

ANDREW YULE & COMPANY LIMITED
(A Government of India Enterprise)
Chennai (Operation), Electrical Division
5/346 OLD MAHABALIPURAM ROAD
PERUNGUDI, CHENNAI: 600 096

**TENDER DOCUMENTS FOR CIVIL & SANITARY WORK FOR THE PROPOSED EXPANSION OF
FACTORY BUILDING AT OUR PERUNGUDI WORKS**

ANDREW YULE & CO. LTD. invites e-Tender under single stage two part system (Part I: Techno-Commercial Bid and Part II: Price Bid) for finalizing contract for Civil & sanitary work for the proposed expansion of factory building at our Perungudi Works, "Scope of Work / Technical Specification" as specified in this tender document.

Tender document may be downloaded from MSTC website www.mstcecommerce.com/eprochome/aycl. Corrigenda or clarifications, if any, shall be hosted on the above mentioned websites only.

AYCL reserves the right to accept or reject any tender.

We request you to submit your offer for Civil & sanitary work for the proposed expansion of factory building at our Perungudi Works (DETAILED TECHNICAL SPECIFICATION SHEET ENCLOSED IN ANNEXURE VI)

Any clarification or additional information if required, the tenderer should call on us to get those things clarified. Detailed

VALIDITY: Your offer should be valid for acceptance for a minimum period of 60 days from the date of tender opening.

The buyer reserves the right to accept or reject any or all the tenders or to waive any informality, minor deviation or omission without assigning any reasons whatsoever.

Schedule of Tender

1.	TENDER NO.	<u>T-14/2016-17</u>
2.	MODE OF TENDER	e-Procurement System Online submission of Part I - Techno-Commercial Bid and Part II - Price Bid through www.mstcecommerce.com/eprochome/aycl The intending bidders are required to submit their offer electronically through this e-tendering portal. No physical tender is acceptable by AYCL/MSTC
3.	E-Tender No. / Event No.	AYCL/Electrical Division CO/56/16-17/ET/194
4.	Date of publication of e-Tender through publication MSTC/AYCL websites and Central Public Procurement Portal	06.01.2017
5.	Date of availability of NIT to the Vendors for downloading	06.01.2017
6.	Earnest Money Deposit	<ul style="list-style-type: none"> • Earnest Money Deposit” of Rs.20,000 (Rupees Twenty Thousand only) should be paid by thro' NEFT/RTGS • Other document as described in Annexure II & III
7.	Date of Starting of e-Tender for submission of Online Techno-Commercial Bid and Price Bid at www.mstcecommerce.com/eprochome/aycl	06.01.2017- 11.00 AM
8.	Date of closing of Online e-tender for submission of Techno-Commercial Bid & Price Bid at www.mstcecommerce.com/eprochome/aycl	21.01.2017 -11.00 AM
9.	Last date of submission/ uploading details of EMD & other documents at www.mstcecommerce.com/eprochome/aycl	21.01.2017 -11.00 AM
10.	Date & time of opening of Part-I (Techno-Commercial Bid)	21.01.2017 – 11.30 AM
11.	Date & time of opening of Part-II (Price Bid)	To be intimated to the eligible vendor separately by email.

List of Annexure

Important Instructions for E-procurement -	Annexure-I
Terms & Conditions	Annexure-II
General Terms& Conditions	Annexure-III
Online Techno commercial terms	Annexure-IV
Price Sheet	Annexure-V
Technical Specification	Annexure-VI

Important Instructions for E-procurement

This is an e-procurement event of ANDREW YULE & COMPANY LTD Ltd.

You are requested to read the Terms & Conditions (Annexure- II,III,IV) of this tender before submitting your online tender. Tenderers who do not comply with the Conditions with documentary proof (wherever required) will not qualify in the Tender for opening of Price Bid.

1. Process of E-tender:

A) **Registration:** The process involves vendor's registration with MSTC e-procurement portal which is free of cost. Only after registration, the vendor(s) can submit his/their bids electronically. Electronic Bidding for submission of Techno-Commercial Bid as well as Price Bid over the internet will be done. The Vendor should possess Class III signing type Digital Signature Certificate. Vendors are to make their own arrangement for bidding from a PC connected with Internet. MSTC is not responsible for making such arrangement. (Bids will not be recorded without Digital Signature).

SPECIAL NOTE: THE PRICE BID AND THE COMMERCIAL BID HAS TO BE SUBMITTED ON-LINE AT www.mstcecommerce.com/eprochome/aycl

- 1) Vendors are required to register themselves online with www.mstcecommerce.com → e-Procurement → PSU / Govt. depts. → Register as Vendor under AYCL- Filling up details and creating own user id and password → Submit.
- 2) Vendors will receive a system generated mail confirming their registration in their email which has been provided during filling the registration form.

In case of any clarification, please contact MSTC/AYCL (before the scheduled time of the e-Tender).

Contact person (ANDREW YULE & COMPANY LTD):

1. Mr. A T E Pandian
Manager (Materials)
Ph. No: (044) 2496-0793
Email: atepandian@andrewyule.com

2. Mr Kingsley Rueben
Technical Assistant (EDP)
Mobile No: 91 9884446378
Email: reuben@andrewyule.com

3. Mr. R. Tamilselvan
Assistant Manager (Materials)
Mobile. No: 91 9788520864
Email: tamilselvan@andrewyule.com

Contact person (E-Commerce, MSTC Ltd):

- | | |
|---|---|
| 1. Mr. Arindam Bhattacharjee | 2) Mr. Sabyasachi Mukherjee |
| Deputy Manager (E-commerce) | Assistant Manager (E-commerce) |
| MobileNo: 09330102643 | Mobile- 07278030407 |
| Email: arindam@mstcindia.co.in | Email: smukherjee@mstcindia.co.in |
| Landline: (033) 22901004 | |

Ms Sumona Maity
Management Trainee (E-Commerce)
Mobile-09831155225
Email: smaity@mstcindia.co.in

System Requirement:

- i) Windows XP-SP3 or above / Windows 7 Operating System
 - ii) IE-7 or above Internet browser.
 - iii) Signing & Encryption type digital signature
 - iv) JRE 7 update 79 software to be downloaded and installed in the system. Security level should be medium
 - v) To enable ALL active X controls and disable 'use pop up blocker' under Tools → Internet Options → custom level (Please run IE settings from the page www.mstcecommerce.com once)
2. Part-I: Uploading of EMD & other Documents:

Within specified Date & time the vendor must submit the documents as per the Annexure. (Annexure II & II (A))

Bidding in e-Tender:

- a. No interest will be paid on EMD. EMD of the unsuccessful bidder(s) will be refunded by ANDREW YULE & COMPANY LTD. EMD to be paid along with the Document within the last date as mentioned in SOT.
- b. The process involves Electronic Bidding for submission of Techno Commercial Bid as well as Price Bid.
- c. The bidder(s) should submit their Techno Commercial Bids , upload payment details of EMD & other documents and Price Bid through online in MSTC website www.mstcecommerce.com → e-procurement → Psu / Govt depts. → Login under AYCL → My Menu → Auction Floor Manager → live event → Selection of the live event.

