



वाष्कोस लिमिटेड
WAPCOS LIMITED

(भारत सरकार का उपक्रम – जल शक्ति मंत्रालय)
(A Government of India Undertaking - Ministry of Jal Shakti)

76-C, SECTOR-18, GURUGRAM-122015, HARYANA

TENDER DOCUMENT FOR

**CONSTRUCTION OF 120 BEDDED OLD AGE HOME –
BLOCK-A & 200 BEDDED HOSTEL (100 BOYS & 100
GIRLS) –BLOCK-B FOR BLIND PEOPLE AT UNIT-III,
BHUBANESWAR, KHORDHA DISTRICT, ODISHA**

WAP/ED (IP)/HOME/HOSTEL/ODISHA/2024/3

Date: 04/03/2024

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NOTICE INVITING TENDER (NIT)

NOTICE INVITING TENDER

WAP/ED(IP)/HOME/HOSTEL/ODISHA/2024/3

Date: 04.03.2024

WAPCOS Limited (A Govt. of India Undertaking), invites “Online Electronic Tenders” for **Construction of 120 bedded Old Age Home –BLOCK-A & 200 bedded Hostel (100 boys & 100 girls) –BLOCK-B for blind people at Unit-III, Bhubaneswar.** on LCS (Least Cost Selection) basis from experienced agencies and competent bidders for the work as per the following details.

1.	Name of Work:	:	Construction of 120 bedded Old Age Home –BLOCK-A & 200 bedded Hostel (100 boys & 100 girls) –BLOCK-B for blind people at Unit-III, Bhubaneswar, Odisha
2.	Location	:	Bhubaneswar
3.	Website for upload tender/Corrigendum/ Addendum	:	www.wapcos.co.in https://eprocure.gov.in
4.	Estimated Cost of Work	:	Rs. 37,22,85,406/- (exclusive of GST)
5.	Tender submission fee	:	Rs. 10000/- (in form of RTGS/NEFT/Demand Draft in favor of WAPCOS LIMITED payable at Gurugram and it is non-refundable) (Scan copy of RTGS/NEFT/DD is to be uploaded along with Technical bid)
6.	Earnest Money Deposit	:	2% of Estimated Cost i.e. Rs. 74,45,708/-
7.	Site Visit	:	Mandatory: Upto 2 days before the last date of tender submission as mentioned in NIT. Between 10:00 to 17:00 hours in presence of WAPCOS representative (Tel:+917405799950) Bidder's representative shall come along with authorization letter on behalf of bidder firm and handover the same to WAPCOS representative.
8.	Pre Bid Meeting	:	The pre-bid meeting will not be held. Bidder can ask queries in writing to tender inviting authority (WAPCOS LIMITED) 4 days before the last date of tender submission date as mentioned in NIT
9.	Date of start of work	:	Within 14 days of the issue of LOA
10.	Project Completion Period	:	18 Months from the date of handing over of site
11.	Performance Guarantee	:	3% of Tendered value
12.	Security Deposit	:	2.5% of Tendered value
13.	Defect Liability Period	:	1 Year

14.	Validity of Bid/Tender	:	120 Days
15.	Last date & time of Procurement / download of tender Document	:	13.03.2024 up to 11:00 hours The bidder must officially procure/download the tender documents from the ETS portal of WAPCOS www.wapcos.co.in and https://eprocure.gov.in before the last date and time of sale of tender document in order to bid.
16.	Offline Submission of Technical document as detail in Tender (Addressee & Address)	:	14.03.2024 up to 15:00 hours To: Executive Director (INFS – II), WAPCOS Limited Address: Project Office Odisha, Plot No: 369/4305, 1st Floor and 2nd Floor, Ekamra Kanan Road, above HDFC Bank, Jayadev Vihar, Pin: 751013, Bhubaneswar, Odisha-
17.	Last date & time for online submission of Technical & Financial Bid.		13.03.2024 up to 17:00 hours
18.	Online opening of Technical Bid		14.03.2024 at 17:30 hours
19.	Online opening of Financial Bid		After Evaluation of Technical bid
20.	WAPCOS Contact information		Executive Director (INFS-II) WAPCOS Limited. Head Office: 76-C, Sector-18, Gurugram-122015, Haryana Project Office Odisha Plot No: 369/4305, 1st Floor and 2nd Floor, Ekamra Kanan Road, Above HDFC Bank, Jayadev Vihar, Bhubaneswar, Odisha-751013 Contact No.: +917405799950
21.	Signing of Contract	:	The Successful tenderer will have to execute an agreement in stamp paper worth 0.1% of contract agreed amount subjected to maximum of Rs.1,00,000/- in prescribed form.
If the office of WAPCOS Limited, happens to be closed on the last date and time mentioned for any of the event, the said event will take place on the next working day at the same time and venue.			

The tender document has to be downloaded from above specified websites. Bidders are

advised to visit above specified websites regularly for updates /Amendments/ Corrigendum, if any. The Updates/Corrigendum/Addendum shall be followed up to submission of tender and it will be the part of tender. The full details about the work, specifications, drawings, terms and conditions shall be available in the Tender Document. The tender document has to be submitted online on websites www.wapcos.co.in and <https://eprocure.gov.in>.

The purpose of this NIT is to provide Interested Bidders with information to assist the preparation of their bid. While WAPCOS Limited has taken due care in the preparation of the information contained herein, and believe it to be complete and accurate, neither it nor any of its authorities or agencies nor any of its respective officers, employees, agents or advisors give any warranty or make any representations, expressed or implied as to the completeness or accuracy of the information contained in this document or any information which may be provided in association with it.

Further, WAPCOS Limited does not claim that the information is exhaustive. Respondents to this NIT are required to make their own inquiries/ surveys and will be required to confirm, in writing, that they have done so and they did not rely solely on the information in NIT. WAPCOS Limited is not responsible if no due diligence is performed by the bidders.

IMPORTANT POINTS

- 1.1 The bidder should be an Indian Registered Company under Companies Act 1956/ Proprietorship Company/ Partnership Company.
- 1.2 All Bidders are hereby cautioned that Bids containing any deviation or reservation as described in Clauses of “Instructions to Bidders” shall be considered as non-responsive and shall be summarily rejected.
- 1.3 WAPCOS Ltd, reserves the right to accept or reject any or all bids without assigning any reasons. No Bidder shall have any cause of action or claim against the WAPCOS Ltd., for rejection of his Bid and will not be bound to accept the lowest or any other tender.
- 1.4 No reimbursement of cost of any type or on any account will be paid to persons or entities

Submitting their Bid.
- 1.5 All information submitted in response to this NIT shall be the property of WAPCOS Limited and it shall be free to use the concept of the same at its will.
- 1.6 It is hereby declared that WAPCOS is committed to follow the principle of transparency, equity and competitiveness in public procurement. The subject Notice Inviting Tender (NIT) is an invitation to offer made on the condition that the Bidder will sign the integrity

Agreement, which is an integral part of tender/bid documents, failing which the tenderer/bidder will stand disqualified from the tendering process and the bid of the bidder would be summarily rejected. This declaration shall form part and parcel of the Integrity Agreement and signing of the same shall be deemed as acceptance and signing of the Integrity Agreement on behalf of the WAPCOS.

- 1.7 The contractor is bound to follow relevant Odisha State Government orders, circulars prevailing at the time of contract connected to the execution of the work under the contract even through specific reference to these are not provided elsewhere in the contract conditions.

For and on behalf of WAPCOS LIMITED

Executive Director (INFS-II)

SECTION -1 INSTRUCTION OF BIDDER

1.1 SPECIAL INSTRUCTION TO BIDDER FOR E-TENDERING

The bidders are required to submit soft copies of their bids/rate quotations electronically on the etenders.gov.in / wapcos.co.in Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the etenders.gov.in / wapcos.co.in Portal, prepare their bids in accordance with the requirements and submitting their bids online on the etenders.gov.in / wapcos.co.in Portal.

More information useful for submitting online bids on the www.eprocure.gov.in may be obtained at: [https://etenders.gov.in / wapcos.co.in](https://etenders.gov.in/wapcos.co.in)

REGISTRATION

- 1) Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (URL: [https://etenders.gov.in / wapcos.co.in / eprocure /app](https://etenders.gov.in/wapcos.co.in/eprocure/app)) by clicking on the link “Online bidder Enrollment” on the etenders.gov.in / wapcos.co.in Portal which is free of charge.
- 2) As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
- 3) Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the www.eprocure.gov.in .
- 4) Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / nCode / eMudhra etc.), with their profile.
- 5) Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.
- 6) Bidder then logs in to the site through the secured log-in by entering their user ID / password and the password of the DSC / e-Token.

SEARCHING FOR TENDER DOCUMENTS

- 1) There are various search options built in the www.eprocure.gov.in , to facilitate bidders to search active tenders by several parameters. These parameters could

Include Tender ID, Organization Name, Location, Date, Value, etc. There is also an

option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as Organization Name, Form of Contract, Location, Date, Other keywords etc. to search for a tender published on the www.eprocure.gov.in.

- 2) Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective 'My Tenders' folder. This would enable the www.eprocure.gov.in to intimate the bidders through SMS / e- mail in case there is any corrigendum issued to the tender document.
- 3) The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.

PREPARATION OF BIDS

- 1) Bidder should take into account any corrigendum published on the tender document before submitting their bids.
- 2) Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
- 3) Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF/JPG formats. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.
- 4) To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use "My Space" or "Other Important Documents" area available to them to upload such documents. These documents may be directly submitted from the "My Space" area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

Note: *My Documents space is only a repository given to the Bidders to ease the uploading process. If Bidder has uploaded his Documents in My Documents space, this does not automatically ensure these Documents being part of Technical Bid.*

- a) Submission of a tender by a tenderer implies that the tenderer has read this notice and all other Tender Documents and has made himself aware of the scope, the

specifications, and conditions of contract, local conditions and other factors having bearings on the execution of the work.

b) WAPCOS Limited desires that the bidders, suppliers, and Sub-contractors under the Project; observe the highest standard of ethics during the performance, procurement and execution of such contracts. In pursuance of this requirement, WAPCOS Limited defines, for the purposes of this provision, the terms set forth below:

- i. "Corrupt Practice" means the offering, giving, receiving, or soliciting, directly or indirectly, anything of value to influence improperly the actions of another party;
- ii. "Fraudulent Practice" means any act of submission of forged documentation, or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation, or to succeed in a competitive bidding process;
- iii. "Coercive Practice" means impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
- iv. "Collusive Practice" means an arrangement between two or more parties designed to achieve an improper purpose, including influencing improperly the actions of another party.

Will reject the award of Contract, even at a later stage, if it determines that the bidder recommended/ selected for award/awarded has, directly or through an agent, engaged in Corrupt, Fraudulent, Collusive, Or Coercive Practices incompetent for the Contract; Will sanction a party or its successors, including declaring ineligible, either indefinitely or for a stated period of time, to participate in any further bidding/procurement proceedings under the Project, if it at any time determines that the party has, directly or through an agent, engaged in Corrupt, Fraudulent, Collusive, Or Coercive Practices in competing for, or in executing, the contract.

- v. The party may be required to sign an Integrity Pact, if required; and WAPCOS Limited will have the right to require the bidders, or its suppliers, contractors and consultants to permit WAPCOS Limited to inspect their accounts and records and other documents relating to the bid submission and contract performance and to have them audited by auditors appointed by WAPCOS Limited at the cost of the bidders.

- vi. The Bidder must obtain for himself on his own responsibility and at his own expenses all the information which may be necessary for the purpose of making a bid and for entering into a contract, must examine the Drawings, must inspect the sites of the work, acquaint himself with all local conditions, means of access to the work, nature of the work and all matters pertaining thereto. WAPCOS Limited will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.
- vii. The Contract shall be governed by each SECTION OF TENDER DOCUMENT i.e. instructions to bidders, selection & qualifying criteria, scope of works, General Conditions for Contract (GCC), Special Conditions for Contract (SCC), Annexures, Forms, Drawings, Technical Specification, Addendum / Clarification / Corrigendum etc. and all other Conditions mentioned in the tender documents.
- viii. All Bidders are hereby explicitly informed that conditional offers or offers with deviations from the Conditions of Contract, the bids not meeting the minimum eligibility criteria, Technical Bids not accompanied with EMD and Tender Document Fees of requisite amount in acceptable format, Bids in altered/modified formats, or in deviation with any other requirements stipulated in the tender documents are liable to be rejected.
- ix. The bidders shall not tamper or modify any part of the tender documents in any manner. In case in part of the bid is found to be tampered or modified at any stage, the bids are liable to be rejected, the contract is liable to be terminated and the full earnest deposit/retention money/performance guarantee will be forfeited and the bidder will be liable to be banned from doing any business with WAPCOS Limited
- x. Incomplete Price bid shall be liable to be rejected, at the discretion of WAPCOS Limited. The total bid price shall cover the entire scope of works covered in the tender.

PREFERENCE TO MAKE IN INDIA

- 1) The provisions of revised 'Public Procurement (Preference to Make in India) Order 2017-Revision' issued by Department of Industrial Policy and Promotion under Ministry of Commerce and Industry vide letter no.-P45021/2/2017-PP (BE-II) as amended on 16.09.2020 shall be applicable to the bidding process and award of the contract shall be done accordingly. In this connection, the minimum local content shall be 50% and the margin of purchase preference shall be 20%.
- 2) Verification of Local Content

- a. The bidder at the time of tender, bidding or solicitation shall be required to indicate percentage of local content and provide self-certification that the item offered meets the local content requirement of the tender. They shall also give details of the location(s) at which the local value addition is made.
- b. In cases of procurement for a value in excess of Rs 10 Crores, the bidder shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content

RULE 144 (xi) IN GENERAL FINANCIAL RULES (GFRs) 2017

- 1) Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority.
- 2) "Bidder" (including the term 'tenderer', 'consultant' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.
- 3) "Bidder from a country which shares a land border with India" for the purpose of this Order means:
 - a. An entity incorporated, established or registered in such a country; or
 - b. A subsidiary of an entity incorporated, established or registered in such a country; or
 - c. An entity substantially controlled through entities incorporated, established or registered in such a country; or
 - d. An entity whose beneficial owner is situated in such a country; or
 - e. An Indian (or other) agent of such an entity; or
 - f. A natural person who is a citizen of such a country; or
 - g. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above.
- 4) The beneficial owner for the purpose of 1.4.2.(iii) above will be as under:
 - a. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has a controlling ownership interest or who exercise control through other means; Explanation:
 - "Controlling ownership interest" means ownership of or entitlement to more than twenty-five per cent. Of shares or capital or profits of the company;

- “Control” shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholders agreements or voting agreements;
 - b. In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership or entitlement to more than fifteen percent of capital or profits of the partnership;
 - c. In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership or entitlement to more than fifteen percent of the property or capital or profit of such association or body of individuals;
 - d. Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;
 - e. In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.
- 5) An Agent is a person employed to do any act for another, or to represent another in dealings with third person

The successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority.

1.2 EARNEST MONEY DEPOSIT (EMD)

- a) An EMD in the form of an Insurance Surety Bonds, Account Payee Demand Draft, Fixed Deposit Receipt, Banker's cheque, Bank Guarantee from scheduled/nationalized/commercial banks or payment online in an acceptable form, safeguarding the purchaser's interest in all respects of the value as specified in the “NIT” may be submitted in favor of “WAPCOS Limited” payable at New Delhi /Gurugram.
- b) The Bank Guarantee should be valid for 180 days from bid opening date. The hard copy of the original instrument in respect of EMD must be submitted at the address as mentioned in NIT as a part of Technical Bid on or before bid opening date and time as specified. Bid will not be accepted if original payment instrument against the submitted

bid are not reached by the specified date and time.

- c) Bids not accompanied with EMD shall be rejected as non-responsive.
- d) Format of the EMD is mentioned in Annexure III.
- e) The bank details of WAPCOS Limited are:

NAME – WAPCOS LIMITED

NAME OF BANK – INDIAN OVERSEAS BANK

BRANCH-NHB, GURUGRAM

ACCOUNT NO- 193502000000405

IFSC CODE – IOBA0001935

- f) Unsuccessful bidder's EMD will be released after award of work to the Successful bidder.
- g) Successful bidder's EMD will be released after submission of PBG(Performance Bank Guarantee)

Forfeiture of EMD

The entire EMD shall be forfeited by WAPCOS Limited in the following events:

1. If the Bidder varies or modifies its proposal in a manner not acceptable to the tender inviting authority (TIA) after opening of Bid during the validity period or any extension thereof.
2. If the Bidder tries to influence the evaluation process or canvassing of any kind.
3. If the Bidder/s selected as 'Service Provider/s' chose to withdraw the Bid before the finalization process (failure to arrive at consensus by both the parties shall not be construed as withdrawal of Bid by the Bidder).
The Earnest Money Deposit as mentioned in NIT and shall also be submitted in physical form in courtesy of WAPCOS Ltd payable at Gurugram.

1.3 COST OF BIDDING

The Bidder shall bear all costs associated with the preparation & submission of the Bid as well as costs associated for facilitating the evaluation. WAPCOS Ltd shall in no case be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.

1.4 LANGUAGE OF BID

The Bid and all related correspondence and documents relating to the Project shall be in English language only. Supporting documents and printed literature furnished by the Bidder may be in another language provided they are accompanied by an accurate English translation which shall be certified by a qualified translator. Any material that is submitted in a language other than English and which is not accompanied by an accurate English translation will not be considered.

1.5 CURRENCY OF BID

Bid prices shall be quoted in Indian Rupees.

Tender submitted by tenderer shall remain valid for acceptance as mentioned in NIT from the date set for submission of the tender. The tenderer shall not be entitled within the said period to revoke or cancel or vary the tender given or any item thereof, without the consent of WAPCOS Limited. In case tenderer revokes, cancels, or varies his tender in any manner without the consent of WAPCOS Limited, within this period, his earnest money will be forfeited.

1.6 ANNEXURES

The successful Bidder shall submit the following documents and follow the guidelines as per **"Section of Annexures"** mentioned in tender document.

Annexure- I & II	:-	GUARANTEE BONDS / AFFIDAVIT FOR WORK
Annexure- IV	:-	PERFORMANCE SECURITY
Annexure- VI	:-	ADVANCE PAYMENT BANK GUARANTEE
Annexure- X	:-	SAFETY CODES PERFORMANCE SECURITY

WAPCOS Limited reserves the right to reject any or all the bids or to cancel the Tender, without assigning any reason(s) whatsoever.

**For & on behalf of Tender Authority
Executive Director (INFS-II)**

SECTION– II

SELECTION AND QUALIFYING CRITERI

SECTION-II
SELECTION AND QUALIFYING CRITERIA

1.0 SITE VISIT

Intending Bidder(s) have to visit site to inspect and examine the site at his own cost 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 bidder(s) 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 bidder(s) 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 a bid by a bidder(s) 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 of conditions and rates at which stores, tools and plant, etc. will be issued to him by the Government and local conditions and other factors having a bearing on the execution of the work.

2.0 QUALIFYING CRITERIA: ONLINE TECHNICAL BID SUBMISSION

The intending bidders must read the terms & conditions of tender documents carefully. He should only submit his technical bid if he considers himself eligible and he is in possession of all the documents required.

The Technical Bid shall be uploaded **with colored scanned copies of following documents. All the documents must be Serial wise as stated below along with check list**

Format of Check List				
S.N	Particular of Document	Yes	No	Page Nos. (from – to)
1	Original Authorization Letter to sign the Tender.			
2	Proof of online submission of EMD			
3	Proof of online submission of Tender Fee			
4	Letter of Transmittal on bidder letter Head to submit Technical Bid.			

5	Yearly sales Turnover and Audited Balance Sheet for Last 5 (Five) years ending on the financial year 2022-23. (Form-A)			
	The requisite certificates must be certified by statutory auditor of the firm/company. Any such certificate must carry the UDIN (Unique Document Identification Number).			
	<ul style="list-style-type: none"> The contractor should not have incurred any loss (profit after tax should be positive) in more than two years during last Five years ending FY 2022-23 duly audited by the Statutory Auditor. 			
	<ul style="list-style-type: none"> Turnover: Average annual financial turnover on construction works should be at least 50% of the estimated cost of work during the immediate last 3 consecutive financial years ending 2022-23. This should be duly audited by the Statutory Auditor 			
	<ul style="list-style-type: none"> Full Balance Sheet, Profit & loss Statement of Bidder, net worth certificates should be certified by the statutory auditor of the firm/company. Any such certificate must carry the UDIN (Unique Document Identification Number). 			
6	The contractor should also have satisfactorily similar nature works as mentioned below during the last Seven years ending previous day of last date of submission of tender. (Form-I) .			
7	<p>a. Three similar works costing not less than the 40% of cost during last 7 years. Or</p> <p>b. Two similar works costing not less than 50% of cost during last 7 years. Or</p> <p>c. One similar work costing not less than 80% of cost during last 7 years.</p> <p>The Value of Similar Works will 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 submission of bids.</p>			
	"Similar work refers to Construction of Residential /non-residential building/Infrastructure Development project for any Central Government / State Government/PSU/ Department.			

	In the case of Private sector, a satisfactorily completed work certificate must be supported by the TDS certificates in the form 26AS duly authenticated by the chartered account.			
8	Details of General/similar type of work indicating value of works in each contract with self-attested documentary evidence such as copy/copies of completion Certificate(s) along- with LOI(s)/Work order from respective Owner(s)/Client(s) mentioning name and nature of work(s), date(s) of commencement and value(s) of the job(s) executed during last Seven years. Completion certificate/Work order/ Agreement and other relevant document needs to be enclosed.			
9	<p>The bidder should not be insolvent, in receivership, bankrupt or being wound up, not have had their business activities suspended. Accordingly, Bidder shall submit Solvency certificate from Nationalized/Scheduled Commercial Bank with details of Financial Status i.e. Name of the Banker & Current Solvency Certificate (<u>i.e. the solvency certificate shall be dated after the date of publication of NIT and Be addressed to the tendering authority quoting the name of the work</u>) from the Banker in original for a sum of at least 40% of the estimated cost in order to fund the project till the time the invoices get paid. (Form-B)</p> <p>The Certificate should be issued between the publishing date of NIT & last date of submission of Bids, including extensions if any. The certificate should carry the name, designation & power of attorney of the bank official.</p>			
10	Name, Address, details of the Organization, Name(s) of the Owner/Promoters and Directors of the firm/company. (Form-C)			
11	Copy of P.F and PAN Number.			
12	Goods and Service Tax (GST): Bidders are advised to get themselves registered for GST in at different place, which are mandatory, as per Govt. of India notification regarding GST. Accordingly bidder shall			

	submit relevant documents if already registered. If not registered till date of submission of bid, bidder will give undertaking on bidder letter head stating that they will get registered in GST as per Govt.			
13	Details of General/similar type of work executed indicating value of works in each contract with self-attested documentary evidence such as copy/copies of completion Certificate(s) along-with LOI(s)/Work order from respective Owner(s)/Client(s) mentioning name and nature of work(s), date(s) of commencement and value(s) of the job(s) executed during last Seven years. Completion certificate/Work order/ Agreement and other relevant document needs to be enclosed.			
14	Name, Address, details of the Organization, Name(s) of the Owner/Promoters and Directors of the firm/company. (Form-C)			
15	The bidder should be an Indian Registered Company under Companies Act 1956/ Proprietorship Company/ Partnership Company/ Limited company private or public or corporation. Joint Ventures / Consortium is not allowed. Copy of Certificate of Incorporation/ Registration/ Partnership Deed or any other relevant document, as applicable, should be submitted along with a copy of address proof.			
16	Bidder should not be blacklisted/ debarred by any government/ semi-government department/ PSU. Bidder should submit the declaration (Form-D)(1) of not being ineligible for corrupt or fraudulent practices			
17	Letter of understanding the project site on bidder letter Head (Form-E) .			
18	'No Deviation Certificate' in the prescribed format in Bidder's Letter Head (Form-F) .			
19	Consent Letter to execute the Integrity Pact (ANNEXURE – VII) & Agreement (Form-G) .			
20	Information of Key Technical Representatives who is going to associate with the Project.			

21	Details of the Equipment's /Machinery owned /hired by the Bidder for the Project.			
22	Details of all work (similar experience) completed.			
23	Project Under Execution or Awarded.			
24	Details of Technical and Administrative Personnel to be employed for the Work.			
25	Undertaking as per Clause 46 (Rule 144 (xi) in General Financial Rules (GFRs) 2017) (Form-L)			
26	Bidder shall submit Information on litigation history, liquidated damages, disqualification etc. in bidder Letter Head. (Form G)			
26.1	ANNEXURE –XIV : Format of Undertaking to be Furnished on Company Letterhead Blacklisting/Non-Debarment Undertaking			
27	Each page of the all Volume of Tender document& Addendum/ Corrigendum shall be Digitally signed by the bidders submitting the Tender in token of his/their having acquainted himself/ Themselves and accepted the entire tender Documents including various conditions of contract. Any Bid with any of the Documents not so signed is liable to be rejected at the discretion of WAPCOS Limited.			
28	Preliminary agreement in stamp paper worth Rs.200/- duly signed by the authored signatory and the scanned copy to be uploaded (format given in (Form G)			

No information relating to financial terms of services should be included in the technical bid. Bids are to be submitted to determine that the bidder has a full comprehension of the tendered work. Where a bidder technical submittal is found non-compliant with the requirement or work, it may be rejected. This process is to assure that only technical acceptable bids are considered for the tendered work.

3.0 SUBMISSIONS OF DOCUMENTS

3.1 The bidders shall upload the scanned copy of all the documents mentioned in “**Section-II, 2.0 Qualifying Criteria**” for Technical Bid i.e. along with checklist & page numbering their Technical Bid Online along with online payment of Tender Fee and EMD. The Bidder shall submit the following Document offline also.

3.2 All the documents mentioned in “Section-II: Selection and Qualifying Criteria” in Para 3.1: Qualifying Criteria for Technical Bid i.e. along with checklist & page numbering in separate sealed envelope clearly labelled as “**TECHNICAL BID**” for the Work (Write Name of Work/Project as mentioned in NIT) along with Details of Bidders Address, Phone, E-mail on Envelope should be submitted.

NOTE: The offline submissions as mentioned above shall be submitted on WAPCOS address mentioned in NIT as per date & time mentioned in NIT otherwise bids are liable to be rejected.

4.0 CONTENTS OF TECHNICAL BID

The Technical Bid shall comprise of two part.

- a.** The Online Submission of Tender Fee (Non -refundable) and EMD
- b.** Scanned copy of all the original documents mentioned in the section II “**2.0 QUALIFYING CRITERIA: ONLINE TECHNICAL BID SUBMISSION**” and the original documents should be submitted in separate sealed Envelope.

5.0 CONTENTS OF FINANCIAL BID

The Financial Bid should be uploaded separately along with Technical bid before last date & time of submission of Tender Document.

The estimated cost mentioned in NIT is based on the rates of item of works in SOR with applicable cost index and Non-OSR items on market rate. The quoted rate filled in Schedule of Quantities, should include all costs associated with the project including any out of pocket/mobilization expenses, Taxes if any applicable as per Government norms, shall be paid by the Contractor excluding Goods and Services Tax (GST).

It is mandatory to bidders to deposit GST within time limit framed by Govt. of India, if applicable. The Goods and Services Tax (GST), shall only be paid to the Agency on submission of proof of deposition of GST.

The company shall be performing all its duties of deduction of TDS and other deduction on payment made to the contractor as per applicable legislation

The tenderer shall quote rates up to Two decimal and as well as in words. In case of any discrepancy rate quoted in words shall prevail.

6.0 OPENING OF TECHNICAL BID AND EVALUATION

I. Bid Opening

- a. The Bids will be opened in the presence of Bidders or their authorized representatives who may choose to attend on date & time as mentioned in Notice Inviting e-tender.
- b. Bids for which an acceptable notice of withdrawal has been submitted shall not be opened.
- c. On opening of the e-Bid, it will be checked if they contain Technical & Financial Bids and e-Tender Processing Fees and EMD/ Bid Security paid online.
- d. Technical Bids will be opened first. These will be checked for confirmation of submission of the requisite EMD/Bid Security. If the documents do not meet the requirements of the e-Tender, a note will be recorded.
- e. Technical evaluation shall be as per, Evaluation Process detailed below.

II. Technical Evaluation Criteria

In Preliminary Stage, e-Tender Fee/ Processing Fee & EMD will be checked online. E-Tender Fee / Processing Fee and EMD will be checked for authenticity of Amount and Form as required by e-tender terms and conditions. If e-Tender Fee / Processing Fee and/or EMD submitted by any bidder is not as per e-tender terms and conditions, his bid will be rejected and will not be considered for further stages of evaluation.

Bidders qualifying in Preliminary Stage will be considered for further evaluation and the Technical Bids shall be evaluated as per eligibility criteria

- i. The financial Bid of only those Bidders who are technically qualified shall be opened.
- ii. WAPCOS shall notify all the technically qualified Bidders of their technical qualification indicating the date, time and venue for opening of financial Bids.

To assist in the tender examination, evaluation, and comparison of bids, and qualification of the Bidders; the Tender Inviting Authority may ask the Bidder for required clarification on the information submitted with the bid. The request for clarification and the response shall be in writing or by e-mail, but no change in the price or substance of the Bid shall be sought, offered, or permitted.

7.0 OPENING OF FINANCIAL BID

The financial bids of the Technically Qualified bidders as decided by WAPCOS shall be opened at the notified date & time mentioned in NIT and the decision of WAPCOS shall be final and binding.

I. Financial Evaluation

- a. Evaluation Committee shall open the financial Bid of the technically qualified Bidders in the presence of the Bidders/their authorized representative, who choose to attend, at the scheduled date and time.
- b. The rates for the various items quoted by the Bidder shall be rounded to two decimal places. The decimal places in excess of two will be discarded during evaluation. The evaluation Committee shall correct arithmetic errors, if any and sign the same. If any discrepancy is found between the amount in figures and the amount in words, the amount in words shall prevail.
- c. All the financial Bids shall then be ranked according to the financial Bid in increasing order with the Bidder quoting the least amount ranked L1, Bidder quoting next higher figure as L2 and so on.
- d. If the grand total quoted amount by a bidder is less than 75% (seventy five percent) of the total estimated cost put to tender, then such bids will be processed based on the directions contained in Government of Odisha or any subsequent modifications thereof.
- e. L1 will be declared as Successful Bidder and his offer will be processed further.

WAPCOS Ltd reserves the right to waive minor deviations if they do not materially affect the capability of the Tenderer to perform the contract.

WAPCOS Ltd, reserves the right to accept or reject any or all bids without assigning any reasons. No Bidder shall have any cause of action or claim against the WAPCOS Ltd., for rejection of his Bid and will not be bound to accept the lowest or any other tender

For & on behalf of Tenderer

SECTION– III
GENERAL CONDITIONS OF CONTRACT

SECTION– III

GENERAL CONDITIONS TO CONTRACT

1.0 GENERAL RULES AND DIRECTIONS

General Rules & Directions	1.	<p>The work proposed for execution by contract will be notified in a form of invitation to tender by publication in Newspapers and / or posted on website as the case may be.</p> <p>This form will state the work to be carried out, as well as the date for submitting and opening tenders and the time allowed for carrying out the work, also the amount of earnest money as mentioned in NIT, to be deposited with the tender, and the amount of the security deposit and Performance guarantee to be deposited by the successful tenderer and the percentage, if any, to be deducted from bills. Copies of the specifications, designs and drawings and any other documents required in connection with the work signed for the purpose of identification by the officer inviting tender shall also be open for inspection by the contractor at the office of officer inviting tender during office hours</p>
	2.	<p>In the event of the tender being submitted by a firm, it must be signed separately by each partner thereof or in the event of the absence of any partner, it must be signed on his behalf by a person holding a Power of Attorney authorizing him to do so, such power of attorney to be produced with the tender, and it must disclose that the firm is duly Registered under the Indian Partnership Act, 1952.</p>
	3.	<p>Receipts for payment made on account of work, when executed by a firm, must also be signed by all the partners, except where contractors are described in their tender as a firm, in which case the receipts must be signed in the name of the firm by one of the partners, or by some other person having due authority to give effectual receipts for the firm</p>
	4	<p>Any person who submits a tender shall fill up the usual printed form, stating at what rate he is willing to undertake each item of the work. Tenders, which propose any alteration in the work specified in the said form of invitation to tender, or in the time allowed for carrying out the work, or which contain any other conditions of any sort, including conditional rebates, will be summarily rejected. No single tender shall include more than one work, but contractors who wish to tender for two or more works shall submit separate tender for each. Tender shall have the name and number of the works to which they refer, written on the envelopes.</p> <p>The rate(s) must be quoted in decimal coinage. Amounts must be quoted in full rupees by ignoring fifty paise and considering more than fifty paise as rupee one.</p>

	5.	The designated committee will open tenders in the presence of any intending contractors who may be present at the time, and will enter the amounts of the several tenders in a comparative statement in a suitable form. In the event of a tender being accepted, a receipt for the earnest money shall thereupon be given to the contractor who shall thereupon for the purpose of identification sign copies of the Specifications and other documents. In the event of a tender being rejected, the earnest money shall thereupon be returned to the Contractor remitting the same, without any interest.
	6.	WAPCOS shall have the right of rejecting all or any of the tenders and will not be bound to accept the lowest or any other tender
	7.	The receipt of an accountant or clerk for any money paid by the contractor will not be considered as any acknowledgment or payment to the officer inviting tender and the contractor shall be responsible for seeing that he procures a receipt signed by the officer inviting tender or A duly authorized Cashier.
	8.	The tenderers shall sign a declaration under the officials Secret Act 1923, for maintaining secrecy of the tender documents drawings or other Records connected with the work given to them.
	9.	<p>In the case of Item Rate Tenders, only rates quoted shall be considered. Any tender containing percentage below/above the rates quoted is liable to be rejected. Rates quoted by the contractor in item rate tender in figures and words shall be accurately filled in so that there is no discrepancy in the rates written in figures and words. However, if a discrepancy is found, the rates which correspond with the amount worked out by the contractor shall unless otherwise proved be taken as correct. If the amount of an item is not worked out by the contractor or it does not correspond with the rates written either in figures or in words, then the rates quoted by the contractor in words shall be taken as correct. Where the rates quoted by the contractor in figures and in words tally, but the amount is not worked out correctly, the rates quoted by the contractor will unless otherwise proved be taken as correct and not the amount. In event no rate has been quoted for any item(s), leaving space both in figure(s), word(s), and amount blank, it will be presumed that the contractor has included the cost of this/these item(s) in other items and rate for such item(s) will be considered as zero and work will be required to be executed accordingly.</p> <p>However, if a tenderer quotes nil rates against each item in item rate tender, the tender shall be treated as invalid and will not be considered as lowest tenderer and earnest money deposited shall be forfeited</p>

	10	In the case of any tender where unit rate of any item/items appear unrealistic, such tender will be considered as unbalanced and in case the tenderer is unable to provide satisfactory explanation, such a tender is Liable to be disqualified and rejected.
	11	All rates shall be quoted on the tender form. The amount for each item should be worked out and requisite totals given. Special care should be taken to write the rates in figures as well as in words and the amount in figures only, in such a way that interpolation is not possible. The total amount should be written both in figures and in words. In case of figures, the word 'Rs.' should be written before the figure of rupees and word 'P' after the decimal figures, e.g. 'Rs.2.15 P' and in case of words, the word, 'Rupees' should precede and the word 'Paissa' should be written at the end. Unless the rate is in whole rupees and followed by the word 'only' it should invariably be up to two decimal places. While quoting the rate in schedule of quantities, the word 'only' Should be written closely following the amount and it should not be written in the next line.
	12.	<p>i. The Contractor, whose tender is accepted, will be required to furnish performance guarantee of 3% (Three Percent) of the tendered amount within the period specified in Schedule-F. This guarantee shall be in the form of cash (in case guarantee amount is less than Rs. 10,000/-) or Deposit at call receipt of any scheduled bank/Banker's cheque of any scheduled bank/Demand Draft of any scheduled bank/Pay order of any scheduled bank (in case guarantee amount is less than Rs. 1,00,000/-) or Government Securities or Fixed Deposit Receipts or Guarantee Bonds of any Scheduled Bank</p> <p>ii. The contractor whose tender is accepted will also be required to furnish by way of Security Deposit for the fulfillment of his contract, an amount equal to 2.5% of the tendered value of the work and will be collected by deductions from the running bills as well as final bill of the contractor at the rates mentioned above. The Security amount will also be accepted in the shape of Government Securities. Fixed Deposit Receipt of a Scheduled Bank or State Bank of India will also be accepted for this purpose provided confirmatory Advice is enclosed.</p>
	13.	On acceptance of the tender, the name of the accredited representative(s) of the contractor who would be responsible for taking instructions from the Engineer-in-Charge shall be communicated in Writing to the Engineer-in-Charge.
	14.	GST or any other tax applicable in respect of inputs procured by the contractor for this contract shall be payable by the Contractor and Government will not entertain any claim whatsoever in respect of the same. However, component of GST at time of supply of service (as provided in CGST Act 2017) provided by the contract shall be varied if

		<p>different from that applicable on the last date of receipt of tender including extension if any.</p> <p>In view of implementation of GST w.e.f. 01.07.17 by Govt. of India, bidders are advised to quote their rates considering the positive (+ve) / negative (-ve) cost impact on their rates in present scenario.</p> <p>However, in respect of Goods and Services Tax, same shall be paid by the contractor to the concerned department on demand and it will only be paid/reimbursed to him by the Engineer-in-Charge after satisfying that it has been actually and genuinely paid by the contractor.</p>				
	15.	The contractor shall give a list of WAPCOS employees related to him				
	16.	The tender for the work shall not be witnessed by a contractor or contractors who himself/themselves has/have tendered or who may and has/have tendered for the same work. Failure to observe this condition would render, tenders of the contractors tendering, as well as witnessing the tender, liable to summary rejection.				
	17.	The tender for composite work includes, in addition to building work, Civil Works, PH & Sanitary works, Electrical Works, Fire Fighting System, and water harvesting etc. The tenderer apart from being a registered contractor (B&R) of appropriate class, must associate himself with agencies of appropriate class which are eligible to tender for sanitary and water supply drainage, electrical and horticulture works in the composite tender.				
	18.	The contractor shall submit list of works which are in hand (progress) in the following form:-				
		Name of Work	Name and particulars where work is being executed	Value of Work	Position of works in progress	Remarks
		(1)	(2)	(3)	(4)	(5)
	19.	The contractor shall comply with the provisions of the Apprentices Act 1961, and the rules and orders issued thereunder from time to time. If he fails to do so, his failure will be a breach of the contract and WAPCOS may in his discretion, without prejudice to any other right or remedy available in law, cancel the contract. The contractor shall also be liable for any pecuniary liability arising on account of any violation by him of the provisions of the said Act.				

2.0 CONDITIONS OF CONTRACT

Definitions	1.	The Contract means the documents forming the tender and acceptance thereof and the formal agreement executed between the WAPCOS and the Contractor, together with the documents referred to therein including these conditions, the specifications, designs, drawings and instructions issued from time to time by the Engineer-In-Charge and all these documents taken together, shall be deemed to form one contract and shall be complementary to one another.
	2.	<p>In the contract, the following expressions shall, unless the context otherwise requires, have the meanings, hereby respectively assigned to them:-</p> <p>“Employer” shall mean “WAPCOS Limited”, A Government of India undertaking- Ministry of Jal Shakti for execution of the “Construction of 120 bedded Old Age Home –BLOCK-A & 200 bedded Hostel (100 boys & 100 girls) –BLOCK-B for blind people at Unit-III, Bhubaneswar, Odisha,”</p> <ul style="list-style-type: none"> i. Having their Registered office at 5th Floor, Kailash, K.G. Marg, New Delhi-110001 India & include their successors & permitted assigns as well as their authorized officer/ representatives ii. The “COMPANY /WAPCOS” shall mean WAPCOS Limited. iii. The expression works or work shall, unless there be something either in the subject or context repugnant to such construction, be construed and taken to mean the works by or by virtue of the contract contracted to be executed whether temporary or permanent, and whether original, altered, substituted or additional. iv. The Site shall mean the land/or other places on, into or through which work is to be executed under the contract or any adjacent land, path or street through which work is to be executed under the contract or any adjacent land, path or street which may be allotted or used for the purpose of carrying out the contract. v. The Contractor shall mean the individual, firm or company, whether incorporated or not, undertaking the works and shall include the legal personal representative of such individual or the persons composing such firm or company, or the successors of such firm or company and the permitted assignees of such individual, firm or company. vi. Owner/Department/Client means Social Security and Empowerment of persons with disability, Department is committed to develop the infrastructure facilities in the State of

		<p>Odisha shall include their Legal representatives, nominees, employees and Officials.</p> <p>vii. The Engineer-in-charge means the Engineer Officer appointed by WAPCOS or his duly authorized representative who shall direct, supervise and be in charge of the work for the purpose of this Contract</p> <p>viii. Accepting Authority shall mean the authority mentioned in Schedule -F</p> <p>ix. Tenderer / Bidder shall mean the firm/party who intends to participate in this Notice Inviting Tender</p> <p>x. Excepted Risk are risks due to riots (other than those on account invasion, act of foreign enemies, hostilities, civil war, rebellion revolution, insurrection, military or usurped power, any acts of Government, damages from aircraft, acts of God, such as earthquake, lightening and unprecedented floods, and other causes over which the contractor has no control and accepted as such by the Accepting Authority or causes solely due to use or occupation by Government of the part of the works in respect of which a certificate of completion has been issued or a cause solely due to Government's faulty design of works.</p> <p>xi. Market Rate shall be the rate as decided by the Engineer-in-Charge on the basis of the cost of materials and Labour at the site where the work is to be executed plus the percentage mentioned in Schedule -F to cover, all overheads and profits.</p> <p>xii. Schedule(s) referred to in these conditions shall mean the relevant schedule(s) annexed to the tender papers or the standard Schedule of Rates of the government mentioned in Schedule -F hereunder, with the amendments thereto issued up to the date of receipt of the tender.</p> <p>xiii. District Specifications means the specifications followed by the State Government in the area where the work is to be executed.</p> <p>xiv. The Contractor/Successful Bidder shall mean the firm or company whose bid has been accepted by WAPCOS.</p> <p>xv. Tendered value means the value of the entire work as stipulated in the letter of award.</p> <p>xvi. Date of commencement of work: The date of commencement of work shall be the date of start as specified in Schedule -F or the first date of handing over of the site, whichever is later, in accordance with the phasing if any, as indicated in the tender Document.</p>
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Scope and Performance	3.	Where the context so requires, words imparting the singular only also Include the plural and vice versa. Any reference to masculine gender shall whenever required include feminine gender and vice versa.
	4.	Headings and Marginal notes to these General Conditions of Contract shall not be deemed to form part thereof or be taken into Consideration in the interpretation or construction thereof or of the contract.
	5.	The contractor shall be furnished, free of cost one certified copy of the contract documents except standard specifications, (Not Applicable) and such other printed and published documents, together with all drawings as may be forming part of the tender papers. None of these documents shall be used for any purpose other than that of this Contract.
Works to be carried out	6.	The work to be carried out under the Contract shall, except as otherwise provided in these conditions, include all Labour, materials, tools, plants, equipment and transport which may be required in preparation of and for and in the full and entire execution and completion of the works. The descriptions given in the Schedule of Quantities/ Building Components shall, unless otherwise stated, be held to include wastage on materials, carriage and cartage, carrying and return of empties, hoisting, setting, fitting and fixing in position and all other labors necessary in and for the full and entire execution and completion of the work as aforesaid in accordance with good Practice and recognized principles.
Sufficiency of Tender	7.	The Contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the (Not Applicable) Cost quoted in the Schedule of Quantities/ Building Components, which rates and prices shall, except as otherwise provided, cover all his obligations under the Contract and All matters and things necessary for the proper completion and maintenance of the works.
Discrepancies and Adjustment of Errors	8.	The several documents forming the Contract are to be taken as mutually explanatory of one another, detailed drawings being followed in preference to small scale drawing and figured dimensions in preference to scale and Schedule F in preference to General Conditions.

	8.1	In the case of discrepancy between the schedule of Quantities/Building Components, the Specifications and/ or the Drawings, the following order of preference shall be observed:- i. Description of Schedule of Quantities/ Building Components. ii. Schedule F iii. Drawings. iv. CPWD Specifications. v. Indian Standard Specifications of B.I.S.
	8.2	If there are varying or conflicting provisions made in any one document forming part of the contract, the Accepting Authority shall be the Deciding authority with regard to the intention of the document and his decision shall be final and binding on the contractor.
	8.3	Any error in description, quantity or rate in Schedule of Quantities or any omission therefrom shall not vitiate the Contract or release the Contractor from the execution of the whole or any part of the works comprised therein according to drawings and specifications or from Any of his obligations under the contract.
Signing of Contract	9.	The successful tenderer/contractor, on acceptance of his tender by the Accepting Authority, shall, within 21 days from the date of issue of LOA, sign the contract consisting of:- i. The Successful tenderer will have to execute an agreement in stamp paper worth 0.1% of contract agreed amount subjected to maximum of Rs.1,00,000/- in prescribed form ii. Schedule -F consisting of: a) Various standard clauses with corrections up to the date stipulated in Schedule -F along with annexures thereto. b) Safety Code. c) Model Rules for the protection of health, sanitary arrangements for workers employed WAPCOS or its contractors. d) Contractor's Labour Regulations. e) List of Acts and omissions for which fines can be imposed. iii. No payment for the work done will be made unless contract is signed by the contractor.

3.0 CLAUSES OF CONTRACT

CLAUSE 1: PERFORMANCE GUARANTEE

- i. The contractor shall submit an irrevocable Performance Guarantee of **3%** (Three percent) of the tendered amount in addition to other deposits mentioned elsewhere in the contract for his proper performance of the contract agreement, (not withstanding and/or without prejudice to any other provisions in the contract) within period specified in Schedule 'F' from the date of issue of letter of acceptance. This period can be further extended by the Engineer-in-Charge up to a maximum period as specified in schedule 'F' on written request of the contractor stating the reason for delays in procuring the Performance

Guarantee, to the satisfaction of the Engineer-in-Charge. This guarantee shall be in the form of Cash (in case guarantee amount is less than Rs. 10,000/-) or Deposit at Call receipt of any scheduled bank/Banker's Cheque of any scheduled bank/Demand Draft of any scheduled bank/Pay Order of any scheduled bank (in case guarantee amount is less than Rs. 1,00,000/-) or Government Securities or Fixed Deposit Receipts or Guarantee Bonds of any Scheduled Bank or the State Bank of India in accordance with the form annexed hereto. In case a fixed deposit receipt of any Bank is furnished by the contractor to the WAPCOS

the said fixed deposit receipt, the loss caused thereby shall fall on the contractor and the contractor shall forthwith on demand furnish additional security to the Government to make good the deficit.

- ii. The Performance Guarantee shall be initially valid up to the stipulated date of completion plus Defect Liability Period Plus One year claim Period as mentioned in Schedule F, if the same is submitted by the agency as per Annexure IV . In case the time for completion of work gets enlarged, the contractor shall get the validity of Performance Guarantee extended to cover such enlarged time for completion of work. After recording of the completion certificate for the work by the competent authority, the performance guarantee shall be returned to the contractor, without any interest. However, in case of contracts involving maintenance of building and services/any other work after construction of same building and services/other work, then 50% of Performance Guarantee shall be retained as Security Deposit. The same shall be returned year wise proportionately.
- iii. In the event of the contract being determined or rescinded under provision of any of the Clause/Condition of the agreement, the performance guarantee shall stand forfeited in full and shall be absolutely at the disposal of the WAPCOS.
- iv. On substantial Completion of any work which has been completed to such an extent that the intended purpose of the work is met and ready to use, then a provisional Completion certificate shall be recorded by the Engineer-in-Charge. The provisional certificate shall have appended with a list of outstanding balance item of work that need to be completed in accordance with the provisions of the contract.

This provisional completion certificate shall be recorded by the concerned Engineer-in-charge with the approval of the Project Manager (Odisha) if required. After recording of the provisional Completion Certificate for the work by the competent authority, the 80 % of performance guarantee shall be returned to the contractor, without any interest. However in case of contracts involving Maintenance of building and services /any other work after construction of same building and services/ other work, then 40% of performance guarantee shall be returned to the contractor, without any interest after recording the provisional Completion certificate.

CLAUSE 1A: RECOVERY OF SECURITY DEPOSIT

The person/persons whose tender(s) may be accepted (hereinafter called the contractor) shall permit WAPCOS at the time of making any payment to him for work done under the contract to deduct a sum at the rate of 2.5% of the gross amount of each running and final bill till the sum deducted will amount to security deposit of 2.5% of the tendered value of the work. Such deductions will be made and held by WAPCOS by way of Security Deposit unless he/they has/have deposited the amount of Security at the rate mentioned above in cash or in the form of Government Securities or fixed deposit receipts. In case a fixed deposit receipt of any Bank is furnished by the contractor to the WAPCOS as part of the security deposit and the Bank is unable to make payment against the said fixed deposit receipt, the loss caused thereby shall fall on the contractor and the contractor shall forthwith on demand furnish additional security to the WAPCOS to make good the deficit.

