke and salt as required.	Set	8.00			
9.2	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 arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required.	Set	8.00			
9.3	Supplying and laying 6 SWG G.I. wire at 0.50 metre below ground level for conductor earth electrode, including connection/ termination with GI thimble etc. as required. Including welding, tinning, fastners etc. Complete	Meter	120.00			
9.4	Providing and fixing 50 mm x 6 mm GI strip on surface or in recess for connections etc. as required. Including welding, tinning, fastners etc. Complete	Meter	200.00			
9.5	Providing and fixing 4mm dia copper wire on surface or in recess for loop earthing as required. (8 SWG) Including welding, tinning, fastners etc. Complete	Meter	120.00			
9.6	Providing and fixing 10SWG copper wire on surface or in recess for loop earthing as required Including welding, tinning, fastners etc. complete.	Meter	300.00			

Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
9.7	Providing and fixing 25 mm X 3 mm copper strip on surface or in recess for connections etc. as required. Including welding, tinning, fastners etc. Complete	Meter	50.00			
	<b>Total for Sub Head 1</b>					
<b>10</b>	<b>SAFETY ITEMS</b>					
10.1	Supplying of non skid rubber mat 12mm thick and 900 mm width.	Each	5.00			
10.2	Supplying of fire bucket painted red & approved quality (set of 4 buckets).	Set	8.00			
10.3	Supplying and fixing danger plate 440 volts written in two languages.	Each	8.00			
10.4	Supply and fixing carbondioxide fire extinguisher type 4.5 kg capacity.	Each	12.00			
10.5	Supplying of first aid box.	Each	4.00			
10.6	Supplying and fixing of shock treatment chart.	Each	4.00			
10.7	Hand gloves suitable for 415 V	Each	4.00			
	<b>Total for Sub Head 2</b>					
<b>11</b>	<b>WIRING</b>					
11.1	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.	No	40.00			
11.2	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 platesuitable GI box and earthing the point with 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable etc. as required.	No	8.00			

Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
12.0	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 as required					
12.1	2 X 1.5 sq. mm + 1 X 1.5 sq. mm earth wire	Meter	250.00			
12.2	2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire	Meter	500.00			
12.3	2 X 4 sq. mm + 1 X 4 sq. mm earth wire	Meter	500.00			
12.5	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 amps modular socket outlet and 5/6 amps modular switch, connection etc. as required. (For light plugs to be used in non residential buildings).	No	32.00			
12.6	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 amps modular socket outlet and 15/16 amps modular switch, connection etc. as required.	No	32.00			
13.0	Supplying and fixing brass batten/ angle holder including connection etc. as required.	No	12.00			
14.0	Supply all materials and installation of 32A FOUR POLE MCB Isolator with Metal enclosure with all accessories and giving connections.	Each	32.00			
14.1	Supply all materials and laying of 4 core 4 sq.mm Ar. Copper cable	Each	700.00			
14.2	Supply all materials and providing end termination of 2cx 2.5, 4x2.5 and 4c x 4sq.mm copper cable	Each	40.00			
15.0	<b>WARE HOUSE/WORK SHOP CEILING LIGHTING</b>					
15.1	Supply all materials and installation of 6A MCB isolator with Metal enclosure with all accessories and giving connections.	Each	36.00			
15.2	Supply all materials and laying of 2 core 2.5 sq.mm Ar. Copper cable with clamps on cable tray /ceiling	Each	1,500.00			

Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
15.3	Supply all materials and laying of 4 core 2.5 sq.mm Ar. Copper cable with clamps on cable tray /ceiling	Each	100.00			
15.4	Supply all materials and providing end termination of 2cx 2.5, 4x2.5 and 4c x 4sq.mm copper cale	Each	240.00			
<b>16.0</b>	<b>Supply and installation of light fittings</b>					
16.1	LED single tube light fittings of 22 w (Osram Luxline G2 LED Batten )with base frame and all accessories	No	8.00			
16.2	LED High Bay light fittings with LED of 80 w,5700k, around 9400 LM with base frame (Osram Luxpower high bay LED) and all accessories and cable termination box etc. Complete	No	152.00			
16.3	8 W LED BULB with drive	No	12.00			
16.4	Supply and installation of 305MM single phase , exhaust fan	No	8.00			
16.5	Supply and installation of 1000 CFM hi static exhaust fan with all accessories	No	16.00			
	<b>DISTRIBUTION BOARDS</b>					
<b>17.0</b>	<b>MCB/MCCB DB</b>					
	Supplying and fixing of following ways surface/ recess mounting, vertical type, 415 volts, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200 amps tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCB's (but without MCB's and incomer ) as required.					
17.1	8way Double door	No	4.00			
	Supplying and fixing of following ways surface/ recess mounting 415 volts, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200 amps tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCB's (but without MCB's and incomer ) as required.					
17.2	8way Double door	No	1.00			

Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
17.3	Supplying and fixing following rating, four pole, (three phase and neutral), 415 volts, residual current circuit breaker (RCCB), having a sensitivity current 30 milliamperes in the existing MCB DB complete with connections, testing and commissioning etc. as required. 63 A	No	4.00			
17.4	Supplying and fixing following rating, four pole, (three phase and neutral), 415 volts, residual current circuit breaker (RCCB), having a sensitivity current 30 milliamperes in the existing MCB DB complete with connections, testing and commissioning etc. as required. 40 A	No	1.00			
17.5	Supplying and fixing following rating, four pole, 415 volts, 40A isolator in the existing MCB DB complete with connections, testing and	No	5.00			
17.6	Supplying and fixing following rating, four pole, 415 volts, 63A isolator in the existing MCB DB complete with connections, testing and	No	2.00			
17.7	Supplying and fixing 5 amps to 32 amps rating, 240/415 volts, "C" curve, miniature circuit breaker suitable for inductive load	No	144.00			
18.0	<b>STREET LIGHT /YARD LIGHTS</b>					
18.1	Single arm Standard 9M overall High GI Octagonal street lighting pole, with 1.5m over hung, 400x400x12mm thick base plate, Junction Box suitable for 2nos 4Cx25sqmm, 2nos of 3Cx2.5 cu cable, MCB, cable entry pipe, civil foundation etc.,	Nos	8.00			
19.0	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.					
19.1	Above 8.0 metre and upto 10.0 metre	Each	8.00			
	<b>Total for Sub Head</b>					
20.0	<b>YARD LIGHT FITTINGS</b>					



Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
20.1	Supplying and fixing of 32 mm dia X 2.00 metres long G.I. pipe (medium class) bracket for mounting of fluorescent / HPMV / HPSV street light fitting on pole including bending the pipe to the required shape, 2 nos 40 mm X 3 mm flat iron clamps with nuts, bolts and washer, painting the flat iron with primer and finish paint etc. as required.	Each	8.00			
20.2	1X110W LED Street light fitting with LED lamp with driver all necessary acces.	Each	8.00			
20.3	Supply all materials and installation of 6A MCB with PVC enclosure including minor civil works	Each	8.00			
20.4	Supply all materials and laying of 2 core 2.5 sq.mm Ar. Copper cable	Each	200.00			
20.5	Supply all materials and laying of 4 core 2.5 sq.mm Ar. Copper cable	Each	150.00			
20.6	Supply all materials and providing end termination of 2cx 2.5, 4x2.5 and 4c x 4sq.mm copper cale	Each	24.00			
	<b>Total for Sub Head</b>					
21	<b>STATUTORY APPROVAL AND LAISON WORKS</b>					
	Preparation, submission of drawings of SDF to Electrical inspectorate and obtaining approval, arranging inspection for entire installation including Generator and wiring ,obtaining sanction orders for the electrical installation, complete. Including all incidental expenses except the fees payable to the electrical inspectorate with valid receipts from the authorities and Preparation, submission of drawings of Total Electrical INSTALLATION to KSEB and obtaining Sanction, arranging inspection for entire installation by KSEB including Generator and wiring obtaining sanction orders for the electrical installation, complete. Including all incidental expenses except the fees payable to the KSEB with valid receipts from the authorities.	Each	1.00			
	<b>Total for Sub Head</b>					

Item No.	Description of items	Unit	Quantity	Rate (Rs.)		Amount (Rs.)
	Grand Total for Electrical works - Part B					
	GRAND TOTAL FOR PART A & B					
	TOTAL (RUPEES.....)					
	I / We agree to carry out the above works at the above rates quoted. I / We understand that the detailed shop drawings required for the items has to be submitted by us and shall be approved by the Consultant / INKEL after evaluation. The payment shall be based on the actual quantities of works undertaken as measured and certified by the Consultant/ Engineer -in-charge of INKEL. Based on the rates quoted the total amount of Contract as per above BOQ is Rs...../- (In words : Rupees ..... .)					
	Signature with seal					
	Name & Address of Contractor					
	Place & Date					