- d. The bidder should allow to run an application namely en Apple by accepting the risk and clicking on run. This exercise has to be done twice immediately after opening of Bid floor. Then they have to fill up Common terms /Commercial specification and save the same. After that clicking on the Techno-Commercial bid, if this application is not run then the bidder will not be able to save / submit his Techno-Commercial bid.
- e. After filling the Techno-Commercial Bid, bidder should click 'save' for recording their Techno-Commercial bid. Once the same is done, the Price Bid link becomes active and the same has to be filled up and then bidder should click on "**Save**" to record their Price Bid. Then once both the Techno-Commercial bid & Price Bid has been saved, the bidder can click on the "**Submit**" button to register their bid.
- f. Vendors are instructed to use link in **My Menu** to **Upload Documents** in document library. Multiple documents can be uploaded. Maximum size of single document for upload is 5 MB.
- g. Once documents are uploaded in the library, vendors can attach documents through *Attach Document* link against the particular tender. For further assistance please follow instructions of vendor guide.
- h. In all cases, bidder should use their own ID and Password along with Digital Signature at the time of submission of their bid.
- i. During the entire e-tender process, the bidders will remain completely anonymous to one another and also to everybody else.
- j. The e-tender floor shall remain open from the pre-announced date & time and for as much duration as mentioned above.
- k. Techno-Commercial bid will be opened electronically on specified date and time as given in the NIT. Bidder(s) can download Technical Comparative statement.
- l. Price bid will be opened electronically on specified date and time given in the NIT. Bidder(s) can download Price Comparative statement.
- m. All entries in the tender should be entered in online Technical & Commercial Formats without any ambiguity.
- n. All electronic bids submitted during the e-tender process shall be legally binding on the bidder. Any bid will be considered as the valid bid offered by that bidder and acceptance of the same by the Buyer will form a binding contract between Buyer and the Bidder for execution of supply. Such successful tenderer shall be called hereafter **SUPPLIER**.
- o. It is mandatory that all the bids are submitted with Digital Signature Certificate otherwise the same will not be accepted by the system.
- p. Buyer reserves the right to cancel or reject or accept or withdraw or extend the tender in full or part as the case may be without assigning any reason thereof.

- q. No deviation of the terms and conditions of the tender document is acceptable. Submission of bid in the e-tender floor by any bidder confirms his acceptance of terms & conditions for the tender.
- s. Unit of Measure (UOM) is indicated in the e-tender Floor. Rate to be quoted should be in Indian Rupee as per UOM indicated in the e-tender floor/tender document.

E-tender cannot be accessed after the due date and time mentioned in NIT.

All notices / corrigendum and correspondence to the bidder(s) shall be sent by email only during the process till finalization of tender by ANDREW YULE & COMPANY LTD/MSTC LTD. Hence the bidders are required to ensure that their corporate email I.D. provided is valid and updated at the stage of registration of vendor with MSTC. Bidders are also requested to ensure validity of their DSC (Digital Signature Certificate).

Any order resulting from this open e-tender shall be governed by the terms and conditions mentioned therein.

No deviation to the technical and commercial terms & conditions are allowed.

ANDREW YULE & COMPANY LTD has the right to cancel this e-Tender without assigning any reason thereof.

The online tender should be submitted strictly as per the terms and conditions and procedures laid down in the website www.mstcecommerce.com/eprochome/aycl of MSTC Ltd.

The bidders must upload all the documents required as per terms of NIT. Any other document uploaded which is not required as per the terms of the NIT shall not be considered.

The bid will be evaluated based on the filled-in technical & commercial formats.

Bidders are requested to read the vendor guide and see the video in the page www.mstcecommerce.com/eprochome/mstc of MSTC Ltd. to familiarize them with the system before bidding.

**ANDREW YULE & COMPANY LIMITED
Electrical Division
Chennai-Operation**

General Information

Ref. Tender No.: T-14/16-17

(This document should be uploaded along with EMD)

The applicants are required to furnish full information to the queries included in this form. In giving the particulars, the supporting documents/certificates as called for per queries at places, must be tagged with the application for evidencing the information furnished in the application.

1. Name of the firm in full :

2. Address, Telephone No.,

Fax No. & E-mail :

a) Address :

b) Telephone No. :

c) Fax No. :

d) E-mail ID :

3. Status of the organization :

4. Trade License No.

**(Please attach a photo
copy of the license)** :

5. Banker's name

(a) Name of the Bank :

(b) Name of the Branch :

(c) Account No. :

Note : A copy of Banker's Certificate to be attached.

6. Sales tax Registration No.

(a) Central :

(b) State / VAT :

7. I. T. Permanent Account No.:

8. Financial Capacity : Year (2014-2015)

(a) Fixed capital :

(b) Working capital :

I/we hereby certify that the particulars furnished by me/us above are true to the best of my / our knowledge and belief and mis-representations of facts will render me/us liable to my/our action as may be deemed fit by Andrew Yule & Co. Ltd. (Chennai Operation) & have the sole discretion to reject or accept my/our candidature.

(Signature of the Applicant)
Office Stamp/Seal.

Place :

Date ;

List of attachments:

The following documents are to be uploaded online at

www.mstcecommerce.com/eprochome/aycl

1. EMD : Rs. 20,000/= *
* Bidders may request for exemption from submitting EMD (Refer details given in General terms & conditions)
2. Tender fee Rs: 200 /= should be paid by way of RGTS/ NEFT *
* Bidders participating in the tender should upload the UTR details towards cost of tender document.
3. The workmen employed shall be covered by you under ESI as per statutory provisions. The firm should have valid ESI & PF registration numbers. Copy of allocation letter and copy of latest remitted challan shall be uploaded
4. The firm should have valid Service tax registration Number and PAN numbers. Copy shall be uploaded

SI.	<u>QUALIFICATION CRITERIA :</u>
1	The Bidder should be a Company registered in India under the Indian Companies Act 1956 / partnership firm / proprietary firm
2	Should be a well-established contractor of long standing experience (minimum five years) in construction of multi-storied buildings with pile foundation and allied Works such as site grading, Road, Drains and Plumbing, etc
3	Should have financial and technical resources to carry out the work in the prescribed time limit and should have access to financial resource to sustain a contract cash flow of Rs.15 Lakhs per month.
4	Should have adequate machinery, equipments, tools, technical staff and adequate labour force for the proposed works and the list of the same to be enclosed with the tender
5	The bidder should not have been black listed from participating in any of the Tenders as per Tamilnadu Transparency in Tenders Act by Government of Tamilnadu as on date of submission of Bid. Self Declaration to be enclosed.
6	<p>The bidder should have successfully completed similar work during the last 7 years ending last day of the month previous to the one in which application are invited.</p> <p>Three Civil Construction Work costing not less than Rs.12/- Lakhs each. OR Two Civil Construction Work costing not less than Rs.15/- Lakhs each. OR One Civil Construction Work costing not less than Rs.24/- Lakhs</p>

GENERAL & TERMS AND CONDITIONS

- 1) EMD: Rs. 20,000.00 (Rupees Twenty thousand only), should be paid by way of RGTS/ NEFT.

For bidders already enlisted with AYCL- Chennai Operation, having outstanding amount more than the EMD amount or who have already submitted the EMD against our earlier tenders or those who have security deposit with Andrew Yule may apply for adjustment of the same.

Bidders who are MSMED units may apply for exemption from furnishing EMD by making a specific request in writing and enclosing the necessary document in support of the same.

Bidders whose turnover is more than Rs: 50 crores may apply for exemption from furnishing EMD by making a specific request in writing and enclosing the necessary document in support of the same

If reason for non-submission of EMD or adjustment against the outstanding balance for EMD is not mentioned in Techno-commercial bid of tender, the tender will be rejected.

2) THE RIGHTS OF THE COMPANY

Bidders who have quote other payment terms & condition having financial implication will be loaded as per Andrew Yule's norms.

We reserve the right to accept or reject any or all the tenders or to waive any informality, minor deviation or omission without assigning any reasons whatsoever.

Our Bank details for making RTGS payment.

Bank Name and Address	ALLAHBAD BANK CHENNAI ADYAR BRANCH 19,1ST STREET, PADMANABHA NAGAR CHENNAI 600 020
IFSC Code	ALLA0211103
Account No	20276303182
Account Name	ANDREW YULE & COMPANY LIMITED

3) ARBITRATION

If any dispute arises between the company and the contractor, as to the terms and conditions of the agreement or method of compliance thereof, the procedure as laid down in Indian Arbitration & Consolidation Act 1996 will be adhered to.

4) FORCE MAJEURE

In case of strike, accident, natural calamity, acts of god and other unforeseen contingencies causing stoppage of production at Andrew Yule Factory, Andrew Yule reserves the right to cancel and/or modify this contract without liability for compensation and/or claim of any description.