All compensations or the other sums of money payable by the contractor under the terms of this contract may be deducted from, or paid by the sale of a sufficient part of his security deposit or from the interest arising there from, or from any sums which may be due to or may become due to the contractor by WAPCOS on any account whatsoever and in the event of his Security Deposit being reduced by reason of any such deductions or sale as aforesaid, the contractor shall within 10 days make good in cash or fixed deposit receipt tendered by the State Bank of India or by Scheduled Banks or Government Securities (if deposited for more than 12 months) endorsed in favour of the WAPCOS, any sum or sums which may have been deducted from, or raised by sale of his security deposit or any part thereof.

The security deposit shall be collected from the running bills and the final bill of the contractor at the rates mentioned above.

The security deposit as deducted above can be released against bank guarantee issued by a scheduled bank, on its accumulations to a minimum of Rs. 5 lac subject to the condition that amount of such bank guarantee, except last one, shall not be less than Rs. 5 lac. Provided further that the validity of bank guarantee including the one given against the earnest money shall be in conformity with provisions contained in clause 17 which shall be extended from time to time depending upon extension of contract granted under provisions of clause 2 and clause 5.

In case of contracts involving maintenance of building and services/any other work after construction of same building and services/other work, then 50% of Performance Guarantee shall be retained as Security Deposit. The same shall be returned year wise proportionately.

Note-1: Government papers tendered as security will be taken at 3% (Three per cent) below its market price or at its face value, whichever is less. The market price of Government paper would be ascertained by the Divisional Officer at the time of collection of interest and the amount of interest to the extent of deficiency in value of the Government paper will be withheld if necessary.

Note-2: Government Securities will include all forms of Securities mentioned in Rule No. 274 of the G.F. Rules except fidelity bond. This will be subject to the observance of the condition mentioned under the rule against each form of security.

Note-3: Note 1 & 2 above shall be applicable for both clause 1 and 1A

CLAUSE 2: COMPENSATION FOR DELAY

If the contractor fails to maintain the required progress in terms of clause 5 or to complete the work and clear the site on or before the contract or justified extended date of completion as per clause 5 (excluding any extension under Clause 5.5) as well as any extension granted under clauses 12 and 15, he shall, without prejudice to any other right or remedy available

under the law to the Government on account of such breach, pay as compensation the amount calculated at the rates stipulated below as the authority specified in schedule 'F' may decide on the amount of accepted Tendered Value of the work for every completed day/month (as determined) that the progress remains below that specified in Clause 5 or that the work remains incomplete.

This will also apply to items or group of items for which a separate period of completion has been specified.

i. Compensation for delay of work

With maximum rate @ 0.5% (One percent) per month of delay to be computed on per day basis based on quantum of damage suffered due to stated delay on the part of Contractor

Provided always that the total amount of compensation for delay to be paid under this condition shall not exceed 10 % (ten percent) of the accepted Tendered Value of work or of the accepted Tendered Value of the Sectional part of work as mentioned in Schedule 'F' for which a separate period of completion is originally given.

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

In case no compensation has been decided by the authority in Schedule 'F' during the progress of work, this shall be no waiver of right to levy compensation by the said authority if the work remains incomplete on final justified extended date of completion. If the Engineer in Charge decides to give further extension of time allowing performance of work beyond the justified extended date, the contractor shall be liable to pay compensation for such extended period. If any variation in amount of contract takes place during such extended period beyond justified extended date and the contractor becomes entitled to additional time under clause 12, the net period for such variation shall be accounted for while deciding the period for levy of compensation. However, during such further extended period beyond the justified extended period, if any delay occurs by events under sub clause 5.2, the contractor shall be liable to pay compensation for such delay.

Provided that compensation during the progress of work before the justified extended date of completion for delay under this clause shall be for non- achievement of sectional completion or part handing over of work on stipulated/justified extended date for such part work or if delay affects any other works/services. This is Without prejudice to right of action by the Engineer in Charge under clause 3 for delay in performance and claim of compensation under that clause.

In case action under clause 2 has not been finalized and the work has been determined under clause 3, the right of action under this clause shall remain post determination of contract but levy of compensation shall be for days the progress is behind the schedule on date of determination, as assessed by the authority in Schedule F, after due consideration of justified extension. The compensation for delay, if not decided before the determination of contract, shall be decided after of determination of contract.

The amount of compensation may be adjusted or set-off against any sum payable to the Contractor under this or any other contract with the WAPCOS. In case, the contractor does not achieve a particular milestone mentioned in Schedule F, or the re-scheduled milestone(s) in terms of Clause 5.4, the amount shown against that milestone shall be withheld, to be adjusted against the compensation levied at the final grant of Extension of Time. Withholding of this amount on failure to achieve a milestone, shall be automatic without any notice to the contractor. However, if the contractor catches up with the progress of work on the subsequent milestone(s), the withheld amount shall be released. In case the contractor fails to make up for the delay in subsequent milestone(s), amount mentioned against each milestone missed subsequently also shall be withheld. However, no interest, whatsoever, shall be payable on such withheld amount. (Modified OM No. DG/CON/306 dt. 04.10.2019)

CLAUSE 3: WHEN CONTRACT CAN BE DETERMINED

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

- i. If the contractor having been given by the Engineer-in-Charge a notice in writing to rectify, reconstruct or replace any defective work or that the work is being performed in an inefficient or otherwise improper or un-workman like manner shall omit to comply with the requirement of such notice for a period of seven days thereafter.
- ii. If the contractor has, without reasonable cause, suspended the progress of the work or has failed to proceed with the work with due diligence and continues to do so after a notice in writing of seven days from the Engineer-in-Charge.
- iii. If the contractor fails to complete the work or section of work with individual date of completion on or before the stipulated or justified extended date, on or before such date of completion; and the Engineer in Charge without any prejudice to any other right or remedy under any other provision in the contract has given further reasonable time in a notice given in writing in that behalf as either mutually agreed or in absence of such mutual agreement by his own assessment making such time essence of contract and in the opinion of Engineer-in-Charge the contractor will be unable to complete the same or does not complete the same within the period specified.
- iv. If the contractor persistently neglects to carry out his obligations under the contract and/ or commits default in complying with any of the terms and conditions of the contract and does not remedy it or take effective steps to remedy it within 7 days after a notice in writing is given to him in that behalf by the Engineer-in-Charge.

- v. If the contractor shall offer or give or agree to give to any person in WAPCOS service or to any other person on his behalf any gift or consideration of any kind as an inducement or reward for doing or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of this or any other contract for WAPCOS. to do any act in relation to the obtaining or execution of this or any other contract for WAPCOS.
 - vi. If the contractor shall enter into a contract with WAPCOS in connection with which commission has been paid or agreed to be paid by him or to his knowledge, unless the particulars of any such commission and the terms of payment thereof have been previously disclosed in writing to the Engineer-in-Charge.
 - vii. If the contractor had secured the contract with WAPCOS as a result of wrong tendering or other non-bonafide methods of competitive tendering or commits breach of Integrity Agreement.
 - viii. If the contractor being an individual, or if a firm, any partner thereof shall at any time be adjudged insolvent or have a receiving order or order for administration of his estate made against him or shall take any proceedings for liquidation or composition (other than a voluntary liquidation for the purpose of amalgamation or reconstruction) under any Insolvency Act for the time being in force or make any conveyance or assignment of his effects or composition or arrangement for the benefit of his creditors or purport so to do, or if any application be made under any Insolvency Act for the time being in force for the sequestration of his estate or if a trust deed be executed by him for benefit of his creditors.
 - ix. If the contractor being a company shall pass a resolution or the court shall make an order that the company shall be wound up or if a receiver or a manager on behalf of a creditor shall be appointed or if circumstances shall arise which entitle the court or the creditor to appoint a receiver or a manager or which entitle the court to make a winding up order.
 - x. If the contractor shall suffer an execution being levied on his goods and allow it to be continued for a period of 21 days.
 - xi. If the contractor assigns (excluding part(s) of work assigned to other agency(s) by the contractor as per terms of contract), transfers, sublets (engagement of labour on a piece-work basis or of labour with materials not to be incorporated in the work, shall not be deemed to be subletting) or otherwise parts with or attempts to assign, transfer, sublet or otherwise parts with the entire works or any portion thereof without the prior written approval of the Engineer-in-Charge. When the contractor has made himself liable for action under any of the cases aforesaid, the Engineer-in-Charge on behalf of the WAPCOS shall have powers:
 - a) To determine the contract as aforesaid so far as performance of work by the Contractor is concerned (of which determination notice in writing to the contractor under the hand of the Engineer-in-Charge shall be conclusive evidence). Upon such determination, Security Deposit already recovered, Security deposit payable and Performance Guarantee under the contract shall be liable to be forfeited and shall be absolutely at the disposal of the WAPCOS
 - b) After giving notice to the contractor to measure up the work of the contractor and to take such whole, or the balance or part thereof, as shall be un-executed out of his hands and to give it to another contractor to complete the work. The contractor, whose contract is determined as above, shall not be allowed to participate in the tendering process for the balance work ***including any new items needed to complete the work.***
- In the event of above courses being adopted by the Engineer-in-Charge, the contractor shall

have no claim to compensation for any loss sustained by him by reasons of his having purchased or procured any materials or entered into any engagements or made any advances on account or with a view to the execution of the work or the performance of the contract. And in case action is taken under any of the provision aforesaid, the contractor shall not be entitled to recover or be paid any sum for any work thereof or actually performed under this contract unless and until the Engineer-in-Charge has certified in writing the performance of such work and the value payable in respect thereof and he shall only be entitled to be paid the value so certified.

CLAUSE 3A

In case, the work cannot be started due to reasons not within the control of the contractor within 1/8th of the stipulated time for completion of work or one month whichever is higher, either party may close the contract by giving notice to the other party stating the reasons. In such eventuality, the Performance Guarantee of the contractor shall be refunded within following time limits :

- | | | |
|----|---|---------|
| a) | Tendered value of work is up to Rs. 1 Crore | 15 days |
| b) | If the Tendered value of work is more than Rs. 1 Crore and up to Rs. 10 Crore | 21 days |
| c) | If the Tendered value of work exceeds Rs. 10 Crore | 30 days |
- Neither party shall claim any compensation for such eventuality. This clause is not applicable for any breach of the contract by either party.

CLAUSE 4: CONTRACTOR LIABLE TO PAY COMPENSATION EVEN IF ACTION NOT TAKEN UNDER CLAUSE 3

In any case in which any of the powers conferred upon the Engineer-in- Charge by Clause-3 thereof, shall have become exercisable and the same are not exercised, the non-exercise thereof shall not constitute a waiver of any of the conditions hereof and such powers shall notwithstanding be exercisable in the event of any future case of default by the contractor and the liability of the contractor for compensation shall remain unaffected. In the event of the Engineer-in-Charge putting in force all or any of the powers vested in him under the preceding clause he may, if he so desires after giving a notice in writing to the contractor, take possession of (or at the sole discretion of the Engineer-in-Charge which shall be final and binding on the contractor) use as on hire (the amount of the hire money being also in the final determination of the Engineer-in-Charge) all or any tools, plant, materials and stores, in or upon the works, or the site thereof belonging to the contractor, or procured by the contractor and intended to be used for the execution of the work/or any part thereof, paying or allowing for the same in account at the contract rates, or, in the case of these not being applicable, at current market rates to be certified by the Engineer-in- Charge, whose certificate thereof shall be final, and binding on the contractor, clerk of the works, foreman or other authorized agent to remove such tools, plant, materials, or stores from the premises (within a time to be specified in such notice) in the event of the contractor failing to comply with any such requisition, the Engineer-in-Charge may remove them at the contractor's expense or sell them by auction or private sale on account of the

contractor and his risk in all respects and the certificate of the Engineer-in-Charge as to the expenses of any such removal and the amount of the proceeds and expenses of any such sale shall be final and conclusive against the contractor.

CLAUSE 5: TIME AND EXTENSION DELAY

The time allowed for execution of the Works as specified in the Schedule 'F' or the extended time in accordance with these conditions shall be the essence of the Contract. The execution of the work shall commence from such time period as mentioned in schedule 'F' or from the date of handing over of the site, notified by the Engineer-in-Charge, whichever is later. If the Contractor commits default in commencing the execution of the work as aforesaid, the performance guarantee shall be forfeited by the Engineer in Charge and shall be absolutely at the disposal of the WAPCOS without prejudice to any other right or remedy available in law.

- 5.1** i) As soon as possible but within 7 (seven) working days of award of work and in consideration of
- a) Schedule of handing over of site as specified in the Schedule 'F'
 - b) Schedule of issue of designs as specified in the Schedule 'F' ,
the Contractor shall submit a Time and Progress Chart for each mile stone. The Engineer-in-Charge may within 7 (seven) working days thereafter, if required modify, and communicate the program approved to the contractor failing which the program submitted by the contractor shall be deemed to be approved by the Engineer-in-Charge. The work programme shall include all details of balance drawings and decisions required to complete the contract with specific dates by which these details are required by contractor without causing any delay in execution of the work. The Chart shall be prepared in direct relation to the time stated in the Contract documents for completion of items of the works. It shall indicate the forecast of the dates of commencement and completion of various trades of sections of the work and may be amended as necessary by agreement between the Engineer-in-Charge and the Contractor within the limitations of time imposed in the Contract documents

In case of non-submission of construction programme by the contractor,

- (i) the program approved by the Engineer-in-Charge shall be deemed to be final.
- (ii) The approval by the Engineer-in-Charge of such programme shall not relieve the contractor of any of the obligations under the contract.

- (iii) The contractor shall submit the Time and Progress Chart and progress report using the mutually agreed software or in other format decided by Engineer-in- Charge for the work done during previous month to the Engineer-in-charge on or before 5th day of each month failing which a recovery as per Schedule F to be decided by the NIT approving authority shall be made on per week or part basis in case of delay in submission of the monthly progress report.

5.2 If the work(s) be delayed by:-

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

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

The contractor shall have no claim of damages for extension of time granted or rescheduling of milestone/s for events listed in sub clause 5.2. (Modified OM DG/CON/305 dt. 19.02.2019)

In case the work is hindered by the WAPCOS or for any reason / event, for which the WAPCOS is responsible, the authority as indicated in Schedule 'F' shall, if justified, give a fair and reasonable extension of time and reschedule the milestones for completion of work. Such extension of time or rescheduling of milestone/s shall be without prejudice to any other right or remedy of the parties in contract or in law; provided further that for concurrent delays under this sub clause and sub clause 5.2 to the extent

- 5.3** the delay is covered under sub clause 5.2 the contractor shall be entitled to only extension of time and no damages

- 5.4** Request for rescheduling of Mile stones or extension of time, to be eligible for consideration, shall be made by the Contractor in writing within fourteen days of the happening of the event causing delay on the prescribed forms i.e. Form of application by the contractor for seeking rescheduling of milestones or Form of application by the contractor for seeking

extension of time (Annexure-XIV) respectively to the authority as indicated in Schedule 'F'. The Contractor shall indicate in such a request the period by which rescheduling of milestone/s or extension of time is desired. With every request for rescheduling of milestones, or if at any time the actual progress of work falls behind the approved programme by more than 10% of the stipulated period of completion of contract, the contractor shall produce a revised programme which shall include all details of pending drawings and decisions required to complete the contract and also the target dates by which these details should be available without causing any delay in execution of the work. A recovery as specified in Schedule 'F' shall be made on per day basis in case of delay in submission of the revised programme.

5.4.1 In any such case the authority as indicated in Schedule 'F' may give a fair and reasonable extension of time for completion of work or reschedule the mile stones. Engineer -in-Charge shall finalize/ reschedule a particular mile stone before taking an action against subsequent mile stone. Such extension or rescheduling of the milestones shall be communicated to the Contractor by the authority as indicated in Schedule 'F' in writing, within 21 days of the date of receipt of such request from the Contractor in prescribed form. In event of non- application by the contractor for extension of time E-in-C after affording opportunity to the contractor, may give, supported with a programme (as specified under 5.4 above), a fair and reasonable extension within a reasonable period of occurrence of the event.

5.5 In case the work is delayed by any reasons, in the opinion of the Engineer- in-Charge, by the contractor for reasons beyond the events mentioned in clause 5.2 or clause 5.3 or clause 5.4 and beyond the justified extended date; without prejudice to right to take action under Clause 3, the Engineer- in-Charge may grant extension of time required for completion of work without rescheduling of milestones. The contractor shall be liable for levy of compensation for delay for such extension of time.

CLAUSE 6: MEASUREMENTS OF WORK DONE

Engineer-in-Charge shall, except as otherwise provided, ascertain and determine by measurement, the value in accordance with the contract of work done.

All measurement of all items having financial value shall be entered in Measurement Book and/or level field book so that a complete record is obtained of all works performed under the contract.

All measurements and levels shall be taken jointly by the Engineer-in-Charge or his authorized representative and by the contractor or his authorized representative from time to time during the progress of the work and such measurements shall be signed and dated by the Engineer- in-Charge and the contractor or their representatives in token of their acceptance. If the contractor objects to any of the measurements recorded, a note shall be made to that effect with reason and signed by both the parties. If for any reason the contractor or his authorized representative is not available and the work of recording measurements is suspended by the Engineer-in-Charge or his representative, the Engineer- in-Charge and the WAPCOS shall not entertain any

claim from contractor for any loss or damages on this account. If the contractor or his authorized representative does not remain present at the time of such measurements after the contractor or his authorized representative has been given a notice in writing three (3) days in advance or fails to countersign or to record objection within a week from the date of the measurement, then such measurements recorded in his absence by the Engineer-in-Charge or his representative shall be deemed to be accepted by the Contractor.

The contractor shall, without extra charge, provide all assistance with every appliance, labour and other things necessary for measurements and recording levels.

Except where any general or detailed description of the work expressly shows to the contrary, measurements shall be taken in accordance with the procedure set forth in the specifications notwithstanding any provision in the relevant Standard Method of measurement or any general or local custom. In the case of items which are not covered by specifications, measurements shall be taken in accordance with the relevant standard method of measurement issued by the Bureau of Indian Standards and if for any item no such standard is available, then a mutually agreed method shall be followed.

The contractor shall give, not less than seven days' notice to the Engineer-in-Charge or his authorized representative in charge of the work, before covering up or otherwise placing beyond the reach of measurement any work in order that the same may be measured and correct dimensions thereof be taken before the same is covered up or placed beyond the reach of measurement and shall not cover up and place beyond reach of measurement any work without consent in writing of the Engineer-in-Charge or his authorized representative in charge of the work who shall within the aforesaid period of seven days inspect the work, and if any work shall be covered up or placed beyond the reach of measurements without such notice having been given or the Engineer-in-Charge's consent being obtained in writing, the same shall be uncovered at the Contractor's expense, or in default thereof no

Payment or allowance shall be made for such work or the materials with which the same was executed.

Engineer-in-Charge or his authorized representative may cause either themselves or through another officer of the WAPCOS to check the measurements recorded jointly or otherwise as aforesaid and all provisions stipulated herein above shall be applicable to such checking of measurements or levels.

It is also a term of this contract that recording of measurements of any item of work in the measurement book and/or its payment in the interim, on account or final bill shall not be considered as conclusive evidence as to the sufficiency of any work or material to which it relates nor shall it relieve the contractor from liabilities from any over measurement or defects noticed till completion of the defects liability period.

CLAUSE 6 A: COMPUTERIZED MEASUREMENT BOOK

Engineer-in-Charge shall, except as otherwise provided, ascertain and determine by measurement the value of work done in accordance with the contract.

All measurements of all items having financial value shall be entered by the contractor and compiled in the shape of the Computerized Measurement Book having pages of A-4 size as per the format of the WAPCOS so that a complete record is obtained of all the items of works performed under the contract.

All such measurements and levels recorded by the contractor or his authorized representative from time to time, during the progress of the work, shall be got checked by the contractor from the Engineer-in-Charge or his authorized representative as per interval or program fixed in consultation with Engineer-in-Charge or his authorized representative. After the necessary corrections made by the Engineer-in-Charge, the measurement sheets shall be returned to the contractor for incorporating the corrections and for resubmission to the Engineer-in-Charge for the dated signatures by the Engineer-in-Charge and the contractor or their representatives in token of their acceptance.

Whenever bill is due for payment, the contractor would initially submit draft computerized measurement sheets and these measurements would be got checked/test checked from the Engineer-in-Charge and/or his authorized representative. The contractor will, thereafter, incorporate such changes as may be done during these checks/test checks in his draft computerized measurements, and submit to the WAPCOS a computerized measurement book, duly bound, and with its pages machine numbered. The Engineer-in-Charge and/or his authorized representative would thereafter check this MB, and record the necessary certificates for their checks/test checks.

The final, fair, computerized measurement book given by the contractor, duly bound, with its pages machine numbered, should be 100% correct, and no cutting or over-writing in the measurements would thereafter be allowed. If at all any error is noticed, the contractor shall have to submit a fresh computerized MB with its pages duly machine numbered and bound, after getting the earlier MB cancelled by the WAPCOS. Thereafter, the MB shall be taken in the Divisional Office records, and allotted a number as per the Register of Computerized MBs. This should be done before the corresponding bill is submitted to the Division Office for payment. The contractor shall submit two spare copies of such computerized MB's for the purpose of reference and records.

The contractor shall also submit to the WAPCOS separately his computerized Abstract of Cost and the bill based on these measurements, duly bound, and its pages machine numbered along with two spare copies of the "bill. Thereafter, this bill will be processed by the Division Office and allotted a number as per the computerized record in the same way as done for the measurement book meant for measurements.

The contractor shall, without extra charge, provide all assistance with every appliance, labour and other things necessary for checking of measurements/levels by the Engineer-in- Charge or his representative.

Except where any general or detailed description of the work expressly shows to the contrary, measurements shall be taken in accordance with the procedure set forth in the specifications notwithstanding any provision in the relevant Standard Method of measurement or any general or local custom. In the case of items which are not covered by specifications, measurements shall be taken in accordance with the relevant standard method of measurement issued by the Bureau of Indian Standards and if for any item no such standard is available then a mutually agreed method shall be followed.

The contractor shall give not less than seven days' notice to the Engineer-in- Charge or his authorized representative in charge of the work before covering up or otherwise placing beyond the reach of checking and/or test checking the measurement of any work in order that the same may be checked and/or test checked and correct dimensions thereof be taken before the same is covered up or placed beyond the reach of checking and/or test checking measurement and shall not cover up and place beyond reach of measurement any work without consent in writing of the Engineer- in-Charge or his authorized representative in charge of the work who shall within the aforesaid period of seven days inspect the work, and if any work shall be covered up or placed beyond the reach of checking and/or test checking measurements without such notice having been given or the Engineer-in-Charge's consent being obtained in writing the same shall be uncovered at the Contractor's expense, or in default thereof no payment or allowance shall be made for such work or the materials with which the same was executed.

Engineer-in-Charge or his authorized representative may cause either themselves or through another officer of the WAPCOS to check the measurements recorded by contractor and all provisions stipulated herein above shall be applicable to such checking of measurements or levels.

It is also a term of this contract that checking and/or test checking the measurements of any item of work in the measurement book and/or its payment in the interim, on account of final bill shall not be considered as conclusive evidence as to the sufficiency of any work or material to which it relates nor shall it relieve the contractor from liabilities from any over measurement or defects noticed till completion of the defects liability period.

CLAUSE 7 : PAYMENT ON INTERMEDIATE CERTIFICATE TO BE REGARD AS ADVANCE

The interim or running account bill shall be submitted by the Contractor for work executed on the basis of recorded measurements on the format of the Employer on or before the date of every month fixed by Project Manager of WAPCOS. Contractor shall submit the bill with all requisite certificates/ documents. Project Manager of WAPCOS shall arrange to have the bill verified by taking or causing to be taken where necessary, the requisite measurement of

the work within 15 working days. Observations if any shall be conveyed by the Project Manager, WAPCOS to the Contractor within 25 working days. Contractor shall resubmit the bill to Project Manager, WAPCOS after compliance of observations and duly signed by the Project Manager of WAPCOS for further processing. Payment on account of amount admissible shall be made by the Engineer-in-Charge certifying the sum to which the Contractor is considered entitled by way of interim payment at such rates as decided by Engineer-in-Charge. The amount shall be paid by 45 working days after the day of presentation of the corrected bill by the Contractor to the Engineer-in-Charge or his representative, or 45 days after receive of the payments from Principal Employer whichever is later. As Bidder/Contractor acknowledges that under the present Contract agreement, the Employer is only working as intermediary between Principal Employer and Contractor. Thus, the Contractor unconditionally acknowledge that the payments under the present Contract shall be made proportionately by the Employer only on back- to-back basis i.e., after 45 days subject to receipt of payment from Principal Employer. The Contractor also unconditionally agree that in the event the payment or part thereof, under the present Contract is not received from Principal Employer, then WAPCOS and/or any of its Employee/Officer shall not be responsible to pay any amount to Contractor. The said condition shall supersede any and all other conditions of Contract/Agreement/Work Order/Arrangement between the parties. All such interim payments shall be regarded as payment by way of advances against final payment only and shall not preclude the requiring of bad, unsound and imperfect or unskilled work to be rejected,

All such interim payments shall be regarded as payment by way of advances against final payment only and shall not preclude the requiring of bad, unsound and imperfect or unskilled work to be rejected, removed, taken away and reconstructed or re-erected. Any certificate given by the Engineer-in-Charge relating to the work done or materials delivered forming part of such payment, may be modified or corrected by any subsequent such certificate(s) or by the final certificate and shall not by itself be conclusive evidence that any work or materials to which it relates is/are in accordance with the contract and specifications. Any such interim payment, or any part thereof shall not in any respect conclude, determine or affect in any way powers of the Engineer-in-Charge under the contract or any of such payments be treated as final settlement and adjustment of accounts or in any way vary or affect the contract.

Pending consideration of extension of date of completion, interim payments shall continue to be made as herein provided without prejudice to the right of the WAPCOS to take action under the terms of this contract for delay in the completion of work, if the extension of date of completion is not granted by the competent authority.

CLAUSE 7A

No Running Account Bill shall be paid for the work till the applicable labour licenses, registration with EPFO, ESIC and BOCW Welfare Board, whatever applicable are submitted by the contractor to the Engineer-in-Charge.

CLAUSE 8 : COMPLETION CERTIFICATE AND COMPLETION PLANS

Within ten days of the completion of the work, the contractor shall give notice of such

completion to the Engineer-in-Charge and within thirty days of the receipt of such notice, the Engineer-in-Charge shall inspect the work and if there is no defect in the work, shall furnish the contractor with a final certificate of completion, otherwise a provisional Certificate of physical completion indicating defects (a) to be rectified by the contractor and/or (b) for which payment will be made at reduced rates, shall be issued. But no final certificate of completion shall be issued, nor shall the work be considered to be complete until the contractor shall have removed from the premises on which the work shall be executed all scaffolding, surplus materials, rubbish and all huts and sanitary arrangements required for his/their work people on the site in connection with the execution of the works as shall have been erected or constructed by the contractor(s) and cleaned off the dirt from all wood work, doors, windows, walls, floor or other parts of the building, in, upon, or about which the work is to be executed or of which he may have had possession for the purpose of the execution; thereof, and not until the work shall have been measured by the Engineer-in-Charge. If the contractor shall fail to comply with the requirements of this Clause as to removal of scaffolding, surplus materials and rubbish and all huts and sanitary arrangements as aforesaid and cleaning off dirt on or before the date fixed for the completion of work, the Engineer-in-Charge may at the expense of the contractor remove such scaffolding, surplus materials and rubbish etc., and dispose of the same as he thinks fit and clean off such dirt as aforesaid, and the contractor shall have no claim in respect of scaffolding or surplus materials as aforesaid except for any sum actually realized by the sale thereof

CLAUSE 8A : CONTRACTOR TO KEEP SITE CLEAN

When the annual repairs and maintenance of works are carried out, the splashes and droppings from white washing, colour washing, painting etc., on walls, floor, windows, etc shall be removed and the surface cleaned simultaneously with the completion of these items of work in the individual rooms, quarters or premises etc. where the work is done: without waiting for the actual completion of all the other items of work in the contract. In case the contractor fails to comply with the requirements of this clause, the Engineer-in- Charge shall have the right to get this work done at the cost of the contractor either WAPCOS or through any other agency. Before taking such action, the Engineer-in-Charge shall give ten days' notice in writing to the contractor.

CLAUSE 8B: COMPLETION PLANS TO BE SUBMITTED BY THE CONTRACTOR

The contractor shall submit completion plans for Internal and External Civil, Electrical and Mechanical Services within thirty days of the completion of the work, provided that the service plans having been issued for execution by the Engineer-in-Charge, unless the contractor, by virtue of any other provision in the contract, is required to prepare such plans. In case, the contractor fails to submit the completion plan as aforesaid, he shall be liable to pay a sum of 0.1 % (zero point one percent) of accepted Tendered Value or limit prescribed in Schedule F whichever is more as may be fixed by the authority as mentioned in Schedule F and in this respect the decision of the that authority shall be final and binding on the contractor.

CLAUSE 9 : PAYMENT OF FINAL BILL

The final bill shall be submitted by the contractor in the same manner as specified in interim bills within three months of physical completion of the work or within one month of the date of the final certificate of completion furnished by the Engineer-in-Charge

Whichever is earlier. No further claims shall be made by the contractor after submission of the final bill and these shall be deemed to have been waived and extinguished. Payments of those items of the bill in respect of which there is no dispute and of items in dispute, for quantities and rates as approved by Engineer-in-Charge, will, as far as possible be made within the period specified here in under, the period being reckoned from the date of receipt of the bill by the Engineer- in- Charge or his authorized Engineer, complete with account of materials issued by the WAPCOS and dismantled materials.

- | | |
|---|----------|
| a) Tendered value of work is upto Rs.1 crore | 2 months |
| b) If the Tendered value of work is more than Rs.1 crore and upto Rs 10 crore | 3 months |
| c) If the Tendered value of work exceeds Rs. 10 crore | 6 months |

CLAUSE 9 A : PAYMENT OF CONTRACTOR'S BILLS TO BANKS

Payments due to the contractor may, if so desired by him, be made to his bank, registered financial, co-operative or thrift societies or recognized financial institutions instead of direct to him provided that the contractor furnishes to the Engineer-in-Charge (1) an authorization in the form of a legally valid document such as a power of attorney conferring authority on the bank; registered financial, co-operative or thrift societies or recognized financial institutions to receive payments and (2) his own acceptance of the correctness of the amount made out as being due to him by WAPCOS or his signature on the bill or other claim preferred against WAPCOS before settlement by the Engineer-in- Charge of the account or claim by payment to the bank, registered financial, co-operative or thrift societies or recognized financial institutions. While the receipt given by such banks; registered financial, co-operative or thrift societies or recognized financial institutions shall constitute a full and sufficient discharge for the payment, the contractor shall whenever possible present his bills duly receipted and discharged through his bank, registered financial, cooperative or thrift societies or recognized financial institutions.

Nothing herein contained shall operate to create in favour of the bank; registered financial, co-operative or thrift societies or recognized financial institutions any rights or equities vis-à-vis the WAPCOS.

CLAUSE 10 : MATERIALS SUPPLIED BY WAPCOS

Not Applicable

CLAUSE 10A: MATERIALS TO BE PROVIDED BY CONTRACTOR

The contractor shall, at his own expense, provide all materials, required for the works other than those which are stipulated to be supplied by the WAPCOS.

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

Within such further period as he may require intimate to the Contractor in writing whether samples are approved by him or not. If samples are not approved, the Contractor shall forthwith arrange to supply to the Engineer-in-Charge for his approval, fresh samples complying with the specifications laid down in the contract. When materials are required to be tested in accordance with specifications, approval of the Engineer-in-Charge shall be issued after the test results are received.

The Contractor shall at his risk and cost submit the samples of materials to be tested or analyzed and shall not make use of or incorporate in the work any materials represented by the samples until the required tests or analysis have been made and materials finally accepted by the Engineer-in-Charge. The Contractor shall not be eligible for any claim or compensation either arising out of any delay in the work or due to any corrective measures required to be taken on account of and as a result of testing of materials.

The contractor shall, at his risk and cost, make all arrangements and shall provide all facilities as the Engineer-in-Charge may require for collecting, and preparing the required number of samples for such tests at such time and to such place or places as may be directed by the Engineer-in-Charge and bear all charges and cost of testing unless specifically provided for otherwise elsewhere in the contract or specifications. The Engineer-in-Charge or his authorized representative shall at all times have access to the works and to all workshops and places where work is being prepared or from where materials, manufactured articles or machinery are being obtained for the works and the contractor shall afford every facility and every assistance in obtaining the right to such access.

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

The contractor shall at his own expense, provide a material testing lab at the site for conducting routine field tests. The lab shall be equipped at least with the testing equipments as specified in schedule F.

CLAUSE 10B:

SECURED ADVANCE ON NON-PERISHABLE MATERIALS

- (i) The contractor, on signing an indenture in the form in APPENDIX - XV to be specified by the Engineer-in-Charge, shall be entitled to be paid during the progress of the execution of the work up to 75% of the assessed value of any materials or an amount not exceeding 75% of the material element cost in the tendered rate of the finished item of the work, whichever is lower, which are in the opinion of the Engineer-in-Charge non-perishable, non-fragile and non-combustible and are in accordance with the contract and which have been brought on the site in connection therewith and are adequately stored and/or protected against damage by weather or other causes but which have not at the time of advance been incorporated in the works. When materials on account of which an advance has been made under this sub-clause are incorporated in the work, the amount of such advance shall be recovered/deducted from the next payment made under any of the clause or clauses of this contract.
- Such secured advance shall also be payable on other items of perishable nature, fragile and combustible with the approval of the Engineer-in-Charge provided the contractor provides a comprehensive insurance cover for the full cost of such materials. The decision of the Engineer-in-Charge shall be final and binding on the contractor in this matter. No secured advance, shall however, be paid on high-risk materials such as ordinary glass, sand, petrol, diesel etc.

**CLAUSE 10C: PAYMENT ON ACCOUNT OF INCREASE IN PRICE / WAGES DUE
TO STATUTORY ORDER**

If after submission of tender, if the price of any material incorporated in the work (excluding the material covered under clause 10 CA and/ or wages of Labour increases as a direct result of the coming into force of any fresh law or statutory rule or order (but not due to any variation of rate in GST applicable on such material(s) being considered under this clause) beyond the prices/wages prevailing at the time of the last stipulated date of receipt of tenders including extensions, if any, for the work during contract period including the justified period extended under the provisions of clause 5 of the contract without any action under clause 2, then the amount of the contract shall accordingly be varied.

If after submission of the tender, the price of any material incorporated in the works (excluding the materials covered under Clause 10CA and/or wages of Labour as prevailing at the time of last stipulated date of receipt of tender including extensions, if any, is decreased as a direct result of the coming into force of any fresh law or statutory rules or order (but not due to any changes of rate in sales tax/VAT, Central/State Excise/Custom Duty), WAPCOS shall in respect of materials incorporated in the works (excluding the materials covered under Clause 10CA and/or Labour engaged on the execution of the work after the date of coming into force of such law statutory rule or order be entitled to deduct from the dues of the contractor, such amount as shall be equivalent to the difference between the prices of the materials and/or wages as prevailed at the time of the last stipulated date for receipt of tenders including extensions if any for the work and the prices of materials and/or wages of labour on the coming into force of such law, statutory rule or order. This will be applicable for the contract period including the justified period extended under the provisions of clause 5 of the contract without any action under clause 2.

Engineer-in-Charge shall call books of account and other relevant documents from the contractor to satisfy himself about reasonability of increase in prices of materials and wages.

The contractor shall, within a reasonable time of his becoming aware of any alteration in the price of any such materials and/or wages of Labour, give notice thereof to the Engineer-in-Charge stating that the same is given pursuant to this condition together with all information relating thereto which he may be in position to supply.

For this purpose, the Labour component of 85% of the value of the work executed during period under consideration shall not exceed the percentage as specified in Schedule F, and the increase/decrease in Labour shall be considered on the minimum daily wages in Rupees of any unskilled Mazdoor, fixed under any law statutory rule and order. The cost of work for which escalation is applicable (W) is same as cost of work done worked out as indicated in sub-para (ii) of clause 10 CC except the amount of full assessed value of secured Advance.

CLAUSE 10CA : PAYMENT DUE TO VARIATION IN PRICES OF MATERIALS AFTER RECEIPT OF TENDER

If after submission of the tender, the price of materials specified in Schedule F increases/decreases beyond the base price(s) as indicated in Schedule F for the work, then the amount of the contract shall accordingly be varied and provided further that any such variations shall be effected for stipulated period of Contract including the justified period extended under the provisions of Clause 5 of the Contract without any action under Clause 2.

However for work done/during the justified period extended as above, it will be limited to indices prevailing at the time of updated stipulated date of completion considering the effect of extra work (extra time to be calculated on pro-rata basis only as cost of extra work x stipulated period/tendered cost). If updated stipulated date of completion as calculated on pro-rata basis does not cover full calendar month then indices will be considered or restricted to previous month.

The increase/decrease in prices of cement, steel reinforcement, structural steel and POL shall be determined by the Price indices issued by the Director General, CPWD. For other items provided in the Schedule 'F', this shall be determined by the All India Wholesale Price Indices of materials as published by Economic Advisor to Government of India, Ministry of Commerce and Industry. Base price for cement, steel reinforcement, structural steel and POL shall be as issued under the authority of Director General CPWD applicable for Delhi including Noida, Gurgaon, Faridabad & Ghaziabad and for other places as issued under the authority of Zonal Chief Engineer, CPWD and base price of other materials issued by concerned Zonal Chief Engineer and as indicated in Schedule 'F'. In case, price index of a particular material is not issued by Ministry of Commerce and Industry, then the price index of nearest similar material as indicated in Schedule 'F' shall be followed.

The amount of the contract shall accordingly be varied for all such materials and will be worked out as per the formula given below for individual material:-

$$\text{Adjustment for component of individual material } V = P \times Q \times \frac{CI - CI_0}{CI_0}$$

Where,

V = Variation in material cost i.e. increase or decrease in the amount of rupees to be paid or recovered.

P = Base Price of material as issued under authority of DG, CPWD or concerned Zonal Chief Engineer and as indicated in Schedule "F". For Projects and Original Works

Q = Quantity of material brought at site for bonafide use in the works since

Previous bill excluding any such quantity consumed in the deviated quantity of items beyond deviation limit and extra /substituted item, paid/to be paid at rates derived on the basis of market rate under clause 12.2.

The amount of the contract shall accordingly be varied for all such materials and will be worked out as per the formula given below for individual material:-

$$\text{Adjustment for component of individual material } V = P \times Q \times \frac{CI - CI_0}{CI_0}$$

Where,

V = Variation in material cost i.e. increase or decrease in the amount of rupees to be paid or recovered.

P = Base Price of material as issued under authority of DG, CPWD or concerned Zonal Chief Engineer and as indicated in Schedule "F". For Projects and Original Works

Q = Quantity of material brought at site for bonafide use in the works since

Previous bill excluding any such quantity consumed in the deviated quantity of items beyond deviation limit and extra /substituted item, paid/to be paid at rates derived on the basis of market rate under clause 12.2.

Clo = Price index for cement, steel reinforcement bars structural steel and POL as issued by the DG, CPWD and corresponding to the time of base price of respective material indicated in Schedule 'F'. For other items, if any, provided in Schedule 'F', All India Wholesale Price Index for the material as published by the Economic Advisor to Government of India, Ministry of Industry and Commerce and corresponding to the time of base price of respective material indicated in Schedule 'F'.

CI = Price index for cement, steel reinforcement bars, structural steel and POL as issued under the authority of DG, CPWD for period under consideration. For other items, if any, provided in Schedule 'F', All India Wholesale Price Index for the material for period under consideration as published by Economic Advisor to Government of India, Ministry of Industry and Commerce.

Note:

- (i) In respect of the justified period extended under the provisions of clause 5 of the contract without any action under clause 2, the index prevailing at the time of updated stipulated date of completion considering the effect of extra work (extra time to be calculated on pro-rata basis only as cost of extra work x stipulated period/ tendered cost) shall be considered. Provided always that provisions of the preceding Clause 10 C shall not be applicable in respect of Materials covered in this Clause. If updated stipulated date of completion as calculated on pro- rata basis does not cover full calendar month then indices will be considered or restricted to previous month.
- (ii) If during progress of work or at the time of completion of work, it is noticed that any material brought at site is in excess of requirement, then amount of escalation if paid earlier on such excess quantity of material shall be recovered on the basis of cost indices as applied at the time of payment of escalation or as prevailing at the time of effecting recovery, whichever is higher.
- (iii) Cement mentioned wherever in this clause includes Cement component used in RMC brought at site from outside approved RMC plants, if any.
- (iv) The date wise record of ready mix concrete shall be kept in a register and the cement consumption for the same shall be calculated accordingly.
- (v) If built-up steel items are brought at site from workshop, then the variation shall be paid for the structural steel up to the period when the built up item/finished product is brought at site.

CLAUSE 10CC : PAYMENT DUE TO INCREASE/DECREASE IN PRICES/WAGES (EXCLUDING MATERIALS COVERED UNDER CLAUSE 10 CA) AFTER RECEIPT OF TENDER FOR WORKS

If the prices of materials (not being materials supplied or services rendered at fixed prices by the WAPCOS in accordance with clause 10 & 34 thereof) and/or wages of labour required for execution of the work increase, the contractor shall be compensated for such increase as per provisions detailed below and the amount of the contract shall accordingly be varied, subject to the condition that such compensation for escalation in prices and wages shall be available only for the work done during the stipulated period of the contract including the justified period extended under the provisions of clause 5 of the contract without any action under clause 2. No such compensation shall be payable for a work for which the stipulated period of completion is Equal to or less than the time as specified in Schedule F. Such compensation for escalation in the prices of materials and Labour, when due, shall be worked out based on the following provisions:-

- i. The base date for working out such escalation shall be the last stipulated date of receipt of tenders including extension, if any.
- ii. The cost of work on which escalation will be payable shall be reckoned as below :
 - a) Gross value of work done up to this quarter : (A)
 - b) Gross value of work done up to the last quarter : (B)
 - c) Gross value of work done since previous quarter (A-B) (C)
 - d) Full assessed value of Secured Advance (excluding materials Covered under Clause 10 CA) fresh paid in this quarter : (D)
 - e) Full assessed value of Secured Advance (excluding materials Covered under Clause 10 CA) recovered in this quarter : (E)
 - f) Full assessed value of Secured Advance for which escalation Payable in this quarter (D-E): (F)
 - g) Advance payment made during this quarter: (G)
 - h) Advance payment recovered during this quarter: (H)
 - i) Advance payment for which escalation is payable in this Quarter (G- H): (I)
 - j) Extra items/deviated quantities of items paid as per Clause 12 Based on prevailing market rates during this quarter: (J)

Then, $M = C + F + I + J$

$N = 0.85 M$

Cost of work for which escalation is applicable:

$$W = N$$

Components for materials (except cement, reinforcement bars, structural steel, POL or other materials covered under clause 10 CA) Labour, etc. shall be pre-determined for every work and incorporated in the conditions of contract attached to the tender papers included in

Schedule 'F'. The decision of the Engineer-in-Charge in working out such percentage shall be binding on the contractors.

- iii. The compensation for escalation for other materials (excluding cement, reinforcement bars, structural steel, POL or other materials covered under clause 10 CA) shall be worked as per the formula given below:-

Adjustment for civil component (except cement, structural steel, reinforcement bars, POL and other materials covered under clause 10CA) / electrical component of construction 'Materials'

$$V_m = \frac{W \times X_m \times (MI - MI_0)}{100 \times MI_0}$$

V_m = Variation in material cost i.e. increase or decrease in the amount in rupees to be paid or recovered.

W = Cost of Work done worked out as indicated in sub-para (ii) of Clause 10CC.

X_m = Component of 'materials' (except cement, structural steel, reinforcement bars POL and other materials covered under clause 10CA) expressed as percent of the total value of work.

MI = All India Wholesale Price Index for civil component/electrical component* of construction material as worked out on the basis of All India Wholesale Price Index for Individual Commodities/ Group Items for the period under consideration as published by Economic Advisor to Govt. of India, Ministry of Industry & Commerce and applying weightages to the Individual Commodities/Group Items. (In respect of the justified period extended under the provisions of clause 5 of the contract without any action under clause 2, the index prevailing at the time of updated stipulated date of completion considering the effect of extra work (extra time to be calculated on prorata basis only as cost of extra work x stipulated period/tendered cost, shall be considered.) If updated stipulated date of completion as calculated on pro-rata basis does not cover full calendar month then indices will be considered or restricted to previous month.

MI₀ = All India Wholesale Price Index for civil component/electrical component* of construction material as worked out on the basis of All India Wholesale Price Index for Individual Commodities/Group Items valid on the last stipulated date of receipt of tender including extension, if any, as published by the Economic Advisor to Govt. of India, Ministry of Industry & Commerce and applying weightages to the Individual Commodities/Group items.

***Note: relevant component only will be applicable.**

- iv. The following principles shall be followed while working out the indices mentioned in para (iv) above.

- a) The compensation for escalation shall be worked out at quarterly intervals and shall be with respect to the cost of work done as per bills paid during the three calendar months of the said quarter. The dates of preparation of bills as finally entered in the Measurement Book by the Engineer- in Charge/ date of submission of bill finally by the contractor to the department in case of computerized measurement books shall be the guiding factor to decide the bills relevant to the quarterly interval. The first such payment shall be made at the end of three months after the month (excluding the month in which tender was accepted) and thereafter at three months' interval. At the time of completion of the work, the last period for payment might become less than 3 months, depending on the actual date of completion.
- b) The index (MI/FI etc.) relevant to any quarter/period for which such compensation is paid shall be the arithmetical average of the indices relevant to the three calendar months. If the period up to date of completion after the quarter covered by the last such installment of payment, is less than three months, the index MI and FI shall be the average of the indices for the months falling within that period.
- v. The compensation for escalation for labour shall be worked out as per the formula given below:-

$$VL = W \times \frac{Y}{100} \times \frac{LI - LI_0}{LI_0}$$

VL: Variation in Labour cost i.e. amount of increase or decrease in rupees to be paid or recovered.

W: Value of work done, worked out as indicated in sub-para (ii) above.

Y: Component of Labour expressed as a percentage of the total value of the work.

LI: Minimum wage in rupees of an unskilled adult male mazdoor, fixed under any law, statutory rule or order as applicable on the last date of the quarter previous to the one under consideration. (In respect of the justified period extended under the provisions of clause 5 of the contract without any action under clause 2, the minimum wage prevailing on the last date of quarter previous to the quarter pertaining to updated stipulated date of Completion considering the effect of extra work (extra time to be calculated on prorata basis only as cost of extra work x stipulated period/tendered cost, shall be considered.) If updated stipulated date of completion as calculated on pro- rata basis does not cover full calendar month then indices will be considered or restricted to previous month.

LI₀ : Minimum daily wage in rupees of an unskilled adult male mazdoor, fixed under any law,

statutory rule or order as on the last stipulated date of receipt of tender including extension, if any.

- Vi. The following principles will be followed while working out the compensation as per sub para (vi) above.
- a) The minimum wage of an unskilled Mazdoor mentioned in sub-para (vi) above shall be the higher of the wage notified by Government of India, Ministry of Labour and that notified by the local administration both relevant to the place of work and the period of reckoning.
 - b) The escalation for labour also shall be paid at the same quarterly intervals when escalation due to increase in cost of materials is paid under this clause. If such revision of minimum wages takes place during any such quarterly intervals, the escalation compensation shall be payable at revised rates only for work done in subsequent quarters;
Irrespective of variations in minimum wages of any category of labour, for the purpose of this clause, the variation in the rate for an unskilled Mazdoor alone shall form the basis for working out the escalation compensation payable on the labour component.
- vii) In the event the price of materials and/or wages of labour required for execution of the work decrease/s, there shall be a downward adjustment of the cost of work so that such price of materials and/or wages of labour shall be deductible from the cost of work under this contract and in this regard the formula herein before stated under this Clause 10CC shall mutatis mutandis apply, provided that:
- a) no such adjustment for the decrease in the price of materials and/or wages of Labour aforementioned would be made in case of contracts in which the stipulated period of completion of the work is equal to or less than the time as specified in Schedule 'F'.
 - b) The Engineer-in-Charge shall otherwise be entitled to lay down the procedure by which the provision of this sub-clause shall be implemented from time to time and the decision of the Engineer-in-Charge in this behalf shall be final and binding on the contractor.

Viii. Provided always that:-

- (a) Where provisions of clause 10CC are applicable, provisions of clause 10C will not be applicable but provisions of clause 10CA will be applicable.
- (b) Where provisions of clause 10CC are not applicable, provisions of clause 10C and 10CA will become applicable.

Note: Updated stipulated date of completion (period of completion plus extra time for extra work for compensation under clause 10C, 10CA and 10 CC

The factor of 1.25 taken into account for calculating the extra time under clause 12.1 for extra time shall not be considered while calculating the updated stipulated date of completion for this purpose in clause 10C, clause 10CA, and clause 10CC.

CLAUSE 10D: DISMANTLED MATERIAL WAPCOS PROPERTY

The contractor shall treat all materials obtained during dismantling of a structure, excavation of the site for a work, etc. as WAPCOS's property and such materials shall be disposed of to the best advantage of WAPCOS according to the instructions in writing issued by the Engineer- in-Charge

CLAUSE 11:WORKS TO BE EXECUTED IN ACCORDANCE WITH SPECIFICATIONS, DRAWINGS, and ORDERS ETC.