- 5) Security deposit - the EMD amount of the successful bidder will be retained as security deposit towards the execution of the order and the same will be released after completion of order.
- 6). Mobilisation advance will not be paid by us.
- 7) Payment will be made as follows:
 - a) 70% of running bills duly approved by our consultant within 15 days from submission.
 - b) 20% on completion of the job.
 - c) 10% will be held as RETENTION MONEY
8. EMD amount and the Retention Money will be released after the defects liability period of 6 months from the completion of work or 3 months after date of rectification of last defect, whichever is later. Alternatively the retention money can be released on submission of PBG for the equivalent value.
9. Water and power required for the construction purpose will be made available to you at site. You have to make your own arrangement for storage of water. Power will be given at a particular point and you have to make your own wiring arrangement for the various connections required for the work.
10. You have to make your own arrangements for all equipment, tools and tackles and labour required for the speedy completion of the work.
11. Time is the essence of the contract and you should complete the work within 2 (Two) months from the date of this order or handing over of site whichever is later. In case of any delay, penalty at the rate of 1/2% of the value of the contract will be levied per week subject to a maximum of 5% of the value of the contract.
12. You should take adequate cover under Workmen's compensation Act and also take Insurance cover against third party for injury, fire, riot, civil, commotion and shall take all statutory clearance including the Contract Labour (Regulation and Abolition) Act, and shall comply with the same.
13. The workmen employed shall be covered by you under ESI as per statutory provisions.
- 14 The workmanship should be first class and should conform to the latest IS Specifications. Andrew yule reserves the right to carryout inspection during the course of construction and also after the completion of the construction.
15. Payment will be made for the actual measurement of work completed .The method of measurement will be as per specification IS 1200.

16. The labourers will be subject to Security check while passing in or out of our main gate and inside the premises by our Security Personnel.

17. The statutory requirements like Minimum wage, insurance ESI, Income Tax and any other requirement imposed by Government will be followed as per procedure and the entire liability on account of the above is to your account.

**TECHNO-COMMERCIAL TERMS FOR CIVIL & SANITARY WORK FOR THE PROPOSED
EXPANSION OF FACTORY BUILDING AT OUR PERUNGUDI WORKS**

(To be filled online in mstc portal).

SL NO	TERMS & CONDITIONS	VENDOR RESPONSE
1	REQUIREMENT <i>E-Tender offers are invited for Civil & sanitary work for the proposed expansion of factory building at our Perungudi Works (DETAILED TECHNICAL SPECIFICATION SHEET ENCLOSED in ANNEXURE VI)</i>	AGREE
2	Validity period of the offer: Your offer should be valid for acceptance for a minimum period of 60 days from the date of tender opening.	AGREE
3	ARBITRATION If any dispute arises between the company and the contractor, as to the terms and conditions of the agreement or method of compliance thereof, the procedure as laid down in Indian Arbitration & Consolidation Act 1996 will be adhered to.	AGREE
4	RIGHTS OF THE COMPANY Bidders who have quote other payment terms & condition having financial implication will be loaded as per Andrew Yule's norms. The company reserves the right to accept any tender irrespective of whether it is lowest or otherwise or to reject any or all tenders without assigning any reason thereof.	AGREE
5	FORCE MAJEURE In case of strike, accident, natural calamity, acts of god and other unforeseen contingencies causing stoppage of production at Andrew Yule Factory, Andrew Yule reserves the right to cancel and/or modify this contract without liability for compensation and/or claim of any description.	AGREE
6	Legal condition: Any contract entered against this tender will be as per the following legal condition It is recorded that this purchase order / contract / agreement is executed and concluded by and between the parties hereto at premises No.5/346, Old Mahabalipuram Road, Perungudi, Chennai 600 096 and in the event any dispute arises out of this agreement between the parties only the appropriate Civil Court in the City of Kolkata shall have the exclusive jurisdiction to entertain, try and determine the said proceedings in exclusion of all other courts.	AGREE
7	Acceptance of general condition as per Annexure III & Technical specification of tender as per Annexure VI	AGREE
8	The statutory requirements like Minimum wage, insurance ESI, Income Tax and any other requirement imposed by Government will be followed as per procedure and the entire liability on account of the above is to your account	AGREE
9	PAYMENT TERMS: - 1) 70% of running bills duly approved by our consultant within 15 days from submission. 2) 20% on completion of the job.	AGREE

	3) 10% will be held as RETENTION MONEY Tax Deduction at Source and WCT deduction will be applicable on the payment.	
10	Income tax PAN number to be UP LOADED	Remarks field
11	Service Tax Registration No. Proof to be UP LOADED	Remarks field
12	The firm should have valid ESI & PF registration numbers. Copy of allocation letter and copy of latest remitted challan shall be enclosed. UP LOADED	Remarks field
13	EMD : Rs. 20,000/= * UP LOADED * Bidders may request for exemption from submitting EMD (Refer details given in General terms & conditions)	Remarks field
14	Tender fee Rs: 200 /= should be paid by way of RGTS/ NEFT * UP LOADED * Bidders participating in the tender should upload the UTR details towards cost of tender document.	Remarks field
15	Applicable taxes & duties for the various constituents of the price bid should indicated in the Remarks filed or uploaded	Remarks field
16	The Bidder should be a Company registered in India under the Indian Companies Act 1956 / partnership firm / proprietary firm * Proof to be UP LOADED	Remarks field
17	Should be a well-established contractor of long standing experience (minimum five years) in construction of multi-storied buildings with pile foundation and allied Works such as site grading, Road, Drains and Plumbing, etc* Proof to be UP LOADED	Remarks field
18	Should have financial and technical resources to carry out the work in the prescribed time limit and should have access to financial resource to sustain a contract cash flow of Rs.15 Lakhs per month. * Proof to be UP LOADED	Remarks field
19	Should have adequate machinery, equipments, tools, technical staff and adequate labour force for the proposed works and the list of the same to be enclosed with the tender * Proof to be UP LOADED	Remarks field
20	The bidder should not have been black listed from participating in any of the Tenders as per Tamilnadu Transparency in Tenders Act by Government of Tamilnadu as on date of submission of Bid. *Self Declaration to be enclosed.	Remarks field
21	The bidder should have successfully completed similar work during the ending last day of the month previous to the one in which application are invited. Three Civil Construction Work costing not less than Rs.12/- Lakhs each. OR Two Civil Construction Work costing not less than Rs.15/- Lakhs each. OR One Civil Construction Work costing not less than Rs.24/- Lakhs * Proof to be UP LOADED	Remarks field

**PRICE FORMAT FOR CIVIL & SANITARY WORK FOR THE PROPOSED EXPANSION OF
FACTORY BUILDING AT OUR PERUNGUDI WORKS**

SI.NO	DESCRIPTION	Unit of Measure ment	Quantity	Rate per (a)	Landed cost per No (In Rs) =a
	A) PROPOSED EXPANSION OF FACTORY BUILDING AT PERUNGUDI SANITARY & WATER SUPPLY WORKS				
1	Supplying, installing, testing and commissioning of approved make white glazed Wall Mounted European water closet "S" Trap with Slimline Cistern including necessary bend, check nut etc., white polypropylene solid seat and cover with polythene buffer and flap, CP flanges, CP bolts and nuts, etc. complete Make – Parry ware	NO	1		
2	Supplying, Installing, Testing and Commissioning of Rectangular wash basin, with 32mm dia CP waste coupling, 32 mm dia. CP bottle trap with extension pipe, Cl. wall brackets with a pair of SS screws to support the basin 1no. 15mm CP pillar cock , 1 no. 15mm CP angle valve with	NO	1		

	450mm long CP inlet connection pipe, CP wall flange all of approved make, etc. complete Make – Parry ware				
3	Supplying, installing and testing 15mm CP bib cock with CP flanges including necessary fixing materials etc., complete	NO	2		
4	Excavation in all types of Soft soil for laying pipes upto 300mm dia. including forming bottom surface to required level, refilling selected excavated earth around the pipe in layers 150mm thick, watering, consolidating and disposing off the surplus earth within the site as directed by the site engineer with a lead of 200M etc., complete Depth up to 2.0 M.	CU.M	10		
5	Supplying, fixing and testing PVC pressure pipes (6Kg/sq cm) confirming to IS 4985 for waste connection from wash basin, kitchen sinks to floor trap/anti siphonage pipe with solvent cement joints, including all the fittings, laid under floor/concealed in wall etc with necessary supports,	RM	70		

	the work shall include wall chase and making good the same in cement mortar etc., complete for 110mm dia				
6	Supplying, fixing and testing PVC pressure pipes (6Kg/sqcm) confirming to IS 4985 for waste connection from wash basin, kitchen sinks to floor trap/ anti siphonage pipe with solvent cement joints, including all the fittings, laid under floor/concealed in wall etc with necessary supports, the work shall include wall chase and making good the same in cement mortar etc., complete for 75 mm dia	RM	10		
7	Supplying, fixing and testing salt glazed stoneware gully trap with rebated top square bodies 150mm x 150mm, CI grating 100mm dia outlet set in 75mm thick PCC 1:4:8 bed, 115mm thick masonry chamber in CM 1:4, internal and external plastering 12mm thick in CM 1:6, supply and fixing 300mm x 300mm size CI frame and cover, jointing to drain in CM 1:1, excavating,	NO	2		

	refilling and ramming etc., complete				
8	Construction of inspection chamber with 230mm thick brick work over a bed of 100mm thick PCC 1:4:8, internal 'walls plastered in CM 1:3 and external wall with CM 1:3 with sponge finish, benching and channelling in PCC 1:4:8. Supplying and fixing CI 'square frame & cover of size 600 x 600mm (weight 135 Kgs.) PVC steps in position The quoted rate shall also include necessary excavation and back filling etc., complete. Clear internal size of the chamber 600 x 600mm maximum depth not exceeding 1200mm	NO	2		
9	Supplying, fixing and testing PVC floor trap (heavy duty hinged type) with brass CP frame and cover (150mm x 150mm). Trap of 100mm dia. Inlet and 75mm dia outlet fixed on a bed of cement concrete etc., complete	NO	1		
10	Supplying, installing, testing & commissioning approved make medium quality (Class 'B') GI pipes and fittings confirming to IS 1239 PI & II,	RM	20		

	Malleable Specials such as tees, elbows, checknuts, unions, flanges, nipples, etc including cutting, threading, fixing with necessary supports etc., complete for 20mm				
11	Supplying, installing, testing & commissioning approved make medium quality (Class 'B') GI pipes and fittings confirming to IS 1239 PI & II, Malleable Specials such as tees, elbows, checknuts, unions, flanges, nipples, etc including cutting, threading, fixing with necessary supports etc., complete for 25mm	RM	30		
	B) GENERAL BUILDERS WORK/CIVIL WORK				
12	EARTH WORK AND FILLING Clearing & Grubbing the ground, removal and disposal of top vegetative soil, small trees(less than 30 cm girth), bushes etc. including roots, stumps & logs or anything arising out of the clearing operation by mechanical means up to average depth of 75 mm from natural ground level. Collecting and Disposing the same debris (including loading, unloading &	Sqm	460		

	leveling) to outside the plant premises with contractor's own risk.				
13	Providing 450mm dia bore piles, 10m depth including reinforcement steel 10 nos, 10mm dia verticals and 8mm dia binders @ 200mm c/c. The rate inclusive of RCC M25 concrete.	RM	100		
14	Earthwork excavation in all kinds of soils except rock requiring blasting for any kind of foundation including for trenches, pits and tunnels etc., for the following depths below average ground level including shoring, strutting for protecting the sides of foundation, pumping, bailing of water so as to keep foundations in dry conditions at any stage of work and drain the water away from the site of work without any extra payment, levelling, ramming the bottom of excavation and also back filling sides of foundation with selected excavated earth in layers upto ground level including watering, consolidation and carting away and	Cum	85		

	<p>disposing of the surplus excavated earth at places shown within the site, unloading, spreading, levelling as directed including all leads and lifts, labour etc., all complete. If required, steel sheet soldier piling and propping the earth using 20 - 25 mm thick wooden batten in between the soldiers as directed by Engineer to protect the sides of excavation which will be paid for separately under relevant item. The rate to include for extra earth work required for providing shoring, strutting, steel soldier piling, working space etc. The length and breadth of bottom of foundation and depth from top of average ground level to bottom of foundation as shown in the drawing or as directed only shall be measured for payment irrespective of extra excavation done for steel soldier piling and for working space for any kind of works including water proof treatment works. Upto 1.50 Metre depth below average</p>				
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	ground level.				
15	<p>Providing Pre-constructional anti-termite treatment and creating a chemical barrier to the building by injecting chemical emulsion of required concentrations under raft slab and beam, under Cellular raft slab, around the footings, column pits, trenches, pits, tunnels, wall trenches, back fill, plinth filling, junction of wall and floor, side walls of foundation, external perimeter of building, surrounding of pipes expansion joints, etc. as per IS specification and as per the instructions of chemical manufacturer and all as directed. The treatment shall be carried out strictly in accordance with the technical</p>	Sqm	225		

	<p>specification and conforming to IS 6313 or equivalent BS specification.</p> <p>The chemical to be used as insecticides for the treatment shall be</p> <p>CHLOROPYRIPHOS 20% (or) 50% EC and the application shall be dilute one part of chemical 20% or 50% EC with 19 or 49 parts of water to get 1% emulsion and strictly in accordance with the manufacturer's specification. Note : Horizontal plan area at the top of cellular raft/ raft slab level of the building will be measured.</p>				
16	Filling sub grade with Quarry dust of approved quality including watering and consolidation.	Cum	60		
17	Supplying and filling with approved hill	Cum	190		

	<p>earth (or) selected earth / murrum / gravel brought from outside for back filling in foundation for footings, trenches sides and drain sides etc including filling in layers upto F.G.L.and watering ,consolidation etc,.complete as directed by Engineer-in-charge. Hill Earth (or) selected earth</p>				
18	<p>Plain and Reinforced concrete. Providing and laying required thickness of plain concrete of mix PCC 1:4:8 grade with 40mm and down size coarse graded hard stone aggregate in foundation at any mass concrete and other similar works at all levels and heights, elevations, mechanical mixing, transporting and placing at all lifts,</p>	Cum	12		

	vibrating, compacting, levelling, curing, shuttering, dewatering wherever necessary, the cost of all materials, labour, leads and lifts, tools and plant, machineries etc., complete as per specifications.				
19	Providing and laying plain cement concrete using coarse 1: 3: 6 graded aggregate of 25 mm down size for levelling course under ground floor etc. including laying layers of specified thickness in alternative bays not exceeding 10 sqm as directed including form work wherever necessary and well compacted etc. all complete, as directed.	Cum	22		
20	Providing & laying	Cum	6.80		