The contractor shall execute the whole and every part of the work in the most substantial and workmanlike manner both as regards materials and otherwise in every respect in strict accordance with the specifications. The contractor shall also conform exactly, fully and faithfully to the design, drawings and instructions in writing in respect of the work signed by the Engineer-in-Charge and the contractor shall be furnished free of charge one copy of the contract documents together with specifications, designs, drawings and instructions as are not included in the standard specifications specified in Schedule F or in any Bureau of Indian Standard or any other, published standard or code or, Schedule of Rates or any other printed publication referred to elsewhere in the contract.

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

At least to 10% of prescribed Tests as per Central Public Works Department Manual/IS Codes of construction materials shall be carried out from the outside approved/NABL recognized Laboratory as may be approved by WAPCOS without any extra expenditure to WAPCOS.

The Contractor shall establish a field test laboratory on the site with latest equipment's for carrying out field tests of construction materials and will maintain proper records of all the test results.

CLAUSE 12: DEVIATIONS / VARIATIONS EXTENT AND PRICING

The Engineer-in-Charge shall have power (i) to make alteration in, omissions from, additions to, or substitutions for the original specifications, drawings, designs and instructions that may appear to him to be necessary or advisable during the progress of the work, and (ii) to omit a part of the

works in case of non-availability of a portion of the site or for any other reasons and the contractor shall be bound to carry out the works in accordance with any instructions given to him in writing signed by the Engineer-in-Charge and such alterations, omissions, additions or substitutions shall form part of the contract as if originally provided therein and any altered, additional or substituted work which the contractor may be directed to do in the manner specified above as part of the works, shall be carried out by the contractor on the same conditions in all respects including price on which he agreed to do the main work except as hereafter provided.

12.1 The time for completion of the works shall, in the event of any deviations resulting in additional cost over the tendered value sum being ordered, be extended, if requested by the contractor, as follows:

- (i) In the proportion which the additional cost of the altered, additional or substituted work, bears to the original tendered value plus
- (ii) 25% of the time calculated in (i) above or such further additional time as may be considered reasonable by the Engineer-in-Charge.

12.2 Deviations, Extra Items and Pricing

In the case of extra item(s) (items that are completely new, and are in addition to the items contained in the contract), the contractor may within fifteen days of receipt of order or occurrence of the item(s) submit market rate claim rates, supported by proper analysis which shall include invoices, vouchers etc. and Manufacturer's specification for the work failing which the rate approved later by the Engineer-in-charge shall be binding and the Engineer-in-Charge shall within prescribed time limit of the receipt of the claims supported by analysis, after giving consideration to the analysis of the rates submitted by the contractor, determine the rates on the basis of the market rates and the contractor shall be paid in accordance with the rates so determined, failing which it will be deemed to have been approved.

Deviation, Substituted Items and Pricing.

In the case of substituted items (items that are taken up with partial substitution or in lieu of items of work in the contract), the rate for the agreement item (to be substituted) and substituted item shall also be determined in the manner as mentioned in the following para.

- (a) If the market rate for the substituted item so determined is more than the market rate of the agreement item (to be substituted), the rate payable to the contractor for the substituted item shall be the rate for the agreement item (to be substituted) so increased to the extent of the difference between the market rates of substituted item and the agreement item (to be substituted).
- (b) If the market rate for the substituted item so determined is less than the market rate of the agreement item (to be substituted), the rate payable to the contractor for the substituted item shall be the rate for the agreement item (to be substituted) so decreased to the extent of the difference between the market rates of substituted item and the agreement item (to be

substituted).

Deviations, Deviated Quantities, Pricing

In the case of contract items, substituted items, contract cum substituted items, which exceed the limits laid down in schedule F, the contractor may within fifteen days of receipt of order or occurrence of the excess, claim revision of the rates, supported by proper analysis for the work in excess of the above mentioned limits, provided that if the rates so claimed are in excess of the rates specified in the schedule of quantities, the Engineer-in- Charge shall within prescribed time limit of receipt of the claims supported by analysis, after giving consideration to the analysis of the rates submitted by the contractor, determine the rates on the basis of the market rates (as per invoice, vouchers from the manufacturers or suppliers submitted by the agency and duly verified by Engineer in Charge or his representative) and the contractor shall be paid in accordance with the rates so determined.

The prescribed time limit for finalizing rates for Extra Item(s), Substitute Item(s) and Deviated Quantities of contract items is within 45 days after submission of proposal by the contractor without observation of the Engineer-in-Charge.

- 12.3** The provisions of the preceding paragraph shall also apply to the decrease in the rates of items for the work in excess of the limits laid down in Schedule F, and the Engineer-in-Charge shall after giving notice to the contractor within one month of occurrence of the excess and after taking into consideration any reply received from him within fifteen days of the receipt of the notice, revise the rates for the work in question within one month of the expiry of the said period of fifteen days having regard to the market rates.
- 12.4** The contractor shall send to the Engineer-in-Charge once every three months, an up to date account giving complete details of all claims for additional payments to which the contractor may consider himself entitled and of all additional work ordered by the Engineer-in-Charge which he has executed during the preceding quarter failing which the contractor shall be deemed to have waived his right.
- 12.5** For the purpose of operation of Schedule “F”, the following works shall be treated as works relating to foundation unless & otherwise defined in the contract:
- (i) For Buildings: All works up to 1.2 meters above ground level or up to floor 1 level whichever is lower.
 - (ii) For abutments, piers and well staining: All works up to 1.2 m above the bed level.
 - (iii) For retaining walls, wing walls, compound walls, chimneys, overhead reservoirs/ tanks and other elevated structures: All works up to 1.2 meters above the ground level.
 - (iv) For reservoirs/tanks (other than overhead reservoirs/tanks): All works up to 1.2 meters above the ground level.
 - (v) For basement: All works up to 1.2 m above ground level or up to floor 1 level whichever is lower.
 - (vi) For Roads, all items of excavation and filling including treatment of sub base.

- 12.6** Any operation incidental to or necessarily has to be in contemplation of tenderer while quoting tender, or necessary for proper execution of the item included in the Schedule of quantities or in the schedule of rates mentioned above, whether or not, specifically indicated in the description of the item and the relevant specifications, shall be deemed to be included in the rates quoted by the tenderer or the rate given in the said schedule of rates, as the case may be. Nothing extra shall be admissible for such operations.

**CLAUSE 13 : FORECLOSURE OF CONTRACT DUE TO ABANDONMENT OR
REDUCTION IN SCOPE OF WORK**

If at any time after acceptance of the tender or during the progress of work, the purpose or object for which the work is being done changes due to any supervening cause and as a result of which the work has to be abandoned or reduced in scope the Engineer-in-Charge shall give notice in writing to that effect to the contractor stating the decision as well as the cause for such decision and the contractor shall act accordingly in the matter. The contractor shall have no claim to any payment of compensation or otherwise whatsoever, on account of any profit or advantage which he might have derived from the execution of the works in full but which he did not derive in consequence of the foreclosure of the whole or part of the works.

The contractor shall be paid at contract rates, full amount for works executed at site and, in addition, a reasonable amount as certified by the Engineer-in-Charge for the items hereunder mentioned which could not be utilized on the work to the full extent in view of the foreclosure;

- i) Any expenditure incurred on preliminary site work, e.g. temporary access roads, temporary labour huts, staff quarters and site office; storage accommodation and water storage tanks.
- ii) Reasonable compensation for transfer of T & P from site to contractor's permanent stores or to his other works, whichever is less. If T & P are not transported to either of the said places, no cost of transportation shall be payable.
- a. Reasonable compensation for repatriation of contractor's site staff and imported labour to the extent necessary.

The contractor shall, if required by the Engineer-in-Charge, furnish to him, books of account, wage books, time sheets and other relevant documents and evidence as may be necessary to enable him to certify the reasonable amount payable under this condition.

The reasonable amount of items on (i), (iv) and (v) above shall not be in excess of 2% of the cost of the work remaining incomplete on the date of closure, i.e. total stipulated cost of the work as per accepted tender less the cost of work actually executed under the contract and less the cost of contractor's materials at site taken over by the WAPCOS as per item (ii) above. Provided always that against any payments due to the contractor on this account or otherwise, the Engineer-in-Charge shall be entitled to recover or be credited with any outstanding balances due

from the contractor for advance paid in respect of any tool, plants and materials and any other sums which at the date of termination were recoverable by the WAPCOS from the contractor under the terms of the contract.

In the event of action being taken under Clause 13 to reduce the scope of work, the contractor may furnish fresh Performance Guarantee on the same conditions, in the same manner and at the same rate for the balance tendered amount and initially valid up to the extended date of completion or stipulated date of completion if no extension has been granted plus minimum 60 days beyond that. Wherever such a fresh Performance Guarantee is furnished by the contractor the Engineer-in-Charge may return the previous Performance Guarantee.

CLAUSE 14 : CARRYING OUT PART WORK AT RISK & COST OF CONTRACTOR

If contractor:

- i) At any time makes default during currency of work or does not execute any part of the work with due diligence and continues to do so even after a notice in writing of 7 working days in this respect from the Engineer-in-Charge; or
- ii) Commits default in complying with any of the terms and conditions of the contract and does not remedy it or takes effective steps to remedy it within 7 working days even after a notice in writing is given in that behalf by the Engineer-in-Charge; or Fails to complete the work(s) or items of work with individual dates of completion, on or before the date(s) so determined, and does not complete them within the period specified in the notice given in writing in that behalf by the Engineer-in-Charge.

The Engineer-in-Charge without invoking action under clause 3 may, without prejudice to any other right or remedy against the contractor which have either accrued or accrue thereafter to WAPCOS, by a notice in writing to take the part work / part incomplete work of any item(s) out of his hands and shall have powers to:

- iii) Take possession of the site and any materials, constructional plant implements, stores, etc., thereon; and/or
- iv) Carry out the part work / part incomplete work of any item(s) by any means at the risk and cost of the contractor.

The Engineer-in-Charge shall determine the amount, if any, is recoverable from the contractor for completion of the part work / part incomplete work of any item(s) taken out of his hands and execute at the risk and cost of the contractor, the liability of contractor on account of loss or damage suffered by WAPCOS because of action under this clause shall not exceed 10% of the tendered value of the work.

In determining the amount, credit shall be given to the contractor with the value of work done in all respect in the same manner and at the same rate as if it had been carried out by the original contractor under the terms of his contract, the value of contractor's materials taken over and incorporated in the work and use of plant and machinery belonging to the contractor.

The certificate of the Engineer-in-Charge as to the value of work done shall be final and conclusive against the contractor provided always that action under this clause shall only be taken after giving notice in writing to the contractor. Provided also that if the expenses incurred by the WAPCOS are less than the amount payable to the contractor at his agreement rates, the difference shall not be payable to the contractor.

Any excess expenditure incurred or to be incurred by WAPCOS in completing the part work/ part incomplete work of any item(s) or the excess loss of damages suffered or may be suffered by WAPCOS as aforesaid after allowing such credit shall without prejudice to any other right or remedy available to WAPCOS in law or per as agreement be recovered from any money due to the contractor on any account, and if such money is insufficient, the contractor shall be called upon in writing and shall be liable to pay the same within 30 days.

If the contractor fails to pay the required sum within the aforesaid period of 30 days, the Engineer-in-Charge shall have the right to sell any or all of the contractors' unused materials, constructional plant, implements, temporary building at site etc. and adjust the proceeds of sale thereof towards the dues recoverable from the contractor under the contract and if thereafter there remains any balance outstanding, it shall be recovered in accordance with the provisions of the contract.

In the event of above course being adopted by the Engineer-in-Charge, the contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchased or procured any materials or entered into any engagements or made any advance on any account or with a view to the execution of the work or the performance of the contract.

CLAUSE 15 : SUSPENSION OF WORK

- i) The contractor shall, on receipt of the order in writing of the Engineer-in-Charge, (whose decision shall be final and binding on the contractor) suspend the progress of the works or any part thereof for such time and in such manner as the Engineer-in-Charge may consider necessary so as not to cause any damage or injury to the work already done or endanger the safety thereof for any of the following reasons:
 - a. on account of any default on the part of the contractor or;
for proper execution of the works or part thereof for reasons other than the default of the contractor; or
 - b. for safety of the works or part thereof.
- The contractor shall, during such suspension, properly protect and secure the works to the extent necessary and carry out the instructions given in that behalf by the Engineer-in-Charge.

- (ii) If the suspension is ordered for reasons (b) and (c) in sub-para (i) above:
 - (a) The contractor shall be entitled to an extension of time equal to the period of every such suspension PLUS 25%, for completion of the item or group of items of work for which a separate period of completion is specified in the contract and of which the suspended work forms a part, and;
 - (b) If the total period of all such suspensions in respect of an item or group of items or work for which a separate period of completion is specified in the contract exceeds thirty days, the contractor shall, in addition, be entitled to such compensation as the Engineer-in-Charge may consider reasonable in respect of salaries and/or wages paid by the contractor to his employees and labour at site, remaining idle during the period of suspension, adding thereto 2% to cover indirect expenses of the contractor provided the contractor submits his claim supported by details to the Engineer-in-Charge within fifteen days of the expiry of the period of 30 days.
- (iii) If the works or part thereof is suspended on the orders of the Engineer-in-Charge for more than three months at a time, except when suspension is ordered for reason (a) in subpara (i) above, the contractor may after receipt of such order serve a written notice on the Engineer-in-Charge requiring permission within fifteen days from receipt by the Engineer-in-Charge of the said notice, to proceed with the work or part thereof in regard to which progress has been suspended and if such permission is not granted within that time, the contractor, if he intends to treat the suspension, where it affects only a part of the works as an omission of such part by WAPCOS or where it affects whole of the works, as an abandonment of the works by WAPCOS, shall within ten days of expiry of such period of 15 days give notice in writing of his intention to the Engineer-in-Charge. In the event of the contractor treating the suspension as an abandonment of the contract by WAPCOS, he shall have no claim to payment of any compensation on account of any profit or advantage which he might have derived from the execution of the work in full but which he could not derive in consequence of the abandonment. He shall, however, be entitled to such compensation, as the Engineer-in-Charge may consider reasonable, in respect of salaries and/or wages paid by him to his employees and labour at site, remaining idle in consequence adding to the total thereof 2% to cover indirect expenses of the contractor provided the contractor submits his claim supported by details to the Engineer-in-Charge within 30 days of the expiry of the period of 3 months.

CLAUSE 16 : ACTION IN CASE WORK NOT DONE AS PER SPECIFICATIONS

All works under or in course of execution or executed in pursuance of the contract, shall at all times be open and accessible to the inspection and supervision of the Engineer-in - charge, his authorized subordinates in charge of the work and all the superior officers, officer of the Quality Assurance Unit of the WAPCOS or any organization engaged by the WAPCOS for Quality Assurance and of the Chief Technical Examiner's Office, and the contractor shall, at all times, during the usual working hours and at all other times at which reasonable notice of the visit of such officers has been given to the contractor, either himself be present to receive orders and instructions or have a responsible agent duly accredited in writing, present for that purpose. Orders given to the Contractor's agent shall be considered to have the same force as if they had been given to the contractor himself.

If it shall appear to the Engineer-in-charge or his authorized subordinates in charge of the work or to the Chief Engineer in charge of Quality Assurance or his subordinate officers or the officers of the organization engaged by the WAPCOS/Department for Quality Assurance or to the Chief Technical Examiner or his subordinate officers, that any work has been executed with unsound, imperfect, or unskillful workmanship, or with materials or articles provided by him for the execution of the work which are unsound or of a quality inferior to that contracted or otherwise not in accordance with the contract, the contractor shall, on demand in writing which shall be made within twelve months (six months in the case of work costing Rs. 10 Lac and below except road work) of the completion of the work from the Engineer- in-Charge specifying the work, materials or articles complained of notwithstanding that the same may have been passed, certified and paid for forthwith rectify, or remove and reconstruct the work so specified in whole or in part, as the case may require or as the case may be, remove the materials or articles so specified and provide other proper and suitable materials or articles at his own charge and cost. In the event of the failing to do so within a period specified by the Engineer-in- Charge in his demand aforesaid, then the contractor shall be liable to pay compensation at the same rate as under clause 2 of the contract (for non-completion of the work in time) for this default.

In such case the Engineer-in-Charge may not accept the item of work at the rates applicable under the contract but may accept such items at reduced rates as the authority specified in schedule 'F' may consider reasonable during the preparation of on account bills or final bill if the item is so acceptable without detriment to the safety and utility of the item and the structure or he may reject the work outright without any payment and/or get it and other connected and incidental items rectified, or removed and re- executed at the risk and cost of the contractor. Decision of the Engineer- in-Charge to be conveyed in writing in respect of the same will be final and binding on the contractor.

CLAUSE 17: CONTRACTOR LIABLE FOR DAMAGES, DEFECTS DURING DEFECT LIABILITY PERIOD

If the contractor or his working people or servants shall break, deface, injure or destroy any part of building in which they may be working, or any building, road, road kerb, fence, enclosure, water pipe, cables, drains, electric or telephone post or wires, trees, grass or grassland, or cultivated ground contiguous to the premises on which the work or any part is being executed, or if any damage shall happen to the work while in progress, from any cause whatever or if any defect, shrinkage or other faults appear in the work within twelve months (six months in the case of work costing Rs. Ten lacs and below except road work) after a certificate final or otherwise of its completion shall have been given by the Engineer in- Charge as aforesaid arising out of defect or improper materials or workmanship the contractor shall upon receipt of a notice in writing on that behalf make the same good at his own expense or in default the Engineer-in-Charge cause the same to be made good by other workmen and deduct the expense from any sums that may be due or at any time thereafter may become due to the contractor, or from his security deposit or the proceeds of sale thereof or of a sufficient portion thereof. The security deposit of the contractor shall not be refunded before the expiry of twelve months (six months in the case of

work costing Rs. Ten lakhs and below except road work) after the issue of the certificate final or otherwise, of completion of work, or till the final bill has been prepared and passed whichever is later. Provided that in the case of road work, if in the opinion of the Engineer-in-Charge, half of the security deposit is sufficient, to meet all liabilities of the contractor under this contract, half of the security deposit will be refundable after six months and the remaining half after twelve months of the issue of the said certificate of completion or till the final bill has been prepared and passed whichever is later.

During this period the Contractor will get the defects rectified without any cost to WAPCOS. For the item of water proofing roof treatment the Contractor will give guarantee bond for ten years. Similarly for other items, like electrical/mechanical equipment which have guarantee/warranty period beyond one year, wherever applicable as per manufacturer recommendations, will also be given guarantee bond by the Contractor to WAPCOS.

CLAUSE 18 : CONTRACTOR TO SUPPLY TOOLS & PLANTS ETC.

The contractor shall provide at his own cost all materials (except such special materials, if any, as may in accordance with the contract be supplied from the Engineer-in-Charge's stores), machinery, tools & plants as specified in schedule F. In addition to this, appliances, implements, other plants, ladders, cordage, tackle, scaffolding and temporary works required for the proper execution of the work, whether original, altered or substituted and whether included in the specifications or other documents forming part of the contract or referred to in these conditions or not, or which may be necessary for the purpose of satisfying or complying with the requirements of the Engineer-in-Charge as to any matter as to which under these conditions he is entitled to be satisfied, or which he is entitled to require together with carriage therefore to and from the work. The contractor shall also supply without charge the requisite number of persons with the means and materials, necessary for the purpose of setting out works, and counting, weighing and assisting the measurement for examination at any time and from time to time of the work or materials. Failing his so doing, the same may be provided by the Engineer-in-Charge at the expense of the contractor and the expenses may be deducted, from any money due to the contractor, under this contract or otherwise and/or from his security deposit or the proceeds of sale thereof, or of a sufficient portions thereof.

CLAUSE 18A : RECOVERY OF COMPENSATION PAID TO WORKMEN

In every case in which by virtue of the provisions sub-section (1) of section 12 of the Workmen's Compensation Act. 1923, WAPCOS is obliged to pay compensation to a workman employed by the contractor, in execution of the works, WAPCOS will recover from the contractor, the amount of the compensation so paid: and, without prejudice to the rights of the WAPCOS under sub-section (2) of section 12, of the said Act, WAPCOS shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any sum due by WAPCOS to the contractor whether under this contract or otherwise. WAPCOS shall not be bound to contest any claim made against it under sub-section (1) of section 12, of the said Act, except on the written request of the contractor and upon his giving to WAPCOS full security for all costs for which WAPCOS might become liable in consequence of contesting such claim.

CLAUSE 18B : ENSURING PAYMENT AND AMENITIES TO WORKERS, IF CONTRACTOR FAILS

In every case in which by virtue of the provisions of the Contract Labour (Regulation and Abolition) Act, 1970, and of the Contract Labour (Regulation and Abolition) Central Rules, 1971, WAPCOS is obliged to pay any amounts of wages to a workman employed by the contractor in execution of the works, or to incur any expenditure in providing welfare and health amenities required to be provided under the above said Act and the rules under Clause 19H or under the C.P.W.D. Contractor's Labour Regulations, or under the Rules framed by Government from time to time for the protection of health and sanitary arrangements for workers employed by C.P.W.D. Contractors, WAPCOS will recover from the contractor, the amount of wages so paid or the amount of expenditure so incurred; and without prejudice to the rights of the WAPCOS under sub - section(2) of Section 20, and sub-section (4) of Section 21, of the Contract Labour (Regulation and Abolition) Act, 1970, WAPCOS shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any sum due by WAPCOS to the contractor whether under this contract or otherwise WAPCOS shall not be bound to contest any claim made against it under sub-section (1) of Section 20, sub-section (4) of Section 21, of the said Act, except on the written request of the contractor and upon his giving to the WAPCOS full security for all costs for which WAPCOS might become liable in contesting such claim.

CLAUSE 19 : LABOUR LAWS TO BE COMPLIED BY CONTRACTOR

The contractor shall obtain a valid license under the Contract Labour (R&A) Act, 1970, and the Contract Labour (Regulation and Abolition) Central Rules, 1971, before the commencement of the work, and continue to have a valid license until the completion of the work.

The contractor shall also comply with provisions of the Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979. The contractor shall also abide by the provisions of the Child Labour (Prohibition and Regulation) Act, 1986.

The contractor shall also comply with the provisions of the building and other Construction Workers (Regulation of Employment & Conditions of Service) Act, 1996 and the building and other Construction Workers Welfare Cess Act, 1996.

Any failure to fulfill these requirements shall attract the penal provisions of this contract arising out of the resultant non-execution of the work.

CLAUSE 19A

No labour below the age of fourteen years shall be employed on the work.

CLAUSE 19B: PAYMENT OF WAGES

- i. The contractor shall pay to labour employed by him either directly or through subcontractors, wages not less than fair wages as defined in the C.P.W.D. Contractor's Labour Regulations or as

per the provisions of the Contract Labour (Regulation and Abolition) Act, 1970 and the contract Labour (Regulation and Abolition) Central Rules, 1971, wherever applicable.

- ii) The contractor shall, notwithstanding the provisions of any contract to the contrary, cause to be paid fair wage to labour indirectly engaged on the work, including any labour engaged by his sub-contractors in connection with the said work, as if the labour had been immediately employed by him.
- iii) In respect of all labour directly or indirectly employed in the works for performance of the contractor's part of this contract, the contractor shall comply with or cause to be complied with the Central Public Works Department contractor's Labour Regulations made by WAPCOS from time to time in regard to payment of wages, wage period, deductions from wages recovery of wages not paid and deductions unauthorized made, maintenance of wage books or wage slips publication of scale of wage and other terms of employment, inspection and submission of periodical returns and all other matters of the like nature or as per the provisions of the Contract Labour (Regulation and Abolition) Act, 1970, and the Contract Labour (Regulation and Abolition) Central Rules, 1971, wherever applicable
- iv) (a) The Engineer-in-Charge concerned shall have the right to deduct from the moneys due to the contractor any sum required or estimated to be required for making good the loss suffered by a worker or workers by reason of non- fulfillment of the conditions of the contract for the benefit of the workers, non- payment of wages or of deductions made from his or their wages which are not justified by their terms of the contract or non-observance of the Regulations.
- b) Under the provision of Minimum Wages (Central) Rules, 1950, the contractor is bound to allow to the labours directly or indirectly employed in the works one day rest for 6 days continuous work and pay wages at the same rate as for duty. In the event of default, the Engineer-in-Charge shall have the right to deduct the sum or sums not paid on account of wages for weekly holidays to any labours and pay the same to the persons entitled thereto from any money due to the contractor by the Engineer-in-Charge concerned.

In the case of Union Territory of Delhi, however, as the all-inclusive minimum daily wages fixed under Notification of the Delhi Administration No.F.12(162)MWO/DAB/ 43884-91, dated 31-12-1979 as amended from time to time are inclusive of wages for the weekly day of rest, the question of extra payment for weekly holiday would not arise.

- v) The contractor shall comply with the provisions of the Payment of Wages Act, 1936, Minimum Wages Act, 1948, Employees Liability Act, 1938, Workmen's Compensation Act, 1923, Industrial Disputes Act, 1947, Maternity Benefits Act, 1961, and the Contractor's Labour (Regulation and Abolition) Act 1970, or the modifications thereof or any other laws relating thereto and the rules made thereunder from time to time.
- vi) The contractor shall indemnify and keep indemnified WAPCOS against payments to be made under and for the observance of the laws aforesaid and the C.P.W.D. Contractor's Labour

Regulations without prejudice to his right to claim indemnity from his sub-contractors.

- vii) The laws aforesaid shall be deemed to be a part of this contract and any breach thereof shall be deemed to be a breach of this contract.
- viii) Whatever is the minimum wage for the time being, or if the wage payable is higher than such wage, such wage shall be paid by the contractor to the workmen directly without the intervention of Jamadar and that Jamadar shall not be entitled to deduct or recover any amount from the minimum wage payable to the workmen as and by way of commission or otherwise.
- ix) The contractor shall ensure that no amount by way of commission or otherwise is deducted or recovered by the Jamadar from the wage of workmen.

CLAUSE 19C

In respect of all labour directly or indirectly employed in the work for the performance of the contractor's part of this contract, the contractor shall at his own expense arrange for the safety provisions as per C.P.W.D. Safety Code framed from time to time and shall at his own expense provide for all facilities in connection therewith. In case the contractor fails to make arrangement and provide necessary facilities as aforesaid, he shall be liable to pay a penalty as decided by the authority mentioned in Schedule F for each default and in addition, the Engineer-in-Charge shall be at liberty to make arrangement and provide facilities as aforesaid and recover the costs incurred in that behalf from the contractor.

CLAUSE 19 D

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

- (1) the number of labourers employed by him on the work,
- (2) their working hours,
- (3) the wages paid to them,
- (4) the accidents that occurred during the said fortnight showing the circumstances under which they happened and the extent of damage and injury caused by them, and
- (5) The number of female workers who have been allowed maternity benefit according to Clause 19F and the amount paid to them.

Failing which the contractor shall be liable to pay to WAPCOS, a sum as decided by the authority mentioned in Schedule F for each default or materially incorrect statement. The decision of the Engineer-In-Charge shall be final in deducting from any bill due to the contractor, the amount levied as fine and be binding on the contractor.

CLAUSE 19 E

In respect of all labour directly or indirectly employed in the works for the performance of the contractor's part of this contract, the contractor shall comply with or cause to be complied with all the rules framed by Government from time to time for the protection of health and sanitary

arrangements for workers employed by the WAPCOS and its contractors.

CLAUSE 19 F

Leave and pay during leave shall be regulated as follows:-

1. Leave :
 - (i) in the case of delivery - maternity leave not exceeding 8 weeks, 4 weeks up to and including the day of delivery and 4 weeks following that day,
 - (ii) in the case of miscarriage - upto 3 weeks from the date of miscarriage.
2. Pay :
 - (i) in the case of delivery - leave pay during maternity leave will be at the rate of the women's average daily earnings, calculated on total wages earned on the days when full time work was done during a period of three months immediately preceding the date on which she gives notice that she expects to be confined or at the rate of Rupee one only a day whichever is greater.
 - (ii) in the case of miscarriage - leave pay at the rate of average daily earning calculated on the total wages earned on the days when full time work was done during a period of three months immediately preceding the date of such miscarriage.
3. Conditions for the grant of Maternity Leave:

No maternity leave benefit shall be admissible to a woman unless she has been employed for a total period of not less than six months immediately preceding the date on which she proceeds on leave.
4. The contractor shall maintain a register of Maternity (Benefit) in the Prescribed Form as shown in Appendix -I and II, and the same shall be kept at the place of work.

CLAUSE 19 G

In the event of the contractor(s) committing a default or breach of any of the provisions of the WAPCOS, Contractor's Labour Regulations and Model Rules for the protection of health and sanitary arrangements for the workers as amended from time to time or furnishing any information or submitting or filing any statement under the provisions of the above Regulations and Rules which is materially incorrect, he/they shall, without prejudice to any other liability, pay to the Government a sum as decided by the authority mentioned in Schedule F for every default, breach or furnishing, making, submitting, filing such materially incorrect statements and in the event of the contractor(s) defaulting continuously in this respect, the penalty may be enhanced to as decided by the authority mentioned in Schedule F per day for each day of default subject to a maximum of 5 percent of the estimated cost of the work put to tender. The decision of the Engineer-in-Charge shall be final and binding on the parties.

Should it appear to the Engineer-in-Charge that the contractor(s) is/are not properly observing and complying with the provisions of the C.P.W.D. Contractor's Labour Regulations and Model Rules and the provisions of the Contract Labour (Regulation and Abolition) Act 1970, and the

Contract Labour (R& A) Central Rules 1971, for the protection of health and sanitary arrangements for work-people employed by the contractor(s) (hereinafter referred as “the said Rules”) the Engineer-in-Charge shall have power to give notice in writing to the contractor(s) requiring that the said Rules be complied with and the amenities prescribed therein be provided to the work-people within a reasonable time to be specified in the notice. If the contractor(s) shall fail within the period specified in the notice to comply with and/observe the said Rules and to provide the amenities to the work- people as aforesaid, the Engineer-in-Charge shall have the power to provide the amenities hereinbefore mentioned at the cost of the contractor(s). The contractor(s) shall erect, make and maintain at his/their own expense and to approved standards all necessary huts and sanitary arrangements required for his/their work-people on the site in connection with the execution of the works, and if the same shall not have been erected or constructed, according to approved standards, the Engineer-in-Charge shall have power to give notice in writing to the contractor(s) requiring that the said huts and sanitary arrangements be remodeled and/or reconstructed according to approved standards, and if the contractor(s) shall fail to remodel or reconstruct such huts and sanitary arrangements according to approved standards within the period specified in the notice, the Engineer- in-Charge shall have the power to remodel or reconstruct such huts and sanitary arrangements according to approved standards at the cost of the contractor(s).

CLAUSE 19H

The contractor(s) shall at his/their own cost provide his/their labour with a sufficient number of huts (hereinafter referred to as the camp) of the following specifications on a suitable plot of land to be approved by the Engineer-in-Charge.

- i) (a) The minimum height of each hut at the eaves level shall be 2.10m (7 ft.) and the floor area to be provided will be at the rate of 2.7 sq.m. (30 sq.ft.) for each member of the worker’s family staying with the labourer.
- (b) The contractor(s) shall in addition construct suitable cooking places having a minimum area of 1.80m x 1.50m (6’x5’) adjacent to the hut for each family.
- (c) The contractor(s) shall also construct temporary latrines and urinals for the use of the labourers each on the scale of not less than four per each one hundred of the total strength, separate latrines and urinals being provided for women.
- (d) The contractor(s) shall construct sufficient number of bathing and washing places, one unit for every 25 persons residing in the camp. These bathing and washing places shall be suitably screened.
- ii) (a) All the huts shall have walls of sun-dried or burnt-bricks laid in mud mortar or other suitable local materials as may be approved by the Engineer-in-Charge. In case of sun-dried bricks, the walls should be plastered with mud gobi on both sides. The floor may be kutcha but plastered with mud gobi and shall be at least 15 cm (6”) above the surrounding ground. The roofs shall be laid with thatch or any other materials as may be approved by the Engineer-in-Charge and the contractor shall ensure that throughout the period of their occupation, the roofs remain water-tight.
- (b) The contractor(s) shall provide each hut with proper ventilation.

- (c) All doors, windows, and ventilators shall be provided with suitable leaves for security purposes.
- (d) There shall be kept an open space of at least 7.2m (8 yards) between the rows of huts which may be reduced to 6m (20 ft.) according to the availability of site with the approval of the Engineer-in-Charge. Back to back construction will be allowed
- iii) **Water Supply** - The contractor(s) shall provide adequate supply of water for the use of labourers. The provisions shall not be less than two gallons of pure and wholesome water per head per day for drinking purposes and three gallons of clean water per head per day for bathing and washing purposes. Where piped water supply is available, supply shall be at stand posts and where the supply is from wells or river, tanks which may be of metal or masonry, shall be provided. The contractor(s) shall also at his/ their own cost make arrangements for laying pipe lines for water supply to his/ their labour camp from the existing mains wherever available, and shall pay all fees and charges therefore.
- iv) The site selected for the camp shall be high ground, removed from jungle.
- v) **Disposal of Excreta** - The contractor(s) shall make necessary arrangements for the disposal of excreta from the latrines by trenching or incineration which shall be according to the requirements laid down by the Local Health Authorities. If trenching or incineration is not allowed, the contractor(s) shall make arrangements for the removal of the excreta through the Municipal Committee/authority and inform it about the number of labourers employed so that arrangements may be made by such Committee/authority for the removal of the excreta. All charges on this account shall be borne by the contractor and paid direct by him to the Municipality/authority. The contractor shall provide one sweeper for every eight seats in case of dry system.
- vi) **Drainage** - The contractor(s) shall provide efficient arrangements for draining away sullage water so as to keep the camp neat and tidy.
- vii) The contractor(s) shall make necessary arrangements for keeping the camp area sufficiently lighted to avoid accidents to the workers.
- viii) **Sanitation** - The contractor(s) shall make arrangements for conservancy and sanitation in the labour camps according to the rules of the Local Public Health and Medical Authorities.

CLAUSE 19I

The Engineer-in-Charge may require the contractor to dismiss or remove from the site of the work any person or persons in the contractors' employ upon the work who may be incompetent or misconduct himself and the contractor shall forthwith comply with such requirements. In respect of maintenance/repair or renovation works etc. where the labour have an easy access to the individual houses, the contractor shall issue identity cards to the laborers, whether temporary or permanent and he shall be responsible for any untoward action on the part of such Labour. The Engineer-In-Charge will display a list of contractors working in the colony/Blocks on the notice board in the colony and also at the service centre, to apprise the residents about the same.

CLAUSE 19J

It shall be the responsibility of the contractor to see that the building under construction is not occupied by anybody unauthorized during construction, and is handed over to the Engineer-in-Charge with vacant possession of complete building. If such building though completed is occupied illegally, then the Engineer-in-Charge shall have the option to refuse to accept the said building/buildings in that position. Any delay in acceptance on this account will be treated as the delay in completion and for such delay, a levy upto 5% of tendered value of work may be imposed by WAPCOS whose decision shall be final bothwith regard to the justification and quantum and be binding on the contractor.

However, the WAPCOS, through a notice, may require the contractor to remove the illegal occupation any time on or before construction and delivery.

CLAUSE 19K: EMPLOYMENT OF SKILLED / SEMI SKILLED WORKERS

The contractor shall, at all stages of work, deploy skilled/semi-skilled tradesmen who are qualified and possess certificate in particular trade from CPWD Training Institute/Industrial Training Institute/ National Institute of construction Management and Research (NICMAR)/ National Academy of Construction, CIDC or any similar reputed

And recognized Institute managed/ certified by State/Central Government. The numberof such qualified tradesmen shall not be less than 20% of total skilled/semi- skilled workers required in each trade at any stage of work. The contractor shall submit number of man days required in respect of each trade, it's scheduling and the list of qualified tradesmen along with requisite certificate from recognized Institute to Engineer in charge for approval. Notwithstanding such approval, if the tradesmen are found to have inadequate skill to execute the work of respective trade, the contractor shall substitute such tradesmen within two days of written notice from Engineer-in- Charge. Failure on the part of contractor to obtain approval of Engineer-in- Charge or failure to deploy qualified tradesmen will attract a compensation to be paid by contractor at the rate specified in schedule 'F' per such tradesman per day. Decision of Engineer in Charge as to whether particular tradesman possesses requisite skill and amount of compensation in case of default shall be final and binding.

Provided always, that the provisions of this clause, shall not be applicable for works with estimated cost put to tender being less than Rs. 5 crores.

For work costing more than Rs. 10 Crores, and upto Rs. 50 Crores, the contractor shall arrange on site training as per National Skill Development Corporation (NSDC) norms for at least 20% of the unskilled workers engaged in the project in co- ordination with the CPWD Regional Training Institute & National Skill Development Corporation (NSDC) for certification at the level of skilled/semi-skilled tradesmen.

For work costing more than Rs. 50Crores, the contractor shall arrange on site training as per National Skill Development Corporation (NSDC) norms for at least 30% of the unskilled worker engaged in the project in co- ordination with the CPWD Regional Training Institute & National

Skill Development Corporation (NSDC) for certification at the level of skilled/semi- skilled tradesmen. The cost of such training as stated above shall be borne by the Government. The necessary space and workers shall be provided by the contractor and no claim what so ever shall be entertained.

CLAUSE 19L: CONTRIBUTION OF EPF AND ESI

The ESI and EPF contributions on the part of employer in respect of this contract shall be paid by the contractor. These contributions on the part of the employer paid by the contractor shall be reimbursed by the Engineer-in- charge to the contractor on actual basis. The verification of deployment of Labour will be done through biometric attendance system or any other suitable method by the Engineer in Charge. The applicable and eligible amount of EPF & ESI shall be reimbursed preferably within 7 days but not later than 30 days of submission of documentary proof of payment provided same are in order.

CLAUSE 20: MINIMUM WAGES ACT TO BE COMPLIED WITH

The contractor shall comply with all the provisions of the Minimum Wages Act, 1948, and Contract Labour (Regulation and Abolition) Act, 1970, amended from time to time and rules framed there under and other Labour laws affecting contract Labour that may be brought into force from time to time.

CLAUSE 21: WORK NOT TO BE SUBLET. ACTION IN CASE OF INSOLVENCY

The contract shall not be assigned or sublet without the written approval of the Engineer- in-Charge. And if the contractor shall assign or sublet his contract, or attempt to do so, or become insolvent or commence any insolvency proceedings or make any composition with his creditors or attempt to do so, or if any bribe, gratuity, gift, loan, perquisite, reward or advantage pecuniary or otherwise, shall either directly or indirectly, be given, promised or offered by the contractor, or any of his servants or agent to any public officer or person in the employ of WAPCOS in any way relating to his office or employment, or if any such officer or person shall become in any way directly or indirectly interested in the contract, the Engineer-in-Charge on behalf of the WAPCOS shall have power to adopt the course specified in Clause 3 hereof in the interest of WAPCOS and in the event of such course being adopted, the consequences specified in the said Clause 3 shall ensue.

CLAUSE 22

All sums payable by way of compensation under any of these conditions shall be considered as reasonable compensation to be applied to the use of WAPCOS without reference to the actual loss or damage sustained and whether or not any damage shall have been sustained.

CLAUSE 23: CHANGES IN FIRM'S CONSTITUTION TO BE INTIMATED

Where the contractor is a partnership firm, the previous approval in writing of the Engineer-in-Charge shall be obtained before any change is made in the constitution of the firm. Where

the contractor is an individual or a Hindu undivided family business concern, such approval as aforesaid shall likewise be obtained before the contractor enters into any partnership agreement where under the partnership firm would have the right to carry out the works hereby undertaken by the contractor. If previous approval as aforesaid is not obtained, the contract shall be deemed to have been assigned in contravention of Clause 21 hereof and the same action may be taken, and the same consequences shall ensue as provided in the said Clause 21.

CLAUSE 24: LIFE CYCLE COST

The contractor shall be responsible for safety, quality and soundness of the buildings including structural elements beyond maintenance period. The contractor shall have obligation to rectify such defects minimum up to 5 (five) years from the date of completion of work. The defects have to be rectified within a reasonable time not exceeding three months after issue of notice by Engineer- in- Charge.

CLAUSE 25: SETTLEMENT OF DISPUTES & ARBITRATION

Amicable Resolution and Mediation

Save where expressly stated to the contrary in the Contract, any dispute, difference or controversy of whatever nature between the Parties, howsoever arising under, out of or in relation to the Contract including disputes, if any, with regard to any acts, decision or opinion of WAPCOS Limited Representative and so notified in writing by either Party to the other (the "Dispute") shall in the first instance be attempted to be resolved amicably in accordance with the procedure set out in Clause 25.1 [Amicable Resolution and Mediation] below.

25.1 [Amicable Resolution and Mediation]

Either Party may require such Dispute to be referred to a person nominated by each Party, for amicable settlement. Upon such reference, the two shall meet at the earliest mutual Convenience and in any event within [15 (fifteen)] days of such reference to discuss and attempt to amicably resolve the Dispute.

In the event that the Dispute in question is not resolved amicably within 15 (fifteen) days of such meeting between the Parties in accordance with Clause 25.1 [Amicable Resolution and Mediation] either Party may refer the Dispute to arbitration in accordance with Clause 25.2 [Arbitration Procedure].

25.2 Arbitration Procedure

Save where expressly stated to the contrary in the Contract, any Dispute shall be finally settled by binding arbitration under the Arbitration and Conciliation Act 1996 by sole arbitrators appointed by CMD, WAPCOS.

Place of Arbitration

The place of arbitration shall be New Delhi.

English Language

The request for arbitration, the answer to the request, the terms of reference, any written submissions, any orders and awards shall be in English and, if oral hearings take place, English shall be the language to be used in the hearings.

Enforcement of Award

The Parties agree that the decision or award resulting from arbitration shall be final and binding upon the Parties and shall be enforceable in accordance with the provisions of the Arbitration and Conciliation Act.

Performance during Arbitration

Pending the submission of and/or decision on a Dispute and until the arbitral award is published, the Parties shall continue to perform their respective obligations under the Contract without prejudice to a final adjustment in accordance with such award.

Except where otherwise provided in the contract, all questions and disputes relating to the meaning of the specifications, design, drawings and instructions here-in before mentioned and as to the quality of workmanship or materials used on the work or as to any other question, claim, right, matter or thing whatsoever in any way arising out of or relating to the contract, designs, drawings, specifications, estimates, instructions, orders or these conditions or otherwise concerning the works or the execution or failure to execute the same whether arising during the progress of the work or after the cancellation, termination, completion or abandonment thereof shall be dealt with as mentioned hereinafter:

“Any dispute, Controversy of claims arising out of or relating to this Agreement or the breach, termination or invalidity thereof, shall be settled through following mechanism:

- a) Firstly, the aggrieved party shall write a letter to the other party detailing its grievances and calling upon the other party to amicably resolve the dispute by convening a joint meeting. Accordingly, the parties as per their convenience shall jointly convene the said meeting(s), wherein minutes of the said meeting(s) shall be prepared and countersigned by all the parties. It is mandatory to prepare minutes of meeting(s) and to be countersigned by all the parties, irrespective of the outcome of the said meeting(s).

- b) In the event the parties are unable to reach on my settlement in the said meeting(s), then the aggrieved party shall mandatory resort to pre-litigation mediation mechanism with Delhi High Court Mediation Cell, New Delhi.
- c) It is only upon failure of the pre-litigation mediation mechanism with Delhi High Court Mediation Cell, then the aggrieved party shall resort to resolution of disputes through arbitration of a Sole Arbitrator. The appointing authority of Sole Arbitrator is CMD, WAPCOS Limited, to which neither of the parties have any objection nor they shall ever object.
- d) Subject to the parties agreeing otherwise, the Arbitration proceedings shall be conducted in accordance with the provisions of the Indian Arbitration and Conciliation Act, 1996 (amended as on date).
- e) It is also acknowledged and accepted that WAPCOS is only working as intermediary between the Associate/Sub-Consultant/Sub-Contractor and the Principal Employer/Client, thus in the event, any dispute arises under the present agreement and referred to Arbitration for adjudication, then subject to corresponding clause in the Contract/Agreement/Work Order/Arrangement between Principal Employer/Client & WAPCOS, Principal Employer/Client shall also be made party to the said Arbitration proceedings. Also, the award including costs if any passed against WAPCOS and costs incurred in the proceedings shall be the sole responsibility of Principal Employer/Client. The said clause if found inapplicable, even then the other terms of the Arbitration Clause Shall survive and shall be acted upon.
- f) The place/seat of arbitration shall be Delhi and any award whether interim or final, shall be made, and shall be deemed for all purpose between the parties to be made, in Delhi. The arbitration procedure shall be conducted in English language and any award or awards shall be rendered in English. The procedural law of the arbitration shall be Indian law. The award of the arbitrator shall be final and conclusive and binding upon the Parties.
- g) The Contract and any dispute or claim arising out of or in connection with it or its subject matter of formation (including non-contractual disputes or claims) shall be Governed by and construed in accordance with the laws of India and the Parties submit to sole & exclusive jurisdiction of courts at Delhi."

CLAUSE 26: CONTRACTOR INDEMNIFY WAPCOS AGAINST PATENT RIGHTS

The contractor shall fully indemnify and keep indemnified the WAPCOS against any action, claim or proceeding relating to infringement or use of any patent or design or any alleged patent or design rights and shall pay any royalties which may be payable in respect of any article or part thereof included in the contract. In the event of any claims made under or action brought against WAPCOS in respect of any such matters as aforesaid, the contractor shall be immediately notified thereof and the contractor shall be at liberty, at his own expense, to settle any dispute or to conduct any litigation that may arise there from, provided that the contractor shall not be liable to indemnify WAPCOS if the infringement of the patent or design or any alleged patent or design right is the direct result of an order passed by the Engineer-in-Charge in this behalf.

CLAUSE 27: LUMP SUM PROVISIONS IN TENDER

When the estimate on which a tender is made includes lump sum in respect of parts of the work, the contractor shall be entitled to payment in respect of the items of work involved or the part of the work in question at the same rates as are payable under this contract for such items, or if the part of the work in question is not, in the opinion of the Engineer-in-Charge payable of measurement, the Engineer-in-Charge may at his discretion pay the lump-sum amount entered in the estimate, and the certificate in writing of the Engineer-in-Charge shall be final and conclusive against the contractor with regard to any sum or sums payable to him under the provisions of the clause.

CLAUSE 28: ACTION WHERE NO SPECIFICATIONS ARE SPECIFIED

In the case of any class of work for which there is no such specifications as referred to in Clause 11, such work shall be carried out in accordance with the Bureau of Indian Standards Specifications. In case there are no such specifications in Bureau of Indian Standards, the work shall be carried out as per manufacturers' specifications, if not available then as per state/ District Specifications. In case there are no such specifications as required above, the work shall be carried out in all respects in accordance with the instructions and requirements of the Engineer-in-Charge.

CLAUSE 29: WITHHOLDING AND LIEN IN RESPECT OF SUM DUE FROM CONTRACTOR

- i) Whenever any claim or claims for payment of a sum of money arises out of or under the contract or against the contractor, the Engineer-in- Charge or WAPCOS shall be entitled to withhold and also have a lien to retain such sum or sums in whole or in part from the security, if any deposited by the contractor and for the purpose aforesaid, the Engineer-in-Charge or WAPCOS shall be entitled to withhold the security deposit, if any, furnished as the case may be and also have a lien over the same pending finalization or adjudication of any such claim. In the event of the security being insufficient to cover the claimed amount or amounts or if no security has been taken from the contractor, the Engineer-in- Charge or WAPCOS shall be entitled to withhold and have a lien to retain to the extent of such claimed amount or amounts referred to above, from any sum or sums found payable or which may at any time thereafter become payable to the contractor under the same contract or any other contract with the Engineer- in-Charge of the WAPCOS or any contracting person through the Engineer- in-Charge pending finalization of adjudication of any such claim.

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

- ii) Department/WAPCOS shall have the right to cause an audit and technical examination of the works and the final bills of the contractor including all supporting vouchers, abstract, etc., to be made after payment of the final bill and if as a result of such audit and technical examination any sum is found to have been overpaid in respect of any work done by the contractor under the contract or any work claimed to have been done by him under the contract and found not to have been executed, the contractor shall be liable to refund the amount of over-payment and it shall be lawful for WAPCOS to recover the same from him in the manner prescribed in sub-clause (i) of this clause or in any other manner legally permissible; and if it is found that the contractor was paid less than what was due to him under the contract in respect of any work executed by him under it, the amount of such under payment shall be duly paid by WAPCOS to

the contractor, without any interest thereon whatsoever.

Provided that the WAPCOS shall not be entitled to recover any sum overpaid, nor the contractor shall be entitled to payment of any sum paid short where such payment has been agreed upon between the WAPCOS on the one hand and the contractor on the other under any term of the contract permitting payment for work after assessment by WAPCOS.

CLAUSE 29A: LIEN IN RESPECT OF CLAIMS IN OTHER CONTRACTS

Any sum of money due and payable to the contractor (including the security deposit returnable to him) under the contract may be withheld or retained by way of lien by the Engineer-in-Charge or the WAPCOS or any other contracting person or persons through Engineer-in-Charge against any claim of the Engineer-in-Charge or WAPCOS or such other person or persons in respect of payment of a sum of money arising out of or under any other contract made by the contractor with the Engineer-in-Charge or the WAPCOS or with such other person or persons. It is an agreed term of the contract that the sum of money so withheld or retained under this clause by the Engineer-in-Charge or the WAPCOS will be kept withheld or retained

as such by the Engineer-in-Charge or the WAPCOS or till his claim arising out of the same contract or any other contract is either mutually settled or determined by the arbitration clause or by the competent court, as the case may be and that the contractor shall have no claim for interest or damages whatsoever on this account or on any other ground in respect of any sum of money withheld or retained under this clause and duly notified as such to the contractor.

CLAUSE 29B: EMPLOYMENT OF COAL MINING OR CONTROLLED AREA LABOUR NOT PERMISSIBLE

The contractor shall not employ coal mining or controlled area labour falling under any category whatsoever on or in connection with the work or recruit labour from area within a radius of 32 km (20 miles) of the controlled area. Subject as above the contractor shall employ imported labour only i.e., deposit imported labour or labour imported by contractors from area, from which import is permitted.

Where ceiling price for imported labour has been fixed by State or Regional Labour Committees not more than that ceiling price shall be paid to the labour by the contractor.

The contractor shall immediately remove any labourer who may be pointed out by the Engineer in-Charge as being a coal mining or controlled area labourer. Failure to do so shall render the contractor liable to pay to WAPCOS a sum calculated at the rate of Rs.10/- per day per labourer. The certificate of the Engineer-in-Charge about the number of coal mining or controlled area

labourer and the number of days for which they worked shall be final and binding upon all parties to this contract.

It is declared and agreed between the parties that the aforesaid stipulation in this clause is one in which the public are interested within the meaning of the exception in Section 74 of Indian Contract Act, 1872.

CLAUSE 30 : UNFILTERED WATER SUPPLY

The contractor(s) shall make his/their own arrangements for water required for the work and nothing extra will be paid for the same. This will be subject to the following conditions.

- i) That the water used by the contractor(s) shall be fit for construction purposes to the satisfaction of the Engineer-in-Charge.
- ii) The Engineer-in-Charge shall make alternative arrangements for supply of water at the risk and cost of contractor(s) if the arrangements made by the contractor(s) for procurement of water are in the opinion of the Engineer-in-Charge, unsatisfactory.

CLAUSE 30A : ALTERNATE WATER ARRANGEMENTS

The contractor shall be allowed to construct temporary wells in the proposed land for Construction for taking water for construction purposes only after he has got permission of the Engineer-in-Charge in writing. No charges shall be recovered from the contractor on this account, but the contractor shall be required to provide necessary safety arrangements to avoid any accidents or damage to adjacent buildings, roads and service lines. He shall be responsible for any accidents or damage caused due to construction and subsequent maintenance of the wells and shall restore the ground to its original condition after the wells are dismantled on completion of the work.

CLAUSE 31 : HIRE OF PLANT & MACHINERY

The contractor shall arrange at his own expense all tools, plant, machinery and equipment (hereinafter referred to as T&P) required for execution of the work

CLAUSE 32 : CONDITION RELATING TO USE OF ASPHALTIC MATERIALS

- i) The contractor undertakes to make arrangement for the supervision of the work by the firm supplying the tar or bitumen used.
- ii) The contractor shall collect the total quantity of tar or bitumen required for the work as per standard formula, before the process of painting is started and shall hypothecate it to the Engineer-in-Charge. If any bitumen or tar remains unused on completion of the work on account of lesser use of materials in actual execution for reasons other than authorized changes of specifications and abandonment of portion of work, a corresponding deduction equivalent to the

cost of unused materials as determined by the Engineer-in-Charge shall be made and the material return to the contractors. Although the materials are hypothecated to WAPCOS, the contractor undertakes the responsibility for their proper watch, safe custody and protection against all risks. The materials shall not be removed from site of work without the consent of the Engineer-in-Charge in writing.

iii) The contractor shall be responsible for rectifying defects noticed within a year from the date of completion of the work and the portion of the security deposit relating to asphaltic work shall be refunded after the expiry of this period.

CLAUSE 33 : EMPLOYMENT OF TECHNICAL STAFF AND EMPLOYEES

Contractors Superintendence, Supervision, Technical Staff & Employees

- i. The contractor shall provide all necessary superintendence during execution of the work and all along thereafter as may be necessary for proper fulfilling of the obligations under the contract.

The contractor shall immediately after receiving letter of acceptance of the tender and before commencement of the work, intimate in writing to the Engineer-in-Charge, the name(s), qualifications, experience, age, address(s) and other particulars along with certificates, of the principal technical representative to be in charge of the work and other technical representative(s) who will be supervising the work. Minimum requirement of such technical representative(s) and their qualifications and experience shall not be lower than specified in Schedule 'F'. Even if the contractor (or partner(s) in case of firm/ company) is himself / herself an Engineer, it is necessary on the part of the contractor to Employ principal technical representative/ technical representative (s) as per stipulation in Schedule 'F'

The Engineer-in-Charge shall within 3 days of receipt of such communication intimate in writing his approval or otherwise of such a representative(s) to the contractor. Any such approval may at any time be withdrawn and in case of such withdrawal, the contractor shall appoint another such representative(s) according to the provisions of this clause. Decision of the tender accepting authority shall be final and binding on the contractor in this respect. Such a principal technical representative and other technical representative(s) shall be appointed by the contractor soon after receipt of the approval from Engineer-in-charge and shall be available at site before start of work.

All the provisions applicable to the principal technical representative under the Clause will also be applicable to other technical representative(s) The principal technical representative and other technical representative(s) shall be present at the site of work for supervision at all times when any construction activity is in progress and also present himself/themselves, as required, to the Engineer-in-Charge and/or his designated representative to take instructions. Instructions given to the principal technical representative or other technical representative(s) shall be

deemed to have the same force as if these have been given to the contractor. The principal technical representative and other technical representative(s) shall be actually available at site fully during all stages of execution of work, during recording/checking/test checking of measurements of works and whenever required by the Engineer-in-Charge and shall also note down instructions conveyed by the Engineer-in-Charge or his designated representative(s) in the site order book and shall affix his/their signature in token of noting down the instructions and in token of acceptance of measurements/checked measurements/ test checked measurements. The representative(s) shall not look after any other work. Substitutes, duly approved by Engineer-in-Charge of the work in similar manner as aforesaid shall be provided in event of absence of any of the representative(s) by more than two days.

If the Engineer-in-Charge, whose decision in this respect is final and binding on the contractor, is convinced that no such technical representative(s) is/are effectively appointed or is/are effectively attending or fulfilling the provision of this clause, a recovery (nonrefundable) shall be effected from the contractor as specified in Schedule 'F' and the decision of the Engineer-In-Charge as recorded in the site order book and measurement recorded checked/test checked in Measurement Books shall be final and binding on the contractor. Further if the contractor fails to appoint suitable technical Principal technical representative and/or other technical representative(s) and if such appointed persons are not effectively present or are absent by more than two days without duly approved substitute or do not discharge their responsibilities satisfactorily, the Engineer-in-Charge shall have full powers to suspend the execution of the work until such date as suitable other technical representative(s) is/are appointed and the contractor shall be held responsible for the delay so caused to the work. The contractor shall submit a certificate of employment of the technical representative(s) (in the form of copy of Form-16 or CPF deduction issued to the Engineers employed by him) along with every on account bill final bill and shall produce evidence if at any time so required by the Engineer-in-Charge.

- ii. The contractor shall provide and employ on the site only such technical assistants as are skilled and experienced in their respective fields and such foremen and supervisory staff as are competent to give proper supervision to the work.

The contractor shall provide and employ skilled, semiskilled and unskilled labour as is necessary for proper and timely execution of the work.

The Engineer-in-Charge shall be at liberty to object to and require the contractor to remove from the works any person who in his opinion misconducts himself, or is incompetent or negligent in the performance of his duties or whose employment is otherwise considered by the Engineer-in-Charge to be undesirable. Such person shall not be employed again at works site without the written permission of the Engineer-in-Charge and the persons so removed shall be replaced as soon as possible by competent substitutes.

CLAUSE 34: LEVY / TAXES PAYABLE BY CONTRACTOR

- i. GST, Building and other Construction Workers Welfare Cess or any other tax, levy or Cess in respect of input for or output by this contract shall be payable by the contractor and WAPCOS shall not entertain any claim whatsoever in this respect except as provided under Clause 35.

- ii. The contractor shall deposit royalty and obtain necessary permit for supply of the red bajri, stone, kankar, etc. from local authorities.
- iii. If pursuant to or under any law, notification or order any royalty, cess or the like becomes payable by the WAPCOS and does not any time become payable by the contractor to the State Government, Local authorities in respect of any material used by the contractor in the works, then in such a case, it shall be lawful to WAPCOS and it will have the right and be entitled to recover the amount paid in the circumstances as aforesaid from dues of the contractor.

CLAUSE 35 : CONDITIONS FOR REIMBURSEMENT OF LEVY/TAXES IF LEVIED AFTER RECEIPT OF TENDERS

- (i) All tendered rates shall be inclusive of all taxes and levies (including GST) payable under respective statutes. However, if any further tax or levy or cess is imposed by Statute, after the last stipulated date for the receipt of tender including extensions if any and the Contractor thereupon necessarily and properly pays such taxes/levies/cess, the Contractor shall be reimbursed the amount so paid, provided such payments, if any, is not, in the opinion of the WAPCOS Limited attributable to delay in execution of work within the control of the Contractor.
- (ii) The contractor shall keep necessary books of accounts and other documents for the purpose of this condition as may be necessary and shall allow inspection of the same by a duly authorized representative of the WAPCOS and/or the Engineer-in-Charge and shall also furnish such other information/document as the Engineer-in-Charge may require from time to time.
- (iii) The contractor shall, within a period of 30 days of the imposition of any such further tax or levy or cess, or variation or repeal of such tax or levy or cess give a written notice thereof to the Engineer-in-charge that the same is given pursuant to this condition, together with all necessary information relating thereto.

CLAUSE 36 : TERMINATION OF CONTRACT ON DEATH OF CONTRACTOR

Without prejudice to any of the rights or remedies under this contract, if the contractor dies, the Engineer-In-Charge on behalf of the WAPCOS shall have the option of terminating the contract without compensation to the contractor.

CLAUSE 37 : IF RELATIVE WORKING IN WAPCOS THEN THE CONTRACTOR NOT ALLOWED TO TENDER

The contractor shall not be permitted to tender for works in the WAPCOS responsible for award and execution of contracts in which his near relative is posted in WAPCOS. He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to any Officer in the WAPCOS. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of WAPCOS. If however the contractor is registered in any other department, he shall be debarred from tendering in WAPCOS for any breach of this condition.

NOTE: By the term “near relatives” is meant wife, husband, parents and grandparents, children and grandchildren, brothers and sisters, uncles, aunts and cousins and their corresponding in-laws.

CLAUSE 38 : NO GAZETTED ENGINEER TO WORK AS CONTRACTOR WITHIN ONE YEAR OF RETIREMENT

No engineer of gazetted rank or other gazetted officer employed in engineering or administrative duties in an engineering department of the Government of India shall work as a contractor or employee of a contractor for a period of one year after his retirement from government service without the previous permission of Government of India in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found at any time to be such a person who had not obtained the permission of Government of India as aforesaid, before submission of the tender or engagement in the contractor's service, as the case may be.

CLAUSE 39 : RETURN OF MATERIALS & RECOVERY FOR MATERIAL ISSUED

- I. After completion of the work and also at any intermediate stage in the event of non-reconciliation of materials issued, consumed and in balance - (see Clause 10), theoretical quantity of materials issued by the WAPCOS for use in the work shall be calculated on the basis and method given hereunder:-
 - a) Quantity of cement & bitumen shall be calculated on the basis of quantity of cement & bitumen required for different items of work as shown in the Schedule of Rates mentioned in Schedule F. In case any item is executed for which standard constants for the consumption of cement or bitumen are not available in the above mentioned schedule/statement or cannot be derived from the same shall be calculated on the basis of standard formula to be laid down by the Engineer-in-Charge.
 - b) For any other material as per actual requirements.
 - c) Over the theoretical quantities of materials so computed a variation shall be allowed as specified in Schedule F. The difference in the net quantities of material actually issued to the contractor and the theoretical quantities including such authorized variation, if not returned by the contractor or if not fully reconciled to the satisfaction of the Engineer-in-Charge within fifteen days of the issue of written notice by the Engineer-in-charge to this effect shall be recovered at the rates specified in Schedule F, without prejudice to the provision of the relevant conditions regarding return of materials governing the contract. Decision of Engineer-in-Charge in regard to theoretical quantities of materials, which should have been actually used as per the Annexure of the standard schedule of rates and recovery at rates specified in Schedule F, shall be final & binding on the contractor. For nonscheduled items, the decision of the Engineer-In-Charge regarding theoretical Quantities of materials which should have been actually used, shall be final and binding on the contractor.
 - d) The said action under this clause is without prejudice to the right of the WAPCOS to take action against the contractor under any other conditions of contract for not doing the work according to the prescribed specifications.

CLAUSE 40 : COMPENSATION DURING WARLIKE SITUATION

The work (whether fully constructed or not) and all materials, machines, tools and plants, scaffolding, temporary buildings and other things connected therewith shall be at the risk of the contractor until the work has been delivered to the Engineer-in-Charge and a certificate from him to that effect obtained. In the event of the work or any materials properly brought to the site for incorporation in the work being damaged or destroyed in consequence of hostilities or warlike operation, the contractor shall when ordered (in writing) by the Engineer-in-Charge to remove any debris from the site, collect and properly stack or remove in store all serviceable materials salvaged from the damaged work and shall be paid at the contract rates in accordance with the provision of this agreement for the work of clearing the site of debris, stacking or removal of serviceable material and for reconstruction of all works ordered by the Engineer-in-Charge, such payments being in addition to compensation upto the value of the work originally executed before being damaged or destroyed and not paid for. In case of works damaged or destroyed but not already measured and paid for, the compensation shall be assessed by the Engineer In Charge upto Rs.2,00,000/-- and by the WAPCOS for a higher amount.

The contractor shall be paid for the damages/destruction suffered and for restoring the material at the rate based on analysis of rates tendered for in accordance with the provision of the contract. The certificate of the Engineer-in-Charge regarding the quality and quantity of materials and the purpose for which they were collected shall be final and binding on all parties to this contract.

Provided always that no compensation shall be payable for any loss in consequence of hostilities or warlike operations (a) unless the contractor had taken all such precautions against air raid as are deemed necessary by the A.R.P. (Air Raid precaution) Officers or the Engineer-in-Charge (b) for any material etc. not on the site of the work or for any tools, plant, machinery, scaffolding, temporary building and other things not intended for the work. In the event of the contractor having to carry out reconstruction as aforesaid, he shall be allowed such extension of time for its completion as is considered reasonable by the Engineer-In-Charge.

CLAUSE 41 : APPRENTICES ACT PROVISIONS TO BE COMPLIED WITH

The contractor shall comply with the provisions of the Apprentices Act, 1961 and the rules and orders issued there under from time to time. If he fails to do so, his failure will be a breach of the contract and the WAPCOS may, in his discretion, cancel the contract. The contractor shall also be liable for any pecuniary liability arising on account of any violation by him of the provisions of the said Act.

CLAUSE 42 : RELEASE OF SECURITY DEPOSIT AFTER LABOUR CLEARANCE

Release of Security Deposit of the work shall not be refunded till the contractor produces a clearance deposit after labour certificate from the Labour Officer. As soon as the work is virtually

complete the contractor shall apply for the clearance certificate to the Labour Officer under intimation to the Engineer-in-Charge. The Engineer-in-Charge, on receipt of the said communication, shall write to the Labour Officer to intimate if any complaint is pending against the contractor in respect of the work. If no complaint is pending, on record till after 3 months after completion of the work and/or no communication is received from the Labour Officer to this effect till six months after the date of completion, it will be deemed to have received the clearance certificate and the Security Deposit will be released if otherwise due.

CLAUSE 43: INSURANCE

1. Requirements

Before commencing execution of works, unless stated otherwise in the Schedule F, it shall be obligatory for the contractor to obtain at his own cost stipulated insurance cover under the following requirements:

- a) Contractor's all risk and Third Party Cover.
- b) Liability under the workmen's compensation Act, 1923, Minimum Wages Act, 1948 and Contract Labour (Regulation and Abolition) Act, 1970.
- c) Accidents to staff, Engineers, Supervisors and others who are not governed by workmen's compensation Act.
- d) Damage to material, machinery and works due to fire theft etc.
- e) Any other risk to be covered by insurance as may be specified by the employer in the Schedule F

- **Policy in Joint Names of Contractor and Employer**

The policy referred to under sub-clause 43(1) above shall be obtained in the joint names of the contractor and the employer and shall inter-alia provide coverage against the following, arising out of or in connection with execution of works, their maintenance and performance of the contract.

- f) Loss of life or injury involving public, employee of the contractor, or that of employer and Engineer, labour etc.
- g) Injury, loss or damage to the works or property belonging to public, government bodies, local authorities, utility organizations, contractors, employer or others.

- **Currency of Policy**

The policies shall remain in force throughout the period of execution of the works and till the expiry of the defect liability period. The contractor shall, whenever called upon, produce to the engineer or his representative the various insurance policies obtained by him as also the rates of premia and the premia paid by him to ensure that the policies indeed continue to be in force. If the contractor fails to effect or keep in force or provide adequate cover in the insurance policies

mentioned in the sub clause 43(1) or any other insurance he might be required to effect under the contract, then in such cases, the employer may effect and keep in force any such insurance or further insurance and the cost and expenses incurred by him in this regard shall be deductible from payments due to the contractor or from the contractor's performance security.

CLAUSE 45: PREFERENCE TO MAKE IN INDIA

- 1) The provisions of revised 'Public Procurement (Preference to Make in India) Order 2017-Revision' issued by Department of Industrial Policy and Promotion under Ministry of Commerce and Industry vide letter no.-P45021/2/2017-PP (BE-II) as amended on 16.09.2020 shall be applicable to the bidding process and award of the contract shall be done accordingly. In this connection, the minimum local content shall be 50% and the margin of purchase preference shall be 20%.

Verification of Local Content

- a) The bidder at the time of tender, bidding or solicitation shall be required to indicate percentage of local content and provide self-certification that the item offered meets the local content requirement of the tender. They shall also give details of the location(s) at which the local value addition is made.
- b) In cases of procurement for a value in excess of Rs 10 Crores, the bidder shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content

CLAUSE 46: RULE 144 (xi) IN GENERAL FINANCIAL RULES (GFRs) 2017

- 1) Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority.
- 2) "Bidder" (including the term 'tenderer', 'consultant' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.
- 3) "Bidder from a country which shares a land border with India" for the purpose of this Order means:
 - a. An entity incorporated, established or registered in such a country; or
 - b. A subsidiary of an entity incorporated, established or registered in such a country; or
 - c. An entity whose beneficial owner is situated in such a country; or
 - d. An Indian (or other) agent of such an entity; or

- e. A natural person who is a citizen of such a country; or
- f. A consortium or joint venture where any member of the consortium or jointventure falls under any of the above.

4) The beneficial owner for the purpose of 1.4.2.(iii) above will be as under:

- a) In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has a controlling ownership interest or who exercise control through other means;

Explanation:

- “Controlling ownership interest” means ownership of or entitlement to morethan twenty- five per cent. Of shares or capital or profits of the company;
 - “Control” shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholders agreements or voting agreements;
 - b) In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;
 - c) In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone of together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profit of such association or body of individuals;
 - d) Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;
 - e) In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.
- 5) An Agent is a person employed to do any act for another, or to represent another indealings with third person.

The successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority

For & on behalf of Tenderer

SECTION– IV

PROFORMA OF SCHEDULES

SECTION-IV
PROFORMA OF SCHEDULES
(Operative schedule)

1.0 SCHEDULES

SCHEDULE 'A'		
	Schedule of quantities (BOQ)	Attached as Volume III, Bill of Quantities
SCHEDULE 'B'		
	Schedule of materials to be issued to the contractor	NIL – No material to be issued to the Contractor
SCHEDULE 'C'		
	Tools and plants to be hired to the contractor	NIL - No tools and plants to be hired to the Contractor
SCHEDULE 'D'		
	Extra schedule for specific requirements/document for the work, if any.	As attached in tender form for the work, if any.
SCHEDULE 'E'		
	Name of work :	“ Construction of 120 bedded Old Age Home –BLOCK-A & 200 bedded Hostel (100 boys & 100 girls) –BLOCK-B for blind people at Unit-III, Bhubaneswar, Odisha”
	Estimated cost of work:	Rs. 37,22,85,406/- + GST
	Earnest money:	Rs.74,45,708/-
	Performance Guarantee:	3% of Tendered value
	Security Deposit:	2.5% of Tendered value
SCHEDULE 'F'		
Clause No.	Description	Applicability/Modified/ Added
GENERAL RULES AND DIRECTIONS		

DEFINITIONS

Clause No.	Description	Applicability/Modified/ Added
Add 2(i)(a)	Owner shall mean: Social Security and Empowerment of persons with disability, Department is committed to develop the infrastructure facilities in the State of Odisha	
2(ii)	Work Means: “Construction of 120 bedded Old Age Home –BLOCK-A & 200 bedded Hostel (100 boys & 100 girls) –BLOCK-B for blind people at Unit-III, Bhubaneswar, Odisha,”	
2(iii)	Site Means Bhubaneswar, Odisha	
2 (iv)	Engineer-In-Charge Will be intimated to the successful bidder at the time of issue of Notice to Proceed the works.	
2 (v)	Accepting Authority: Executive Director (INFS-II) WAPCOS Ltd	
2 (vi)	Market Rate Percentage on cost of materials and labour to cover all overheads and profits	15%
2(vii)	Standard Schedule of Rates Schedule of Rates (Electrical) Schedule of Rates (Civil)	OSOR 2022 (up to date of floating of NIT)
2(viii)	Date of Commencement of work	Within 14 days after award of work or date of handing over of site, whichever is later
9	Signing of Contract	The Successful tenderer will have to execute an agreement in stamp paper worth 0.1% of contract agreed amount subjected to a maximum of Rs.1,00,000/- in prescribed form within 21 days from the date of LoA

CLAUSES OF CONTRACT

Clause 1	Performance Guarantee i. Performance Guarantee	Applicable 3% of Contract Value (This guarantee shall be in the form of Deposit at call receipt of any Nationalized/Scheduled Bank /Banker's cheque of any Nationalized/Scheduled Bank /Demand Draft of any Nationalized /Scheduled Bank /Pay order of any Nationalized/Scheduled Bank (in case guarantee amount is less than Rs. 1,00,000/-) or Government Securities or Fixed Deposit Receipts or Guarantee Bonds of any Nationalized/Scheduled Bank or the State Bank of India in accordance with the prescribed form
	ii. Time allowed for submission of Performance Guarantee from the date of issue of letter of acceptance iii. Maximum allowable extension with late fee @ 0.1% per day of Performance Guarantee amount beyond the period as provided in (i) Above. iv. Validity of Performance Guarantee v. Return of Performance Guarantee	14 days 7 days Performance Security is to be furnished by a specified date [generally 21 (twenty-one) days after notification of the award] and it should remain valid for a period of 60 (sixty) days beyond the date of completion of all contractual obligations of the contractor, including Defect Liability Period (DLP). On Successful completion of the Work, & issue of completion certificate by the Owner of Work. If the L1 bidder quotes abnormally low

	Additional PBG in case of excessive Low quote by the bidder.	cost, the PBG shall increase by the differential cost i.e. cost put to Tender minus the quoted amount as Additional Performance Security in shape of Term Deposit pledged in favour of WAPCOS Ltd within seven days from the date of opening of price bid.
Clause 1A	Security Deposit	Applicable 2.5% of Tendered Value
	Release of security Deposit	After completion of the Defect Liability Period and submission of "No Defects Certificate"/ "Taking over Certificate" issued by the Owner of the Work. In the event of different defect liability periods being applicable to different sections/parts, due to different completion date the release of security shall be proportionate.
Clause 2	Compensation for Delay	0.5% of the actual executed value of contract for each weeks delay subject to a maximum of 10% of the contract value of contract based on quantum of damage suffered due to stated delay on the part of Contractor Applicable Timely completion of the work is very much/strictly essential due to time constraints
Clause 3	When the Contract can be Determined	<u>ADD</u> (c) to determine the amount to be recovered from the Contractor for completing the remaining work or in the event the remaining work is not to be completed the loss/damage suffered, if any, by WAPCOS after giving credit for the value of the work executed by the Contractor up to the time of termination/cancellation less on account payments made till date and value of Contractor's

		<p>materials, plant, equipment, etc., taken possession of after termination/cancellation.</p> <p>(d) To recover the amount determined as per (a) and (b), if any, from any moneys due to the Contractor or any account or under any other Contract and in the event of any shortfall, the Contractor shall be called upon to pay the same on demand.</p>
Clause 4	Time and Extension for Delay Number of days from the date of issue of letter of acceptance for reckoning date of start Stipulated time of completion of project	<p>Applicable 7 days</p> <p>As Mentioned in NIT</p>
Clause 4.1 (1)	Non submission of construction programme by the contractor	Rs. 5000/- per day
Clause 4.2	Non submission of modified construction programme for the extended time by the contractor	Rs. 5000/- per day
Clause 6A	Computerized Measurement Book	Applicable
Clause 7	Payment on Intermediate Certificate to be Regarded as advance	Applicable
		<p>ADD</p> <p>The final 3% of the Contract Value will be released after the completion of Defects Liability Period which will be considered as a Performance Guarantee after the Completion of the Project till Defects Liability Period.</p>
Clause 10A	Materials to be provided by the contractor	Contractor must provide Field Testing Equipment's in required number

Clause 10 B	Secured Advance on Non-Perishable Materials	Not Applicable
	Mobilization advance	Not Applicable
Clause 10 C	Payment on Account of Increase in Price / Wages due to Statutory Order	Not Applicable
Clause 10 CA	Payment due to Variation in Prices of Materials after Receipt of Tender	Not Applicable
Clause 10 CC	Payment due to Increase/Decrease in Prices/Wages (Excluding Materials covered under Clause 10 CA) after Receipt of Tender for Works	Not Applicable
Clause 11	Works to be Executed in Accordance with Specifications, Drawings, Orders Etc. Specifications to be followed for execution of work	<p>Applicable</p> <p>All works are to be executed in accordance with the specifications, BIS Standards and Codes, Indian Electricity Rules 1956, Indian Electricity Act 2003 and Fire Safety Regulations pertaining to Electric applications. Specification with up to date correction on the last date of submission of tender for work.</p> <p><u>In case specification of any item is not clear, CPWD Specifications, Indian Standards(IS), NBPDC Specifications with up to date correction slips issued on the last date of submission of tender for work is applicable</u></p>
Clause 12.2	Deviation, Extra Items and Pricing.	<p>ADD</p> <p>In case the extra item being the Scheduled Item (latest OSOR), these shall be paid as per the schedule rate. (plus applicable cost index)</p> <p>In the case of extra item(s) (items not available in OSOR), the contractor may within fifteen (15) days of receipt of order or occurrence of the item(s) claim rates, supported by proper analysis on the basis of the market rates and the contractor shall be paid in accordance with the minimum of above rates approved by WAPCOS.</p>

Clause 12.2	Deviation, Substituted Items and Pricing.	<p>ADD</p> <p>“The specification mentioned in Tender may be substituted as per the requirement of Owner/ WAPCOS. In this case of substituted item(s)/deviated item(s) being SOR item, these shall be paid as per the latest prevailing SOR plus applicable cost index (at the time of tender)</p> <p>In the case substituted of item(s) (items that are completely new), the contractor may within fifteen days of receipt of order or occurrence of the item(s) claim rates, supported by proper analysis on the basis of the market rates and the contractor shall be paid in accordance with the minimum of above rates approved by WAPCOS.</p>
Clause 12.2 and Clause 12.3	The deviation limit to be specified for all the items	100%
Clause 13	Foreclosure of Contract due to Abandonment or Reduction in Scope of Work	<p>ADD</p> <p>If the progress of the work or of any portion of the work is unsatisfactory, the Engineer-in-Charge, after giving the contractor 15(fifteen) days’ notice in writing, without cancelling or terminating the contract, shall be entitled to employ another agency for executing the job or to carry out the work departmentally or contractually through tendering process, either wholly or partly, debiting the contractor with cost involved in engaging another agency Or with the cost of labour and the prices of materials, as the case may be. The certificate to be issued by the Engineer-in-Charge for the cost of the work so done shall be final and conclusive and the extra cost, if any,</p>

		shall be borne by the contractor.		
Clause 16	Authority for deciding reduced rates	Competent authority of WAPCOS		
Clause 17	Contractor liable for Damages, Defects during Defect Liability Period	Applicable Add: 2 Years for Civil work and Electrical and Mechanical Works from the date of successful completion and commissioning of the project in all respect and handing over of the work with full satisfaction of Department. As WAPCOS is liable to the Department, the contractor is liable to WAPCOS till the Defect Liability Period.		
Clause 19	Deciding Authority for penalty:	Engineer –In-Charge (A sum of Rs.2000/-for each default) Further, the contractor indemnifies WAPCOS from any penalties imposed by the concerned department of Government of Odisha in case of any default in Clause-19		
Clause 33	Minimum Requirement of Technical Representative(s).			
S.No.	Requirement of Technical Staff		Minimum Experience (Yrs)	Designation of Technical Staff
	Minimum Qualification	Numbers		
1.	B. Tech (Civil)	1	8 (Having Experience of onesimilar nature of work)	Project Manager

2.	Diploma (Civil)	1	5	Construction Engineer/ Billing Engineer/ Quality Control & Safety Engineer Control & Safety Engineer
3	B. Tech (Electrical)	1	4	Electrical Supervisor
Clause 39	Return of Material & Recovery for Material Issued		Not Applicable	
Clause 43	Insurance		The Contractor shall submit the required Insurances within One week from the Date of signing of the agreement.	
Clause 45	Preference to Make in India		<p>The bidder at the time of tender, bidding Or solicitation shall be required to indicate percentage of local content and provide self-certification that the item offered meets the local content requirement of the tender. They shall also give details of the location(s) at with the local value addition is made.</p> <p>In cases of procurement for a value in excess of Rs 10 Crores, the bidder shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.</p> <p>The Contractor shall submit a certificate/Undertaking accordingly.</p>	
Clause 46	RULE 144 (xi) IN GENERAL FINANCIAL RULES (GFRs) 2017		Undertaking as per Form L	

2.0 ADDITIONAL CONDITIONS

1. The Contractor shall be responsible for consequential effects arising out during the inspection done by the Chief Technical Examiner Cell, Central Vigilance Commission or by the Building Works Committee or third party authorized by WAPCOS or any statutory committee or by any duly authorized representative of WAPCOS, during the progress or any time after the construction and development of project up to the defect liability period, and will take appropriate action for rectification of defective work. Rectification of defective works or replacement of sub-standard materials or articles, as pointed out by the Chief Technical Cell, Central Vigilance Commission, Building Works Committee or authorized representative of WAPCOS or third party authorized by WAPCOS or any statutory committee, will be carried out or replaced by the Contractor at his own risk and cost. WAPCOS will not pay any extra amount for such rectification or replacement.
2. **Handing Over of the Project:** Contractor will hand over the project to Owner /Client after successful completion of each component of the project in all respect and complete satisfaction of Engineer-In-charge. **The partial handing over of building components shall not be considered.** Contractor shall also provide necessary Completion Certificate/NOC from all local Government/ Statutory Authorities Including Fire, Forest, Electrical, Environment, Lift, DG Set, required before handing over the project to the client.
3. **FURNISHED OFFICE ACCOMMODATION & MOBILITY AND COMMUNICATION TO BE PROVIDED BY CONTRACTOR TO WAPCOS**
On account of furnished Project office equipped with all facilities such as telephone, fax, internet, photocopier, computer/ laptop & printer along with operator, regular electric & purified drinking water supply and inspection vehicle etc. as per the requirement of the project an amount equal to 2.00 % of gross bill from all running account & final bill will be recovered. The contractor shall also make sufficient arrangement for Photography/ Videography preferably by maintaining a camera/video camera at site so that video photographs can be taken of a specific activity at any point of time. The contractor shall also provide software like MS Project etc. for the purpose of preparing progress report etc.
4. The contractor shall make all arrangements for ground breaking ceremony/ inaugural function etc for the project as required and the cost towards it deemed to be included in his rates/offer.
5. Contractor shall provide 1 no. of vehicle to deployed Engineers of Employer for inspection of work under the project for a minimum contract period as mentioned in NIT or execution period whichever is later including running charges such as POL, driver, repairs, etc. for maximum 2000 kms per month. The model of vehicle shall not be older than year of 2022 and the vehicle shall

be Swift-Dzire / Innova Etios, etc.

6. The Contractor shall render all help and assistance in documenting the total sequence of this project by way of photography, slides, audio-video recording etc. nothing extra shall be payable to the agency on this account.
7. The work will be commenced by the Contractor only after the approval of drawings from the concerned local authorities including fire fighting's department or any other department as per statutory requirement.
8. The Contractor shall be solely responsible to follow the general clauses of the contract including Labour regulations, registration of contractor, obtaining Labour license from Labour department, safety precautions, etc. and all other statutory provisions related to labor/works as per the prevailing General Clauses of Contract amended from time to time. The Contractor shall stick to the schedule of all activities and carry out it with mutually agreed time frame.
 - Rates and amount Quoted by contractor shall be firm and fixed for entire contract period as well as extended period for completion of the works. No escalation shall be applicable on this contract.
10. Unless otherwise provided in the schedule of quantities the rates tendered by the contractor shall be all inclusive and shall apply to all heights lifts, leads and depths of the structure and nothing extra shall be payable on this account.
11. The contractor shall make his own arrangements for obtaining electric connection and water Connection/ arrangement (if required) and make necessary payments directly to the department concerned. No dispute in this regard shall be entertained.
12. Other agencies doing works related to this project will also simultaneously execute the work and the contractor shall provide necessary facilities for the same. The contractor shall leave such necessary holes opening etc. for burying in the work pipes, cables, conduits, clamps, boxes and hooks for fan clamps etc. as may be required for other agencies. Conduits for electrical wiring / cables will be laid in a way that they leave enough space for concreting and do not adversely affect the structural members. Nothing extra over the agreement rates shall be paid for the same.
13. Some restrictions may be imposed by the security staff etc. on the working and for movement for Labour materials etc. The contractor shall be bound to follow all such restrictions / instructions and nothing extra shall be payable on this account.
14. (a) The Project work will be carried out in the manner complying in all respects with the requirements of relevant bye laws of the local body under the jurisdiction of which the work

is to be executed or as directed by the Engineer in charge and nothing extra will be paid on this account.

(b) The contractor shall comply with proper and legal orders and directions of the local or public authority or municipality and abide by their rule and regulations and pay all fees and charges which he may be liable.

15. The contractor shall give a performance test of the entire installation (s) as per standing specification before the work is finally accepted and nothing extra whatsoever shall be payable to the contractor for the test.
16. Any cement slurry added over base surface (or) for continuation of concreting for better bond is deemed to have been in-built in the items and nothing extra shall be payable (or) extra cement considered in consumption on this account.
17. Samples of various materials required for testing shall be provided free of charges by the contractor. Testing charges, if any, unless otherwise provided shall be borne by the Contractor. All other expenditure required to be incurred for taking the samples, conveyance, packing etc. shall be borne by the contractor himself.
18. The work shall be carried out in accordance with the Architectural drawings and structural drawings, to be issued from time to time, by the Engineer-in-Charge. Before commencement of any item of work the contractor shall correlate all the relevant architectural and structural drawings, nomenclature of items and specifications etc. issued for the work and satisfy himself that the information available there from is complete and unambiguous. The figure and written dimension of the drawings shall be Engineer-in-charge before execution of the work. The contractor alone shall be responsible for any loss or damage occurring by the commencement of work on the basis of any erroneous superseding the measurement by scale. The discrepancy, if any, shall be brought to the notice of the and/ or incomplete information and no claim whatsoever shall be entertained on this account.
19. The contractor shall bear all incidental charges for cartage, storage and safe custody of materials issued by WAPCOS.
20. In the case of items of which abbreviated nomenclature is not available in the above cited publication and also in case of extra and substituted items of works for which abbreviated nomenclature is not provided in the agreement, the full nomenclature of items shall be reproduced in the measurements books and bill forms for running account bill.

The full nomenclature of the items shall be adopted in preparing abstract of final bill in the measurement book and also in the bill form for final bill.

21. The contractor shall have to make approaches to the site, if so required and keep them in good condition for transportation of Labour and materials as well as inspection of works by the Engineer in charge. Nothing extra shall be paid on this account.
22. No payment will be made to the contractor for damage caused by rains, or other natural calamities during the execution of the works and no such claim on this account will be entertained.
23. Various factory made materials shall be procured from reputed and approved manufacturers or their authorized dealers. List of such approved manufacturers is available with tender document. For the items / materials not appearing in the list the decision of Engineer in charge shall be final and binding.
24. The terms machine batched, machine mixed and machine vibrated concrete used elsewhere in agreement shall mean the concrete produced in concrete batching and mixing plant and if necessary transported by transit concrete mixers, placed in position by the concrete pumps, tower crane and vibrated by surface vibrator /needle vibrator / plate vibrator, as the case may be to achieve required strength and durability.
25. Wherever work is specified to be done or material procured through specialized agencies, their names shall be got approved well in advance from Engineer in charge. Failure to do so shall not justify delay in execution of work. It is suggested that immediately after award of work, contractor should negotiate with concerned specialist agencies and send their names for approval to Engineer in charge. Any material procured without prior approval of Engineer in charge in writing is liable to be rejected. Engineer in charge reserves right to get the materials tested in laboratories of his choice before final acceptance. Nonstandard materials shall not be accepted.
26. Doors and frames shall be procured from specialist firms and name of such agencies shall be got approved from the Engineer in charge well in advance.
27. The construction joints shall be provided in predetermined locations only as decided by Engineer in charge. The cost of shuttering for these construction joints shall be included in item of Concrete work / RCC work and nothing extra shall be payable on this account to the contractor.
28. The gradation of fine sand to be used in plaster work, shall be strictly as per Table 3.1 (clause

3.1.3) of CPWD Specification 2009 Vol. - I conforming to IS 1542-1977. The plastered surface shall be fairly smooth without any undulation of any kind for applying paint/white wash.

29. No chase cutting/dismantling of plaster/RCC/CC shall be allowed, so contractor has to execute the electrical work accordingly.
30. The contractor shall invariably prepare the samples of finishing items as per direction of Engineer-in-charge. The contractor shall proceed with further finishing items only after getting the samples of these items approved in writing from Engineer-in-charge. No extra claim whatsoever beyond the payments due at agreement rates will be entertained from the contractor on this account.
31. The contractor shall take instruction from the Engineer in charge for stacking of materials at any place. No excavated earth or Project material shall be stacked on areas where other buildings, roads, services or compound walls are to be constructed.
32. If as per municipal rules, the huts for Labour are not be created at the site of work by the contractors, the contractor are required to provide such accommodation as is acceptable to local bodies and nothing extra shall be paid on this account.
33. Royalty at the prevalent rates shall be payable by the contractor on all the boulders, metals, shingle, sand and bajri etc. collected by him for the execution of the work, direct to the Revenue authority or authorized agent of the state Government Concerned or Central Government. No such claim of Contractor on royalty shall be entertained by the WAPCOS.
34. All relevant tests for BMC / RMC as per prescribed IS codes in order to enable the Engineer in charge to conduct field tests to ensure that the quality is consistent with the prescribed specifications and nothing extra shall be paid on this account.
35. The contractor or his authorized representative shall associate in collection, preparation, forwarding and testing of such samples. In case, he or his authorized representative is not present or does not associate himself, the results or such tests and consequences thereon shall be binding on the contractor.
36. The contractor shall get the water tested with regard to its suitability of use in the works and get written approval from the Engineer in charge before he proceeds with the use of same of execution of works. If the tube well water is not suitable, the contractor shall arrange Municipal water or from any other sources at his own cost and nothing extra shall be paid to the contractor on this account. The water shall be got tested at frequency specified in latest CPWD

specifications/BIS code.

37. The material shall conform to the quality and make as per attached list in tender document. However for the items not appearing in the list preference shall be given to those articles which bear ISI certification marks. In case articles bearing ISI certification marks are not available the quality of sample brought by the Contractor shall be judged by the standard laid down in the relevant ISI specification/CPWD specification. All materials and articles brought by the contractor to the site for use shall conform to the samples approved, which shall be preserved till the completion of the work. However, such articles which bear ISI mark but stand banned by CPWD will not be used. Notwithstanding the case of materials of "Preferred Make" as given in Annexure IX, provisions of Clause 10A of the General Conditions of Contract for Central PWD works shall be applicable on the materials of "**Preferred Make**" also.
38. It must be ensure that all materials to be used in work bear BIS certification mark. In cases where BIS certification system is available for a particular material/product but not even a single producer has so far approached BIS for certification the material can be used subject to the condition that it should conform to CPWD specification and relevant BIS codes. In such case written approval of the Engineer- In-Charge may be obtained before use of such material in the work.
39. The final approval of the brand to be used shall be as per the direction of Engineer- in-Charge. The brand used shall be one of the brands in case specified in the list of preferred make / materials as enclosed.
40. In case of non-availability of material of the brands specified in the list of approved materials an equivalent brand may be used after getting written approval of WAPCOS giving details to indicate that the brand proposed to be used is equivalent to the brands mentioned in the agreement.

41. Special conditions for Cement

The contractor shall procure 53 grade Ordinary Portland Cement (conforming to IS: 8112), Portland Pozzolona cement (conforming to IS: 1489: Part –I) as required in the work, from reputed manufacturers of cement such as ACC, Ultratech, Ambuja, Jaypee Cement, and or from any other reputed cement manufacturer, having a production capacity not less than one million tons per annum as approved by WAPCOS. The tenderers may also submit a list of names of cement manufacturers which they propose to use in the work. The tender accepting authority reserves right to accept or reject name(s) of cement manufacture(s) which the tenderer proposes to use in the work. No change in the tendered rates will be accepted if the tender accepting authority does not accept the list of cement manufactures, given by the tenderer, fully or partially. The cement brought to the site for execution of work shall be in bags bearing manufacturer's name

& ISI marking. Weight of cement in each bag shall be 50 kg. Samples of cement arranged by the contractor shall be taken by the Engineer- in-Charge and got tested in accordance with provisions of relevant BIS codes. In case the test results indicate that the cement arranged by the contractor does not conform to the relevant BIS codes, the same shall stand rejected and it shall be removed from the site by the contractor at his own cost within 7 days of written order from the Engineer-in-Charge to do so.

42. Special Conditions for Steel:-

The contractor shall procure TMT bars of Fe500/Fe500D/Fe550/Fe550D grade (the grade to be procured is to be specified) from steel producers such as SAIL, Tata Steel Ltd., RINL (VIZAG), Jindal Steel & Power Ltd. and JSW Steel Ltd. or any other producer as approved by WAPCOS who are using iron ore as the basic raw material /input and having crude steel capacity of 2.0 Million tons per annum and above.

43. Removal of rejected/sub-standard materials.

The following procedure shall be followed for the removal of rejected/sub-standard materials from the site of work:

- i) Whenever any material brought by the contractor to the site of work is rejected, entry thereof should invariably be made in the Site Order Book under the signature of the Engineer-In-Charge, giving the approximate quantity of such materials.
- ii) As soon as the material is removed, a certificate to that effect shall be recorded by the Engineer-In-Charge against the original entry, giving, the date of removal and mode of removal, i.e., whether by truck, carts, or by manual Labour. If the removal is by truck, the registration number of the truck should be recorded.
- iii) When it is not possible for the Engineer-In-Charge to be present at the site of work at the time of actual removal of the rejected/sub-standard materials from the site, the required certificate should be recorded by the Authorized Representative of WAPCOS, and the Engineer-In-Charge should countersign the certificate recorded by the Authorized Representative.

44. If the work is carried out in more than one shift or during night, no claim on this account shall be entertained. The contractor has to take permission from the police & local authorities etc. if required for work during night hours. No claim / hindrance on this account shall be considered if work is not allowed during night time. The requisite supervision shall be made available by the WAPCOS along with necessary issue of material under joint custody.

45. Contractor should provide R.O. Plant sufficient for workers employed at site, his technical staff and site staff of WAPCOS free of charge.

46. The contractor shall provide & maintain (2 Nos.) desktop/ laptop of latest version along with printer, operator and internet connection at site of work as per direction of Engineer-in-charge.

47. Once the Project is completed and the contractor shall be responsible to attend defect pointed out by WAPCOS and then hand over the Project to the Department.
48. Contractor should hand over the warranty of the specialized items to the WAPCOS.
49. The contractor is required to deploy resources as per availability of site. However no claim will be entertained for idle Labour, idle machinery, idle technical/no-technical staff, idle T&P etc.
50. Contractor shall not divert any advance payments or part thereof for any work other than that needed for completion of the contracted work. All advance payments received as per terms of the contract (i.e. mobilization advance, secured advance against materials brought at site, secured advance against plant & machinery and/or for work done during interim stages, etc) are required to be re-invested in the contracted work to ensure advance availability of resources in terms of materials, Labour, plant & machinery needed for required pace of progress for timely completion of work.
51. All running account bills preferred by the contractor for advance payments shall be processed only if Engineer-in-charge is satisfied that upto date investments (excluding security deposit & performance guarantee, which are not considered as investments) made by the contractor against contracted work are more than the payments received. Accordingly, all running account bills shall be supported with an account of up-to-date payments received vis-a-vis upto date investments made on the work to enable engineer-in-charge to check to his satisfaction that the payments made by engineer-in-charge are properly utilized only on the work and nowhere else.
52. The contractor shall make all arrangements during site visits of VIPs, dignitaries, official from the Ministries of GoO or their Departments, WAPCOS officials to the Project Site during the Contract Period.
53. The Contractor shall make all arrangements towards Groundbreaking Ceremony/ Foundation Stone Laying Ceremony/Inaugural Function as required and the cost of such arrangements shall be deemed to be included in his rates/offer. No payment shall be made to the Contractor on this account
54. The contractor is bound to follow relevant Odisha State Government orders, circulars. Prevailing at the time of contract connected to the execution of the work under the contract even through specific reference to these are not provided elsewhere in the contract conditions.

3.0 CONDITION OF THE PROJECT SITE

3.1 Information from WAPCOS Limited

The Contractor acknowledges and agrees that any information and data on climatic, hydrological, topographical and general conditions relating to the Project Site made available to it by WAPCOS Limited has been done so for the convenience of the Contractor and that the Contractor enters into the Contract based upon its own investigations and determinations. Without prejudice to Clause 3.1 [Background Information and the manner in which discrepancies are resolved], WAPCOS Limited shall have no responsibility to the Contractor (whether in contract, tort, for breach of statutory duty or howsoever other arising) for or in relation to such information and data whether as to its accuracy, adequacy, sufficiency or completeness.

3.2 Contractor to inspect

Without prejudice to Clause 3.1 [Information from WAPCOS Limited] and without limitation to any other provision of the Contract, the Contractor shall be deemed prior to executing the Contract, to have and warrants that it has inspected to the full extent necessary and examined to its satisfaction the Project Site and its surroundings and where applicable, any existing structures or works on, over and under the Project Site and is familiar with and has satisfied itself with the Project Site Conditions including, without limitation:

- the nature of the climatic, hydrological, topographical, ecological, environmental conditions at the Project Site (including without limitation all hazards and the potential for any contamination of the Project Site or the sub-soil by any noxious or hazardous substances) and the sub-soil and the general conditions of the Project Site
- the form and nature of the Project Site (including existing ground levels) and its adequacy for the purposes of the design and Execution of the Works;
- the risk of injury or damage to property adjacent to the Project Site and to occupiers and users of such property;
- the extent and nature of the design, work, plant and materials necessary for the design and Execution of the Works
- the means of communication with and access (including vehicular access) to and from the Project Site, the accommodation it may require and the adequacy of the rights of access set out in the Contract for those purposes (including the nature and extent of any restrictions upon access or use of the Project Site)
- the possibility of interference by persons with access to or use of or possession of the Project Site;
- the precautions and the times and methods of working necessary to prevent any nuisance, whether public or private, being caused to any third parties on or around the Project Site;
- the whereabouts of existing services and mains on or around the Project Site;
- conditions affecting shipping and transportation of Goods, plant, equipment and Materials to, through and from the Project Site;

- the availability and quality of Labour required for the Works;
- the availability of water and electrical power for the Works;
- the Applicable Laws and Applicable Clearances and local customs relating to the Project Site and the Works; and
- the adequacy and suitability of any design or works carried out by other contractors on or around the Project Site which design or works the Contractor has taken over or will take over with the Project Site or with which the design and/or the Execution of the Works is required to integrate.

4.0 Claims

No claim by the Contractor for additional payment or compensation or any extension of time on the ground of any misunderstanding or misapprehension in respect of the matters referred to in this Clause 3.0 [Condition of the Project Site] or on the ground that incorrect or insufficient information was given to it by WAPCOS Limited, WAPCOS Limited Representative or WAPCOS Limited advisors or consultants, any Statutory Authority, nor shall the Contractor be relieved from any liability, risk or obligation imposed on or undertaken by it under or in relation to the Contract on any such ground or on the ground that it did not or could not foresee any matter which may in fact affect or have affected the design and Execution of the Works.