	<p>cast-in-situ controlled reinforced concrete of the following grades using 20mm and down size coarse graded machine crushed hard stone aggregate including designing the mix, weigh batching, mechanical mixing, transporting and placing at all lifts, vibrating, consolidating, curing and finishing smooth as required all exposed faces, complete for the following RC structural and other elements including centering, shuttering, form work either straight, curved, plain, tapered or sloped, supplying and mixing admixtures, dewatering wherever necessary, the cost of all</p>				
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	<p>complete materials, labour, all leads and lifts, tools, plant and machineries, hire and fuel charges and all other incidental charges etc., all as per specification. specifications, drawings and as directed, but excluding steel reinforcement, IRC mesh, insert plates which will be paid for separately under relevant items. The rates quoted shall hold good for all foundations at any depth, flooring, all floors, heights, levels, elevation, below ground level, basement, trenches, pits, tunnels etc. Note</p> <p>The designing of concrete mix for different grades of controlled concrete should be done in accordance with latest IS - SP 23.</p>				
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	<p>(Hand book on concrete mix design) in the field laboratory and the same should be got approved by the Engineer. Grade of concrete for all concrete works specified in BOQ as M-25 should be invariably followed :</p> <p>Wherever alternative items have been called for, in a particular item of work if there is any change in grade of concrete during execution the upward and downward variations that quantity of cement will be paid for or deducted at the rate of cement as mentioned by the Contractor elsewhere in the tender.</p> <p>M 25 Grade</p> <p>For all raft /pile cap</p>				
21	Plinth Beam	Cum	4		
22	RCC column &	Cum	4		

	pedestal upto FFL				
23	RCC column in superstructure	Cum	2		
24	RCC flooring M25	Cum	32		
25	RCC lintel	Cum	4		
26	RCC sunshade	Cum	1		
27	RCC cover slab 8mm thick	Sqm	44.2		
28	Steel Reinforcement: Supplying, fabricating and fixing in position MS bars conforming to IS-432/ High yield strength deformed bars conforming to IS-1786 of Fe 415 Grade of all dia for reinforcement in all RCC in situ works including flooring and precast works at all levels and heights above finished floor level and for foundations, trenches, pits, tunnels, lift pits etc., below finished floor	MT	4		

	level including cost of straightening, cutting, bending to shape fabricating and tying with 18 gauge GI binding wire, providing and fixing cement cover blocks, dewatering wherever necessary etc., all complete as per drawings and specifications and as directed by the Engineer. The rate to include cost of binding wire, cement cover blocks, all cuts and wastes which will not be measured. Only laid weight will be measured including authorised laps. Cuts and wastes will not be measured for payment.				
29	Supplying, fabricating and fixing in position inserts comprising edge angle, MS	MT	0.05		

	<p>angles, Chquired plates, tees, flats and other structural steel sections, holding down bolts, anchor bolts, anchor plates, pipe sleeves etc., in all cement concrete works at all levels and heights above finished floor level in foundation, trenches, pits, tunnels, lift pits etc., below finished floor level including cutting, bending to shape fabricating, drilling, threading, welding lugs etc., with all tools, tackles and labour as per design or as directed including a coat of primer of approved quality and painting the exposed surface with two coats of synthetic enamel paint of approved quality and colour etc., all complete as per drawings and as</p>				
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	directed.				
30	<p>Masonry Works:</p> <p>a) Only good approved quality locally available chamber burnt bricks shall be used with minimum compressive strength of 35 kg/sqcm</p> <p>b) The rates quoated for item below shall include leaving pockets for fixed hold fasts of doors, window and ventilator frames.</p> <p>c) The rate to include for scaffolding where necessary and curing and all materials and labour complete.</p> <p>Providing and constructing brick work with best quality well chamber table moulded bricks with minimum compressive strength of 35 Kg per Sqcm in cement mortar 1:5 in foundation and</p>	Cum	22		

	basements, etc. complete, all as directed.				
31	Providing and constructing brick work with best quality well chamber table moulded bricks with minimum compressive strength of 35 Kg per Sqcm in cement mortar 1:5 in GROUND FLOOR etc. complete, all as directed.	Cum	20		
32	Providing and constructing 115 mm thick masonry wall at all levels with approved best quality well chamber table moulded bricks with minimum compressive strength of 50 Kg/Sqcm in cement mortar 1:4 with reinforced cement concrete binders in 1:2:4 – 80 mm thick using coarse graded aggregate of 12 mm	Sqm	7		

	and downsize, reinforced with 4 nos. of 8 mm dia. tor steel and 6 mm dia. MS bar stirrups at 230 mm c/c and binders placed at intervals of not more than 1000 mm. Rate shall include for cost of reinforcements and 18 gauge GI annealed binding wires, form work, scaffolding, raking out joints, curing etc complete, all as directed.				
33	Plastering Works Providing and applying 15mm thick plaster for all internal brick masonry walls in C.M 1:4 in one coat at all levels with necessary scaffolding etc.	Sqm	300		
34	Flooring works Supplying and laying HDPE sheet of 200 micron thick with 300mm overlap over	Sqm	220		

	base to pavement concrete as directed by the Engineer				
35	Providing vacuum de-watered flooring operation consisting of providing side shuttering with MS channels, angles to the required levels, Vibrating the concrete by using screed vibrator, de-watering using vacuum pumps by suction method and finishing the top surface to required level and grade using skim floaters/discs/power trowels. Covering the finished concrete surface with 200 micron thick polythene sheet and curing etc., complete.	Sqm	210		
36	Providing grooves of size 3 mm wide and 15 mm deep on vacuum de-watering	R.M	120		

	floor surface at every 20 Sqm area grooves made by groove cutting machine with diamond cutting wheel and filling of the grooves with polysulphide sealant.				
37	Providing and laying ceramic non slippery kajaria floor tiles 300x300 mm (thickness to be specified by the manufacturer) of Ist quality conforming to IS of KAJARIA NITCO, or equivalent make in all colours shades except laid on 12 mm thick cement mortar 1:3 (1cement and 3 coarse sand) including pointing the joints with white cement and pigment of matching shade etc.,complete	Sqm	10		
38	Providing and fixing dadoing with best quality Kajaria or	Sqm	20		

	<p>approved equivalent make ceramic tiles ranges as listed below shall have size 300 x 200 x 6.5 mm minimum thick & laid with C.M 1: 3 , 12mm average thickness and finishing with ROOF TILE or Bal grout joint filler all as manufacturer's specification at all levels and as directed . Rate shall include for preparation of plastered surface, jointing, cleaning the surface with acid washing and protecting with plastic sheet laying the tiles in approved pattern with or without spacers etc., complete all as directed</p>				
39	Providing Grano flooring with 40mm thick	Sqm	50		
40	Aluminum works				

	<p>Providing and fixing colour anodised aluminium partition with partly glazed and partly with Novopan, open able and 1 no. side hung shutter hinged or pivoted, fabricated and fixed at all levels, elevations and heights. The aluminium extruded sections shall be of colour anodised - 15 Microns high strength and weight ratio joints mitred adjointed with die cast cleats with fins to match the sections of frames and shutters conforming to Indal Sections. The rate includes 5 mm thick float glass plain (or)tinted of approved make for all glazing with snap fit aluminium beading and special PVC weather proof gasket blinery etc.,</p>	Sqm	50		
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	complete as per specification for various structural openings and all as per IS and approved make but including cost of supplying and fixing hardware fittings in hinges, lock and tower bolt etc.a) 2.5m height				
41	Providing and fixing louvered ventilator fabricated out of anodised aluminium sections sections 9835 with adjustable aluminium louvre system, handles, cill section and 5 mm pinhead glass louvers with edges ground all.	Sqm	1.44		
42	ROLLING SHUTTERS & EMERGENCY DOOR: Providing and erecting in position including assembling, fittings and fixing MS gear type approved make rolling shutter	Sqm	24		