Contractor shall, before initiating the construction works, check all levels, dimensions and make proper markings on the site to assist the Engineers/ Architects to visualize the proper locations of the built forms and road network. In case, due to design or any other considerations, there are changes, then the Contractor shall extend his full cooperation in site marking as per the revised instructions till all built forms etc. are satisfactorily located. This activity shall bear no extra cost.

The Contractor shall at its own expense:

Do everything necessary to acquire and maintain all Applicable Clearances and which are not specified as responsibility of WAPCOS Limited in Schedule F. If requested by WAPCOS

Limited, the Contractor shall assist WAPCOS Limited in obtaining in a timely and expeditious manner any Applicable Clearance which WAPCOS Limited is required under the Contract to maintain; take all reasonable steps, consistent with a good and experienced employer to maintain harmony and good industrial relations among the personnel employed in connection with the performance of its obligations under the Contract

5.0 Blacklisting policy

The Blacklisting Policy of the company is available on official website of WAPCOS LIMITED. The bidder/tenderer/consultant/contractors have to mandatory furnish an undertaking addressing the same to Engineer-in-charge in the form of certificate to abide the contents of Blacklisting Policy as per ANNEXURE –XIV. Any action in violation of the blacklisting policy or to the certificate furnished shall result in cancellation of tender at the stage before or after the award of work.

SECTION– V

ANNEXURES AND APPENDICES

ANNEXURES

ANNEXURE - I:	FORMAT FOR GUARANTEE TO BE EXECUTED BY THE CONTRACTOR FOR REMOVAL OF DEFECTS AFTER COMPLETION / AFFIDAVIT FOR WORK
ANNEXURE - II:	FORMAT FOR GUARANTEE BOND FOR WATER PROOFING TREATMENT (Not Applicable)
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ANNEXURE - IV:	FORMAT FOR PERFORMANCE SECURITY
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ANNEXURE–XIV:	FORMAT OF UNDERTAKING TO BE FURNISHED ON COMPANY LETTERHEAD BLACKLISTING/NON-DEBARMENT UNDERTAKING

Annexure –I.**GUARANTEE TO BE EXECUTED BY THE CONTRACTOR FOR REMOVAL OF DEFECTS AFTER COMPLETION IN RESPECT OF WATER SUPPLY AND SANITARY INSTALLATIONS, UPVC WINDOWS, ROCK WOOL INSULATION AND POLYURETHENE FOAM**

The agreement made this _____ day of _____ two thousand and _____ Between _____ S/o _____ (hereinafter called the GUARANTOR of the one part) and the WAPCOS LIMITED (hereinafter called the WAPCOS of the other part).

WHEREAS THIS agreement is supplementary to a contract. (Herein after called the Contract) dated _____ and made between the GUARANTOR OF THE ONE PART AND the WAPCOS of the other part, whereby the contractor inter alia, under look to render the work in the said contract recited structurally stable workmanship and use of sound materials.

AND WHEREAS THE GUARANTOR agreed to give a guarantee to the effect that the said work will remain structurally stable and guarantee against faulty workmanship, finishing, manufacturing defects of materials and leakages etc.

NOW THE GUARANTOR hereby guarantee that work executed by him will remain structurally stable, after the expiry of maintenance period prescribed in the contract for the minimum life of ten years, to be reckoned from the date after the expiry of maintenance period prescribed in the contract.

The decision of the Engineer-in-charge with regard to nature and cause of defects shall be final. During the period of guarantee the guarantor shall make good all defects to the satisfaction of the Engineer in charge calling upon him to rectify the defects, failing which the work shall be got done by the WAPCOS by some other contractor at the guarantor's cost and risk. The decision of the Engineer in charge as to the cost payable by the Guarantor shall be final and binding.

That if the guarantor fails to make good all the defects, commits breach thereunder then the guarantor will indemnify the Principal and his successor against all loss, damage cost expense or otherwise which may be incurred by him by reason of any default on the part of the GUARANTOR in performance and observance of this supplementary agreement. As to the amount of loss and / or damage and / or cost incurred by the WAPCOS the decision of the Engineer-in-charge will be final and binding on the parties.

IN WITNES WHEREOF those presents have been executed by the obligator _____ And _____ by for and on behalf of the WAPCOS LIMITED on the day, month and year first above written.

Signed sealed and delivered by OBLIGATOR in presence of:

1. _____
2. _____

SIGNED FOR AND ON BEHALF OF THE WAPCOS LIMITED BY _____ In the presence of:

1. _____
2. _____

Annexure –II**GUARANTEE BOND TO BE EXECUTED BY THE CONTRACTOR FOR WATER PROOFING
TREATMENT FOR BASEMENT / TERRACE / TOILETS (Not Applicable)**

The agreement made this _____ day of _____ two thousand and _____
Between _____ S/o _____ (hereinafter called the GUARANTOR of the one
part) and the WAPCOS Limited (hereinafter called the WAPCOS of the other part).

WHEREAS THIS agreement is supplementary to a contract. (Herein after called the Contract)
dated _____ and made between the GUARANTOR OF THE ONE PART AND the WAPCOS
of the other part, whereby the contractor interalia, undertook to render the structures in the said
contract the work in the said contract recited completely water and leak proof.

THE GUARANTOR hereby guarantee that the water proofing treatment given by him will render
the structures completely leak proof and the minimum life of such water proofing treatment shall
be ten years to be reckoned from the date after the expiry of maintenance period prescribed in
the contract.

Provided that the guarantor will not be responsible for leakage caused by earthquake or
structural defects.

The decision of the Engineer in charge with regard to cause of leakage shall be final.

During the period of guarantee the guarantor shall make good all defects and in case of any
defects being found render the structure water proof to the satisfaction of the Engineer in charge
at his cost and shall commence the work for such rectification within seven days from the date
of issue of notice from the Engineer in charge calling upon him to rectify the defects, failing which
the work shall be got done by the WAPCOS through some other contractor at the guarantor's
cost and risk. The decision of the Engineer in charge as to the cost payable by the Guarantor shall
be final and binding.

That if the guarantor fails to execute the water proofing, or commits breach thereunder then the
guarantor will indemnify the Principal and his successor against all loss, damage, cost of expenses
or otherwise which may be incurred by him by reason of any of any default on the part of the
GUARANTOR in performance and observance of this supplementary agreement . As to the
amount of loss and / or cost incurred by the WAPCOS on the decision of the Engineer-in-charge
will be final and binding on the parties.

IN WITNES WHEREOF those presents have been executed by the obligator
_____ And _____ by for and on behalf of the WAPCOS LIMITED on the day,
month and year first above written.

Signed sealed and delivered by OBLIGATOR in presence of:

1. _____
2. _____

SIGNED FOR AND ON BEHALF OF THE WAPCOS LIMITED BY _____ in the presence Of:

1. _____
2. _____

Annexure –III**BANK GUARANTEE FORMAT FOR EMD (Not Applicable)**

WHEREAS, M/s Having their Registered/Head Office at (Here in after called “the Bidder”) has submitted his Bid dated for the.....[hereinafter called “the Bid”] to M/s WAPCOS Limited (hereinafter called the Employer)

KNOW ALL PEOPLE by these presents that we.....(name of the Bank) having our head office at (Here in after called “the Bank”) are bound unto Employer in the sum of for which payment well and truly to be made to the Employer, the Bank binds itself, its successors and assigns by these presents.

SEALED with the Common Seal of the said Bank this day of 2022.

THE CONDITIONS of this obligation are:

- (1) If after Bid opening the Bidder withdraws his bid during the period of Bid validity specified;
OR
(2) If the Bidder having been notified of the acceptance of his bid by
During the period of Bid Validity:

We undertake to pay to the.....up to the above amount upon receipt of his first written demand, without the Employer having to substantiate his demand, provided that in his demand the Bidder will note that the amount claimed by him is due to him owing to the occurrence of one or any of the above mentioned two conditions and specify the occurred condition or conditions.

This Guarantee will remain in force up to and including the date.....after the deadline for submission of Bids as is stated in the instructions to Bidders or as it may be extended by the notice of which extension(s) to the Bank is hereby waived and notice to the bidder would constitute sufficient notice to the Bank. Any demand in respect of this guarantee should reach the Bank not later than the above date.

Notwithstanding anything contained herein

- i) Liability under this guarantee shall not exceed
- ii) This bank guarantee shall be valid upto.....and;
- iii) Our liability to make payment shall arise and we are liable to pay the guaranteed amount or any part thereof under this guarantee only and only if you serve upon us a written claim or demand in terms of the guarantee on or before..... (Indicate a period twelve months after the date of issue of Bank Guarantee).

DATE:
(Signature of Witness)

SIGNATURE:
SEAL

Annexure –IV
FORM OF PERFORMANCE SECURITY

WAPCOS Limited,
76-C, Institutional Area,
Sector-18, Gurgaon,
Haryana-122015

In consideration of _____ (Employer's name) (hereinafter referred to as "the Employer") which expression shall, unless repugnant to the context or meaning thereof include its successors, administrators and assigns) having awarded to _____ (Contractor's name & address) (Here in after referred to as "the Contractor" which expression shall unless repugnant to the context or meaning thereof, include its successors, administrators, executors and assigns) a contract, by issue of Employer's Notification of Award No. _____ dt. _____. And the same having been unequivocally accepted by the Contractor, resulting into a contract valued at Rs. _____ (Rupees _____ only) for _____ (name of work) (hereinafter called "the contract") and the Contractor having agreed to provide a Contract Performance Guarantee for the faithful performance of the entire contract equivalent to Rs. _____ (Rupees _____ only) (3 % of the said value of the Contract to the Employer.

We, _____ (name & address of bank) (hereinafter referred to as "the Bank" which expression shall, unless repugnant to the context or meaning thereof, include its successors, administrators, executors and assigns) do hereby guarantee and undertake to pay the Employer, on demand any or, all monies payable by the Contractor to the extent of Rs. _____ (Rupees _____ only) as aforesaid at any time upto _____. Without any demur, reservation, contest, recourse or protest and/or without any reference to the Contractor. Any such demand made by the Employer on the bank shall be conclusive and binding notwithstanding any difference between the Employer and the Contractor or any dispute pending before any Court, Tribunal, Arbitrator or any other authority. The Bank undertakes not to revoke this guarantee during its currency without previous consent of the Employer and further agrees that the guarantee herein contained shall continue to be enforceable till the Employer discharges this guarantee.

We the said Bank further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Contract and that it shall continue to be enforceable till all the dues of the Employer under or by virtue of the said contract have been fully paid and its claims satisfied or discharged or till the Employer certifies that the terms and conditions of the said Contract have been fully and properly carried out by the said Contractor and accordingly discharges the guarantee.

The Employer shall have the fullest liberty without affecting in any way the liability of the

Bank under this guarantee, from, time to time to extend the time for performance of the Contract by the Contractor. The Employer shall have the fullest liberty without affecting this guarantee, to postpone from time to time the exercise of any powers vested in them or of any right which they might have against the Contractor and to exercise the same at any time in any manner and either to enforce or to forbear to enforce any covenants, contained or implied, in the Contract between the Employer and the Contractor or any other course or remedy or security available to the Employer. The bank shall not be released of its obligations under these presents by any exercise by the Employer of its liberty with reference to the matters aforesaid or any of them or by reason of any other act or forbearance or other acts of omission or commission on the part of the Employer or any other indulgence shown by the Employer or by any other matter or thing whatsoever which under law would but for this provision, have the effect of relieving the Bank. The guarantee shall not be affected by a change in the constitution of the bank or of the employer.

The bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance, without proceeding against the Contractor and notwithstanding any security or other guarantee that the Employer may have in relation to the Contractor's liabilities.

We The Said Bank do hereby declare that we have absolute and unconditional power to issue this guarantee in your favour under the Memorandum and Articles of Association or such other constitutional documents of the Bank and the undersigned have full power to execute this guarantee under the Power of Attorney/ Post Approval Authorization dated _____ of the bank granted to him / us by the Bank. We the said bank do hereby declare and undertake that your claim under the guarantee shall not be affected by any deficiency or other defect in the powers of the bank or its officials and the guarantee shall be deemed to have been issued as if the bank and its officials have all the powers and authorization to give this guarantee on behalf of the bank.

We the said bank do hereby certify the genuineness and appropriateness of the Stamp paper and stamp value used for issuing the guarantee. We the said bank do hereby declare and undertake that your claim under the guarantee shall not be affected by any deficiency or other defect in the stamp paper or its stamp value.

We the said bank do hereby declare that our payments hereunder shall be made to you , free and clear of and without and deduction, reduction on account of any reasons including any and all present and future taxes, levies, charges of withholding whatsoever imposed or collected with respect thereto.

Notwithstanding anything contained hereinabove our liability under this guarantee is restricted to Rs. _____ (Rupees _____ only) and it shall remain in force upto and including _____ and shall be extended from time to time for such period as may be desired by M/s WAPCOS Limited to whom this bank guarantee has been given.

Notwithstanding anything contained herein

- i) our liability under this guarantee shall not exceed Rs. _____ (Rupees _____ only) ;
- ii) This bank guarantee shall be valid upto _____; and
- iii) Our liability to make payment shall arise and we are liable to pay the guaranteed amount or any part thereof under this guarantee, only and only if you serve upon us a written claim or demand in terms of the guarantee on or before _____ (**indicate a date twelve months after validity of guarantee**).

Dated this _____ day of _____ at New Delhi.

For & on behalf of Tenderer

Annexure –V
FORMAT FOR AFFIDAVIT

I / We have submitted a bank guarantee for the work (Name of work) Agreement No. _____ Dated _____ from _____ (Name of the Bank with full address) to the WAPCOS with a view to seek exemption from payment of performance guarantee in cash. This Bank guarantee expires on _____

I / We undertake to keep the validity of the bank guarantee intact by getting it extended from time to time at my / our own initiative upto a period of _____ months after the recorded date of completion of the work or as directed by the WAPCOS.

I / We also indemnify the WAPCOS against any losses arising out of non-encasement of the bank guarantee if any.

(Deponent)
Signature of Contractor

Note: The affidavit is to be given by the Executants before a first class Magistrate

Annexure –VI
FORM OF ADVANCE PAYMENT GUARANTEE

In consideration of WAPCOS LTD (hereinafter referred to as "the Employer") which expression shall, unless repugnant to the context or meaning thereof include its successors, administrators and assigns) having awarded to _____ (Contractor's name) with its Registered /Head Office at _____ (hereinafter referred to as "the Contractor " which expression shall unless repugnant to the context or meaning thereof, include its successors, administrators, executors and assigns) a contract, by issue of Employer's Notification of Award No. _____ dt. _____ and the same having been unequivocally accepted by the Contractor, resulting into a contract valued at Rs. _____ (Rupees _____ only) for _____ (hereinafter called "the contract") and the Employer having agreed to make an advance payment to the Contractor for performance of the above Contract amounting to Rs. _____ (Rupees _____ only) as an advance against bank guarantee to be furnished by the Contractor.

We, _____ (name & address of bank) having its Head Office at _____ (hereinafter referred to as "the Bank" which expression shall, unless repugnant to the context or meaning thereof, include its successors, administrators, executors and assigns) do hereby guarantee and undertake to pay the Employer immediately on demand any or, all monies payable by the Contractor to the extent of Rs. _____ (Rupees _____ only) as aforesaid at any time upto _____ Without any demur, reservation, contest, recourse or protest and/or without any reference to the Contractor. Any such demand made by the Employer on the bank shall be conclusive and binding notwithstanding any difference between the Employer and the Contractor or any dispute pending before any Court, Tribunal, Arbitrator or any other authority. We agree that the Guarantee herein contained shall be irrevocable and shall continue to be enforceable till the Employer discharges this guarantee. We further agree that no change in the constitution of the Bank or of the Employer shall affect this guarantee.

The Employer shall have the fullest liberty without affecting in any way the liability of the Bank under this guarantee, from time to time, to vary the advance or to extend the time for performance of the Contract by the Contractor. The Employer shall have the fullest liberty without affecting this guarantee, to postpone from time to time the exercise of any powers vested in them or of any right which they might have against the Contractor and to exercise the same at any time in any manner, and either to enforce or to forbear to enforce any covenants, contained or implied, in the Contract between the Employer and the Contractor or any other course or remedy or security available to the Employer. The bank shall not be released of its obligations under these presents by any exercise by the Employer of its liberty with reference to the matters aforesaid or any of them or by reason of any other act or forbearance or other acts of omission or commission on the part of the Employer or any other indulgence shown by the Employer or by any other matter or thing

Whatsoever which under law would but for this provision, have the effect of relieving the Bank.

The bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Contractor and notwithstanding any security or other guarantee that the Employer may have in relation to the Contractor's liabilities.

We The Said Bank do hereby declare that we have absolute and unconditional power to issue this guarantee in your favor under the Memorandum and Articles of Association or such other constitutional documents of the Bank and the undersigned have full power to execute this guarantee under the Power of Attorney/ Post Approval Authorization dated _____ of the bank granted to him / us by the Bank. We the said bank do hereby declare and undertake that your claim under the guarantee shall not be affected by any deficiency or other defect in the powers of the bank or its officials and the guarantee shall be deemed to have been issued as if the bank and its officials have all the powers and authorization to give this guarantee on behalf of the bank.

We the said bank does hereby certify the genuineness and appropriateness of the Stamp paper and stamp value used for issuing the guarantee. We the said bank does hereby declare and undertake that your claim under the guarantee shall not be affected by any deficiency or other defect in the stamp paper or its stamp value.

We the said bank do hereby declare that our payments hereunder shall be made to you , free and clear of and without and deduction, reduction on account of any reasons including any and all present and future taxes, levies, charges of withholding whatsoever imposed or collected with respect thereto.

Notwithstanding anything contained hereinabove our liability under this guarantee is limited to Rs. _____ (Rupees _____ only) and it shall remain in force upto and including _____ and shall be extended from time to time for such period (not exceeding one year), as may be desired by M/S _____ on whose behalf this bank guarantee has been given

Notwithstanding anything contained herein

d) Our liability under this guarantee shall not exceed Rs. _____ (Rupees _____ Only);

e) This bank guarantee shall be valid upto _____ and

f) our liability to make payment shall arise and we are liable to pay the guaranteed amount or any part thereof under this guarantee, only and only if you serve upon us a written claim or demand in terms of the guarantee on or before _____

(Indicate a date twelve months after the validity of the guarantee).

Dated this _____ day of _____ at New Delhi.

WITNESS

(Signature)

(Name)

(Official address)

(Signature)

(Name)

(Signature)

(Name)

(Designation with bank stamp)

Attorney as Power of Attorney

No. _____ dt. _____

ANNEXURE – VII
FORM OF INTEGRITY PACT

To
The Executive Director WAPCOS Limited,
76-C, Sector 18, Institutional Area
Gurgaon, Haryana-122015

Sub: Submission of Tender for the work of **“Construction of 120 bedded Old Age Home –BLOCK-A & 200 bedded Hostel (100 boys & 100 girls) –BLOCK-B for blind people at Unit-III, Bhubaneswar, Odisha”**

Dear Sir,

I/We acknowledge that WAPCOS is committed to follow the principles thereof as enumerated in the Integrity Agreement enclosed with the tender/bid document.

I/We agree that the Notice Inviting Tender (NIT) is an invitation to offer made on the condition that I/We will sign the enclosed integrity Agreement, which is an integral part of tender documents, failing which I/We will stand disqualified from the tendering process. I/We acknowledge that the Making of the Bid shall be regarded as an Unconditional and absolute Acceptance of this condition of the NIT.

I/We confirm acceptance and compliance with the Integrity Agreement in letter and spirit and further agree that execution of the said Integrity Agreement shall be separate and distinct from the main contract, which will come into existence when tender/bid is finally accepted by WAPCOS. I/We acknowledge and accept the duration of the Integrity Agreement, which shall be in the line with Article 1 of the enclosed Integrity Agreement.

I/We acknowledge that in the event of my/our failure to sign and accept the Integrity Agreement, while submitting the tender/bid, WAPCOS shall have unqualified, absolute and unfettered right to disqualify the tenderer/bidder and reject the tender/bid in accordance with terms and conditions of the tender/bid.

Yours faithfully
(Duly authorized signatory of the Bidder)

To be signed by the bidder and same signatory competent / authorized to sign therelevant contract on behalf of WAPCOS

FORMAT FOR INTEGRITY PACT

This Integrity Agreement is made at on this..... Day of..... 20.....

BETWEEN

WAPCOS Limited, New Delhi (Hereinafter referred as the '**Principal/Owner**', which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

AND

.....
..... (Name and Address of the Individual/firm/Company) Through (Hereinafter referred To as the (Details of duly authorized signatory)

"Bidder/Contractor" and which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

Preamble

WHEREAS the Principal / Owner has floated the Tender (NIT No.) (Here in after referred to as "Tender/Bid") and intends to award, under laid down organizational procedure, contract for (Name of work) hereinafter Referred to as the "Contract".

AND WHEREAS the Principal/Owner values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/transparency in its relation with its Bidder(s) and Contractor(s).

AND WHEREAS to meet the purpose aforesaid both the parties have agreed to enter into this Integrity Agreement (hereinafter referred to as "Integrity Pact" or "Pact"), the terms and conditions of which shall also be read as integral part and parcel of the Tender/Bid documents and Contract between the parties.

NOW, THEREFORE, in consideration of mutual covenants contained in this Pact, the parties hereby agree as follows and this Pact witnesses as under:

Article 1: Commitment of the Principal/Owner

- (1) The Principal/Owner commits itself to take all measures necessary to prevent corruption and to observe the following principles:
- a) No employee of the Principal/Owner, personally or through any of his/her family members, will in connection with the Tender, or the execution of the Contract, demand, take a promise for or

accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.

- b) The Principal/Owner will, during the Tender process, treat all Bidder(s) with equity and reason. The Principal/Owner will, in particular, before and during
 - c) The Principal/Owner shall endeavor to exclude from the Tender process any person, whose conduct in the past has been of biased nature.
- (2) If the Principal/Owner obtains information on the conduct of any of its employees which is a criminal offence under the Indian Penal code (IPC)/Prevention of Corruption Act, 1988 (PC Act) or is in violation of the principles herein mentioned or if there be a substantive suspicion in this regard, the Principal/Owner will inform the Chief Vigilance Officer and in addition can also initiate disciplinary actions as per its internal laid down policies and procedures.

Article 2: Commitment of the Bidder(s)/Contractor(s)

- 1) It is required that each Bidder/Contractor (including their respective officers, employees and agents) adhere to the highest ethical standards, and report to the WAPCOS all suspected acts of fraud or corruption or Coercion or Collusion of which it has knowledge or becomes aware, during the tendering process and throughout the negotiation or award of a contract.
- 2) The Bidder(s)/Contractor(s) commits himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the Tender process and during the Contract execution:
 - a) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal/Owner's employees involved in the Tender process or execution of the Contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the Tender process or during the execution of the Contract.
 - b) The Bidder(s)/Contractor(s) will not enter with other Bidder(s) into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to cartelize in the bidding process.
 - c) The Bidder(s)/Contractor(s) will not commit any offence under the relevant IPC/PC Act. Further the Bidder(s)/Contractor(s) will not use improperly, (for the purpose of competition or personal gain), or pass on to others, any information or documents provided by the Principal/Owner as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
 - d) The Bidder(s)/Contractor(s) of foreign origin shall disclose the names and addresses of agents/representatives in India, if any. Similarly Bidder(s)/Contractor(s) of Indian Nationality shall disclose names and addresses of foreign agents/representatives, if any. Either the Indian agent on behalf of the foreign principal or the foreign principal directly could bid in a tender but not both. Further, in cases where an agent participate in a tender on behalf of one manufacturer, he shall not be allowed to quote on behalf of another manufacturer along with the first manufacturer in a subsequent/parallel tender for the

same item.

- e) The Bidder(s)/Contractor(s) will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, Brokers or any other intermediaries in connection with the award of the Contract.
- 3) The Bidder(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.
- 4) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm indulge in fraudulent practice means a willful misrepresentation or omission of facts or submission of fake/forged documents in order to induce public official to act in reliance thereof, with the purpose of obtaining unjust advantage by or causing damage to justified interest of others and/or to influence the procurement process to the detriment of the WAPCOS interests.
- 5) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm use Coercive Practices (means the act of obtaining something, compelling an action or influencing a decision through intimidation, threat or the use of force directly or indirectly, where potential or actual injury may befall upon a person, his/her reputation or property to influence their participation in the tendering process).

Article 3: Consequences of Breach

Without prejudice to any rights that may be available to the Principal/Owner under law or the Contract or its established policies and laid down procedures, the Principal/Owner shall have the following rights in case of breach of this Integrity Pact by the Bidder(s)/Contractor(s) and the Bidder/ Contractor accepts and undertakes to respect and uphold the Principal/Owner's absolute right:

- 1) If the Bidder(s)/Contractor(s), either before award or during execution of Contract has committed a transgression through a violation of Article 2 above or in any other form, such as to put his reliability or credibility in question, the Principal/Owner after giving 14 days' notice to the contractor shall have powers to disqualify the Bidder(s)/Contractor(s) from the Tender process or terminate/determine the Contract, if already executed or exclude the Bidder/Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of transgression and determined by the Principal/Owner. Such exclusion may be forever or for a limited period as decided by the Principal/Owner.
- 2) Forfeiture of EMD/Performance Guarantee/Security Deposit: If the Principal/Owner has disqualified the Bidder(s) from the Tender process prior to the award of the Contract or terminated/determined the Contract or has accrued the right to terminate/determine the Contract according to Article 3(1), the Principal/Owner apart from exercising any legal rights that may have accrued to the Principal/Owner, may in its considered opinion forfeit the entire amount of Earnest Money Deposit, Performance Guarantee and Security Deposit of the Bidder/Contractor.

- 3) Criminal Liability: If the Principal/Owner obtains knowledge of conduct of a Bidder or Contractor, or of an employee or a representative or an associate of a Bidder or Contractor which constitutes corruption within the meaning of IPC Act, or if the Principal/Owner has substantive suspicion in this regard, the Principal/Owner will inform the same to law enforcing agencies for further investigation.

Article 4: Previous Transgression

- 1) The Bidder declares that no previous transgressions occurred in the last 5 years with any other Company in any country confirming to the anticorruption approach or with Central Government or State Government or any other Central/State Public Sector Enterprises in India that could justify his exclusion from the Tender process.
- 2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the Tender process or action can be taken for banning of business dealings/ holiday listing of the Bidder/Contractor as deemed fit by the Principal/ Owner.
- 3) If the Bidder/Contractor can prove that he has resorted / recouped the damage caused by him and has installed a suitable corruption prevention system, the Principal/Owner may, at its own discretion, revoke the exclusion prematurely.

Article 5: Equal Treatment of all Bidders/Contractors/Subcontractors

- 1) The Bidder(s)/Contractor(s) undertake(s) to demand from all subcontractors a commitment in conformity with this Integrity Pact. The Bidder/Contractor shall be responsible for any violation(s) of the principles laid down in this agreement/Pact by any of its Subcontractors/sub-vendors.
- 2) The Principal/Owner will enter into Pacts on identical terms as this one with all Bidders and Contractors.
- 3) The Principal/Owner will disqualify Bidders, who do not submit, the duly signed Pact between the Principal/Owner and the bidder, along with the Tender or violate its provisions at any stage of the Tender process, from the Tender process.

Article 6- Duration of the Pact

This Pact begins when both the parties have legally signed it. It expires for the Contractor/Vendor 12 months after the completion of work under the contract or till the continuation of defect liability period, whichever is more and for all other bidders, till the Contract has been awarded.

If any claim is made/lodged during the time, the same shall be binding and continue to be valid despite the lapse of this Pacts as specified above, unless it is discharged/determined by the Competent Authority, WAPCOS

Article 7- Other Provisions

- 1) This Pact is subject to Indian Law, place of performance and jurisdiction is the Headquarters of the Principal/Owner, who has floated the Tender.

- 2) Changes and supplements need to be made in writing. Side agreements have not been made.
- 3) If the Contractor is a partnership or a consortium, this Pact must be signed by all the partners or by one or more partner holding power of attorney signed by all partners and consortium members. In case of a Company, the Pact must be signed by a representative duly authorized by board resolution.
- 4) Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
- 5) It is agreed term and condition that any dispute or difference arising between the parties with regard to the terms of this Integrity Agreement / Pact, any action taken By the Owner/Principal in accordance with this Integrity Agreement/ Pact or interpretation thereof shall not be subject to arbitration.

6) Independent External Monitor(s)

Panel of IEM's will be conveyed in due course of time.

Article 8- LEGAL AND PRIOR RIGHTS

All rights and remedies of the parties hereto shall be in addition to all the other legal rights and remedies belonging to such parties under the Contract and/or law and the same shall be deemed to be cumulative and not alternative to such legal rights and remedies aforesaid. For the sake of brevity, both the Parties agree that this Integrity Pact will have precedence over the Tender/Contact documents with regard any of the provisions covered under this Integrity Pact.

IN WITNESS WHEREOF the parties have signed and executed this Integrity Pact at the place and date first above mentioned in the presence of following witnesses:

.....
(For and on behalf of Principal/Owner)

.....
(For and on behalf of Bidder/Contractor)

WITNESSES:

1.....
(Signature, name and address)

2.....
(Signature, name and address)

Place:

Dated:

ANNEXURE-VIII
FORMAT OF RESUME OF PROPOSED PERSONNEL

The bidder shall provide all the information requested below:

Position		
Personnel information	Name	Date of birth
	Professional qualifications	
Present employment	Name of Employer	
	Address of Employer	
	Telephone	Contact (manager / personnel officer)
	Fax	E-mail
	Job title	Years with present Employer

Summarize professional experience in reverse chronological order. Indicate particular technical and managerial experience relevant to the project.

From	To	Company, Project , Position, and Relevant Technical and Management Experience

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience, and I am available to undertake the assignment in case of an award. I understand that any misstatement or misrepresentation described herein may lead to my disqualification or dismissal by the Client, and/or sanctions by the Bank.

{Day/month/year}

Name of Personnel

Signature

Date

{Day/month/year}

**Name of authorized Representative
of the Contractor**

Signature

Date

ANNEXURE-IX
ACCEPTABLE MAKES OF MATERIALS

All procurement shall be done in accordance with G.O. No. P-45021/2/2017-PP (BE-II) Government of India, Ministry of Commerce and Industry Department for Promotion of Industry and Internal Trade dated 16.09.2020. Acceptable makes of materials to be used in the work are enclosed. In case of non-availability of these makes, after the approval of WAPCOS, the Contractor can use the alternative makes only BIS marked materials. Non BIS marked materials may be permitted by the WAPCOS only when BIS marked materials are not manufactured. (Enclosed)

ACCEPTABLE MAKES OF MATERIALS

Acceptable makes of materials to be used in the work are enclosed. In case of non-availability of these makes, after the approval of WAPCOS, the Contractor can use the alternative makes only BIS marked materials. Non BIS marked materials may be permitted by the WAPCOS only when BIS marked materials are not manufactured. (Enclosed)

ANNEXURE –X

SAFETY CODES

1. Suitable scaffolds should be provided for workmen for all works that cannot safely be done from the ground, or from solid construction except such short period work as can be done safely from ladders. When a ladder is used, an extra mazdoor shall be engaged for holding the ladder and if the ladder is used for carrying materials as well suitable footholds and hand-hold shall be provided on the ladder and the ladder shall be given an inclination not steeper than $\frac{1}{4}$ to 1($\frac{1}{4}$ horizontal and 1 vertical).
2. Scaffolding of staging more than 3.6 m (12ft.) above the ground or floor, swung or suspended from an overhead support or erected with stationary support shall have a guard rail properly attached or bolted, braced and otherwise secured at least 90 cm. (3ft.) high above the floor or platform of such scaffolding or staging and extending along the entire length of the outside and ends thereof with only such opening as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying from the building or structure.
3. Working platforms, gangways and stairways should be so constructed that they should not sag unduly or unequally, and if the height of the platform or the gangway or the stairway is more than 3.6 m (12ft.) above ground level or floor level, they should be closely boarded, should have adequate width and should be suitably fastened as described in (2) above.
4. Every opening in the floor of a building or in a working platform shall be provided with suitable means to prevent the fall of person or materials by providing suitable fencing or railing whose minimum height shall be 90 cm. (3ft.).
5. Safe means of access shall be provided to all working platforms and other working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9m. (30ft.) in length while the width between side rails in rung ladder shall in no case be less than 29 cm. (11½") for ladder up to and including 3 m. (10 ft.) in length. For longer ladders, this width should be increased at least $\frac{1}{4}$ " for each additional 30 cm. (1 foot) of length. Uniform step spacing of not more than 30 cm shall be kept. Adequate precautions shall be taken to prevent danger from electrical equipment. No materials on any of the sites or work shall be so stacked or placed as to cause danger or inconvenience to any person or the public. The contractor shall provide all necessary fencing and lights to protect the public from accident and shall be bound to bear the expenses of defense of every suit, action or other proceedings at law that may be brought by any person for injury sustained owing to neglect of the above precautions and to pay any damages and cost which may be awarded in any such suit; action or proceedings to any such person or which may, with the consent of the contractor, be paid to compensate any claim by any such person.

6. (a) Excavation and Trenching - All trenches 1.2 m. (4ft.) or more in depth, shall at all times be supplied with at least one ladder for each 30 m. (100 ft.) in length or fraction thereof, Ladder shall extend from bottom of the trench to at least 90 cm. (3ft.) above the surface of the ground. The side of the trenches which are 1.5 m. (5ft.) or more in depth shall be stepped back to give suitable slope or securely held by timber bracing, so as to avoid the danger of sides collapsing. The excavated materials shall not be placed within 1.5 m. (5ft.) of the edges of the trench or half of the depth of the trench Whichever is more? Cutting shall be done from top to bottom. Under no circumstances, undermining or undercutting shall be done.

(b) Safety Measures for digging bore holes:-

- i. If the bore well is successful, it should be safely capped to avoid caving and collapse of the bore well. The failed and the abandoned ones should be completely refilled to avoid caving and collapse;
 - ii. During drilling, Sign boards should be erected near the site with the address of the drilling contractor and the Engineer in-charge of the work;
 - iii. Suitable fencing should be erected around the well during the drilling and after the installation of the rig on the point of drilling, flags shall be put 50m all-round the point of drilling to avoid entry of people;
 - iv. After drilling the bore well, a cement platform (0.50m x 0.50m x 1.20m) 0.60m above ground level and 0.60m below ground level should be constructed around the well casing;
 - v. After the completion of the bore well, the contractor should cap the borewell properly by welding steel plate, cover the bore well with the drilled wet soil and fix thorny shrubs over the soil. This should be done even while repairing the pump;
 - vi. After the bore well is drilled the entire site should be brought to the ground level.
7. Demolition - Before any demolition work is commenced and also during the progress of the work,
- i. All roads and open areas adjacent to the work site shall either be closed or suitably protected.
 - ii. No electric cable or apparatus which is liable to be a source of danger or a cable or apparatus used by the operator shall remain electrically charged.
 - iii. All practical steps shall be taken to prevent danger to persons employed from risk of fire or explosion or flooding. No floor, roof or other part of the building shall be so overloaded with debris or materials as to render it unsafe.
8. All necessary personal safety equipment as considered adequate by the Engineer-in-Charge should be kept available for the use of the person employed on the site and

maintained in a condition suitable for immediate use, and the contractor should take adequate steps to ensure proper use of equipment by those concerned. The following safety equipment shall invariably be provided.

- i. Workers employed on mixing asphaltic materials, cement and lime mortars shall be provided with protective footwear and protective goggles.
- ii. Those engaged in white washing and mixing or stacking of cement bags or any material which is injurious to the eyes, shall be provided with protective goggles.
- iii. Those engaged in welding works shall be provided with welder's protective eye shields.
- iv. Stone breaker shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.
- v. When workers are employed in sewers and manholes, which are in active use, the contractors shall ensure that the manhole covers are opened and ventilated at least for an hour before the workers are allowed to get into the manholes, and the manholes so opened shall be cordoned off with suitable railing and provided with warning signals or boards to prevent accident to the public. In addition, the contractor shall ensure that the following safety measure are adhered to :
 - (a) Entry for workers into the line shall not be allowed except under supervision of the JE or any other higher officer.
 - (b) At least 5 to 6 manholes upstream and downstream should be kept open for at least 2 to 3 hours before any man is allowed to enter into the manhole for working inside.
 - (c) Before entry, presence of Toxic gases should be tested by inserting wet lead acetate paper which changes colour in the presence of such gases and gives indication of their presence.
 - (d) Presence of Oxygen should be verified by lowering a detector lamp into the manhole. In case, no Oxygen is found inside the sewer line, workers should be sent only with Oxygen kit.
 - (e) Safety belt with rope should be provided to the workers. While working inside the manholes, such rope should be handled by two men standing outside to enable him to be pulled out during emergency.
 - (f) The area should be barricaded or cordoned off by suitable means to avoid mishaps of any kind. Proper warning signs should be displayed for the safety of the public whenever cleaning works are undertaken during night or day.
 - (g) No smoking or open flames shall be allowed near the blocked manhole being cleaned.
 - (h) The malba obtained on account of cleaning of blocked manholes and sewer lines should be immediately removed to avoid accidents on account of slippery nature of the malba.
 - (i) Workers should not be allowed to work inside the manhole continuously. He should be given rest intermittently. The Engineer-in- Charge may decide the time

up to which a worker may be allowed to work continuously inside the manhole.

- (j) Gas masks with Oxygen Cylinder should be kept at site for use in emergency.
 - (k) Air-blowers should be used for flow of fresh air through the manholes. Whenever called for, portable air blowers are recommended for ventilating the manholes. The Motors for these shall be vapor proof and of totally enclosed type. Non sparking gas engines also could be used but they should be placed at least 2 meters away from the opening and on the leeward side protected from wind so that they will not be a source of friction on any inflammable gas that might be present.
 - (l) The workers engaged for cleaning the manholes/sewers should be properly trained before allowing to work in the manhole.
 - (m) The workers shall be provided with Gumboots or non-sparking shoes bump helmets and gloves non sparking tools safety lights and gas masks and portable air blowers (when necessary). They must be supplied with barrier cream for anointing the limbs before working inside the sewer lines.
 - (n) Workmen descending a manhole shall try each ladder stop or rung carefully before putting his full weight on it to guard against insecure fastening due to corrosion of the rung fixed to manhole well.
 - (o) If a man has received a physical injury, he should be brought out of the sewer immediately and adequate medical aid should be provided to him.
 - (p) The extent to which these precautions are to be taken depend on individual situation but the decision of the Engineer-in-Charge regarding the steps to be taken in this regard in an individual case will be final.
9. The Contractor shall not employ women and men below the age of 18 on the work of painting with product containing lead in any form, wherever men above the age of 18 are employed on the work of lead painting, the following principles must be observed for such use :
- (i) White lead, sulphate of lead or product containing these pigment, shall not be used in painting operation except in the form of pastes or paint ready for use.
 - (ii) Measures shall be taken, wherever required in order to prevent danger arising from the application of a paint in the form of spray.
 - (iii) Measures shall be taken, wherever practicable, to prevent danger arising out of from dust caused by dry rubbing down and scraping.
 - (iv) Adequate facilities shall be provided to enable working painters to wash during and on cessation of work.
 - (v) Overall shall be worn by working painters during the whole of working period.
 - (vi) Suitable arrangement shall be made to prevent clothing put off during working hours being spoiled by painting materials.
 - (vii) Cases of lead poisoning and suspected lead poisoning shall be notified and shall be subsequently verified by medical man.
 - (viii) WAPCOS may require, when necessary medical examination of workers.

- (ix) Instructions with regard to special hygienic precautions to be taken in the painting trade shall be distributed to working painters.
10. When the work is done near any place where there is risk of drowning, all necessary equipment's should be provided and kept ready for use and all necessary steps taken for prompt rescue of any person in danger and adequate provision, should be made for prompt first aid treatment of all injuries likely to be obtained during the course of the work.
11. Use of hoisting machines and tackle including their attachments, anchorage and supports shall conform to the following standards or conditions :-
- (i) (a) These shall be of good mechanical construction, sound materials and adequate strength and free from patent defects and shall be kept repaired and in good working order.
(b) Every rope used in hoisting or lowering materials or as a means of suspension shall be of durable quality and adequate strength, and free from patent defects.
 - (ii) Every crane driver or hoisting appliance operator, shall be properly qualified and no person under the age of 21 years should be in charge of any hoisting machine including any scaffolding winch or give signals to operator.
 - (iii) In case of every hoisting machine and of every chain ring hook, shackle swivel and pulley block used in hoisting or as means of suspension, the safe working load shall be ascertained by adequate means. Every hoisting machine and all gear referred to above shall be plainly marked with the safe working load. In case of a hoisting machine having a variable safe working load each safe working load and the condition under which it is applicable shall be clearly indicated. No part of any machine or any gear referred to above in this paragraph shall be loaded beyond the safe working load except for the purpose of testing.
 - (iv) In case of departmental machines, the safe working load shall be notified by the Electrical Engineer-in-Charge. As regards contractor's machines the contractors shall notify the safe working load of the machine to the Engineer-in-Charge whenever he brings any machinery to site of work and get it verified by the Electrical Engineer concerned.
12. Motors, gearing, transmission, electric wiring and other dangerous parts of hoisting appliances should be provided with efficient safeguards. Hoisting appliances should be provided with such means as will reduce to the minimum the risk of accidental descent of the load. Adequate precautions should be taken to reduce to the minimum the risk of any part of a suspended load becoming accidentally displaced. When workers are employed on electrical installations which are already energized, insulating mats, wearing apparel, such as gloves, sleeves and boots as may be necessary should be provided. The worker should not wear any rings, watches and carry keys or other materials which are

good conductors of electricity.

13. All scaffolds, ladders and other safety devices mentioned or described herein shall be maintained in safe condition and no scaffold, ladder or equipment shall be altered or removed while it is in use. Adequate washing facilities should be provided at or near places of work.
14. These safety provisions should be brought to the notice of all concerned by display on a notice board at a prominent place at work spot. The person responsible for compliance of the safety code shall be named therein by the contractor.
15. To ensure effective enforcement of the rules and regulations relating to safety precautions the arrangements made by the contractor shall be open to inspection by the Labour Officer or Engineer-in-Charge of the department or their representatives.
16. Notwithstanding the above clauses from (1) to (15), there is nothing in these to exempt the contractor from the operations of any other Act or Rule in force in the Republic of India.

For & on behalf of Tenderer

ANNEXURE – XI
MODEL RULES FOR THE PROTECTION OF HEALTH AND SANITARY ARRANGEMENTS FOR
WORKERSEMPLOYED BY CONTRACTORS

1. APPLICATION

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

2. DEFINITION

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

3. FIRST-AID FACILITIES

- (i) At every work place, there shall be provided and maintained, so as to be easily accessible during working hours, first-aid boxes at the rate of not less than one box for 150 contract labour or part thereof ordinarily employed.
- (ii) The first-aid box shall be distinctly marked with a red cross on white back ground and shall contain the following equipment:-
 - a) For work places in which the number of contract labour employed does not exceed 50- Each first-aid box shall contain the following equipment's:-
 - 1. 6 small sterilized dressings.
 - 2. 3 medium size sterilized dressings.
 - 3. 3 large size sterilized dressings.
 - 4. 3 large sterilized burn dressings.
 - 5. 1 (30 ml.) bottle containing a two per cent alcoholic solution of iodine.
 - 6. 1 (30 ml.) bottle containing Sal volatile having the dose and mode of administration indicated on the label.
 - 7. 1 snakebite lancet.
 - 8. 1 (30 gms.) bottle of potassium permanganate crystals.
 - 9. 1 pair scissors.
 - 10. 1 copy of the first-aid leaflet issued by the Director General, Factory Advice Service and Labour Institutes, Government of India.
 - 11. 1 bottle containing 100 tablets (each of 5 gms.) of aspirin.
 - 12. Ointment for burns.
 - 13. A bottle of suitable surgical antiseptic solution
 - b) For work places in which the number of contract labour exceed 50. Each first-aid box shall contain the following equipment's.

1. 12 small sterilized dressings.
 2. 6 medium size sterilized dressings.
 3. 6 large size sterilized dressings.
 4. 6 large size sterilized burn dressings.
 5. 6 (15 gms.) packets sterilized cotton wool.
 6. 6. 1 (60 ml.) bottle containing a two per cent alcoholic solution iodine.
 7. 1 (60 ml.) bottle containing Sal volatile having the dose and mode of administration indicated on the label
 8. 1 roll of adhesive plaster.
 9. 1 snake bite lancet.
 10. 1 (30 gms.) bottle of potassium permanganate crystals.
 11. 1 pair scissors.
 12. 1 copy of the first-aid leaflet issued by the Director General Factory Advice Service and Labour Institutes /Government of India.
 13. A bottle containing 100 tablets (each of 5 gms.) of aspirin.
 14. Ointment for burns.
 15. A bottle of suitable surgical antiseptic solution.
- (iii) Adequate arrangements shall be made for immediate recoupment of the equipment when necessary
- (iv) Nothing except the prescribed contents shall be kept in the First-aid box.
- (v) The first-aid box shall be kept in charge of a responsible person who shall always be readily available during the working hours of the work place.
- (vi) A person in charge of the First-aid box shall be a person trained in First- aid treatment in the work places where the number of contract Labour employed is 150 or more.
- (vii) In work places where the number of contract Labour employed is 500 or more and hospital facilities are not available within easy distance from the works. First-aid posts shall be established and run by a trained compounder. The compounder shall be on duty and shall be available at all hours when the workers are at work.
- (viii) Where work places are situated in places which are not towns or cities, a suitable motor transport shall be kept readily available to carry injured person or person suddenly taken ill to the nearest hospital.

4. DRINKING WATER

- (i) In every work place, there shall be provided and maintained at suitable places, easily accessible to Labour, a sufficient supply of cold water fit for drinking.
- (ii) Where drinking water is obtained from an intermittent public water supply, each work place shall be provided with storage where such drinking water shall be stored.
- (iii) Every water supply or storage shall be at a distance of not less than 50 feet from any latrine drain or other source of pollution. Where water has to be drawn from an existing well which is within such proximity of latrine, drain or any other source of pollution, the well shall be properly chlorinated before water is drawn from it for drinking. All such wells shall be entirely closed in and be provided with a trap door which shall be dust and waterproof.
- (iv) A reliable pump shall be fitted to each covered well, the trap door shall be kept locked and opened only for cleaning or inspection which shall be done at least once a month

5. WASHING FACILITIES

- (i) In every work place adequate and suitable facilities for washing shall be provided and maintained for the use of contract Labour employed therein.
- (ii) Separate and adequate cleaning facilities shall be provided for the use of male and female workers.
- (iii) Such facilities shall be conveniently accessible and shall be kept in clean and hygienic condition.

6. LATRINES AND URINALS

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

Provided that, where the number of males or females exceeds 100, it shall be sufficient if there is one latrine for 25 males or females as the case may be upto the first 100, and one for every 50 thereafter.
- (ii) Every latrine shall be under cover and so partitioned off as to secure privacy, and shall have a proper door and fastenings.
- (iii) The inside walls shall be constructed of masonry or some suitable heat- resisting nonabsorbent materials and shall be cement washed inside and outside at least once a year, Latrines shall not be of a standard lower than borehole system.
- (iv) (a) Where workers of both sexes are employed, there shall be displayed outside each block of latrine and urinal, a notice in the language understood by the majority of the workers "For Men only" or "For Women Only" as the case may be.
(b) The notice shall also bear the figure of a man or of a woman, as the case may be.
- (v) There shall be at least one urinal for male workers up to 50 and one for female workers up to fifty employed at a time, provided that where the number of male or female workmen, as the case may be exceeds 500, it shall be sufficient if there is one urinal for every 50 males or females up to the first 500 and one for every 100 or part thereafter.
- (vi) (a) The latrines and urinals shall be adequately lighted and shall be maintained in a clean and sanitary condition at all times.
(b) Latrines and urinals other than those connected with a flush sewage system shall comply with the requirements of the Public Health Authorities.
- (vii) Water shall be provided by means of tap or otherwise so as to be conveniently accessible in or near the latrines and urinals.
- (viii) Disposal of excreta: - Unless otherwise arranged for by the local sanitary authority, arrangements for proper disposal of excreta by incineration at the work place shall be made by means of a suitable incinerator. Alternately, excreta may be disposed of by putting a layer of night soil at the bottom of a pucca tank prepared for the purpose and covering it with a 15 cm. layer of Waste or refuse and then covering it with a layer of earth for a fortnight (when it will turn to manure).

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

7. PROVISION OF SHELTER DURING REST

At every place there shall be provided, free of cost, four suitable sheds, two for meals and the other two for rest separately for the use of men and women Labour. The height of each shelter shall not be less than 3 meters (10 ft.) from the floor level to the lowest part of the roof. These shall be kept clean and the space provided shall be on the basis of 0.6 sqm. (6 sft) per head.

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

8. CRECHES

- (i) At every work place, at which 20 or more women worker are ordinarily employed, there shall be provided two rooms of reasonable dimensions for the use of their children under the age of six years. One room shall be used as a play room for the children and the other as their bedroom. The rooms shall be constructed with specifications as per clause 19H (ii) a,b & c.
- (ii) The rooms shall be provided with suitable and sufficient openings for light and ventilation. There shall be adequate provision of sweepers to keep the places clean.
- (iii) The contractor shall supply adequate number of toys and games in the play room and sufficient number of cots and beddings in the bed room.
- (iv) The contractor shall provide one ayaa to look after the children in the crèche when the number of women workers does not exceed 50 and two when the number of women workers exceed 50.
- (v) The use of the rooms earmarked as crèches shall be restricted to children, their attendants and mothers of the children.

9. CANTEENS

- (i) In every work place where the work regarding the employment of contract labour is likely to continue for six months and where in contract labour numbering one hundred or more are ordinarily employed, an adequate canteen shall be provided by the contractor for the use of such contract labour.
- (ii) The canteen shall be maintained by the contractor in an efficient manner.
- (iii) The canteen shall consist of at least a dining hall, kitchen, storeroom, pantry and washing places separately for workers and utensils.
- (iv) The canteen shall be sufficiently lighted at all times when any person

- has access to it.
- (v) The floor shall be made of smooth and impervious materials and inside wall shall be lime washed or colour washed at least once in each year. Provided that the inside walls of the kitchen shall be lime-washed every four months.
 - (vi) The premises of the canteen shall be maintained in a clean and sanitary condition.
 - (vii) Waste water shall be carried away in suitable covered drains and shall not be allowed to accumulate so as to cause a nuisance.
 - (viii) Suitable arrangements shall be made for the collection and disposal of garbage.
 - (ix) The dining hall shall accommodate at a time 30 per cent of the contract labour working at a time.
 - (x) The floor area of the dining hall, excluding the area occupied by the service counter and any furniture except tables and chairs shall not be less than one square meter (10 sft) per diner to be accommodated as prescribed in sub- Rule 9.
 - (xi) (a) A portion of the dining hall and service counter shall be partitioned off and reserved for women workers in proportion to their number.
c) Washing places for women shall be separate and screened to secure privacy.
 - xii) Sufficient tables stools, chair or benches shall be available for the number of diners to be accommodated as prescribed in sub-Rule 9.
 - (xiii) (a) 1. There shall be provided and maintained sufficient utensils crockery, furniture and any other equipment's necessary for the efficient running of the canteen.
2. The furniture utensils and other equipment shall be maintained in a clean and hygienic condition.

(b) 1. Suitable clean clothes for the employees serving in the canteen shall be provided and maintained.
2. A service counter, if provided, shall have top of smooth and impervious material.
3. Suitable facilities including an adequate supply of hot water shall be provided for the cleaning of utensils and equipment's.
 - (xiv) The food stuffs and other items to be served in the canteen shall be in conformity with the normal habits of the contract labour.
 - (xv) The charges for food stuffs, beverages and any other items served in the canteen shall be based on 'No profit, No loss' and shall be conspicuously displayed in the canteen.
 - (xvi) In arriving at the price of foodstuffs, and other article served in the canteen, the following items shall not be taken into consideration as expenditure

namely:-

- a) The rent of land and building.
 - b) The depreciation and maintenance charges for the building and equipment provided for the canteen.
 - c) The cost of purchase, repairs and replacement of equipment including furniture, crockery, cutlery and utensils.
 - d) The water charges and other charges incurred for lighting and ventilation
 - e) The interest and amounts spent on the provision and maintenance of equipment provided for the canteen.
- xvii) The accounts pertaining to the canteen shall be audited once every 12 months by registered accountants and auditors.

10. ANTI-MALARIAL PRECAUTIONS

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

- 11.** The above rules shall be incorporated in the contracts and in notice inviting tenders and shall form an integral part of the contracts.

12. AMENDMENTS

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

For & on behalf of Tenderer

ANNEXURE –XII

CONTRACTOR'S LABOUR REGULATIONS TO BE FOLLOWED IN THIS PROJECT

1. SHORT TITLE

These regulations may be called the CPWD Contractors Labour Regulations and shall be followed by the Contractor for this Project.

2. DEFINITIONS

- i) **Workman** means, any person employed by Department or its contractor directly or indirectly, through a subcontractor, with or without the knowledge of the Department, to do any skilled, semiskilled or unskilled, manual, supervisory, technical or clerical work, for hire or reward, whether the terms of employment are expressed or implied, but does not include any person: -
 - a) Who is employed mainly in a managerial or administrative capacity; or,
 - b) Who, being employed in a supervisory capacity draws wages exceeding five hundred rupees per mensem or exercises either by the nature of the duties attached to the office or by reason of powers vested in him, functions mainly of managerial nature; or,
 - c) Who is an out worker, that is to say, person to whom any article or materials are given out by or on behalf of the principal employers to be made up cleaned, washed, altered, ornamental finished, repaired adopted or otherwise processed for sale for the purpose of the trade or business of the principal employers and the process is to be carried out either in the home of the out worker or in same another premises, not being premises under the control and management of the principal employer. No person below the of 14 years shall be employed to act as a workman
- ii) **Fair Wages** means wages whether for time or piecework fixed and notified under the provision of the Minimum Wages Act from time to time.
- iii) **Contractors** shall include every person who undertakes to produce a given result other than a mere supply of goods or articles of manufacture through contract labour or who supplies contract labour for any work and includes a subcontractor.
- iv) **Wages** shall have the same meaning as defined in the Payment of Wages Act.

3.

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

- ii) When an adult worker is made to work for more than 9 hours on any day or for more than 48 hours in any week he shall be paid over time for the extra hours put in by him at double the ordinary rate of wages.
- iii) a) Every worker shall be given a weekly holiday normally on a Sunday, in accordance with the provisions of Minimum Wages (Central) Rules 1960, as amended from time to time, irrespective of whether such worker is governed by the Minimum Wages Act or not.
b) Where the minimum wages prescribed by the Government, under the Minimum Wages Act, are not inclusive of the wages for the weekly day of rest, the worker shall be entitled to rest day wages, at the rate applicable to the next preceding day, provided he has worked under the same contractor for a continuous period of not less than 6 days.
c) Where a contractor is permitted by the Engineer-in-Charge to allow a worker to work on a normal weekly holiday, he shall grant a substituted holiday to him for the whole day, on one of the five days, immediately before or after the normal weekly holiday, and pay wages to such worker for the work performed on the normal weekly holiday at the overtime rate.

4. DISPLAY OF NOTICE REGARDING WAGES ETC.

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

5. PAYMENT OF WAGES.

- i) The contractor shall fix wage periods in respect of which wages shall be payable.
- ii) No wage period shall exceed one month.
- iii) The wages of every person employed as contract labour in an establishment or by a contractor, where less than one thousand such persons are employed, shall be paid before the expiry of seventh day and in other cases before the expiry of tenth day after the last day of the wage period in respect of which the wages are payable.
- iv) Where the employment of any worker is terminated by or on behalf of the contractor the wages earned by him shall be paid before the expiry of the second working day from the date on which his employment is terminated.
- v) All payment of wages shall be made on a working day at the work premises and during the

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

- vi) Wages due to every worker shall be paid to him direct or to other person authorized by him in this behalf.
- vii) All wages shall be paid in current coin or currency or in both.
- viii) Wages shall be paid without any deductions of any kind except those specified by the Central Government by general or special order in this behalf or permissible under the Payment of Wages Act 1956.
- ix) A notice showing the wages period and the place and time of disbursement of wages shall be displayed at the place of work and a copy sent by the contractor to the Engineer- in-Charge under acknowledgement.
- x) It shall be the duty of the contractor to ensure the disbursement of wages in presence of authorized representative of the Engineer-in-Charge who will be required to be present at the place and time of the disbursement of wages by the contractor to workmen.
- xi) The contractor shall obtain from the junior engineer or any other authorized representative of the Engineer-in-Charge, as the case may be, a certificate under his signature at the end of the entries in the "Register of Wages" or the "Wage cum- Muster Roll", as the case maybe, in the following form:-"Certified that the amount shown in the column No.....has been paid to the workman concerned in my presence on.....at "

6. FINES AND DEDUCTIONS WHICH MAY BE MADE FROM WAGES

- (i) The wages of a worker shall be paid to him without any deduction of any kind except the following: -
 - (a) Fines
 - (b) Deductions for absence from duty i.e. from the place or the places where by the terms of his employment he is required to work. The amount of deduction shall be in proportion to the period for which he was absent.
 - (c) Deductions for damage to or loss of goods expressly entrusted to the employed person for custody, or for loss of money or any other deductions which he is required to account, where such damage or loss is directly attributable to his neglect or default.
 - (d) Deduction for recovery of advances or for adjustment of overpayment of wages, advances granted shall be entered in a register.

- (e) Any other deduction, which the Central Government may from time to time, allows.
- (ii) No fines should be imposed on any worker save in respect of such acts and omissions on his part as have been approved of by the Chief Labour Commissioner.

Note:- An approved list of Acts and Omission for which fines can be imposed is enclosed at Appendix-1.

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

7. LABOUR RECORDS

- (i) The contractor shall maintain a Register of Persons employed on work on contract in Form XIII of the CL (R&A) Central Rules 1971 (Appendix IV)
- (ii) The contractor shall maintain a Muster Roll register in respect of all workmen employed by him on the work under Contract in Form XVI of the CL (R&A) Rules 1971 (Appendix V)
- (iii) The contractor shall maintain a Wage Register in respect of all workmen employed by him on the work under contract in Form XVII of the CL (R&A) Rules 1971 (Appendix VI)
- (iv) Register of accident – The contractor shall maintain a register of accidents in such forms as may be convenient at the work place but the same shall include the following particulars:
 - a) Full Particulars of the labourers who met with accident.
 - b) Rate of wages.
 - c) sex
 - d) Age
 - e) Nature of accident and cause of accident

- f) Time and date of accident
- g) Date and time when admitted in hospital
- h) Date of discharge from the hospital
- i) Period of treatment and result of treatment
- j) Percentage of loss of earning capacity and disability as assessed by Medical Officer.
- k) Claim required to be paid under Workmen's Compensation Act.
- l) Date of payment of compensation
- m) Amount paid with details of the person to whom the same was paid
- n) Authority by whom the compensation was assessed
- o) Remarks.
- v) The contractor shall maintain a Register of Fines in the Form XII of the CL (R&A) Rules 1971 (Appendix XI) The contractor shall display in a good condition and in a conspicuous place of work the approved list of acts and omission for which fines can be imposed (Appendix X)
- vi) The contractor shall maintain a Register of deductions for damage or loss in Form XX of the CL (R&A) Rules 1971 (Appendix XII).
- vii) The contractor shall maintain a Register of Advances in Form XXIII of the CL (R&A) Rules 1971 (Appendix-XIII).
- viii) The contractor shall maintain a Register of Overtime in Form XXIII of the CL (R&A) Rules 1971 (Appendix-XIV).

8. ATTENDANCE CARD-CUM WAGE SLIP

- i) The contractor shall issue an Attendance card cum wage slip to each workman employed by him in the specimen form at (Appendix-VII).
- ii) The card shall be valid for each wage period.
- iii) The contractor shall mark the attendance of each workman on the card twice each day, once at the commencement of the day and again after the rest interval, before he actually starts work.

- iv) The card shall remain in possession of the worker during the wage period under reference.
- v) The contractor shall complete the wage slip portion on the reverse of the card at least a day prior to the disbursement of wages in respect of the wage period under reference.
- vi) The contractor shall obtain the signature or thumb impression of the worker on the wage slip at the time of disbursement of wages and retain the card with him.

9. EMPLOYMENT CARD

The contractor shall issue an Employment Card in the Form XIV of CL (R&A) Central Rules 1971 to each worker within three days of the employment of the worker (Appendix-VIII).

10. SERVICE CERTIFICATE

On termination of employment for any reason whatsoever the contractor shall issue to the workman whose services have been terminated, a Service Certificate in the Form XV of the CL (R&A) Central Rules 1971 (Appendix-IX).

11. PRESERVATION OF LABOUR RECORDS

All records required to be maintained under Regulations Nos. 6 & 7 shall be preserved in original for a period of three years from the date of last entries made in them and shall be made available for inspection by the Engineer-in-Charge or Labour Officer or any other officers authorized by the Department in his behalf.

12. POWER OF LABOUR OFFICER TO MAKE INVESTIGATIONS OR ENQUIRY

The labour officer or any person authorized by the Central Government on their behalf shall have power to make enquiries with a view to ascertaining and enforcing due and proper observance of Fair Wage Clauses and provisions of these Regulations. He shall investigate into any complaint regarding the default made by the contractor or subcontractor in regard to such provision.

13. REPORT OF LABOUR OFFICER

The Labour Officer or other persons authorized as aforesaid shall submit a report of result of his investigation or enquiry to the Engineer in charge concerned indicating the extent, if any, to which the default has been committed with a note that necessary deductions from the contractor's bill be made and the wages and other dues be paid to the labourers concerned. In case an appeal is made by the contractor or under Clause 13 of these regulations, actual payment to labourers will be made by the Department after the competent authority of WAPCOS has given their recommendation on such appeal and on approval by Department.

i) Engineer in charge shall recommend for payments to the labour concerned within 45 days from the receipt of the report from competent authority of WAPCOS and approval from Department as the case may be.

14. APPEAL AGAINST THE DECISION OF LABOUR OFFICER

Any person aggrieved by the decision and recommendations of the Labour Officer or other person so authorized may appeal against such decision to the Department concerned within 30 days from the date of decision, forwarding simultaneously a copy of his appeal to the Engineer in charge concerned but subject to such appeal, the decision of the officer shall be final and binding upon the contractor.

15. PROHIBITION REGARDING REPRESENTATION THROUGH LAWYER

- i) A workman shall be entitled to be represented in any investigation or enquiry under these regulations by: -
 - a) An officer of a registered trade union of which he is a member.
 - b) An officer of a federation of trade unions to which the trade union referred to in Clause (a) is affiliated.
 - c) Where the employer is not a member of any registered trade union, by an officer of a registered trade union, connected with the industry in which the worker is employed or by any other workman employed in the industry in which the worker is employed.
- ii) An employer shall be entitled to be represented in any investigation or enquiry under these regulations by:-
 - a) An officer of an association of employers of which he is a member.
 - b) An officer of a federation of associations of employers to which association referred to in Clause (a) is affiliated.
 - c) Where the employer is not a member of any association of employers, by an officer of association of employer connected with the industry, in which the employer is engaged or by any other employer, engaged in the industry in which the employer is engaged.
- ii) No party shall be entitled to be represented by a legal practitioner in any investigation inquiry under these regulations.

16. INSPECTION OF BOOKS AND SLIPS

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

17. SUBMISSION OF RETURNS

The contractor shall submit periodical returns as may be specified from time to time.

18. AMENDMENTS

The Client may from time to time add to or amend the regulations and on any question as to the application/interpretation or effect of those regulations the decision of the EIC concerned shall be final.

ANNEXURE –XIII**FORM OF APPLICATION BY THE CONTRACTOR FOR
SEEKING EXTENSION OF TIME**

1. Name of contractor
2. Name of work as given in the agreement
3. Agreement no
4. Estimated amount put tender
5. Date of commencement of work as per agreement
6. Period allowed for completion of work as per agreement
7. Date of completion stipulated in agreement
8. Period for which extension of time if has been given by authority in Schedule 'F' previously

	letter no. and date	Extension granted	
		Months	Days
	(a) 1st		
	(b) 2nd extension		
	(c) 3rd extension		
	(d) 4th extension		
	(e) Total extension previously given		

9. Reasons for which extension have been previously given (copies of the previous applications should be attached)
10. Period for which extension if applied for
11. Hindrances on account of which extension is applied for with dates on which Hindrances occurred and the period for which these are likely to last (for causes under clause 5.2/ and 5.3)

Submitted to the Authority indicated in Schedule F.

Signature of Contractor

Dated

ANNEXURE –XIV

**FORMAT OF UNDERTAKING TO BE FURNISHED ON COMPANY
LETTERHEADBLACKLISTING/NON-DEBARMENT
UNDERTAKING**

To
The Executive Director
WAPCOS Limited,
76-C, Sector 18, Institutional Area
Gurgaon, Haryana-122015

Name of work:

Tender No:

This is to certify that we have taken the cognizance of Blacklisting Policy of WAPCOS Limited. Further, we hereby confirm and declare that we, M/s.

is not blacklisted/De registered/debarred by any government department/Public Sector Undertaking/Private Sector/or any other agency for which we have Executed/Undertaken the works /Services during the last 5 years.

For_____

Authorized
Signatory:

Date:

Appendix-I

REGISTER OF MATERNITY BENEFITS (Clause 19 F)

Name and address of the contractor.....

Name and Location of the work.....

Name of the employee	Father's/husband's	Nature of Employment	Period of actual employment	Date on which notice of confinement given name
1.	2.	3.	4.	5.

Date on Which Maternity Leave Commenced and ended				
Date of Delivery/miscarriage	In Case of Delivery		In Case of Miscarriage	
	Commenced	Ended	Commenced	Ended
6.	7.	8.	9.	10.

Leave Paid to the employee				Remarks
In Case of Delivery		In Case of Mis Carriage		
Rate of leave pay	Amount paid	Rate of leave pay	Amount paid	
11.	12.	13.	14.	15.

**SPECIMEN FORM OF THE REGISTER, REGARDING MATERNITY BENEFIT
ADMISSIBLE TO THE CONTRACTOR'S
LABOUR**

Name and address of the contractor.....

Name and Location of the work.....

1. Name of the woman and her husband's name.
2. Designation.
3. . Date of appointment.
4. Date with months and years in which she is employed.
5. Date of discharge/dismissal, if any.
6. Date of production of certificates in respect of pregnancy.
7. Date on which the woman informs about the expected delivery.
8. Date of delivery/miscarriage/death
9. Date of production of certificate in respect of delivery/miscarriage.
10. Date with the amount of maternity/death benefit paid in advance of expected delivery.
11. Date with amount of subsequent payment of maternity benefit.
12. Name of the person nominated by the woman to receive the payment of the maternity benefit after her death.
13. If the woman dies, the date of her death, the name of the person to whom maternity benefit amount was paid, the month thereof and the date of payment.
14. Signature of the contractor authenticating entries in the register.
15. Remarks column for the use of Inspecting Office

Appendix-III

LABOUR BOARD

Name of work: _____

Name of contractor: _____

Address of contractor: _____

Name and address of Construction Unit: _____

Name of CLIENT Labour Officer: _____

Address of CLIENT Labour Officer: _____

Name of Labour Enforcement Officer: _____

Address of Labour Enforcement Officer: _____

Sl.No	Category	Minimum Wage Fixed	Actual Wage Paid	Number Present	Remarks

Weekly holiday _____

Wage Period _____

Date of Payment of Wages _____

Working hours _____

Rest Interval _____

Appendix-IV

Form –XV (See Rule 75)
Register of Workmen Employed by Contractor

Name and address of contractor _____

Name and address of establishment under which contract is carried on _____

Nature and location of work _____

Name and address of Principal Employer _____

Sl.No	Name and Surname of Workman	Age and Sex	Father's/Husband's Name	Nature of Employment/Designation	Permanent Home address of Workman	Local Address	Date of Commencement of Employment	Signature or Thumb Impression of Workman	Date of Termination of employment	Reason for Termination	Remarks
1	2	3	4	5	6	7	8	9	10	11	12

Appendix-V

Form-XVI (See Rule 78(2) (a))

Muster Roll

Name and address of the contractor _____

Name and address of establishment under which contract is carried

on _____

Nature and location of work _____

Name and address of Principal Employer _____

For the month of fortnight _____

Sl.No.	Name of workman	Sex	Father's/ Husband's Name	Dates					Remarks
1	2	3	4	5					6
				1	2	3	4	5	

Appendix-VI

Form –XVII (See Rule 78(2) (a))

Register of Wages

Name and address of the contractor _____

Name and address of establishment under which

Contract is carried on _____

Nature and location of work _____

Name and address of Principal Employer _____

Wages period _____ Monthly/fortnightly

Sl.No.	Name of workman	Serial No.in the register of workman	Designation Nature of work done	No. of days worked	Units of work done	Daily rate of wages/piece rate	Basic Wages
1	2	3	4	5	6	7	8

Dearness allowances	Overtime	Other cash payments(Indicate nature)	Total	Deductions if any, (indicate nature)	Net amount paid	Signature or thumb impression of the	Initial of contractor or his representative
9	10	11	12	13	14	15	16

Wage Card

Wage Card No. _____

Name and address of the contractor _____ Date of issue _____

Name and location of work _____ Designation _____

Name of Workman _____ Month/fortnight-----

Rate of Wages _____

DATE																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Mo																															
Eve																															
Init																															

Rate _____ Amount _____

Received from _____ the sum of Rs.
_____ on account of my wages.

Signature

The wage card is valid for one month from the date of issue

Appendix-VII

Form-XVIII
((See rule 78(2) (b))
Wages Slip

Name and address of the contractor _____ Name and
Father's/Husband's name of workman _____ Nature
and location of work _____ For the
Week/Fortnight/Month ending _____

1. No. of days worked _____
2. No. of units worked in case of piece rate workers _____
3. Rate of daily wages/piece rate _____
4. Amount of overtime wages _____
5. Gross wages payable _____
6. Deduction, if any _____
7. Net amount of wages paid _____

Initials of the Contractors or his representative

Appendix-VIII

Form-XIX [See rule 76]Employment Card

Name and address of the contractor.....

Name and address of establishment under which contract is carried on.....

Nature of work and location of work.....

Name and address of Principal Employer.....

1. Name of Workman.....

2. SI No. in the register of workman employed.....

3. Nature of employment/designation.....

4. Wage rate (with particulars of unit in case of piece work)

5. Wages period.....

6. Tenure of employment.....

7. Remarks.....

Signature of contractor

Appendix-IX

Form – XX (see Rule 77)

Service Certificate

Name and address of contractor.....

Nature and location of work.....

Name and address of workman.....

Age or date of birth.....

Identification marks.....

Father's/Husband's name.....

Name and address of establishment in under which contract is carried
on.....

Name and address of Principal Employer.....

S. No.	Total Period for which employed		Nature of work done	Rates of wages (with particular of unit in case of piece work)	Remarks
	From	To			

Signature

Appendix-X

LIST OF ACTS AND OMISSIONS FOR WHICH FINES CAN BE IMPOSED

In accordance with rule 7(v) of the Contractor's Labour Regulations to be displayed prominently at the site of work both in English and local Language.

1. Willful insubordination or disobedience, whether alone or in combination with other.
2. Theft fraud or dishonesty in connection with the contractors beside a business or property of Department
3. Taking or giving bribes or any illegal gratifications
4. Habitual late attendance.
5. Drunkenness lighting, riotous or disorderly or indifferent behavior
6. Habitual negligence.
7. Smoking near or around the area where combustible or other materials are locked
8. Habitual indiscipline.
9. Causing damage to work in the progress or to property of the Department or of the contractor.
10. Sleeping on duty.
11. Malingering or slowing down work.
12. Giving of false information regarding name, age father's name, etc.
13. Habitual loss of wage cards supplied by the employers.
14. Unauthorized use of employer's property of manufacturing or making of unauthorized particles at the workplace.
15. Bad workmanship in construction and maintenance by skilled workers which is not approved by the Department and for which the contractors are compelled to undertake rectifications.
16. Making false complaints and/or misleading statements.
17. Engaging on trade within the premises of the establishments.
18. Any unauthorized divulgence of business affairs of the employees.
19. Collection or canvassing for the collection of any money within the premises of an establishment unless authorized by the employer.
20. Holding meeting inside the premises without previous sanction of the employers.
21. Threatening or intimidating any workman or employer during the working hours within the premise

Appendix-XI

Form – XXI (see Rule 78(2)(d))

Register of Fines

Names and address of contractor

Name and address of establishment in under which contract is carried on

Nature and location of work

Name and address of Principal Employer

Sl. N o.	Name of workman	Father's/ Husband' s name	Designation/ nature	Act/Omissi on for which fine imposed	Date of offence	Whether workman	Name of person in whose	Wage period and	Amou nt of find impos	Date on which fine	Remarks
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.

Appendix-XII

Form – XXII (see Rule 78(2)(d))
Register of Deduction for Damage or Loss

Name and address of contractor.....

Name and address of establishment in under which contract is carried on.....

Nature and location of work.....

Name and address of Principal Employer.....

Sl.No	Name of Workman	Father,s and Husbands'Name	Designation/Nature of Employment	Particluars of Damage or Loss	Date of Damage or Loss	Whether Workman Showcaused against Fine	Name of the person in expalnation was heard	No of installmenst	Amount of Fine Imposed	Date of Recovery		Remarks
										First Installement	Last Insatlement	
1	2	3	4	5	6	7	8	9	10	11	12	13

Appendix-XIII

Form – XXIII (see Rule 78(2)(d))

Register of Advances

Name and address of contractor

Name and address of establishment in under which contract is carried on.....

Nature and location of work.....

Name and address of Principal Employer.....

Sl.No	Name of the Work man	Father's/Husband's	Designation Nature of Employment	Wage Period and Wage Payable	Date and Amount of	Purpose for which advance given	Number of advances by which advances to be given	Date and amount of each Installment Given	Date on which last installment was given	Remarks
1	2	3	4	5	6	7	8	9	10	11

Appendix-XIV

Form – XXIV (see Rule 78(2)(e))

Register of Overtime

Name and address of contractor.....

Name and address of establishment in under which contract is carried on.....

Nature and location of work.....

Name and address of Principal Employer.....

Sl.No	Name of Workman	Father's /Husband's NAME	Sex	Designation/Nature of employment	Date on which Overtime Worked	Total Over time worked in case of Piece rate	Normal Rate of Wages	Overtime rate of wages	Overtime earnings	Rate on which overtime wages paid	Remarks
1	2	3	4	5	6	7	8	9	10	11	12

Appendix-XV

(FORM 31)

INDENTURE FOR SECURED ADVANCES
(Referred to in paragraphs 10.2.20 and 10.2.22 of CPW A Code)

(For use in cases in which the contract is for finished work and the contractor has entered into an agreement for the execution of a certain specified quantity of work in a given time)

THIS INDENTURE made the..... day of20..... BETWEEN

..... (hereinafter called the Contractor which expression shall where the context so admits or implies be deemed to include his executors administrators and assigns) of the one part and the WAPCOS LIMITED (hereinafter called the WAPCOS which expression shall where the context so admits or implies be deemed to include his successors in office and assigns) of the other part.

WHEREAS by an agreement dated(hereinafter called the said agreement) the Contractor has agreed AND WHEREAS the Contractor has applied to the WAPCOS that he may be allowed advances on the security of materials absolutely belonging to him and brought by him to the site of the works the subject of the said agreement for use in the construction of such of the works as he has undertaken to execute at rates fixed for the finished work (inclusive of the cost of materials and labour and other charges) AND WHEREAS the WAPCOS has agreed to advance to the Contractor the sum of Rupees..... on the security of materials the quantities and other particulars of which are detailed in Accounts of Secured Advances attached to the Running Account Bill for the said works signed by the Contractor on.....and the WAPCOS has reserved to himself the option of making any further advance or advances on the security of other materials brought by the Contractor to the site of the said works. Now THIS INDENTURE WITNESSETH that in pursuance of the said agreement and in consideration of the sum of Rupees.....on or before the execution of these presents paid to the Contractor on recommendation from WAPCOS (the receipt whereof the Contractor doth hereby acknowledge) and of such further advances (if any) as may be made to him as aforesaid the Contractor doth hereby covenant and agree with the WAPCOS and declare as follows: -

- (1) That the said sum of Rupeesso advanced by the WAPCOS to the Contractor as aforesaid and all or any further sum or sums advanced as aforesaid shall be employed by the Contractor in or towards expediting the execution of the said works and for no other purpose whatsoever.
- (2) That the materials detailed in the said Account of Secured Advances which have been offered to and accepted by the WAPCOS as security are absolutely the Contractor's own property and free from encumbrances of any kind and the contractor will not make any application for or receive a further advance on the security of materials which are not absolutely his own property and free from encumbrances of any kind and the Contractor indemnifies the WAPCOS against claims to any

materials in respect of which an advance has been made to him as aforesaid.

- (3) That the materials detailed in the said Account of Secured Advances and all other materials on the security of which any further advance or advances may hereafter be made as aforesaid (hereinafter called the said materials) shall be used by the Contractor solely in the execution of the said works in accordance with the directions of the Engineer -in Charge (hereinafter called the Engineer -in Charge) and in the term of the said agreement.
- (4) That the Contractor shall make at his own cost all necessary and adequate arrangements for the proper watch, safe custody and protection against all risks of the said materials and that until used in construction as aforesaid the said materials shall remain at the site of the said works in the Contractor's custody and on his own responsibility and shall at all times be open to inspection by the Divisional Officer or any officer authorized by him. In the event of the said materials or any part thereof being stolen, destroyed or damaged or becoming deteriorated in a greater degree than is due to reasonable use and wear thereof the Contractor will forthwith replace the same with other materials of like quality or repair and make good the same as required by the Engineer -in Charge.
- (5) That the said materials shall not on any account be removed from the site of the said works except with the written permission of the Engineer -in Charge or an officer authorized by him on that behalf.
- (6) That the advances shall be repayable in full when or before the Contractor receives payment on recommendation of WAPCOS of the price payable to him for the said works under the terms and provisions of the said agreement. Provided that if any intermediate payments are made to the Contractor on account of work done than on the occasion of each such payment the WAPCOS will be at liberty to make a recovery from the Contractor's bill for such payment by deducting there from the value of the said materials then actually used in the construction and in respect of which recovery has not been made previously, the value for this purpose being determined in respect of each description of materials at the rates at which the amounts of the advances made under these presents were calculated.
- (7) That if the Contractor shall at any time make any default in the performance or observance in any respect of any of the terms and provisions of the said agreement or of these presents the total amount of the advance or advances that may still be owing to the WAPCOS shall immediately on the happening of such default be repayable by the Contractor to the WAPCOS together with interest thereon at twelve per cent per annum from the date or respective dates of such advance or advances to the date of repayment and with all costs charges, damages and expenses incurred by the WAPCOS in or for the recovery thereof or enforcement of this security or otherwise by reason of the default of the Contractor and the Contractor hereby covenants and agrees with the WAPCOS to repay and pay the same respectively to him accordingly.
- (8) That the Contractor hereby charges all the said materials with the repayment to the WAPCOS of the said sum of Rupees.....and any further sum or sums advanced as aforesaid and all costs charges, damages and expenses payable under these presents PROVIDED ALWAYS and it is hereby agreed and declared that notwithstanding anything in the said agreement and without prejudice to the powers contained therein if and whenever the covenant for payment and repayment herein before contained shall become enforceable and the money owing shall not be paid in accordance therewith the WAPCOS may at any time thereafter adopt all or any of the

following courses as he may deem best

- a) Size and utilize the said materials or any part thereof in the completion of the said works on behalf of the Contractor in accordance with the provisions in that behalf contained in the said agreement debiting the Contractor with the actual cost of effecting such completion and the amount due in respect of advances under these presents and crediting the Contractor with the value of work done as if he had carried it out in accordance with the said agreement and at the rates thereby provided. If the balance is against the Contractor he is to pay same to the WAPCOS on demand.
 - b) Remove and sell by public auction the seized materials or any part thereof and out of the moneys arising from the sale retain all the sums aforesaid repayable or payable to the WAPCOS under these presents and pay over the surplus (if any) to the Contractor.
 - c) Deduct all or any part of the moneys owing out of the security deposit or any sum due to the Contractor under the said agreement.
- (9) That except in the event of such default on the part of the Contractor as aforesaid interest on the said advance shall not be payable.
- (10) That in the event of any conflict between the provisions of these presents and the said agreement the provisions of these presents shall prevail and in the event of any dispute or difference arising over the construction or effect of these presents the settlement of which has not been herein before expressly provided for the same shall be finally resolved as per provisions of clause 25 of the contract.

In witness whereof the saidand..... by the order and under the direction of the WAPCOS have hereunto set their respective hands the day and year first above written.

Signed, sealed and delivered by..... the said contractor in the presence of expenses payable under these presents PROVIDED ALWAYS and it is hereby agreed and declared that notwithstanding anything in the said agreement and without prejudice to the powers contained therein if and whenever the covenant for payment and repayment herein before contained shall become enforceable and the money owing shall not be paid in accordance therewith the WAPCOS may at any time thereafter adopt all or any of the following courses as he may deem best:-

Signature

Witness Name

Address

Signed by.....

by the order and direction of the WAPCOS in the presence of

Signature

Witness Name

Address

Appendix-XVI

**Notice for appointment of Arbitrator
[Refer Clause 25]**

To,

**The Executive Director
WAPCOS Limited,
76-C, Sector 18, Institutional Area
Gurgaon, Haryana-122015**

Dear Sir,

In terms of clause 25 of the agreement, particulars of which are given below, I/we hereby give notice to you to appoint an arbitrator for settlement of disputes mentioned below:

1. Name of applicant
2. Whether applicant is Individual/Prop. Firm/Partnership Firm/Ltd. Co.
3. Full address of the applicant
4. Name of the work and contract number in which arbitration sought
5. Name of the Division which entered into contract
6. Contract amount in the work
7. Date of contract
8. Date of initiation of work
9. Stipulated date of completion of work
10. Actual date of completion of work (if completed)
11. Total number of claims made
12. Total amount claimed
13. Date of intimation of final bill (if work is completed)
14. Date of payment of final bill (if work is completed)
15. Amount of final bill (if work is completed)
16. Date of request made to SE for decision
17. Date of receipt of SE's decision
18. Date of appeal to you
19. Date of receipt of your decision.

Specimen signatures of the applicant
(only the person/authority who
signed the contract should sign)

I/We certify that the information given above is true to the best of my/our knowledge.
I/We enclose Following documents,

1. Statement of claims with amount of claims.
- 2.
- 3.
- 4.

Yours faithfully,

(Signatures) Copy in duplicate to:

1. The Engineer -in Charge,

SECTION– VI

FORMS:

LETTER OF TRANSMITTALPOWER OF ATTORNEY

FORM-A	:	FINANCIAL INFORMATION
FORM-B	:	SOLVENCY CERTIFICATE
FORM-C	:	STRUCTURE & ORGANISATION
FORM-D	:	NO CONVICTION CERTIFICATE
FORM-E	:	UNDERSTANDING THE PROJECT SITE
FORM-F	:	NO DEVIATION CERTIFICATE
FORM-G	:	PRELIMINARY AGREEMENT
FORM -H	:	LIST OF EQUIPMENTS
FORM -I	:	DETAILS OF ALL WORKS OF SIMILAR NATURE COMPLETED
FORM -J	:	PROJECT UNDER EXECUTION OR AWARDED
FORM -K	:	DETAILS OF TECHINCAL & ADMINISTRATIVE PERSONNEL TO BE EMPLOYED FOR THE WORK
FORM –L	:	UNDERTAKING AS PER CLAUSE 46 (RULE 144 (xi)IN GENERAL FINANCIAL RULES (GFRs) 2017)

LETTER OF TRANSMITTAL

From:

To
The Executive Director
WAPCOS Limited,
76-C, Sector 18, Institutional Area
Gurgaon, Haryana-122015

Subject: Submission of bids for the work of Construction of 120 bedded Old Age Home –BLOCK-A & 200 bedded Hostel (100 boys & 100 girls) –BLOCK-B for blind people at Unit-III, Bhubaneswar,” Odisha

Sir,
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 L and accompanying statement are true and correct.
2. I/we have furnished all information and details necessary and have no further pertinent information to supply.
3. I/we submit the following certificates in support of our suitability, technical knowledge and capability for having successfully execute the following eligible similar works:

Name of work	Certificate from

Certificate:

It is certified that the information given in the enclosed in the bid are correct. It is also certified that I/we shall be liable to be debarred, disqualified/ cancellation of enlistment in case any information furnished by me/us found to be incorrect.

Enclosures:

Seal of bidder

Date of submission:

Signature(s) of Bidder(s)

**FORMAT FOR POWER OF ATTORNEY FOR SIGNING OF PROPOSAL FOR AUTHORIZED
SIGNATORY**

Know all men by these presents, we (Name of the Tenderer and address of their registered office) do hereby constitute, appoint and authorize Mr/Ms.....(name and residential address of Power of Attorney holder) who is presently employed with us and holding the position of..... as our attorney, to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to our Bid for the Project and submission of all documents and providing information / responses to _____, representing us in all matters before _____, and generally dealing with _____ in all matters in connection with our proposal for the said Project. We hereby agree to ratify all acts, deeds and things lawfully done by our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall and shall always be deemed to have been done by us.

FORM 'A'
FINANCIAL INFORMATION

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

Years	Gross Annual turnover on construction works	Profit/Loss (After Tax)
2022-2023		
2021-2022		
2020-2021		
2019-2020		
2018-2019		

II. Financial arrangements for carrying out the proposed work.

III. Solvency Certificate from Bankers of the bidder in the prescribed Form "B".

Signature of Statutory Auditor
(with Seal)

Signature of Bidder(s).
(with Seal)

FORM "B"
FORMAT FOR SOLVENCY CERTIFICATE
[To be submitted on Bank's Original Letter Head]

SOLVENCY CERTIFICATE

To,
The Executive Director
WAPCOS Limited,
76-C, Sector 18, Institutional Area
Gurgaon, Haryana-122015

Name of the work: Tender for "[Insert name of the work/project here]"

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

This certificate is issued without any guarantee or responsibility on the Bank or any of the officers.
This certificate is issued at specific request of the customer for tender purpose.

Date:

Place:

Signature of Authorized signatory of bank:

Name of Authorized signatory of bank:

E-mail id of Bank/Authorized signatory of bank:

Power of Attorney number of bank official:

Note:

1. Solvency Certificate should be on letter head of the Bank
2. Email id of bank/authorized signatory of bank should be clearly mentioned on the certificate so that genuineness of the certificate can be established via email.

FORM "C"
STRUCTURE & ORGANISATION

S.No.	Particulars	Details Submitted by Bidder
1.	Name & address of the bidder	
2.	Telephone no./Telex 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)	
	Organization/Place of Registration 1. 2. 3.	Registration No.
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.	Has the bidder, or any constituent partner in case of partnership firm Limited Company/ Joint Venture, ever been convicted by the court of law? If so, give details.	
8.	In which field of Electrical Engineering construction the bidder has specialization and interest?	
9.	Any other information considered necessary but not included above.	

Signature of Bidder(s)

FORM-D

FORMAT FOR No-Conviction Certificate [On the letterhead of the Organization]

Subject: No-Conviction Certificate for --- (Name of the work / project)

This is to certify that _____ (Name of the organization), having registered office at _____ (Address of the registered office) has never been blacklisted or restricted to apply for any such activities by any Central / State Government Department or Court of law anywhere in the country.

This is also to certify that M/s _____ (Name of Organization), is not involved in any form of Corrupt and Fraudulent practices in past and will never be involved in future.

Yours faithfully,

Date: _____ **(Signature, name and designation of the Authorized signatory)**

Place: _____ **Name and seal of Bidder**

FORM-E
FORMAT FOR UNDERSTANDING THE PROJECT SITE
(on Bidder Letter Head)

To
The Executive Director WAPCOS Limited,
76-C, Sector 18, Institutional Area
Gurgaon, Haryana-122015

Subject: Undertaking of the Site Visit for --- (Name of the work / project)

Sir,

I/we hereby certify that I/we have examined & inspected the site & its surrounding satisfactorily, where the project is to be executed as per the scope of works. I/ We are well aware about the following

- Location of the proposed building and its allied works.
- Site clearance and no cutting off the matured trees.
- Topography and contouring of the land where the project is to be executed to understand the cutting & filling during the construction and about depth of column/ foundation below the plinth beam.
- Nature of the ground & sub-soil of the site and accessibility to the site.
- Existing surrounding road level to finalize plinth beam level as per standard norms.
- Location of Existing Sewer line & Water pipe line network to connect the proposed building and allied works to make the building functional.
- Location of existing Electric Sub-Station to supply the electricity for the proposed building and allied works to make the building functional.

I / We hereby submit our BID considering above all facts gathered during site visit and each & every aspect have been considered in the Quoted cost of the project since it is item rate Contract.

I / We hereby confirm that no extra/additional cost shall be claimed on above aspects

Yours faithfully,

Date:

Place:

**(Signature, name and designation
of the Authorized signatory)**
Name and seal of Bidder

FORM-F
FORMAT FOR NO DEVIATION CERTIFICATE
[To be submitted on Bidder's Letter Head]

To,
The Executive Director
WAPCOS Limited,
76-C, Sector 18, Institutional Area
Gurgaon, Haryana-122015

Subject: No Deviation Certificate for (name of Work /Project)

Dear Sir,

With reference to above this is to confirm that as per Tender conditions we have visited site before submission of our Offer and noted the job content and site condition etc. We also confirm that we have not changed/modified the above tender document and in case of observance of the same at any stage it shall be treated as null and void.

We hereby also confirm that we have not taken any deviation from Tender Clause together with other reference as enumerated in the above referred Notice Inviting Tender and we hereby convey our unconditional acceptance to all terms & conditions as stipulated in the Tender Document.

In the event of observance of any deviation in any part of our offer at a later date whether implicit or explicit, the deviations shall stand null and void.

Thanking you,

Yours faithfully,

Date:

**(Signature, name and designation
of the Authorized signatory)**

Place:

Name and seal of Bidder

FORM-G
PRELIMINARY AGREEMENT

(To be executed on stamp per Rs.200/- (Govt of Odisha Stamp Paper))

Preliminary Agreement entered into on this day
of Two thousand and between.....<Tender
Inviting Authority> for and on behalf of WAPCOSLIMITED, of the one part and Sri
..... (here enter full name and
address of the Bidder) hereinafter called the Bidder of the other part for the execution of the
agreement as well as for the execution of the work WHEREAS
the WAPCOS LIMITED invited tenders for the work of (here enter
name of the work) by Notification No..... Dated..... in the.....

I/We undersigned hereby offer to construct the proposed work in strict accordance with the
contract/bid document for the consideration to be calculated in terms of the priced schedule of
quantities.

I/We undertake to complete the whole of the works as per the attached schedule from the date
of issue of intimation by you that our tender has been accepted and upon being permitted to
enter site. I/We further undertake that on failure, subject to the conditions of the contract
relating to extension of time, I/We shall pay agreed 'Liquidated Damages' for the period during
which the work shall remain incomplete.

I/We hereby deposit with you as Earnest money Rs. _____/- (Rupees _____)
[carrying no interest] as mentioned in Tender Document in favour of <tender inviting authority>
and I/We agree that this sum shall be forfeited in the event of the Employer accepting my/our
tender and I/We fail to take up the contract when called upon to do so as per the bid document.
I/We further agree for the applicable deduction from the 'Interim Payment/RA Bill' towards
the 'Performance Security Deposit', which will be returned as per the relevant clauses in the
agreement.

I/We will furnish the Performance Guarantee Bond as per the approved format, if our bid is
accepted. Bid Security deposit shall be treated as security for the proper fulfillment of the same
and shall execute an agreement for the work in the prescribed form. If I/We fails to do this or
maintain a specified rate of progress (as specified in the Milestone details of contract data in the
bid document), the performance guarantee (both treasury fixed deposit and irrevocable bank
Guarantee) and Performance Security Deposit if any deducted from the RA Bills shall be forfeited
to Government and fresh tenders shall be called for or the matter otherwise disposed of. If as a
result of such measures due to the default of the Bidder to pay the requisite deposit, sign contract
or take possession of the work any loss to Government due to the same will be recovered from
me/us as arrears of revenue, but should it be a saving to Government. I/We shall have no claim
whatever to the difference. Recoveries on this or any other account will be made from the sum
that may be due to us on this or any or other subsisting contracts or under the Revenue Recovery

act or otherwise the Government may decide.

I/We further agrees that, in the case of becoming the lowest bidder in this tender and in the event of failure on part of me/us to produce any of the original documents, or submit the performance guarantee, or enter into agreement with the first part within the specified time limit, the first part may take appropriate action as provided in the bid document. In such a situation, if the second lowest bidder gets awarded with the work at his quoted rate, I shall agree to pay to the first part compensation towards the loss on account of award of work at a higher amount. Recoveries on this or any other account will be made from the sum that may be due to us on this or any or other subsisting contracts or under the Revenue Recovery act or otherwise the Government may decide

NOW THEREFOR IN THE PRESENCE OF WITNESS it is mutually agreed as follows.

1) The terms and conditions for the said contract having been stipulated in the said tender document and forms to which the I/We have agreed and a copy of which is here to be appended which forms the part of this agreement, it is agreed that the terms and conditions stipulated therein 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 said tender form.

2) The I/We hereby agreed and undertake to perform and fulfill all the operations and obligations connected with the execution of the said contract work (hereinafter the name of the work) if awarded in favour of the me/us.)

3) If the Bidder does not come forward and to execute the original agreement after the said work is awarded and selection notice issued in his favour or commits breach of any of the conditions of the contract as stipulated in clause of the notice inviting tenders as quoted above, within the period stipulated then the Government may rearrange the work otherwise or get it done departmentally at the risk and the cost of the Bidder and the loss so sustained by the WAPCOS LIMITED can be realized from the Bidder under the Revenue recovery Act as if arrearsof land revenue as assessed quantified and fixed by an adjudicating authority consisting of the Secretary Public works, Chief Engineer (Admn) or any other officer or officers authorized by Government in this behalf, taking into consideration the prevailing P.W.D rates and after giving due notice to the Bidder. The decision taken by such authority officer or officers shall be final and conclusive and shall be binding on the Bidder

4) The Bidder further agrees that any amount found due to the Government under or by virtue of this agreement shall be recoverable from the Bidder from his EMD 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 the Government may deem fit in this regard.

5) The Bidder further assures that it is clearly understood that the settlement of claims either by

part bills or by final bills will be made only according to the availability of budget provision and allotment of funds of the work under the respective heads of account in which the work is sanctioned and arranged and also subject to the seniority of such bills. No claims for interest or for damages whatsoever shall be made for the related settlement of claims of bills.

IN WITNESS THERE OF SRI..... (here enter the name of the officers of the Department) for on behalf of the WAPCOS LIMITED and the Bidder have set their hand on the day and year first above written Signed by Sri.....In the presence of witnesses

FORM-H
LIST OF EQUIPMENTS

S.No	Equipment List	Own/Lease/Hire

FORM-I

DETAILS OF ALL WORKS OF SIMILAR NATURE COMPLETED
DURING THE LAST FIVE YEARS ENDING LAST DAY OF THE MONTH PREVIOUS TO THE ONE IN
WHICH THE BIDS ARE INVITED

Sl. No	Name of Work/Project & Location	Owner of sponsoring Organization	Cost of Work in lakhs	Date of commencement as per contract	Stipulated date of completion	Actual date of completion	Litigation/ Arbitration pending/in progress with details*	Name & address/Telephone No. of officer to 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.

Copy of work Orders and Completion Certificates of the above works should also be submitted.

Signature of Applicant

FORM-J
PROJECT UNDER EXECUTION OR AWARDED

Sl. No	Name of Work/Project & Location	Owner of sponsoring Organization	Cost of Work in lakhs	Date of commencement as per contract	Stipulated date of completion	Actual date of completion	Litigation/Arbitration pending/in progress with details*	Name & address/Telephone No. of officer to 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.

Completion Certificates of the above works should also be submitted.

Signature of Applicant

FORM-K

DETAILS OF TECHINCAL & 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)

Signature of Applicant

FORM L
UNDERTAKING
[Rule 144 (xi) in the General Financial Rules (GFRs), 2017]

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I hereby certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered.

Date:

Place:

(Signature, name and designation of the Authorized signatory)

Name and seal of Bidder

SECTION–VII

WORK REQUIREMENTS

SECTION-VII WORK REQUIREMENTS

Social Security and Empowerment of persons with disability, Department is committed to develop the infrastructure facilities in the State of Odisha .120 bedded Old Age Home –BLOCK-A & 200 bedded Hostel (100 boys & 100 girls) –BLOCK-B for blind people at Unit-III, Bhubaneswar, Odisha

1.0 NOC'S / APPROVALS/ CLEARANCES FROM LOCAL BODIES/ AUTHORITIES

The Contractor will take necessary Statuary Approval/ NoCs/ Clearance from all concern Local Authorities / Departments, if any, required before start of the work / during the work / after execution of work & before handing over.

The contractor shall mobilize the resources at site after getting approval / NoCs/ Clearance from all concern Local Authorities / Departments if any, essential before start of the construction and shall not make any claim due to any delay in approval.

Contractor will follow the all rules, regulations and terms & conditions of Green building norm during the execution of the project work.

2.0 CIVIL WORK DESIGN AND DRAWINGS OF THE PROJECT / WORKS

The Scope of work, shall include execution of work as per the standard technical Specification & Description of items in Bill of Quantities mentioned in tender document. The scope of work is not limited to these Specification & Description of items mentioned in tender document. The Contractor will consider all other necessary Specification and Items of works, while quoting the cost, which are essential to complete the work in all respect.

The modifications/ improvements may be made by the WAPCOS as per the requirement of Client during execution of work.

The detailed Civil Structural Design & Drawings for the Works / Project shall be prepared by the Contractor. The Contractor shall submit the detailed structural drawings considering all design loads as per the Indian Standard Codes at his own cost to WAPCOS. The Structural Design & Drawings of each and every aspect of the project shall be got approved from WAPCOS.

The contractor shall not be absolved of their responsibility of structural stability and correctness of structural design. The contractor shall bear all the losses if arises out of the failure of any part of the project.

3.0 MATERIALS AND TESTING OF MATERIALS FOR QUALITY

The materials shall be subject to inspection and approval of the Engineer-In-Charge. The contractor shall be required to get necessary tests carried out of materials / work from an approved laboratory approved by the Board. Any construction material will get tested at the cost of the contractor. The contractor will set up a site laboratory for testing of Coarse Aggregate, Fine Aggregate & Compressive Strength of Concrete, etc.