	<p>with pressed MS guide channels of size 75 x 25 mm -- 10 gauge bracket plate, reinforced lock plate with necessary locking arrangement on both sides and the roller shaft of heavy "C" class pipe fitted with high tensile wire springs. Rate shall include to fix the guide channel wall and connected civil works and finished the surface neat etc. complete and all as per standard specifications as directed by the Engineer-in-Charge.</p>				
43	<p>Fabrication supply and fixing of hollow metal pressed steel doors outer frame profile size 125 x 60mm with suitable rebates and shutter made in 40 x 40 x 1.6mm square tube and both sides</p>	Sqm	2.88		

	covered with 18 SWG CR sheet with necessary stiffeners and mineral wool infill, , vision panel including one coat of zinc chromate primer and two coats of synthetic enamel paint including cost of material, conveyance, labour charges, all taxes etc. complete including necessary fittings				
44	PAINTING WORKS Providing two coats of cement paint to plastered surface of approved colour and make over a coat of primer and full putty (smooth sanded) to give an even shade etc., including preparation of surface, scaffolding etc., complete at all levels, elevations an	Sqm	300		
45	Providing synthetic enamel paint 2 or more coats over a	Sqm	80		

	coat of primer for steel work at all levels.				
46	Miscellaneous Works: Fixing of anchor bolts in the concrete pedestals with anchor plate & pipe sleeve supplied as per above item to the required line & level inc. cost of template etc.,	Nos	20		
47	Providing plinth protection with precast RCC slab in concrete 1:2:4 using course graded aggregate of 20 mm and down size, slab size of 600 mm x 600 mm x 50 mm thick with 10 mm x 10 mm corner splay, top finished smooth, while wet and laid with a nominal slope over a sand bed of 75 mm thick including necessary excavation wherever neccessary and	Sqm	30		

	pointing the joints with cement mortar 1:3, 12 mm thick necessary formwork and nominal reinforcement. The end slab shall have 115 mm thick RCC retaining wall at the edge 300 mm height. The exposed faces of wall shall be plastered with cement mortar 1:4 - 20 mm thick. The rate include necessary formwork, curing and nominal reinforcement etc.				
48	Supply and grouting the space below base plate with Conbexa GP2 (Fosroc or equivalent)	Cum	0.2		
49	Providing and fixing in position readymade doors with Fibre reinforced polyester (FRP) frame and single leafed 30mm thick sandwich shutter of	Sqm	3.78		

	<p>approved size 750 mm x 2000 mm colour and shade etc. complete. The frame shall be of FRP of 75 mm x 50mm cross sections. The shutter shall have 1.5mm thick FRP skin made with gel coat and 2 layers of 300 gms of chopped strand mat on either side of block board core. Necessary resin coated wooden pieces to be placed and bonded in position to receive door fittings viz. 3 No. stainless steel butt hinges of IS make 75 mm size, 1 No. of 125 mm powdercoated aluminium handles and 1 No. powdercoated aluminium baby latch of approved make. (0.90 x 2.10 - 2 nos)</p>				
50	Providing and fixing Gypboard false	Sq.m	32		

	ceiling in position including all fittings accessories.				
51	Providing & fixing Gypwall Classic 75mm over all thick metal stud partition which includes one layer of regular Gypboard screw fixed with 25 mm Drywall screw at 300 mm centers to either side of 48 mm stud(0.55 thick having one flange of 34 mm and another flange of 36mm of G.I. steel) placed at 610mm center to center in 50 mm floor & top channel (0.55 mm thick having two flanges of 32mm each made of G.I. steel) with joints staggered to avoid through joint. Finally square and tapered edge of the board to be jointed and finished so as to have a flush look	Sq.m	20		

	<p>which includes filling and finishing jointing compound joint paper and two coats of Drywall top coat suitable for gypboard.</p> <p>(consider metal frame in GYPSTEEL ULTRA only.)Providing & fixing .50mm th. glass wool filling in the partition for sound insulation.</p>				
52	<p>Providing and laying paver blocks of 80mm thick M 25 grade from approved manufacturer over prepared well compacted sub grade with classic type blocks of approved colour in the pattern specified by Architects over 50mm thick sand cushion laid to the required levels and slopes including vibro compaction, all leads and lifts etc.</p>	Sq.m	50		

	complete (Samples of different lots of pavered blocks shall be tested for compressive strength before using in the works) (14.4 X 4.5M)				
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A) TECHNICAL SPECIFICATION:

TECHNICAL SPECIFICATION FOR			
PROPOSED EXPANSION OF FACTORY BUILDING AT PERUNGUDI			
SANITARY & WATER SUPPLY WORKS			
SI No	Description of work	Unit	Qty
1	Supplying, installing, testing and commissioning of approved make white glazed Wall Mounted European water closet "S" Trap with Slimline Cistern including necessary bend, check nut etc., white polypropylene solid seat and cover with polythene buffer and flap, CP flanges, CP bolts and nuts, etc. complete Make - Parryware	No.	1.00
2	Supplying, Installing, Testing and Commissioning of Rectangular wash basin, with 32mm dia CP waste coupling, 32 mm dia. CP bottle trap with extension pipe, Cl. wall brackets with a pair of SS screws to support the basin 1no. 15mm CP pillar cock , 1 no. 15mm CP angle valve with 450mm long CP inlet connection pipe, CP wall flange all of approved make, etc. complete Make - Parryware	No.	1.00
3	Supplying, installing and testing 15mm CP bib cock with CP flanges including necessary fixing materials etc., complete	No.	2.00
4	Excavation in all types of Soft soil for laying pipes upto 300mm dia. including forming bottom surface to required level, refilling selected excavated earth around the pipe in layers 150mm thick, watering, consolidating and disposing off the surplus earth within the site as directed by the site engineer with a lead of 200M etc., complete Depth upto 2.0 M.	Cu. m.	10.0
5	Supplying, fixing and testing PVC pressure pipes (6Kg/sqcm) confirming to IS 4985 for waste connection from wash basin, kitchen sinks to floor trap/antisiphonage pipe with solvent cement joints, including all the fittings, laid under floor/concealed in wall etc with necessary supports, the work shall include wall chase and making good the same in cement mortar etc., complete for 110 mm Dia	RM	70.0
6	Supplying, fixing and testing PVC pressure pipes (6Kg/sqcm) confirming to IS 4985 for waste connection from wash basin, kitchen sinks to floor trap/antisiphonage pipe with solvent cement joints, including all the fittings, laid under floor/concealed in wall etc with necessary supports, the work shall include wall chase and making good the same in cement mortar etc., complete for 110 mm Dia	RM	10.0

	75mm dia		
7	Supplying, fixing and testing salt glazed stoneware gully trap with rebated top square bodies 150mm x 150mm, CI grating 100mm dia outlet set in 75mm thick PCC 1:4:8 bed, 115mm thick masonry chamber in CM 1:4, internal and external plastering 12mm thick in CM 1:6, supply and fixing 300mm x 300mm size CI frame and cover, jointing to drain in CM 1:1, excavating, refilling and ramming etc., complete	No.	2.0
8	Construction of inspection chamber with 230mm thick brick work over a bed of 100mm thick PCC 1:4:8, internal 'walls plastered in CM 1:3 and external wall with CM 1:3 with sponge finish, benching and channelling in PCC 1:4:8. Supplying and fixing CI 'square frame & cover of size 600 x 600mm (weight 135 Kgs.) PVC steps in position The quoted rate shall also include necessary excavation and back filling etc., complete. Clear internal size of the chamber 600 x 600mm maximum depth not exceeding 1200mm	No.	2.0
9	Supplying, fixing and testing PVC floor trap (heavy duty hinged type) with brass CP frame and cover (150mm x 150mm). Trap of 100mm dia. Inlet and 75mm dia outlet fixed on a bed of cement concrete etc., complete	No.	1.0
10	Supplying, installing, testing & commissioning approved make medium quality (Class 'B') GI pipes and fittings confirming to IS 1239 PI & II, Malleable Specials such as tees, elbows, checknuts, unions, flanges, nipples, etc including cutting, threading, fixing with necessary supports etc., complete for 20 mm dia	RM	20.0
11	Supplying, installing, testing & commissioning approved make medium quality (Class 'B') GI pipes and fittings confirming to IS 1239 PI & II, Malleable Specials such as tees, elbows, checknuts, unions, flanges, nipples, etc including cutting, threading, fixing with necessary supports etc., complete for 25 mm dia	RM	30.0

**B) TECHNICAL SPECIFICATION FOR
PROPOSED EXPANSION OF FACTORY BUILDING AT PERUNGUDI
GENERAL BUILDERS WORK/CIVIL WORK**

Sl.no.	Description	Unit	Qty
A	EARTH WORK AND FILLING		
12	Clearing & Grubbing the ground, removal and disposal of top vegetative soil, small trees(less than 30 cm girth), bushes etc. including roots, stumps & logs or anything arising out of the clearing operation by mechanical means up to average depth of 75 mm from natural ground level. Collecting and Disposing the same debris (including loading, unloading & leveling) to outside the plant premises with contractor's own risk.	Sqm	460.00
13	Providing 450mm dia bore piles, 10m depth including reinforcement steel 10 nos, 10mm dia verticals and 8mm dia binders @ 200mm c/c. The rate inclusive of RCC M25 concrete.	RM	100.00
14	Earthwork excavation in all kinds of soils except rock requiring blasting for any kind of foundation including for trenches, pits and tunnels etc., for the following depths below average ground level including shoring, strutting for protecting the sides of foundation, pumping, bailing of water so as to keep foundations in dry conditions at any stage of work and drain the water away from the site of work without any extra payment, levelling, ramming the bottom of excavation and also back filling sides of foundation with selected excavated earth in layers upto ground level including watering, consolidation and carting away and disposing of the surplus excavated earth at places shown within the site, unloading, spreading, levelling as directed including all leads and lifts, labour etc., all complete. If required, steel sheet soldier piling and propping the earth using 20 - 25 mm thick wooden batten in between the soldiers as directed by Engineer to protect the sides of excavation which will be paid for separately under relevant item.		
	The rate to include for extra earth work required for providing shoring, strutting, steel soldier piling, working space etc. The length and breadth of bottom of foundation and depth from top of average ground level to bottom of foundation as shown in the drawing or as directed only shall be measured for payment irrespective of extra excavation done for steel soldier piling and for working space for any kind of works including water proof treatment works.		
	Upto 1.50 Metre depth below average ground level.	Cum	85.00

15	Providing Pre-constructional anti- termite treatment and creating a chemical barrier to the building by injecting chemical emulsion of required concentrations under raft slab and beam, under Cellular raft slab, around the footings, column pits, trenches, pits, tunnels, wall trenches, back fill, plinth filling, junction of wall and floor, side walls of foundation, external perimeter of building, surrounding of pipes expansion joints, etc. as per IS specification and as per the instructions of chemical manufacturer and all as directed. The treatment shall be carried out strictly in accordance with the technical specification and conforming to IS 6313 or equivalent BS specification. The chemical to be used as insecticides for the treatment shall be CHLOROPYRIPHOS 20% (or) 50% EC and the application shall be dilute one part of chemical 20% or 50% EC with 19 or 49 parts of water to get 1% emulsion and strictly in accordance with the manufacturer's specification.	Sqm	225.00
	Note : Horizontal plan area at the top of cellular raft/ raft slab level of the building will be measured.		
16	Filling subgrade with Quarry dust of approved quality including watering and consolidation.	Cum	60.00
17	Supplying and filling with approved hill earth (or) selected earth / murrum / gravel brought from outside for back filling in foundation for footings, trenches sides and drain sides etc including filling in layers upto F.G.L.and watering ,consolidation etc.,complete as directed by Engineer-in-charge		
	Hill Earth (or) selected earth	Cum	190.00
B	Plain and Reinforced concrete.		
18	Providing and laying required thickness of plain concrete of mix PCC 1:4:8 grade with 40mm and down size coarse graded hard stone aggregate in foundation at any mass concrete and other similar works at all levels and heights, elevations, mechanical mixing, transporting and placing at all lifts, vibrating, compacting, levelling, curing, shuttering, dewatering wherever necessary, the cost of all materials, labour, leads and lifts, tools and plant, machineries etc., complete as per specifications.	Cum	12.00
19	Providing and laying plain cement concrete using coarse 1:3:6 graded aggregate of 25 mm down size for levelling course under ground floor etc. including laying layers of specified thickness in alternative bays not exceeding 10 sqm as directed including form work wherever necessary and well compacted etc. all complete, as directed.	Cum	22.00
20	Providing & laying cast-in-situ controlled reinforced concrete of the following grades using 20mm and down size coarse graded machine crushed hard stone aggregate including designing the mix, weigh batching, mechanical mixing, transporting and placing at all lifts, vibrating, consolidating, curing and finishing smooth as required all exposed faces, complete for the following RC structural and other elements including centering, shuttering, form work either straight, curved, plain, tapered or sloped, supplying and mixing admixtures, dewatering wherever necessary, the cost of all complete materials, labour, all leads and lifts, tools, plant and machineries, hire and fuel charges and all other incidental charges etc., all as per specification.		

	specifications, drawings and as directed, but excluding steel reinforcement, IRC mesh, insert plates which will be paid for separately under relevant items.		
	The rates quoted shall hold good for all foundations at any depth, flooring, all floors, heights, levels, elevation, below ground level, basement, trenches, pits, tunnels etc.		
	Note :		
	The designing of concrete mix for different grades of controlled concrete should be done in accordance with latest IS - SP 23. (Hand book on concrete mix design) in the field laboratory and the same should be got approved by the Engineer. Grade of concrete for all concrete works specified in BOQ as M-25 should be invariably followed :		
	Wherever alternative items have been called for, in a particular item of work if there is any change in grade of concrete during execution the upward and downward variations that quantity of cement will be paid for or deducted at the rate of cement as mentioned by the Contractor elsewhere in the tender.		
	M 25 Grade		
	For all raft /pile cap	Cum	6.80
21	Plinth Beam	Cum	4.00
22	RCC column & pedestal upto FFL	Cum	4.00
23	RCC column in superstructure	Cum	2.00
24	RCC flooring M25	Cum	32.00
25	RCC lintel	Cum	4.00
26	RCC sunshade	Cum	1.00
27	RCC cover slab 8mm thick	Sqm	44.20
C	Steel Reinforcement:		
28	Supplying, fabricating and fixing in position MS bars conforming to IS-432/ High yield strength deformed bars conforming to IS-1786 of Fe 415 Grade of all dia for reinforcement in all RCC in situ works including flooring and precast works at all levels and heights above finished floor level and for foundations, trenches, pits, tunnels, lift pits etc., below finished floor level including cost of straightening, cutting, bending to shape fabricating and tying with 18 gauge GI binding wire, providing and fixing cement cover blocks, dewatering wherever necessary etc., all complete as per drawings and specifications and as directed by the Engineer. The rate to include cost of binding wire, cement cover blocks, all cuts and wastes which will not be measured. Only laid weight will be measured including authorised laps. Cuts and wastes will not be measured for payment.	MT.	4.00

29	Supplying, fabricating and fixing in position inserts comprising edge angle, MS angles, Chquired plates, tees, flats and other structural steel sections, holding down bolts, anchor bolts, anchor plates, pipe sleeves etc., in all cement concrete works at all levels and heights above finished floor level in foundation, trenches, pits, tunnels, lift pits etc., below finished floor level including cutting, bending to shape fabricating, drilling, threading, welding lugs etc., with all tools, tackles and labour as per design or as directed including a coat of primer of approved quality and painting the exposed surface with two coats of synthetic enamel paint of approved quality and colour etc., all complete as per drawings and as directed.	MT.	0.05
D	Masonry Works:		
	<p>a) Only good approved quality locally available chamber burnt bricks shall be used with minimum compressive strength of 35 kg/sqcm</p> <p>b) The rates quoated for item below shall include leaving pockets for fixed hold fasts of doors, window and ventilator frames.</p> <p>c) The rate to include for scaffolding where necessary and curing and all materials and labour complete.</p>		
30	Providing and constructing brick work with best quality well chamber table moulded bricks with minimum compressive strength of 35 Kg per Sqcm in cement mortar 1:5 in foundation and basements, etc. complete, all as directed.	Cum	22.00
31	Providing and constructing brick work with best quality well chamber table moulded bricks with minimum compressive strength of 35 Kg per Sqcm in cement mortar 1:5 in GROUND FLOOR etc. complete, all as directed.	Cum	20.00
32	Providing and constructing 115 mm thick masonry wall at all levels with approved best quality well chamber table moulded bricks with minimum compressive strength of 50 Kg/Sqcm in cement mortar 1:4 with reinforced cement concrete binders in 1:2:4 – 80 mm thick using coarse graded aggregate of 12 mm and downsize, reinforced with 4 nos. of 8 mm dia. tor steel and 6 mm dia. MS bar stirrups at 230 mm c/c and binders placed at intervals of not more than 1000 mm. Rate shall include for cost of reinforcements and 18 gauge GI annealed binding wires, form work, scaffolding, raking out joints, curing etc complete, all as directed.	Sqm	7.00
E	Plastering Works		
33	Providing and applying 15mm thick plaster for all internal brick masonry walls in C.M 1:4 in one coat at all levels with necessary scaffolding etc.	Sqm	300.00
F	Flooring works		
34	Supplying and laying HDPE sheet of 200 micron thick with 300mm overlap over base to pavement concrete as directed by the Engineer	Sqm	220.00