4.0 SCOPE OF CIVIL WORKS OF THE PROJECT AND ALLIED WORKS of Submission of bids for the work of “Construction of 120 bedded Old Age Home –BLOCK-A & 200 bedded Hostel (100 boys & 100 girls) –BLOCK-B for blind people at Unit-III, Bhubaneswar” includes

- Construction of 120 bedded Old Age Home –BLOCK-A & 200 bedded Hostel (100 boys & 100 girls) –BLOCK-B for blind people at Unit-III, Bhubaneswar, Odisha.
- The construction of the hostel includes Civil Works, PH and sanitary Works, Electrical Works, Fire Fighting systems and Water Harvesting Systems are to be carried out.
- Assessing, planning and arranging to procure materials and procure/ hire construction equipment for Engineering Works, if required as per the Works Contract Conditions.
- Coordinating with WAPCOS representatives rendering technical advice and holding periodic Progress Meetings.
- Ensuring that the construction is being carried out in accordance with the approved working designs, drawings and specifications and as per the program laid down in the Works of Contract Agreement. Bidders are requested to carefully examine the site condition
- Any statutory approvals required for the completion of works will be in the scope of the bidder.
- The structural drawings have to be vetted by IITs or reputed Govt. Engineering Colleges by the Contractor, if required.
- Any other item not covered above but required to complete the work is also under the bidders’ scope.

The Contractor before proceeding with the work shall verify all surveys, Geotechnical investigations, design and drawings. The Contractor shall provide detailed construction drawings for approval before proceeding with the Construction work. The Contractor shall submit monthly physical and financial progress report to the Employer.

The contractor before commencement of work will conduct confirmatory geo technical investigation to confirm the adequacy of the foundation provided especially in weak soils as per direction of the Engineer in Charge. Cost of the same will be deemed to be included in the price bid of the contractor and no separate payment shall be made on this account to the contractor.

NOTE:

- The Construction works area comes under Bhubaneswar , Orissa
- The Contractor must aware about location of the proposed works, Surrounding local condition where works are to be constructed, Encroachment by local people and its consequence which may affect the progress of works. Accordingly, Contractor shall submit BID considering all these aspect and shall quote the rates. Contractor shall not raise any extra/additional claim on these aspects.
- The contractor is required to deploy the resources at site and start the construction. No claim shall be entertained for idle labour, idle machinery, idle technical / non-technical staff, idle T&P and if any hindrance due to any reason.
- If any dispute/ hindrance may arise during construction, the contractor is not liable for any

financial claim for damages due to such circumstances.

- The bidder shall be responsible right through the entire duration of the Project for execution of all works till commissioning and handing over of project complete with all respects and shall remove all defects, if any, developed during Defects Liability Period (DLP).
- No works, for which rates are not specifically mentioned in the priced schedule or quantities, shall be taken up without written permission of WAPCOS Limited. Rates of items not mentioned in the priced Schedule of Quantities shall be fixed by WAPCOS as provided in the corresponding clauses of the tender document.
- The work shall be executed as per the details in Schedule of Quantities and direction of Engineer-in Charge and shall be completed in all respect with full satisfaction of Engineer-in Charge as per the Government guidelines, Indian standard codes & Manuals. The Bidder may assess the quantum of work before filling of tender.
- Contractor will also submit report on completed work along with drawings of completed (As-Built Drawings) work and including photographs of works.
- Contractor will take necessary approvals/clearance from the concerned departments before the start of work.
- The Contractor will submit the sample and test reports of prefab panel, paints, steel, cement, coarse sand etc. to the Engineer In-Charge for approval before starting the work.
- Any material used without prior approval shall be replaced by the Contractor immediately at his own cost. No payment in this regard shall be entertained.
- The contractor shall make his own arrangements for obtaining electric connection and water Connection/arrangement (if required).
- The Contractor shall dispose of all the dismantled materials, debris, garbage, waste outside of the campus of the works at his own cost after prior approval from Engineer in Charge and provide clear and clean site at the time of handing over the works.
- Contractor shall get the mix design prepared through a government engineering college or similar institutions and approved by the Engineer sufficiently in advance of commencing the work. No extra payment shall be made for excess cement quantities over minimum requirement as per IS code if any in the mix design.

Contractor is advised to visit the site to understand the Scope of Work clearly before quoting the rates for the works.

For & on behalf of Tenderer

SECTION– VIII

TECHNICAL SPECIFICATION

TECHNICAL SPECIFICATION

1. The Work will be executed strictly in accordance with the CPWD/OPWD specification corrected up to date at the time of tenders, unless specified to contrary. The specifications to be generally followed will be the following specifications and codes.

- a) CPWD specification
- b) Orissa PWD Specification
- c) BIS specification
- d) National building code
- e) Particular specification as applicable.

2. Measurement of work will be done as per CPWD specification.

3. The Contractor shall not be entitled to any payments on account of work done till he signs the agreement and the same is accepted by the competent authority.

4. Actual quantities of completed and accepted work shall only be paid.

5. No claim shall be entertained on account of increase in price of material and wages of labour due to any cause what so ever.

6. The Engineer-In-Charge reserves the right to take away any item of work or any part thereof at any time during the currency of work and re-allot to any other agency with due notice to the contractor without liability of any kind or payment of any compensation.

7. The contractor will be responsible for any and all losses of material damages done to unfinished works as result of floods and any other act of God. WAPCOS will not be responsible for any compensation as a result of such damages or loss to the contractor and the contractor shall be liable to set right such damages at his own cost the satisfaction of the Engineer-In-Charge.

8. Nothing extra will be paid to the contractor for any lead or lift unless otherwise specified for any material required directly or indirectly under the contract.

9. Nothing extra will be paid to the contractor for diverting water in the channels or streams if it becomes necessary for the execution and completion of the work.

10. Amount of the work can be increased or decreased due to any item omitted and substituted in accordance with the requirement of the Board. And no claim on this

account shall be entertained.

11. The Contractor shall be responsible for providing to the entire satisfaction of the Engineer-in-Charge at his own expenses for the following amenities for all the labour employed by him:-

- i) Suitable temporary hutting accommodation.
- ii) Trench latrines, bathing enclosures, platforms separately for men and women and their regular cleanliness.
- iii) Clean drinking water.

In event of his failure, the cost thereof shall be recovered from the contractor. Any dispute regarding above points shall be settled by the Engineer-In-Charge and his decision shall be final.

12. For safe custody of materials and watch and ward thereof and proper double lock arrangement, the contractor shall be bound to follow the instruction of the Engineer-In-Charge.

13. The size of reinforced cement concrete and other structural member shall be measured and paid as per size provided in the structural drawings.

14. Error or omission, if any in the nomenclature rate or unit of the items or work shall be corrected as per CPWD schedule of Rates 2014.

Materials and testing of materials for quality:

15. The materials shall be subject to inspection and approval of the Engineer-In-Charge. The contractor shall be required to get necessary tests carried out of materials / work from an approved laboratory approved by the Board.

16. Any material will get tested at the cost of the contractor. The contractor will set up a site laboratory for testing of Coarse Aggregate, Fine Aggregate & Compressive Strength of Concrete, etc.

17. Use of fly Ash

The contractor is required to use fly ash clay bricks conforming to IS: 3812, if the same are available, in view of the Fly Ash Notification issued by the GOI from time to time.

18. The following are the respective CPWD sub sections/clauses relating to the relevant items of works under this package. Where there is discrepancy between CPWD specifications and BIS codes the former will prevail.

SI No	Item description	Specification reference	IS Ref:	Remarks
1	Earth work excavation, felling tree etc	CPWD specifications 2.0 to 2.27	<ol style="list-style-type: none"> 1. IS: 783 -1985 Code of practice for laying of concrete pipes. 2. IS: 1200-1992 Method of Measurement of Building Works (Part I). 3. IS: 3764-1992 Safety code for excavation work. 4. IS: 3385 Code of practice for measurement of Civil Engineering Works. 5. IS: 2720-1983 Method of test of soils (All parts) 6. IS: 1498-1980 Classification and identification of soils for General Engineering purposes 7. IS: 2809 Glossary of terms and symbols relating to Soil Engineering 8. IS: 4081-1986 Safety code for blasting and related drilling operations 9. IS: 4988 Glossary of terms and classifications of earth moving machinery (All Parts) 	
2	PCC	CPWD specifications sub head 4.0	<ol style="list-style-type: none"> 1. IS 456 2. Ordinary Portland cement, 33 Grade, conforming to IS: 269-1989. 3. Rapid Hardening Portland Cement, conforming to IS: 8041-1990. 4. Ordinary Portland cement, 43 Grade, conforming to IS: 8112-1989. 5. Ordinary Portland cement, 53 Grade, conforming to IS: 12269-1987. 6. Sulphate Resistant Portland cement, 	PCC

			conforming to IS: 12330-1988.	
3	RCC works	CPWD specifications sub head 5.0	<p>1.IS: 269-1989 Specification for Ordinary, Rapid-Hardening and Low Heat Portland Cement.</p> <p>2.IS: 455-1989 Specification for Portland Blast Furnace Slag Cement.</p> <p>3.IS: 1489-1991 Specification for Portland-Pozzolana Cement.</p> <p>4.IS: 4031-1996 Methods of Physical Tests for Hydraulic Cement.</p> <p>5.IS: 650-1991 Specification for Standard Sand for Testing of Cement.</p> <p>6.IS: 383 Specification for Coarse and Fine Aggregates from Natural Sources for Concrete.</p> <p>7.IS: 2386-1983 Methods of Test for Aggregates for Concrete. (Part I To VIII)</p> <p>8.IS: 516-1959 Method of Test for Strength of Concrete.</p> <p>9.IS: 1199-1959</p>	

			<p>Method of Sampling and Analysis of Concrete.</p> <p>10.IS: 3025-1987</p> <p>Method of Sampling and Test (Physical and Chemical) Water Used in Industry.</p> <p>11.IS: 432-1982</p> <p>Specification for Mild Steel and Medium Tensile Steel Bars and Hard Drawn Steel</p> <p>Wire for Concrete Reinforcement. (Part I & II)</p> <p>12.IS: 1139-1966</p> <p>Specification for Hot Rolled Mild Steel and Medium Tensile Steel Deformed Bar for Concrete Reinforcement.</p> <p>13.IS: 1566-1982</p> <p>Specification for Plain Hard Drawn Steel Wire Fabric for Concrete (Part I) Reinforcement</p> <p>14.IS: 1785 Specification for Plain Hard Drawn Steel Wire for Prestressed Concrete.</p> <p>15.IS: 1786-1985</p> <p>Specification for Cold Twisted Steel Bars for Concrete Reinforcement.</p> <p>16.IS: 2090 Specification for High Tensile Steel Bars Used in Prestressed Concrete.</p> <p>17.IS: 4990-2001</p> <p>Specification for Plywood for Concrete Shuttering Work.</p> <p>18.IS: 2645-1975</p> <p>Specification for Integral Cement Water-Proofing Compounds.</p>	
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			<p>BS: 4461 Cold Worked Steel Bars for The Reinforcement of Concrete.</p> <p>19.IS: 4098 Lime Pozzolana Mixture (1st Revision) (Amendment 2)</p> <p>IS: 3201 Criteria for Design and Construction of Precast Concrete Trusses.</p> <p>20.IS: 2204 Code of Practice for Construction of Reinforced Concrete Shell Roof.</p> <p>21.IS: 2210 Criteria for The Design of R.C. Shell Structures and Folded Plates.</p> <p>22.IS: 2751-1979</p> <p>Code of Practice for Welding of Mild Steel Bars Used for Reinforced Concrete Construction.</p> <p>23.IS: 2502-1963</p> <p>Code of Practice for Bending and Fixing Vibrators for Consolidating Concrete.</p> <p>24.IS: 3558-1983</p> <p>Code of Practice for Use of Immersion Vibrators for Consolidating Concrete.</p> <p>25.IS: 3414-1968</p> <p>Code of Practice for Design and Installation of Joints in Buildings.</p> <p>26.IS: 4014-1967</p> <p>Code of Practice for Steel Tubular Scaffolding. (Part I & II)</p> <p>27.IS: 2571-1970</p> <p>Code of Practice for Laying In-Situ Cement Concrete Flooring.</p>	
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			<p>28.IS: 2250 Code of Practice for Preparation and Use of Masonry Mortar (1st Revision)</p> <p>29.9.2.5 Construction Safety IS: 3696-1987 Safety Code for Scaffolds and Ladders. (Part I & II)</p> <p>30.IS: 3385 Code of Practice for Measurement of Civil Engineering Works.</p> <p>31.9.2.6 Measurement IS: 1200 Method of Measurement of Building Works.</p> <p>32. IS:3385 Code of Practice for Measurement of Civil Engineering Works.</p>	
4	Masonry Brick work/laterite stones	CPWD specifications sub head 7.0	<p>1. IS 3620 (Laterite),</p> <p>2. IS: 1077-1992 Specifications for Common Burnt Clay Building Bricks</p> <p>1. IS: 1200 Measurements for Building Works IS: 1725 Specifications for Solid Cement Blocks used in General Building Construction</p> <p>3. IS: 1905-1987</p> <p>4. Code of Practice for Structural Safety of Buildings: Masonry Walls.</p> <p>5. IS: 2116-1980</p> <p>6. Sand for Masonry Mortars</p> <p>7. IS: 2180 Specification for Heavy</p>	

			<p>DutyBurnt Clay Building Bricks</p> <p>8. IS: 2185-1979</p> <p>9. Specification for Concrete Masonry Units: Hollow and Solid Concrete Blocks</p> <p>10. IS: 2212-1991</p> <p>11. Code of Practice for Brick Work</p> <p>12. IS: 2222 Specification for Burnt Clay Perforated Building Bricks</p> <p>13. IS: 2691-1988</p> <p>14. Specification for Burnt Clay Facing Bricks</p> <p>15. IS: 3414-1968</p> <p>16. Code of Practice for Design and Installation of Joints in Buildings</p> <p>17. IS: 3466 Specification for Masonry Cement</p> <p>18. IS: 3952 Specification for Burnt Clay Hollow Blocks for Walls and Partitions</p> <p>19. IS:1124 water absorption and specific gravity of laterite stones</p> <p>20. IS:1121 compressive strength of laterite stones</p> <p>21. IS 1197(Pt.I) (Rubble)</p>	
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5	Joinery works	CPWD specifications sub head 9.0	<p>1.IS: 205 Specifications for non-ferrous metal butt hinges</p> <p>2.IS: 287-1993</p> <p>Recommendation for maximum permissible moisture content of timber used for different purposes.</p> <p>3.IS: 303 Specification for plywood for general purpose</p> <p>4.IS: 362 Specification for parliament hinges</p> <p>5.IS: 419-1967</p> <p>Specification for putty for the use on window frames</p> <p>6.IS: 883 Code of practice for design of structural timber in building.</p> <p>7.IS: 1003-1991</p> <p>Specification for Timber paneled and glazed shutters Part II - Window and ventilator shutters</p> <p>8.IS: 1200-1992</p> <p>Method of measurement of building and Civil Engineering Works - Wood Work and Joinery</p> <p>9.IS: 1341 Specification for steel butt hinges</p> <p>10.IS: 1658 Specification for Fiber Hard Boards</p> <p>11.IS: 1761 Specification for transparent sheet glass for glazing and framing purposes.</p> <p>12.IS: 3087 Specification for wood particle boards (medium density for structural</p>
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			<p>timber building)</p> <p>13.IS: 1956 Glossary of terms relating to iron and steel</p> <p>14.IS: 814-1991(Part I)</p> <p>Specifications for covered electrodes for metal are welding of structural steel.</p> <p>15.IS: 814-1991(Part II)</p> <p>1.For welding products other than sheets, Specifications for covered electrodes for metal are welding of structural steel.2.For welding sheets</p> <p>16.IS: 815 Classification and coding of covered electrodes for metal are welding and cutting operation.</p> <p>17.IS: 1948-1961</p> <p>Aluminum doors, windows & ventilators.</p> <p>18.IS: 6227 Code of Practice for use of metal are welding in tubular structure</p> <p>19.IS: 6248-1979</p> <p>Specifications for metal rolling shutters and rolling grill</p> <p>20.IS: 1081-1960</p> <p>Code of Practice for fixing and glazing of metal (steel and aluminum) doors, windows and ventilators.</p> <p>21.IS: 2062-1999</p> <p>Weldable Structural Steel</p> <p>22.IS: 1361-1978</p> <p>Specifications for steel windows for</p>	
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			<p>Industrial Buildings</p> <p>23.IS: 1200-1993(Part VIII)</p> <p>Measurements for steel work and iron work</p> <p>24.IS: 1038-1983</p> <p>Specifications for steel doors, windows, and ventilators.</p> <p>25.IS: 226-1975</p> <p>Specifications for structural steel (Standard quality)</p> <p>26.IS: 823 Code of procedure for manual metal arc welding of metal steel</p> <p>27.IS: 102-1962</p> <p>Ready mixed paint, brushing, red lead non-sitting, and priming.</p> <p>28.IS: 1363-1992</p> <p>For black hexagon bolts, nut and lock nuts(dia. 6 to 39mm) and black hexagon screws (Dia. 6 to 24mm)</p> <p>29.IS: 813 Scheme of symbols for welding.</p>	
6	Flooring	CPWD specifications sub head 11.0	<p>1.IS: 1130-1969 Specification For Marble (Blocks, Slabs And Tiles) (Reaffirmed 1993)</p> <p>2.IS: 1141-1973(1141-1993)*</p> <p>Code Of Practice - Seasoning Of Timber (2nd Revision)</p> <p>3.IS: 1197-1970 Code Of Practice For Laying Rubber Floors (1st Revision (Reaffirmed 1990)</p> <p>4.IS: 1198-1982 Code Of Practice For Laying, Fixing And Maintenance Of Linoleum Floor (1stRevision) (Reaffirmed 1990)</p> <p>5.IS: 1200 (PartXI) 1977</p>	

			<p>Method Of Measurement Of Building And Civil Engineering Work (Part XI)</p> <p>Paving, Floor Finishes, Dado And Skirting)(3rdRevision)(Amendment1)</p> <p>(Reaffirmed 1992)</p> <p>6.IS: 1237-1980 Specification For Cement Concrete Flooring Tiles (1st Revision)(Reaffirmed1990)</p> <p>7.IS: 1322-1982(1322-1993)</p> <p>Specification For Bitumen Felts For Water Proofing And Damp-Proofing (4thRevision)</p> <p>8.IS: 1443-1972 Code Or Practice For Laying And Finishing Of Cement Concrete Flooring Tiles</p> <p>(1st Revision)(Reaffirmed 1991)</p> <p>9.IS:1489(Part-1) 1991</p> <p>Specification For Portland Pozzolana Cement(Part - 1) Fly ash Based (3rd Revision)</p> <p>10.IS: 1489- (PartII) 1991</p> <p>Specification For Portland Pozzolana Cement (Part II) Calcined Clay Based (3rdRevision)(Amendment 1)</p> <p>11. IS: 1580-1991 Specification For Bituminous Compounds Of Water Proofing And Caulking Purpose (3rd Revision)</p> <p>12. IS: 1195 Bitumen Mastic For Flooring</p> <p>13. IS: 3384-1990 Bitumen Primer For Use In Waterproofing And Damp Proofing</p> <p>14.IS: 4832(Part - 1)</p>	
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			<p>Acid Resistant Mortars - Silicate Type</p> <p>15.IS: 4832(Part - 2)</p> <p>Acid Resistant Mortars - Resin Type</p> <p>16.IS: 4457 Ceramic Unglazed Vitreous Acid Resisting Tiles</p>	
7	Painting and Finishing	CPWD specifications sub head 13.0	<p>1.IS: 16-1991(Part: I)</p> <p>Shellac: Part: I-Hand Made Shellac (3rd Revision)</p> <p>2.IS: 16-1991(Part :II) Shellac:Part: II-Machine Made Shellac (3rd Revision)</p> <p>3.IS: 75-1973 Linseed Oil, Raw and Refined (Reaffirmed 1990) (2nd Revision)</p> <p>4.IS: 77-1976 Ready Mixed Paint, Brushing, Red Lead, Non setting, Priming (Reaffirmed 1991)(Revised)</p> <p>5.IS: 102-1962 Specification For Ready MixedPaint, Brushing, Zinc Chrome, Priming (Reaffirmed 1993) (2nd Revision)</p> <p>6.IS: 104-1979 Ready Mixed Paint, brushing, priming Plaster to Indian Standard Colour No. 361, 631 White and off White (Reaffirmed 1993) (1st Revision)</p> <p>7.IS: 109-1968 Ready Mixed Paint, Brushing, priming Plaster to Indian Standard Colour No. 361, 631 White and off White (Reaffirmed 1993) (1st Revision)</p> <p>8.IS: 117-1964 Ready Mixed Paint, Brushing, Finishing Exterior, Semigloss For General Purposes to Indian Standards Colours (Reaffirmed 1988) (Revised)</p> <p>9.IS: 133-1993 Enamel, Interior (a) Under Coating (b) Finishing (3rd Revision)</p>	

			<p>10.IS: 137-1965 Ready Mixed Paint, Brushing, Matt Or Egg Shell Flat, Finishing Interior to Indian Standard Colour as required (Revised 1993)</p> <p>11.IS: 158-1981 Ready Mixed Paint, Brushing, Bituminous Black, Lead Free, Acid, Alkali and Heat Resisting (Reaffirmed 1988) (3rd Revision)</p> <p>12.IS: 217-1988 Specification For Cut Back Bitumen (2nd Revision) IS: 218-1983 Specification For Creosoteand Anthracene Oil For Use As Wood Preservatives (Reaffirmed 1990) (2nd Revision)</p> <p>14.IS: 290-1961 Coal Tar Black Paint (Reaffirmed 1991) (1st Revision)</p> <p>15.IS: 337-1975 Varnish, Finishing Interior (Reaffirmed 1991) (1st Revision)</p> <p>16.IS: 341-1973 Black Japan, Types 'A', 'B' & 'C' (Reaffirmed 1991) (1st Revision)</p> <p>17.IS: 345-1952 Wood Filter, Transparent - Liquid (withdrawn)</p> <p>18.IS: 347-1975 Varnish, Shellac For General Purposes (Reaffirmed 1991) (1st Revision)</p> <p>19.IS: 348-1968 French Polish (Reaffirmed 1991) (1st Revision)</p> <p>20.IS: 419-1967 Putty For Use On Window Frames (Reaffirmed 1992) (1st Revision)</p> <p>21.IS: 427-1965 Distemper, Dry Colour as Required (Reaffirmed 1993) (Revised)</p> <p>22.IS: 428-2000 Distemper, Oil Emulsion, Colour as Required (Reaffirmed 1993) (1stRevision)</p>	
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			<p>23. IS: 524-1983 Varnish, Finishing, Exterior, Synthetic Air Drying (Reaffirmed 1990) (2nd Edition)</p> <p>24. IS: 533-1973 Gum Spirit of Turpentine (Oil of Turpentine) (Reaffirmed 1990) (1st Revision)</p> <p>25. IS: 712-1984 Specification For Building Limes (Reaffirmed 1991) (3rd Revision)</p> <p>26. IS: 1200-1976</p> <p>(Part: XII) Method of Measurements of Building and Civil Engineering Works: Part: XII-Plastering and Pointing (Reaffirmed 1992) (3rd Revision)</p> <p>27. IS: 1200-1987 Method of Measurements of Building and Civil Engineering Works:</p>	
8	Cement		<p>1.43 Grade OPC – IS 8112</p> <p>2.53 Grade OPC-IS 1269</p> <p>3. PPC-IS 1489</p> <p>4. Rapid Harding Portland cement – IS 4032</p> <p>5. Port land slag cement IS 455</p> <p>6. Sulphate RC (SRC) –IS 12330</p>	
9	Fine aggregates	CPWD specifications sub head 5.0	IS 383, 2386	IS references included in other items
10	Coarse aggregates	CPWD specifications sub head 5.0	IS 383, 2386	IS numbers included in other items
11	Mortars	CPWD specifications sub head 3.0	IS 3025, 4031, 269, 455, 1269	IS numbers included in other items
12	Water supply and	CPWD specifications sub head 18	<p>Water supply</p> <p>1 IS 554 Pipe threads where pressure tight</p>	Water supply and

	Sanitary works	and 17	<p>joints are required on the threads- Dimensions, tolerances and designation.</p> <p>2 IS 778 Specification for copper alloy gate, and check valves for water works purposes</p> <p>3 IS 779 Water meters (domestic type) - Specification</p> <p>4 IS 780 Specification for sluice valves for water works purposes (50 to 300 mm size)</p> <p>5 IS 781 Specification for cast copper alloy screw down bib taps and stop valves for water services</p> <p>6 IS 782 Specification for caulking lead</p> <p>7 IS 1239 (Part 1) Steel tubes tubular and other wrought steel fittings, Part 1- Steel tubes- Specification</p> <p>8 IS 1239 (Part 2)</p> <p>Specification for mild steel tubes tubular and other wrought steel fittings, Part 2-Mild street tubular and other wrought steel pipe fittings</p> <p>9 IS 1538 Cast iron fittings for pressure pipes for water, gas and sewage - Specification</p> <p>10 IS 1703 Water fittings - copper alloy float valves (horizontal plunger type) - Specification</p> <p>11 IS 2692 Ferrules for water services- Specification</p> <p>12 IS 3950 Specification for surface boxes for sluice valves</p> <p>13 IS 4736 Specification for Hot-dip Zinc Coatings on mild steel tubes</p>	Sanitary works
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			<p>14 IS 5312 (Part 1) Swing type reflex (non return) valves for water works purposes. Part 1-Single door pattern</p> <p>15 IS 5312 (Part 2) Swing type reflex (non return) valves for water works purposes. Part 2- Multi door pattern</p> <p>16 IS 5382 Rubber sealing rings for gas mains, water mains and sewers</p> <p>17 IS 9762 Specification for polyethylene floats (spherical) for float valves</p> <p>18 IS 9763 Plastic Bib taps and stop valves (rising spindle) for cold water services specifications</p> <p>19. IS 15450 PE-AL-PE Pipes for hot and cold water supplies Specifications</p> <p>20. IS 15778 Chlorinated Polyvinyl Chloride (CPVC) pipes for potable hot and cold water distribution supplies-specifications.</p> <p>21. IS 15801 Polypropylene- Random Copolymer Pipes for hot and cold water supplies Specifications</p> <p>Sanitary</p> <p>1. IS 771 (Pt.1) Specification for glazed fire clay sanitary appliances: Part 1: General requirements.</p> <p>2. IS 771 (Pt.-2) Specification for glazed fire clay sanitary appliances: Part 2: Specific requirements of kitchen and laboratory sink.</p> <p>3. IS 772 Specific action for general requirements for enameled cast iron sanitary appliances.</p> <p>4. IS 774 Flushing cisterns for water closets and urinals (Other than plastic cistern)-</p>	
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			<p>Specifications.</p> <p>5. IS 1300 Phenolic moulding materials.- Specifications</p> <p>6. IS 1703 Water fittings- copper alloy float valves (horizontal plunger type) - Specification.</p> <p>7. IS 1795 Specification for pillar taps for water supply purposes.</p> <p>8. IS 2267 Polystyrene moulding and extrusion materials - Specifications</p> <p>9. IS 2326 Specification for Automatic Flushing Cisterns for Urinals (Other than plastic cisterns)</p> <p>10. IS 2548 (Part-1) Plastic seats and covers for water closets Part 1: Thermo set seats and covers Specifications</p> <p>11. IS 2548 (Part-2) Plastic seats and covers for water closets Part 2: Thermoplastic seats and covers.- Specifications</p> <p>12. IS 2556 Vitreous sanitary appliances (vitreous china) Specifications</p> <p>13. IS 2556 (Part-1) Part-1: General requirements.</p> <p>14. IS 2556 (Part-2) Part-2: Specific requirements of wash-down water closets.</p> <p>15. IS 2556 (Part-3) Part-3: Specific squatting pans.</p> <p>16. IS 2556 (Part-4) Part-4: Specific requirements of wash basins.</p> <p>17. IS 2556 (Part-5) Part-5: Specific requirements of laboratory sinks.</p> <p>18. IS 2556 (Part-6) Part-6: Specific</p>	
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			<p>requirements of Urinals & Partition plates</p> <p>19. IS 2556 (Part-7) Part-7: Specific requirements of accessories for sanitary appliances</p> <p>20. IS 2556 (Part -14) Part-14: Specific requirements of integrated squatting pans.</p> <p>21. IS 2556 (Part -15) Part-15: Specific requirements of universal water closets.</p> <p>22. IS 2963 Specification for Copper alloy waste fittings for wash basins and sinks.</p> <p>23. IS 3389 Urea formaldehyde moulding materials. - Specifications</p> <p>24. IS 3989 Specification for centrifugally cast (spun) iron spigot and socket soil, waste and ventilating pipes fittings and accessories.</p> <p>25. IS 4827 Specification for electroplated coating of nickel and chromium on copper and copper alloys.</p> <p>26. IS 4984 Specification for high density polyethylene pipes for potable water</p>	
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List of Preferred Makes for Civil & Plumbing Works

S. No.	Items	Preferred Makes / Brands
1	Cement (PPC/OPC43)	Ultra Tech / J.K. Cement / ACC / Birla / Lafarge / Wonder
2	White Cement	J.K. White / Birla White / Ultratech / Wonder
3	Reinforcement Steel	Tata Steel / SAIL / RINL / JSPL / JSW / Shyam
4	Structural Steel	Tata Steel / SAIL / RINL / JSPL / JSW / Shyam
5	Stainless Structural Steel	Jindal Hissar / Sail / Tata Steel / Shyam
6	Welding Rods	ESAB / Bohler / Advani Oerilikam / D&H
7	Steel Nut & Bolts	Hilti / Bosch / Fischer
8	Admixtures, Plasticizers	Fosroc/ Sika/ BASF/ MBT/ Bulwark Conchem / Kunal Conchem
9	Water Proofing Compound	Fosroc/ Sika/ Pidilite/ Basf/Kunal Conchem/ Bulwark Conchem
10	Crystalline Water Proofing Compound	Fosroc / Sika / Penetron /Xypex / Vendex / Asian Paints/Bulwark Conchem
11	Polysuphide Sealant	Fosroc / Sika / Pidilite / BASF/ Sika/ Kunal Conchem
12	Weather Silicon Sealant	Dow Corning / Wacker / GE Silicones/ Kunal Conchem
13	Modular Expansion Joint	Herculas / Vexcolt /Devin / Sainfield
14	Autoclaved Aerated Cement Blocks	Aerocon (Hil Ltd.) / Ultratech / Siporex / Magicrete / Biltech / J.K Laxmi
15	Polymer Modified Adhesive For AAC Blocks	MYK Laticrete / J.K. Laxmi / Ultratech / Aerocon /Ardex Endura/ Kunal Conchem
16	Tile and Stone Adhesive & Grouting Compound	Fosroc / Sika / Ardex Endura / Laticrete / Pidilite/ Kunal Conchem
17	Laminate	Greenlam / Durian / Merino / Century/Skydecor
18	Flush Doors / Plywood /Veneers	Green / Merino / Century
19	Block Board	Green / Merino / Century
20	uPVC Window	Fenasta / JELD-WEN / EGGER / VELUX /Prominance / REHAU / Deceuninck
21	Frameless Glass Doors With SS Patch Fittings	Dorma / Hafele / Geze /Becker FS
22	Stainless Steel Mortice Lock, Ball Bearing Hinges, Hanging Floor Door Stopper, Magic Eye) For Doors(Non-Fire Rated)	Dorma / Hafele / Geze / Becker-FS

23	Stainless Steel Sliding Door Bolts, Tower Bolts, Handles For Doors (Non- Fire Rated)	Hafele / Geze / Becker-FS
24	Hydraulic Door Closer	Dorma / Hafele / Geze / Becker-FS / Hettich / Blum
25	Modular Kitchen Accessories	Dorma / Hafele / Geze / Becker-FS / Hettich / Blum
26	Auto Sensys Hinges (Stainless Steel)	Dorma / Hafele / Geze / Becker-FS / Hettich / Blum
27	False Ceiling (Metal)	Lindner / Rockfon / USG Boral (KNAUF) / Gyproc (Saint Gobain) / Anakon / Hunter Douglas / Armstrong
28	False Ceiling (Mineral Fiber)	Lindner / Rockfon / USG Boral (KNAUF) / Gyproc (Saint Gobain) / Anakon / Hunter Douglas / Armstrong
29	U Baffle Aluminum Panel Ceiling	Lindner / Rockfon / USG Boral (KNAUF) / Gyproc (Saint Gobain) / Anakon / Hunter Douglas / Armstrong
30	Dash Fasteners / Anchors	Hilti / Bosch / Fischer / Wurth
31	Clamp System For Stone Cladding	Hilti / Bosch / Fischer / Wurth
32	Float/ Frosted Glass, Mirror Glass	Saint Gobain/ Modiguard /Asahi
33	Structural Glazing, Skylight	Saint Gobain/ Modiguard /Asahi
34	Fire-Rated Glass	Saint Gobain / Schott/ Asahi / Pyroguard
35	Hermetically Sealed Performance Glass, Toughened Glass	Saint Gobain/ Modiguard /Asahi
36	Fire Door Shutter (Wooden / Metallic / Glass)	I Clean /Shakti Hormann / TATA Pravesch / Mikasa (Greenlam) / Vetrotech (Saint-Gobain) / Navair
37	Fire Rated Door Hardware Fitting	Dorma / Hafele / Geze / Becker-FS / Hettich
38	FRP Door Frames And Shutter	Fiberways Technology / Jayna / Simba
39	SS Drapery Rod	Vista / Hunter Douglas / Mac
40	Blinds (including Roller Blinds) For Windows	Hunter Douglas / Mac / Aerolux / D Décor / Marvel
41	Stainless Steel Railings (Knock Down)	Q Railing / D-Line / Ozone
42	Vitrified Tiles	Kajaria / Varmora / Somany / Simpolo / Johnson / Nitco / Nitco / RAK / Cera
43	Glazed / Ceramic Tiles	Kajaria / Varmora / Somany / Simpolo / Johnson / Nitco / Nitco / RAK / Cera
44	Aluminum Sections	Jindal / Hindalco / Indal / Nalco
45	Gypsum Plaster	Saint Gobain (Gyproc) / Boral / Ultratech / Asian Paints
46	Wall Putty (White Cement Based)	Birla Wall Care Putty / JK Wall / Asian Paints Professional Wall Putty / Dulux Wall Putty
47	P.O.P. Putty	Sakarni / Adhar Shree / JK / Ashirwad

48	Epoxy Primer And Paints / Wood Primer/ Steel Primer	Akzonobel India (ICI Dulux) / Kansai Nerolac / Asian Paints
49	Acrylic Distemper	ICI Dulux (Maxilite)/Kansai Nerolac (Narolac Acrylic)/ Asian Paints (Tractor Acrylic) / Berger (Bison)
50	Plastic Emulsion Paint	ICI Dulux (Super Cover 3 In 1) / Kansai Narolac (Beauty Gold) / Asian Paints (Premium Emulsion) /Berger (Easy Clean)
51	Synthetic Enamel Paint	ICI Dulux (Dulux Hi Gloss) / Kansai Narolac (Narolac Hi Gloss) / Asian Paints (Apcolite Premium Gloss) / Berger (Luxol)
52	Exterior Emulsion Paint	ICI Dulux (Weather Shield) / Kansai Narolac (Excel) / Asian Paints (Apex) / Berger (Weather Coat)
53	Melamine Polish	ICI Dulux / Kansai Nerolac / Asian Paints
54	Fire Paint	Akzonobel India (Ici Dulux) / Berger / Asian Paints/Promat
55	Polyester Powder Coating	ICI Dulux / Kansai Nerolac / Asian Paints
56	Centrifugally Cast (Spun) Iron Pipes & Fittings	Neco / Saint Gobain / BIC /Hepco / Kapilansh
57	Centrifugally Cast (Spun) Iron Pipes Class (La) Pipe	Neco / Electro Steel / Tata / Kesoram
58	UPVC Pipes & Fittings	Supreme / Finolex / Jain Irrigation /Astral / Signet
59	G. I. Pipes	Tata/ Jindal (Hisar) / Sail
60	G. I. Pipe Fittings	Unik / Zoloto / Jindal
61	SS Water Supply Pipes And Fittings	Rampart / Jindal / J-Press
62	Stainless Steel Sinks	Neelkanth / Nirali / Jayna
63	CP Brass Fittings	Grohe / Roca / American Standard / Neycer / Duravit / Toto / Jaguar / Kohler / Kerovit
64	Vitreous China Sanitary ware fittings	Grohe / Roca / American Standard / Neycer / Duravit / Toto / Jaguar / Kohler / Kerovit
65	HDPE Pipes	Jain Irrigation / Oriplast / Dutron / Reliance/Signet
66	Ball Valves	Zoloto / Leader / Audco / Schell/ Signet
67	Non Return Valves	Zoloto / Leader / Audco / Kirloskar / IVC/ Signet
68	Butterfly Valves	Audco / Advance / Schell / Kirloskar
69	Water Meter	Zoloto / Leader / Audco
70	SS Floor Grating	Jayna / Chilly / Nirali / Camry
71	Interlocking Precast C.C. Paver Blocks / Kerb Stone / GrassPaver	Dalal / Nitco / Unistone / Ntc / Ultra Tiles / ACC
72	Factory Made Wooden Frames And Wire Gauge Shutters	D.S. Doors / Jain Wood Industries / Jain Doors Pvt. Ltd.
73	Polycarbonate Sheet	Danpalon / Coxwell / Sunpal / Gallina

74	GRC Jali	Unistone / Birla White / Nav Nirman
75	Insulation	Up Twiga / Lloyd / Rock Wool
76	Acoustic Treatment For Walls, Ceiling	Knauf Amf / Saint Gobain / Top Akustik / Hunter Douglas / Armstrong / Anutone
77	Toilet Cubicles	Green Laminate / Marino / Century/ Skydecor
78	Soap Dispenser	Euronics/ Kohler / Jaquar / Grohe
79	Extruded Polystyrene Board Insulation (XPS Board)	Dow Building Solutions / Owens Corning / Isofoam
80	Reinforced Soil Walls	Maccaferri / Terre Armee / Freyssinet
81	Hubless Centrifugally Cast Iron Pipes & Fittings	Neco / Saint Gobain / Bic
82	CGI Sheet	Tata / Jindal / JSW
83	Ball Valves (15 To 50mm)	Arco (Sena)/Sant/L&T/ Signet
84	Non Return Valve	Audco / Advance / L&T/ Signet
85	Monoblock Pumps	Grundfos/Xylem/Wilo-Mather & Platt
86	Vessels	Global Composite/ Aquanomics / Ion Exchange
87	Multiport Valve	CWG / Astral/Aquanomics
88	Chlorinator/Dozer	CWG / Astral/Aquanomics
89	Metering Pump	Lotus Alpha / Asia LMI/Aquanomics
90	Constant Pressure Variable Volume	Grundfos/Armstrong / ITT
91	Air Blower	Swan/Everest / Stanley
92	Resin	Thermax / Ion Exchange
93	Control Valves	Rapid Control / Anergy / L&T/ Signet
94	Pressure Reducing Valve	Honeywell/ Watts/ Utam
95	Solenoid Valve	Danfoss/ Honeywell /L&T
96	GM /Forged Brass Ball Valves	Danfoss/Kitz/ Utam
97	Sluice Valve	Audco/Advance/L&T
98	Check Valve-Wafer Type	Audco/Advance/L&T
99	Check Valve-Dual Plate	Audco/Advance/L&T
100	Check Valve-Forged Screwed	Audco/Advance/L&T
101	Air Release Valve	Audco/Advance/L&T/ Signet
102	Ball Float Valve	Audco/Advance/L&T
103	NRV Ball Type-Sewage Application	Danfoss/Silverspark/Normex/Utam
104	Y Strainer CI	Audco/Kitz/VTM
105	Hydro pneumatic System	Grundfos/Xylem/Wilo-Mather & Platt
106	Storm Water Drainage & Sewage Sump Pumps	Grundfos/Xylem/Wilo-Mather & Platt
107	Transfer Pumps	Grundfos/Xylem/Wilo-Mather & Platt
108	Self-Priming Pump	Johnson/Kirloskar
109	Mechanical Seal	Burgmann/Sealol
110	Ant vibration Mounting & Flexible	Dunlop/Kanwal Industries/Resistoflex

	Connection	
111	Pressure Gauge	H Guru/Fiebig/Emerald
112	Water Meter	Kranti/Actaris/Kent/Capstan
113	Electronic Flow Meter	Krohne/Rockwin / Honeywell / Omega
115	MH/Water Tank Plastic	KGM/Patel/Pranali Industries
116	Three Way Motorised	Danfoss/Honeywell/Siemens/AIP
117	Fire Sealant	Birla 3m/Hilti / Dowsil
118	Manhole(Prefabricate)	Ok Plat/Crescent Foundary
119	Temperature	Forbes Marshall/Wika
120	Dosing Pumps	LMI/Pulser/Feeder/Toschon
121	U.V Steriliser	Eureka Forbes / Ion- Exchange/ Kent / LG
122	Flow Control Devices	Aquaplust/Jaquar/RST
123	SS Pipe	Jindal/Viega/Prime Gold
124	Auditorium Chairs	Godrej / Durian / Featherlite / SR Seating Pvt. Ltd. / Methodex / Penwork
125	Conference Room furniture	Godrej / Durian / Featherlite / Methodex / Penwork
126	System Aluminium doors/windows	Fenesta / Dorma / Assa Abloy / Boon Edam / Hafele / Hettich / Doorset
127	Fire Curtain	Window techs /CLAUSS / MARKISEN / MHZ
128	Modular Kitchen	Sleek (Asian Paints) / Hafele / Hettich
129	Fly Ash Cement bricks	<i>Must be got approved from Engineer-in-charge before use</i>
130	Stamp Concrete	<i>Must be got approved from Engineer-in-charge before use</i>

List of Preferred Makes for Electrical & Mechanical Works

Internal Electrical Installation, Street Lighting & Fixtures

S. No.	Material	Manufacturer
1	LT panels/ boards, Feeder panels.	STERLING GENERATOR, MARINEELECTRICALS, PRECISION SYSTEM CONTROL
2	MCCBS	SIEMENS-3VL, L&T- D-SINE, SCHNEIDER- NSX, ABB-T-MAX
3	ACB's	ABB (E-MAX) / SCHNEIDER (MASTERPACT NW) / L&T (U-Power Omega) / SIEMENS (3WL)
4	MCB, ELCB, RCCB, DB and RCBO. Distribution board shall be of the same make of MCB, ELCB, RCCB, DB and RCBO.	SIEMENS (BETAGUARD), L&T (AU), SCHNEIDER(ACTI-9)
5	LT cables, 1.1 KV grade	KEI, HAVELLS, POLYCAB, RR KABEL, EMPIRE
6	FRLS copper wires and cables, 1.1 KV grade	KEI, HAVELLS, POLYCAB, RR KABEL, L&T, EMPIRE
7	Switch Socket accessories.	LEGRAND (ARTEOR), SCHNEIDER (ZENCELO), MK (ELEMENTS), CRABTREE (MURANO), L&T (Englaze)
8	Lugs and Ferrules	DOWELLS, JAINSON, GRIPWELL, RAYCHEM
9	Brass Compression Gland (Heavy duty)	COMMEX, GRIPWELL, HENSEL, DOWELLS
10	Telephone Cables	FINOLEX, HAVELLS, ANCHOR, POLYCAB, RRKABEL, EMPIRE
11	Telephone Tag Blocks with boxes	KRONE,POUYET
12	PVC Conduits and Accessories (ISI Marked, Heavy duty)	BEC, PRECISION, POLY-PACK
13	MS Conduit and Pipes	BEC, AKG, VIMCO, RMCON
14	MS Conduit Accessories (Heavy duty) (ISI MARKED)	BEC, AKG, VIMCO, RMCON
15	Pipes and Accessories (ISI)	TATA, JINDAL, SAIL
16	Indoor Light Fixtures	PHILIPS, TRILUX, ENDO, REGENT, LIGHTING TECHNOLOGIES, WIPRO
17	Water cooler with UV+UF	BLUE STAR, VOLTAS, KENT, ION EXCHANGE
17	Hand Dryer	EURONICS, MITSUBISHI, DOLPHY
18	Street /landscape LED Light Fixtures	PHILIPS, KESLEC, SHREDDER, TRILUX, LIGHTING TECHNOLOGIES
19	LED Chip for Street /landscape LED Light Fixtures	CREE, PHILIPS, OSRAM, NICHIA
20	Street Light Poles	KESLEC, PHILIPS, VALMONT
21	Decorative Street / Compound Light Poles	KESLEC, PHILIPS, VALMONT

22	4 Way Junction Box with fuse / MCB with heavy duty loop connector in poles	LEGRAND, SCHNEIDER, ABB, L& T
23	Emergency Exit Light	LEGRAND, PHILIPS, WIPRO
24	Selector Switch	RISHAB -L&T, KAYCEE, SIEMENS, C&S
25	CT/PT	AE, GILBERT, PRECISE, KAPPA, ANANTPOWERTECH
26	Aviation Light	BAJAJ, WIPRO, PHILIPS
27	Photo Chromatic Switch	BAJAJ, WIPRO, PHILIPS
28	Annunciation Panel	CROMPTON, AREVA, SIEMENS, KIRLOSKAR
29	Terminal Blocks	BCH, INDUSTRIAL CONTROL, JAINSON
29	Change Over Switch	L&T, SOCOMEC, SIEMENS, HAGER
30	Bus bar	JINDAL, HINDALCO, CENTURY
31	Sandwich type bus trunking (Risingmain)	LEGRAND / SCHNEIDER / L&T / C&S
32	ATS	ABB / SIEMENS / SOCOMEC / ASCO
33	Chemical Earthing	JEFECOSAFE, ERICO, TEREPLUS
34	GI pipes	JINDAL, TATA, SAIL
35	Copper conductor PVC insulated Wires	KEI, HAVELLS, POLYCAB, RR KABEL, EMPIRE
36	Timers & Contactors to be mounted in DB's	L&T, SIEMENS, SCHNEIDER, HAGER, LEGRAND
37	MV Contactors/Timer/Starters	L&T, SIEMENS, SCHNEIDER, LEGRAND
38	Protective Relays	AREVA, SIEMENS, L&T, ALSTOM, SCHNEIDER
39	kWh Meters (Electronic Digital type)/Multifunction Meter/ Ammeter/ Voltmeter)	CONZERV, SECURE, CAPITAL, L&T
40	Indication Lamps/Push Button	L&T, BCH, GE
41	Ceiling/Exhaust Fans	CROMPTON GREAVES, ORIENT, HAVELLS
42	G.I. Cable Tray	SLOTTCO/ LEGRAND/ OBO / PROFAB/Precision System Control
43	Raceway	LEGRAND, MK, SCHNEIDER, OBO
44	PVC MODULAR DLP TRUNKING	LEGRAND, MK, SCHNEIDER, OBO
45	TV outlet	LEGRAND (ARTEOR), SCHNEIDER (ZENVELO), MK (ELEMENTS), CRABTREE (MURANO) L&T (Englaze)
46	DWC HDPE PIPE	SUPREME, JAIN, KISSAN, GEMINI, SIGNET
47	Poly carbonate Junction Boxes	HENSEL, CLIPSAL, MENEKES

48	Fasteners	HILTI, FISCHER, BOSCH, WUNH
49	Kitchen Chimney	FABER / BOSCH / KAFF

HVAC

S. No.	Material	Manufacturer
	HVAC (HighSide)	
1	Water Cooled Screw Chilling Machine with VSD (AHRI Certified)	TRANE/CARRIER/McQuay/YORK/DUNHAMB USH
2	Cooling Tower	EVAPCO/ADVANCE/BELL/DELTA
3	Variable Speed Chilled Water Secondary & Tertiary / Hot Water Variable Pumping System, Air Separator & Pressurized Expansion Tank	ITT-XYLEM/ ARMSTRONG / GRUNDFOS
4	Suction Guide	ANERGY/ EMERALD/RAPID COOL
5	VFD (for chiller, pumps cooling tower and AHU's)	DANFOSS / ABB /SIEMENS / FUJI
6	MECHANICAL INSTALLATION	
7	Pipes (M.S & G.I) upto 150mm dia.	TATA / JINDAL (HISSAR) / SAIL
8	200mm dia. onwards (wall thickness 6-10 mm)	TATA/JINDAL (HISSAR) / SAIL
9	Resin bonded Fibre glass	UP-TWIGA / OWENS CORNING / KIMMCO
10	Cold sticking compound / Bonding	CPRX COMPOUND OF SHALIMAR TAR
11	Globe valve	AUDCO / L&T / ADVANCE
12	Ball Valves / Gate Valves	AUDCO / L&T / ADVANCE
13	Pressure gauges & Thermometers	ANERGY /H.GURU / FIEBIG
14	Test points	ANERGY
15	Y-strainers/Pot strainer	RAPID CONTROL / EMERALD / ADVANCE
16	Butterfly valves/NRV	AUDCO / L&T / ADVANCE
17	Balancing valves	AUDCO / L&T / ADVANCE
18	Steel fasteners	FISCHER / HILTI
19	Spring Isolator	RESISTOFLEX / DUNLOP / GERB
20	Belt	FENNER (INDIA) LIMITED
21	Neoprene in shear isolators	RESISTOFLEX/ DUNLOP
22	Air vents	ANERGY /FLAMCO / AIRTECH /COMFORT
23	Flexible connections Pipes	RESISTOFLEX/KANWAL
24	Pressure Independent Balancing Cum 2-Way Modulating Control Valve (Single Body)	SIEMENS/HONEYWELL / JOHNSON/ Danfoss / Advance-Pettinaroli
25	Thermostat	SIEMENS/HONEYWELL / JOHNSON
26	Actuator	BELIMO / DANFOS / SIEMENS
27	Supporting Steel	TATA/SAIL/JINDAL
28	Motorized Butterfly Valve	BELIMO /AUDCO / ADVANCE
29	Louvers	CARYAIRE / AIRFLOW / CON AIRE
	ELECTRICALINSTALLATION	
30	Power cables	RR KABEL/ KEI/ POLYCAB/BONTON/EMPIRE
31	Motor Control Centre /LT Switch boards	STERLING GENERATOR, MARINE ELECTRICALS,