35	Providing vacuum de-watered flooring operation consisting of providing side shuttering with MS channels, angles to the required levels, Vibrating the concrete by using screed vibrator, de-watering using vacuum pumps by suction method and finishing the top surface to required level and grade using skim floaters/discs/power trowels. Covering the finished concrete surface with 200 micron thick polythene sheet and curing etc., complete.	Sqm	210.00
36	Providing grooves of size 3 mm wide and 15 mm deep on vacuum de-watering floor surface at every 20 Sqm area grooves made by groove cutting machine with diamond cutting wheel and filling of the grooves with polysulphide sealant.	R.M	120.00
37	Providing and laying ceramic non slippery kajaria floor tiles 300x300 mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS of KAJARIA NITCO, or equivalent make in all colours shades except laid on 12 mm thick cement mortar 1:3 (1cement and 3 coarse sand) including pointing the joints with white cement and pigment of matching shade etc.,complete	Sqm	10.00
38	Providing and fixing dadoing with best quality Kajaria or approved equivalent make ceramic tiles ranges as listed below shall have size 300 x 200 x 6.5 mm minimum thick & laid with C.M 1:3 , 12mm average thickness and finishing with ROOF TILE or Bal grout joint filler all as manufacturer's specification at all levels and as directed . Rate shall include for preparation of plastered surface, jointing, cleaning the srface with acid washing and protecting with plastic sheet laying the tiles in approved pattern with or with out spacers etc., complete all as directed	Sqm	20.00
39	Providing Grano flooring with 40mm thick	Sqm	50.00
G	Aluminum works		
40	Providing and fixing colour anodised aluminium partition with partly glazed and partly with Novopan, openable and 1 no. side hung shutter hinged or pivoted, fabricated and fixed at all levels, elevations and heights. The aluminium extruded sections shall be of colour anodised - 15 Microns high strength and weight ratio joints mitred adjointed with die cast cleats with fins to match the sections of frames and shutters conforming to Indal Sections. The rate includes 5 mm thick float glass plain (or)tinted of approved make for all glazing with snap fit aluminium beading and special PVC weather proof gasket blinery etc., complete as per specification for various structural openings and all as per IS and approved make but including cost of supplying and fixing hardware fittings in hinges, lock and tower bolt etc.		
	a) 2.5m height	Sqm	50.00
41	Providing and fixing louvered ventilator fabricated out of anodised aluminium sections sections 9835 with adjustable aluminium louvre system, handles, cill section and 5 mm pinhead glass louvers with edges ground all.	Sqm	1.44
H	ROLLING SHUTTERS & EMERGENCY DOOR		

42	Providing and erecting in position including assembling, fittings and fixing MS gear type approved make rolling shutter with pressed MS guide channels of size 75 x 25 mm --10 gauge bracket plate, reinforced lock plate with necessary locking arrangement on both sides and the roller shaft of heavy "C" class pipe fitted with high tensile wire springs. Rate shall include to fix the guide channel wall and connected civil works and finished the surface neat etc. complete and all as per standard specifications as directed by the Engineer-in-Charge.	Sqm	24.00
43	Fabrication supply and fixing of hollow metal pressed steel doors outer frame profile size 125 x 60mm with suitable rebates and shutter made in 40 x 40 x 1.6mm square tube and both sides covered with 18 SWG CR sheet with necessary stiffeners and mineral wool infill, , vision panel including one coat of zinc chromate primer and two coats of synthetic enamel paint including cost of material, conveyance, labour charges, all taxes etc. complete including necessary fittings	Sqm	2.88
I	PAINTING WORKS		
44	Providing two coats of cement paint to plastered surface of approved colour and make over a coat of primer and full putty (smooth sanded) to give an even shade etc., including preparation of surface, scaffolding etc., complete at all levels, elevations an	Sqm.	300.00
45	Providing synthetic enamel paint 2 or more coats over a coat of primer for steel work at all levels.	Sqm	80.00
J	Miscellaneous Works:		
46	Fixing of anchor bolts in the concrete pedestals with anchor plate & pipe sleeve supplied as per above item to the required line & level inc. cost of template etc.,	Nos	20.00
47	Providing plinth protection with precast RCC slab in concrete 1:2:4 using course graded aggregate of 20 mm and down size, slab size of 600 mm x 600 mm x 50 mm thick with 10 mm x 10 mm corner splay, top finished smooth, while wet and laid with a nominal slope over a sand bed of 75 mm thick including necessary excavation wherever neccessary and pointing the joints with cement mortar 1:3, 12 mm thick necessary formwork and nominal reinforcement. The end slab shall have 115 mm thick RCC retaining wall at the edge 300 mm height. The exposed faces of wall shall be plastered with cement mortar 1:4 - 20 mm thick. The rate include necessary formwork, curing and nominal reinforcement etc.	Sqm	30.00
48	Supply and grouting the space below base plate with Conbexa GP2 (Fosroc or equivalent)	Cum	0.20

49	Providing and fixing in position readymade doors with Fibre reinforced polyester (FRP) frame and single leafed 30mm thick sandwich shutter of approved size 750 mm x 2000 mm colour and shade etc. complete. The frame shall be of FRP of 75 mm x 50mm cross sections. The shutter shall have 1.5mm thick FRP skin made with gel coat and 2 layers of 300 gms of chopped strand mat on either side of block board core. Necessary resin coated wooden pieces to be placed and bonded in position to receive door fittings viz. 3 No. stainless steel butt hinges of IS make 75 mm size, 1 No. of 125 mm powdercoated aluminium handles and 1 No. powdercoated aluminium baby latch of approved make. (0.90 x 2.10 - 2 nos)	Sq.m	3.78
50	Providing and fixing Gypboard false ceiling in position including all fittings accessories.	Sq.m	32.00
51	Providing & fixing Gypwall Classic 75mm over all thick metal stud partition which includes one layer of regular Gypboard screw fixed with 25 mm Drywall screw at 300 mm centers to either side of 48 mm stud (0.55 thick having one flange of 34 mm and another flange of 36mm of G.I. steel) placed at 610mm center to center in 50 mm floor & top channel (0.55 mm thick having two flanges of 32mm each made of G.I. steel) with joints staggered to avoid through joint. Finally square and tapered edge of the board to be jointed and finished so as to have a flush look which includes filling and finishing jointing compound joint paper and two coats of Drywall top coat suitable for gypboard. (consider metal frame in GYPSTEEL ULTRA only.) Providing & fixing .50mm th. glass wool filling in the partition for sound insulation.	Sq.m	20.00
52	Providing and laying paver blocks of 80mm thick M 25 grade from approved manufacturer over prepared well compacted sub grade with classic type blocks of approved colour in the pattern specified by Architects over 50mm thick sand cushion laid to the required levels and slopes including vibro compaction, all leads and lifts etc. complete (Samples of different lots of paved blocks shall be tested for compressive strength before using in the works) (14.4 X 4.5M)	Sq.m.	50.00