	/ Panels	PRECISION SYSTEM CONTROL
32	HRC fuses & fittings	L&T / SIEMENS / GEC ALSTHOM
33	MCCB	SCHNEIDER / SIEMENS / ABB
34	Starters / Relays	L&T / SIEMENS / GE/SCHNEIDER
35	Meters	AUTOMATIC ELECRTIC / KAPPA / CONZERV, SECURE, CAPITAL, L&T, TOHSNIWAL
36	C.T's / P.T's	As per OEM authorised make
37	Protective relays	SIEMENS / ALSTOM/SCHNEIDER/ L&T
38	Glands	COMET / HMI
39	Selector switches	SALZER / KAYCEE /L & T
40	Indication lamps & Push Buttons	BCH / SIEMENS / CONCORD/ L&T
41	G. I. Cable Trays	BEC / SLOTCO/ VENUS / PROFAB
42	Time delay device	SIEMENS / L & T / LK / CONCORD
43	Changeover Switch	HAVELLS /SOCOMAC / L&T
44	Controls cable	LAPP KABEL /SKYTONE / POLYCAB
45	Cable lugs	DOWELL / COMET
46	Selector switches	SIEMENS / ALSTOM
47	Motors	SIEMENS/ CROMPTON/ ABB
48	Air Circuit Breakers	SCHNEIDER /SIEMENS/LEGRAND /L&T/ABB
49	Inline Exhaust Fan	VENTS/GEC/BLOWTECH/ AIRFLOW
50	Single phase preventer	MINILEC
51	Variable frequency drive	DANFOSS/ ABB/SCHNEIDER
52	Propeller Fan	MARATHON/HAVELLS/OSTBERG
	HVAC PIPING	
1	Pipes (M.S & G.I) upto 150mm dia.	TATA / JINDAL (HISSAR) / SAIL
2	200mm dia. onwards (wall	TATA/JINDAL (HISSAR) / SAIL
3	Polyurethane Foam(PUF)	LLOYD/ MALANPUR/ BEARDSSELL
4	Resin bonded fibre glass	UP-TWIGA / OWENS CORNING
5	Cold sticking compound / Bonding	CPRX COMPOUND OF SHALIMAR TAR
6	Globe valve	AUDCO / ADVANCE / L&T
7	Ball Valves / Gate Valves	AUDCO / ADVANCE / L&T
8	Butterfly valves/NRV	AUDCO / ADVANCE / L&T
9	Balancing valves	AUDCO / ADVANCE / L&T
10	Steel fasteners	FISCHER / HILTI
11	Spring Isolator	RESISTOFLEX / DUNLOP / GERB
12	Neoprene in shear isolators	RESISTOFLEX/ DUNLOP
13	Supporting Steel	TATA/SAIL / JINDAL
	HVAC (Lowside)	
1	AHU, TFA units with blowers of NICOTRA, KRUGER, COMEFRI	EDGETECH / ZECO/WAVES
2	AHU fan	KRUGER, NICOTRA, COMFRI, GREENHECK
3	AHU Coils	COMFERI / KRUGER / GREENHECK / WOLTER
4	Globe valve	ADVANCE / L&T / AUDCO
5	Hydronic Hi Wall units	YORK, TRANE, CARRIER, EDGETECH
6	Automatic balancing valve	DANFOS / SIEMENS / ADVANCE
7	Dual plate Check Valve	ADVANCE / L&T / AUDCO

8	Inline Fan	AIRFLOW, CARYAIRE, GREENHECK, KRUGER NICOTRA, PINE AIR OSTBERG
9	Axial, Vane Axial Fans	KRUGER, NICOTRA, COMFRI, AIRFLOW, GREEN HECK.
10	Propeller Fan	GE, KRUGER, CARYAIRE, ALOMONARD
11	PAC Units	STULZ, EMERSON, SCHENEIDER, BLUEBOX, GEA
12	G.I. Sheet for Ducting	TATA, SAIL, JINDAL
13	Prefabricated Ducts	ZECO, ROLASTAR, DUCTOFAB
14	Grills, Diffuser, Dampers, Louvers, Motorized Fire Dampers	Caryaire, Mapro, Ruskin, Dynacraft, Titus, Servex, Pineair, airflow
15	Actuator	SIEMENS, BELIMO, JOHNSON, HONEYWELL
16	Hot Water Generator	KEPL, RAPID COOL, EMERALD
17	Chilled Water Cassettes:	YORK, EDGETECH, TRANE
18	Cooling Coils	EDGETECH, WAVES, ZECO
19	Fan Coil Units	EDGETECH, WAVES, ZECO
20	FDV Unit (Forced Draft Ventilation)	EDGETECH, RCS, ZECO, HUMIDIN
21	Motors	SIEMENS, ABB, KIRLOSKAR, ALSTOM, CROMPTON
22	Balancing Valves	ADVANCE, AUDCO, L&T
23	Butterfly Valves	AUDCO, ADVANCE, L&T VALVES
24	Pre-Insulated Valves	VALTREE, KRISHVT
25	P.I.D. Valves	DANFOSS, OVENTROP, ADVANCE, AUDCO,
26	Ball Valves	ADVANCE, AUDCO, L&T
27	POT, Y-Strainer, Suction Strainer, Airvent	EMERALD, RAPID CONTROL
28	Pipes(MS/GI)	JINDAL HISSAR, TATA, SAIL
29	TDR'S	L&T, BCH
30	Duct & Refrigerant Piping Thermal Insulation (Closed Cell, Cross Linked Elastomeric, Polyethylene Foam)	ARMAFLEX, AEROFLEX, TROCELLEN, K-FLEX
31	Duct Acoustic Lining	UPTWIGA, OWENS CORNING
32	Aluminium Sheets	INDALCO, HINDALCO, BALCO
33	Stem Thermometers (V Grooved)	EMERALD, H. GURU, JAPSIN
34	Duct Hangers	GRIPPLE, MUPRO
35	Digital Thermometer	STAEFA, JOHNSON, SEIMENS, HONEYWELL
36	Pressure Gauges	H. GURU, FIEBEG, MARSH, EMERALD
37	Fire Dampers	RUSKIN, GREENHECK, AIRFLOW, DYNACRAFT
38	Actuator for Fire Damper	SIEMENS, BELIMO
39	Analog Measuring Meters	AE, RISHAB
40	P.U.F. Pipe supports	MALANPURENTECH, MULTIPRODUCTS, BESTPLASTRONICS
41	Bituminous products, Mastics	S.T.P., TIKKI TAR
42	CPRX Compound	SHALIMARPAINTS, ASIAN PAINTS
43	Gate Vales and Globe Valve (Gun Metal, Drain Valve)	ADVANCE, AUDCO, L&T

44	Auto Air Vent With Stop Valve	ANERGY, RAPID CONTROL, EMERALD
45	Fire Resistant Hessian, Canvas	ARCHNACHEMICALS, NAVAIR
46	Rubber Pads, Vibration Isolators	RESISTOFLEX, EMERALD, KANWAL
47	Modulating Valves (3 Way,2 Way)	HONEYWELL, JOHNSON, ANERGY RAPID CONTROL
48	Thermostat and Actuator (2 Way,3 Way Valve)	ANERGY, HONEYWELL, SIEMENS, RAPID CONTROL
49	Energy Meters	SEIMENS, HONEYWELL, ANERGY, SECURE, L&T
50	Flow Switch (Bellow Type)	RAPID CONTROL, ANERGY
51	Air Curtains	MITZVAH, BEACON, SAM, EURONICS
52	Flexible Duct	PINEAIR, CARRYAIR, GPSPIRA
53	Flexible Couplings	KANWAL, RESISTOFLEX, CORI
54	Electrical Starters, Contactors	SIEMENS, L&T, BCH
55	Control Cables Copper Conductor	KEI, HAVELLS, POLYCAB, RR KABEL, EMPIRE
56	L.T. Power Aluminium /Copper Cables (FRLS)	KEI, HAVELLS, POLYCAB, RR KABEL, EMPIRE
57	Panel Boards (Powder Coated) and Control Console	STERLING GENERATOR, MARINE ELECTRICALS, PRECISION SYSTEM CONTROL
58	Filters	THERMODYNE / KLENZOID / PUROLATOR /SPECTRUM
59	ACB Microprocessor	L&T, SIEMENS, SCHNEIDER,ABB,LEGRAND
60	M.C.C.B. with Rotary Handle	L&T, SIEMENS, LEGRAND, SCHNEIDER, ABB
61	Selector Switch	L&T, SIEMENS, G.E, HAVELLS
62	Current Transformer (Cast Resin)	AE, KAPPA, PRECISE
63	Indicating Lamps (LED Type)	SIEMENS, L&T, TELEMECANIQUE
64	Cable Glands	COMMET, GRIPWEL
65	Solder less Lugs	DOWELLS, COMMET
66	Duct Silencers	System air / Caryaire / Zeco
67	CAV / VAV Unit	Cynor / Airflow / Caryaire / Bluebox
68	UL Listed and Certified AHU Mounted UVGI System	Ruks / Trimed / Aeropure
69	Push Button	SIEMENS, L&T, TELEMECANIQUE
70	Capacitors (APP Type)	SIEMENS, L&T, ASIAN, GE
71	Controls	HONEYWELL, STAEFA, RAPIDCONTROL, JOHNSON
72	Motor Protection Circuit Breakers	SIEMENS, L&T, LEGRAND, SCHNEIDER, ABB
73	Copper Wires	KEI, HAVELLS, POLYCAB, RR KABEL, L&T
74	Digital Voltmeter and Ammeter With Selector Switch	ENERCON, L&T, DUCAT
75	Contactors RELAY	L&T, SIEMENS, G.E, SCHNEIDER
76	Thermal OverLoad Relay	L&T, SIEMENS, G.E
77	Single Phasing Preventer	MINILEC, BCH
78	Miniature Circuit Breaker	SIEMENS (BETAGUARD), L&T (AU), SCHNEIDER (ACTI-9)
79	Electrical	
80	Electrical Motor, Motor Starter,	SIEMENS, ABB, CROMPTON, NGEF

	Contactors, Switches	
81	Double skinned AWS / scrubber	WAVE / ZECO / EDGETECH
82	MS DUCT(16 GUAGE)	MODERN ENGG INDUSTRIES, VENTAIR
83	uPVC/PPR drain pipe	Astral, Kisan
84	Drain Pump	Aspen / Blue Diamond/Sauremann
85	Magnehaulic gauge	Dwyer/ Aerosense /Omicron
86	Air Cooled VRV / VRF System	O GENERAL / TOSHIBA / MITSUBISHI
87	Air Cooled Hi Wall Split Unit	O GENERAL / TOSHIBA / MITSUBISHI
88	Fan Coil Unit Copper Connection Set / FCU Link	ATS / OVENTROP / CSI
89	Electrochemical Water Treatment & Disinfection System (For Condenser Water Circuit)	Elgressy / Terragon / ENPAR Technologies
90	Copper Refrigerant Piping	Rajco / Mandev / Shree Shyam
91	Any other item	<i>Must be got approved from Engineer-in-charge before use / procurement</i>

MRL LIFT

S. No.	Material	Manufacturer
1	MRL LIFTS	MITSUBISHI, SCHINDLER, HYUNDAI ELEVATOR, FUJITEC, HITACHI, TOSHIBA, KONE, OTIS
2	Housing Motor	<i>AS PERMANUFACTURER'S STANDARDS; AND MUST BE GOT APPROVED FROM ENGINEER-IN-CHARGE BEFORE USE/ PROCUREMENT</i>
3	Rope	<i>AS PERMANUFACTURER'S STANDARDS; AND MUST BE GOT APPROVED FROM ENGINEER-IN-CHARGE BEFORE USE/ PROCUREMENT</i>

ELECTRICAL SUBSTATION EQUIPMENT

S. No.	Material	Manufacturer
1	ACB	SCHNEIDER (NW) / SIEMENS (3WL) / ABB (E-MAX)/ L&T (U POWER OMEGA)
2	MCCB	SIEMENS-3VL, L&T- D-SINE, SCHNEIDER- NSX, ABB- T-MAX
3	Main LT Panel, APFC / Main Outdoor Feeder Pillar (TTA Type)	ABB (ArTuK) / Schneider electric (PRISMA SET)/ Siemens (SIVACON) /L&T (ENERSIS) or their authorized licensee channel partner from: STERLING GENERATOR, MARINE ELECTRICALS, PRECISION SYSTEM CONTROL
4	Sub distribution boards	STERLING GENERATOR, MARINE ELECTRICALS, PRECISION SYSTEM CONTROL
5	Capacitor	ABB/Schneider/L&T/EPCOS
6	Batteries	EXIDE / PANASONIC/ AMRON
7	Measuring Meters	SCHNEIDER (CONZERV) / C&S / NEPTUNE / L&T
8	Indicating Lamps and Push Buttons	SCHNEIDER / L&T/ / SIEMENS / C&S
9	Control Relays, Contactors, Starters	SCHNEIDER / L&T/ / SIEMENS / C&S
10	CT and PT	SCHNEIDER / GILBERTS & MAXWELL / EPCOS/AE/KAPPA
11	Energy Meters	SCHNEIDER (CONZERV) / C&S/ L&T/SIEMENS
12	Sandwich type Bus duct	SCHNEIDER /L&T/C&S/LEGRAND
13	MCB, RCCB, RCBO, DB	SCHNEIDER / SIEMENS / L&T/ LEGRAND
14	Glands	COMET / HMI / RAYCHEM
15	Selector switches	SALZER / KAYCEE /L & T
16	Cable Trays	PROFAB / SLOTCO /MK / OBO
17	Cable	KEI, HAVELLS, POLYCAB, RR KABEL, EMPIRE
18	Earthing	JMV/ JEF TECHNO SOLUTIONS PVT. LTD. /ERICO/OBO
19	TRANSFORMER (Oil Type)-	SCHNEIDER / CROMPTON GREAVES / ABB/ GE / BHEL
20	HT Panel/VCB	SCHNEIDER / SIEMENS / ABB/PRESISON SYSTEM CONTROL

BIDDER IS REQUESTED TO FOLLOW THE PREFERRED MAKE LIST PACKAGE WISE AS GIVEN BELOW:-

(FIREFIGHTING)

S. No.	Material	Manufacturer
1	M.S Pipes	TATA, JINDAL(HISSAR), SAIL
2	Forged Steel Fittings	SS, MEC(JAINSONS), VS
3	ERW, Butt welded Fittings	MEC (JAINSONS)
4	D.I. Grooved Coupling Fittings	MEC(JAINSONS), VICTAULIC, UNIQ
5	Ball valve	RAPID CONTROL, CIM, SKS, L&T VALVES
6	Butterfly Valve(up to PN16)	AUDCO, ADVANCE, L&T VALVES
7	Butterfly Valve(PN20)	AUDCO, ADVANCE, L&T VALVES
8	Air Release Valve	CASTLE, LEADER, ANERGY
9	C.I Double flanged sluice valves	KIRLOSKAR, AUDCO, ADVANCE, L&T VALVES
10	C.I Double Flanged Non-return Valve	KIRLOSKAR, AUDCO, ADVANCE, L&T VALVES
11	Dual Plate / Wafer Type NonReturnValves(up to PN16)	AUDCO, ADVANCE, L&T VALVES
12	Dual Plate / Wafer Type NonReturnValves(PN20)	AUDCO, ADVANCE, L&T VALVES
13	Fire Extinguishers	GUARDS, LIFEGUARD, MINIMAX, NEWAGE
14	First-aid Hose Reel Drum	GUARDS, LIFEGUARD, MINIMAX, NEWAGE
15	Rubber Hose Reels for Drums	GUARDS, MINIMAX, EVERS SAFE, LIFEGUARD
16	Thermo Plastic Hose Reels for Drums	GUARDS, LIFEGUARD, NEWAGE, EVERS SAFE
17	R.R.L. Hose and C.P. Hose	GUARDS, LIFEGUARD, NEWAGE, EVERS SAFE
18	Branch Pipe, Nozzle, Coupling etc.	GUARDS, LIFEGUARD, NEWAGE, EVERS SAFE
19	Landing Valves	GUARDS, LIFEGUARD, NEWAGE, EVERS SAFE
20	Fire Brigade Connections	GUARDS, LIFEGUARD, NEWAGE, EVERS SAFE
21	Fire Fighting Equipment not covered elsewhere	GUARDS, LIFEGUARD, NEWAGE, EVERS SAFE
22	Hose Box	GUARDS, LIFEGUARD, NEWAGE, EVERS SAFE
23	Sprinklers and Rosette Plates (All Types)	GUARDS, LIFEGUARD, NEWAGE, EVERS SAFE
24	Motors for Fire Pumps	KIRLOSKAR / ABB / CROMPTON GREAVES / SIEMENS / GRUNDFOS
25	Fire Pumps	KIRLOSKAR, MATHER PLATT, WILO, GRUNDFOS

S. No.	Material	Manufacturer
26	Diesel Engine	KIRLOSKAR / GREAVES COTTON /GRUNDFOS /CUMMINS
27	Electrical Switch Gear	SEIMENS, L&T, SCHNEIDER, LEGRAND
28	Cables	KEI, POLYCAB, EMPIRE, HAVELLS, RR KABEL
29	Main Control panel (Power coated)	STERLING GENERATOR, MARINE ELECTRICALS, PRESISON SYSTEM CONTROL
30	Voltmeter &Ammeter	SCHNEIDER, RISHABH, MECCO, CONZERV,SECURE, CAPITAL, L&T
31	Y-Type, Pot, Suction Strainer	KIRLOSKAR, LEADER, FIVALCO TYCO
32	Foot valve with Strainer	KIRLOSKAR, LEADER
33	Pressure Reducing Valves (For FireFighting)	WILKINS, OCV
34	Pre-Fabricated Structural supports and clamps	CHILLY, EASYFLEX, CAMRY
35	Pressure Gauge	FIEBIG, H.GURU, DANFOSS
36	Pipe Coat Material (Pipe Protection)	PYPKOTE, POLYCHEM,CHILLER
37	Dash fasteners	HILTI, FISHER
38	Paint and Primers	ASIAN,JOHNSON NICHOLSON, BERGER
39	Weld. Electrodes	ADVANI, ESSAB, MANGALAM
40	Anti-vibration Pads &suction & delivery flexibleconnectors	EASYFLEX, RESISTOFLEX
41	Nut and Bolt	LAKSHMI,UNBRAKO
42	Gas based Fire suppression system	FIRETRACE / KIDDE / TYCO

(Fire Alarm & PA System)

S. No.	Material	Manufacturer
1	Addressable Fire Alarm Control Panel	NOTIFIER /EDWARDS / SIEMENS / COOPER / BOSCH
2	Repeater Panel	NOTIFIER /EDWARDS / SIEMENS / COOPER / BOSCH
3	Addressable Smoke Detector	NOTIFIER /EDWARDS / SIEMENS / COOPER / BOSCH
4	Short Circuit Isolator	NOTIFIER /EDWARDS / SIEMENS / COOPER / BOSCH
5	Addressable Control Module	NOTIFIER /EDWARDS / SIEMENS / COOPER / BOSCH
6	Addressable Input Module	NOTIFIER /EDWARDS / SIEMENS / COOPER / BOSCH
7	Addressable Manual Call Point	NOTIFIER /EDWARDS / SIEMENS / COOPER / BOSCH
8	Sounder with relay Module	NOTIFIER /EDWARDS / SIEMENS / COOPER / BOSCH

LIST OF APPROVED / PREFERRED MAKES FOR PA SYSTEM

Sl. No.	Item Description	Approved Brand/Manufacturers
1	Speakers	ASL/ BOSCH /BOSE
2	Amplifier	ASL/ BOSCH / BOSE
3	Music & FM radio player	PHILIPS/ SONY / LG
4	FRLS PVC insulated Multi strand flexible copper wires	POLYCAB / RR KABEL / L&T / HAVELLS / EMPIRE

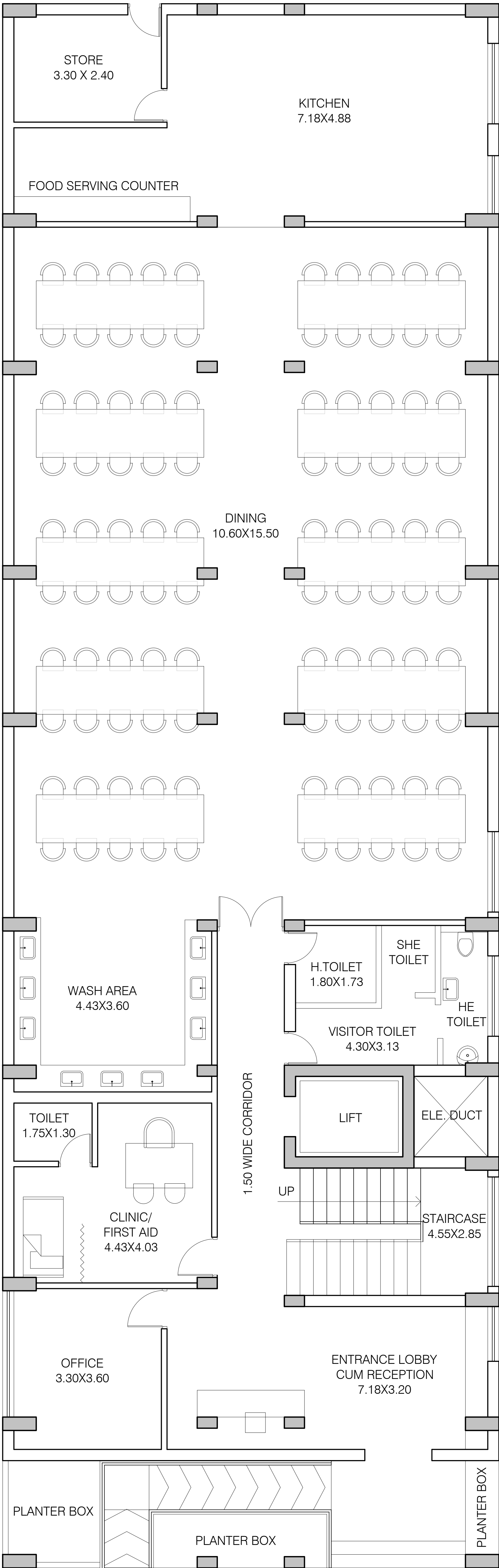
(UPS SYSTEM)

S. No.	Material	Manufacturer
1	UPS	EMERSION, NUMERIC, SCHNEIDER, HITACHI
2	BATTERIES	EXIDE, AMRON, PANASONIC
3	INVERTER	LUMINOUS, MICROTEK, SU-KAM, SERVOTECH POWER SYSTEMS, UTL SOLAR

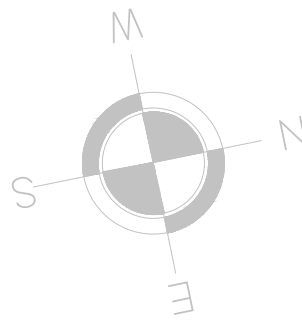
(CCTVSYSTEM)

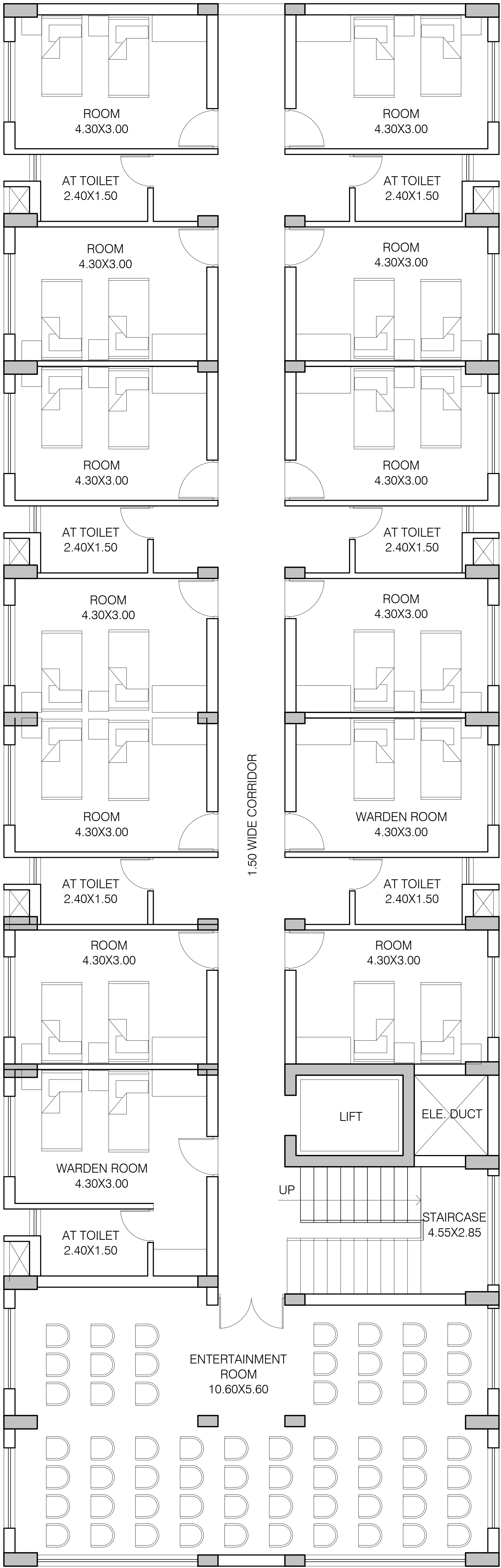
S. No.	Material	Manufacturer
1	Cameras – Dome / Bullet / PTZ	SONY, BOSCH, AXIS COMMUNICATION, AVIGILON, MOBOTIX
2	Video Management, Recording, Analytics and Failover Server	Dell, HP, Cisco
3	CCTV Client Workstation	Dell, HP, IBM
4	Video Storage – 900 TB usable	Dell, HP, Cisco
5	FRP Junction boxes	MK, HENSEL, MENEKKES
6	CAT6 / CAT 6A / CAT 6E / Cable,I/Os for CAT6	COMMSCOPE, MOLE X, PANDUIT

SECTION-I :- OLD AGE HOME FOR ELDERLY BLIND PERSONS AT, UNIT-III, BHUBANESWAR-BLOCK-A

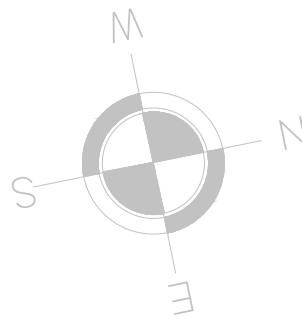


GROUND FLOOR
BUILT UP AREA= 392 SQM



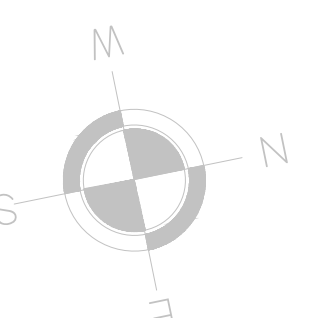


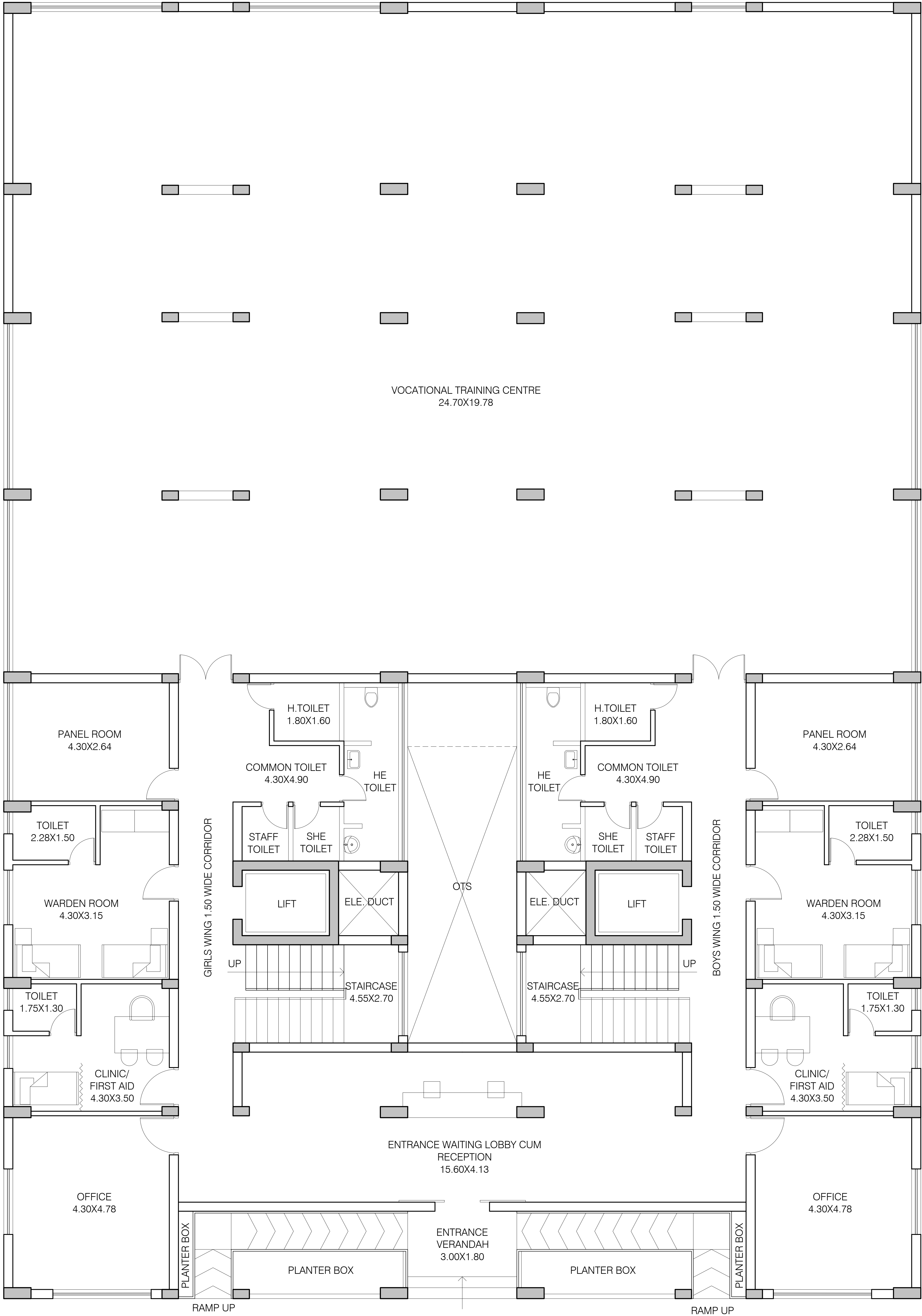
FIRST FLOOR PLAN
BUILT UP AREA= 392 SQM



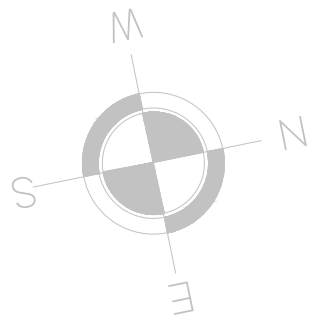


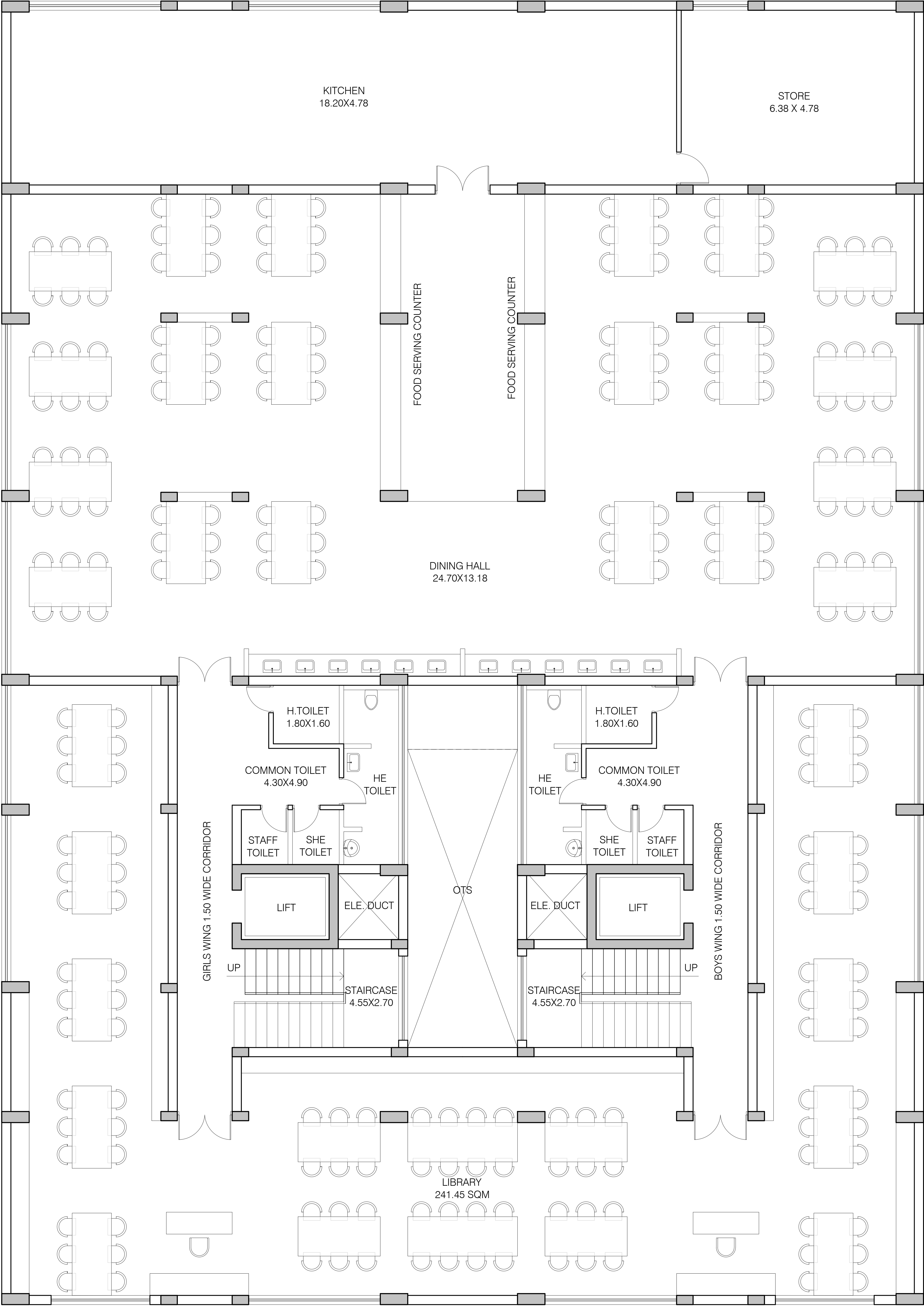
TYPICAL FLOOR PLAN (2nd, 3rd & 4th)
BUILT UP AREA= 392 SQM



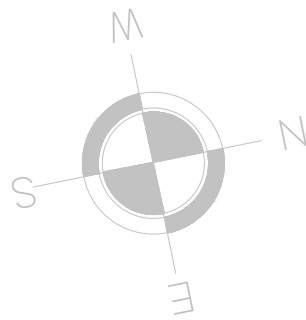


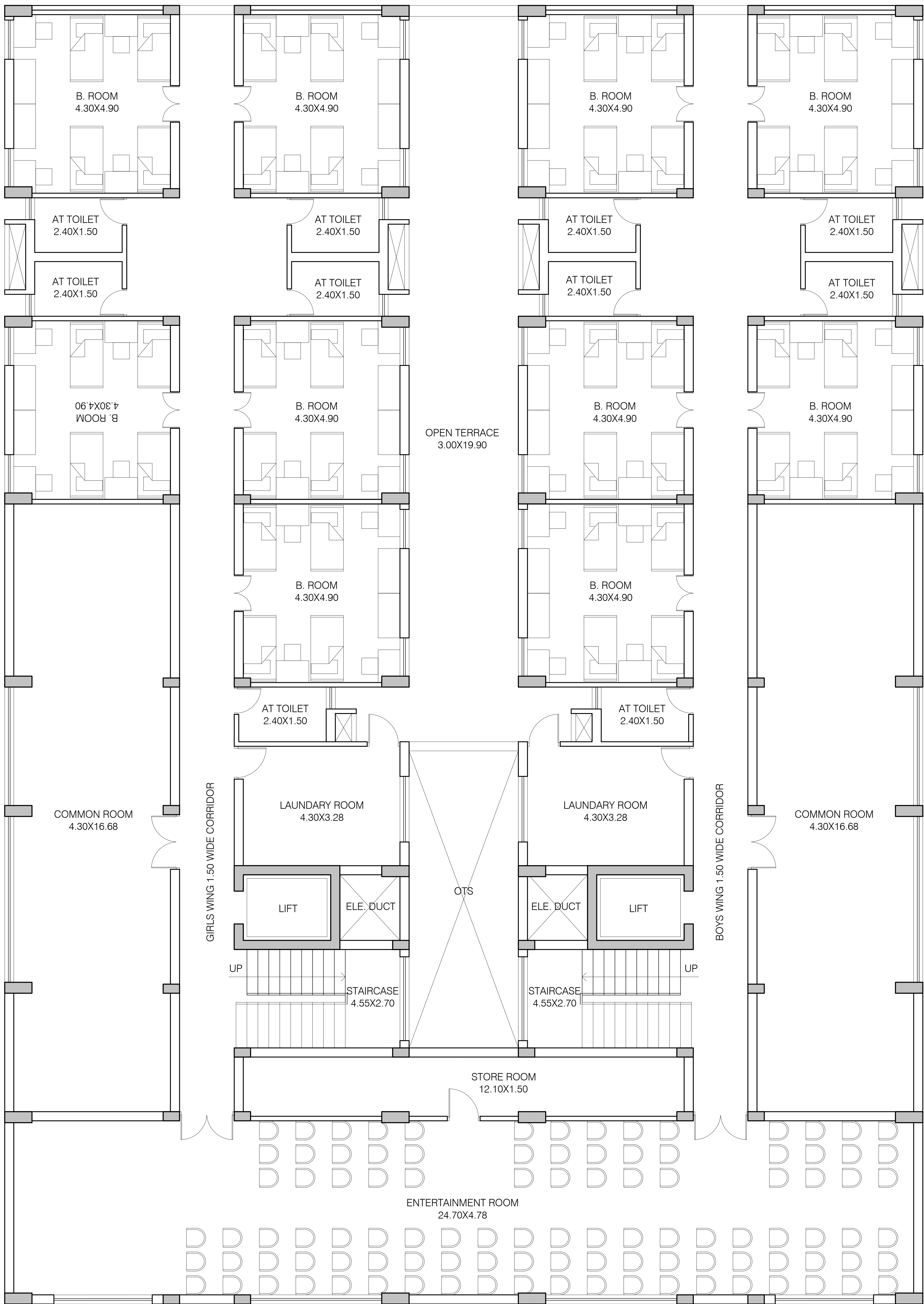
GROUND FLOOR PLAN
BUILT UP AREA=868.03 SQM



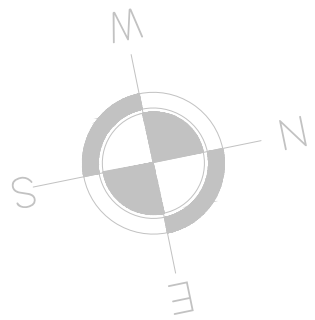


FIRST FLOOR PLAN
BUILT UP AREA=868.03 SQM





SECOND FLOOR PLAN
BUILT UP AREA=873.28 SQM





THIRD & FOURTH FLOOR PLAN
BUILT UP AREA=821.46 SQM

SECTION 8

Form of Quotation

Quotation for Construction of 120 bedded Old Age Home –BLOCK-A & 200 bedded Hostel (100 boys & 100 girls) –BLOCK-B for blind people at Unit-III, Bhubaneswar, Odisha

To,

The Executive Director (INFS-II)WAPCOS Ltd.
76-C, Institutional Area, Sector- 18
Gurgaon, Haryana – 122 015.
Tel – 0124-2399431 / 2399427
Fax No. 2397392

I/We the undersigned, having carefully examined and understood the documents on which quotation to be based, hereby agree to carry out the aforesaid construction for the following work on item rate basis described in the Scheduled of work, in conformity with the specifications and terms and condition as specified in the document. Total price for carrying out the work "Construction of 120 bedded Old Age Home –BLOCK-A & 200 bedded Hostel (100 boys & 100 girls) –BLOCK-B for blind people at Unit-III, Bhubaneswar"

Rupees _____
(Amount in Words and Figures)

This price will remain valid for 120 (One hundred and twenty) days from the date of submission of bid. Unless and until a formal contract is prepared and executed, this quotation, together with your acceptance thereof, shall constitute a binding contract between us.

I/We undersigned, that you are not bound to accept the lowest or any quotation you may receive.
Signed this _____ day _____ 2024

Signature and seal of bidder or Authorized representative

Name of firm :
Address of firm :
Telephone No. :
Fax No. :
E-mail :

ABSTRACT COST

SECTION-I :- OLD AGE HOME FOR ELDERLY BLIND PERSONS AT, UNIT-III, BHUBANESWAR-BLOCK-A

Sl.No.	Description of Works	Amount in Rs.
A. CIVIL WORKS.		
1	OLD AGE BUILDING.	127405075.00
2	ROAD, PATHWAY & PARKING.	1600998.00
3	BOUNDARY WALL.	1436936.00
4	GARDEN & PLANTATION.	443239.00
5	DRAINAGE SYSTEM.	1241427.00
6	SITE DEVELOPMENT.	477499.00
	Sub Total (A) Rs.	132605174.00
B.	P.H. WORKS. Internal & External P.H & Sanitary work.	14645748.00
	Sub Total (B) Rs.	14645748.00
C.	Electrical and Fire Fighting work	36873691.00
	Sub Total (C) Rs.	36873691.00
	TOTAL = (A+B+C)	184124613.00

SECTION -II:- HOSTEL FOR BLIND STUDENTS AT, UNIT-III, BHUBANESWAR-BLOCK-B

A. CIVIL WORKS.		
1	HOSTEL BUILDING.	139814939.00
2	ROAD, PATHWAY & PARKING.	2632291.00
3	BOUNDARY WALL.	2394608.00
4	GARDEN & PLANTATION.	920240.00
5	DRAINAGE SYSTEM.	1796431.00
6	SITE DEVELOPMENT.	1014685.00
	Sub Total-A Rs.	148573194.00
B.	P.H. WORKS. Internal & External P.H & Sanitary work.	13414863.00
	Sub Total-B Rs.	13414863.00
C.	Electrical and Fire Fighting work	26172736.00
	Sub Total-C Rs.	26172736.00
	TOTAL = (A+B+C)	188160793.00
	Sub Total Estimated Cost (Section-I & II)	372285406.00

Do not fill the summary of cost (BOQ) at the time of submission of technical bid.

Date

Signature of bidder

Place

Name & Stamp

SECTION-I :- CONSTRUCTION OF 120 BEDDED OLD AGE HOME FOR ELDERLY BLIND PERSONS AT, UNIT-III, BHUBANESWAR-BLOCK-A													
	GROUND Floor			Length			Width			Height			Rate
Sl. No	Description of the work	Nos		In Mtr.		In Mtr.		In Mtr.		Quantity	Unit	In Rs.	Amount In Rs.
1	Earthwork in excavation in all types of soil for site leveling, foundation, pits, trenches and other civil works upto and including 1.5metre depth and stacking the soil upto a lead of 100 metre and including dewatering, removing slush, shoring and strutting (as required), complete as per specification and as directed by the Engineer-In-Charge.												
	Raft Foundation(Block- A)	1	X	13.200	X	37.470	X	1.500	=	741.906			
	Raft Foundation(Block -B)	1	X	27.500	X	37.600	X	1.500	=	1551.000			
								Total	=	2292.906	Cum	232.30	532642.06
2	Extra earth excavation in lift or 1.5m or part there of over the initial lift of 1.5m in all kinds of embankments and road works and ordinary earth work in general.												
	Raft Foundation(Block-A)	1	X	13.200	X	37.470	X	0.500	=	247.302			
		1	X	2.900	X	2.300	X	0.500	=	3.335			
	Raft Foundation(Block-B)	1	X	27.500	X	37.600	X	0.500	=	517.000			
		2	X	2.900	X	2.300	X	0.500	=	6.670			
								Total	=	774.307	Cum	249.06	192851.22
3	Filling at all depth with available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 15cm in depth: consolidating each deposited layer by ramming and watering complete (lead upto 100m) as directed by the Engineer-In-charge.												
		1	X	3067.213	X	vol.	X	0.670	=	2055.033			
								Total	=	2055.033	Cum	129.07	265240.55
4	Supplying and filling sand in foundation and over areas including watering, ramming, consolidating and dressing, labours, tools, taxes etc. all complete as per the specification and direction of Engineer-In-charge.												
	Raft Foundation(Block-A)	1	X	13.200	X	37.470	X	0.300	=	148.381			
	Raft Foundation(Block-B)	1	X	27.500	X	37.600	X	0.300	=	310.200			
	Plinth inside	1	X	394.000	X	area	X	0.600	=	236.400			
								Total	=	694.981	Cum	1439.58	1000479.31
5	Diluting and injecting chemical emulsion (to be supplied free of cost at site of work) for PRE CONSTRUCTIONAL Anti-termite treatment and creating a continuous chemical barrier under and all-round the column pits, wall trenches, basement excavation, top perimeter of building, expansion joints, over the top surface of consolidated earth on which apron is to be laid, surroundings of pipes and conduits etc. complete as per specifications (plinth area of the building at ground floor only shall be measured for payment).												
		1		394.000	X	area	X		=	394.000			
								Total	=	394.000	Sqm	104.50	41173.00
6	Providing and laying plain cement concrete 1:3:6 (1 cement : 3 sand : 6 stone aggregate 40mm nominal size) as levelling course in foundation and plinth etc. including tempering, curing, shuttering etc. complete all depth and height.												
	Raft Foundation(Block-A)	1	X	13.200	X	37.470	X	0.300	=	148.381			
	Raft Foundation(Block-B)	1	X	27.500	X	37.600	X	0.300	=	310.200			
	Floor P.C.C.	1	X	396.000	X	1.000	X	0.150	=	59.400			
								Total	=	517.981	Cum	6514.53	3374404.07
7	First class Fly ash Brick masonry using bricks of size 25cm. x 12 cm. x 8 cm. having crushing strength not less than 75 kg. Per. Sqr. Cm. in cement mortar of mix(1:6) with ordinary Portland slag cement(PSC) and screened & washed sand for mortar after immersing the bricks for 6 (Six) hours in water before use in Foundation & Plinth including splays cutting, circular moulding, corbelling, chamfering and similar such type of works, watering and curing etc. including cost, conveyance, loading, unloading, royalties and taxes of all materials, cost of all labour, scaffolding, sundries, T&P required for the works etc. complete in all respect as directed by the Engineer-In-Charge.												
	Peripheral wall	1	X	92.000	X	0.500	X	0.300	=	13.800			
		1	X	92.000	X	0.375	X	0.500	=	17.250			
		1	X	92.000	X	0.250	X	0.750	=	17.250			
								Total	=	48.300	Cum	5981.19	288891.42
8	First class Fly ash Brick masonry using bricks of size 25cm. x 12 cm. x 8 cm. having crushing strength not less than 75 kg. Per. Sqr. Cm. in cement mortar of mix (1:6) with ordinary Portland slag cement(PSC) and screened & washed sand for mortar after immersing the bricks for 6 (Six) hours in water before use in Super structure including splays cutting, circular moulding, corbelling, chamfering and similar such type of works, watering and curing etc. including cost, conveyance, loading, unloading, royalties and taxes of all materials, cost of all labour, scaffolding, sundries, T&P required for the works etc. complete in all respect as directed by the Engineer-In-Charge.												
	X-AXIS	2	X	10.500	X	0.250	X	2.700	=	14.175			
		4	X	4.500	X	0.250	X	2.700	=	12.150			
		2	X	1.600	X	0.250	X	2.700	=	2.160			
	y-AXIS	2	X	32.900	X	0.250	X	2.700	=	44.415			
		2	X	13.150	X	0.250	X	2.700	=	17.753			
		1	X	6.000	X	0.250	X	2.700	=	4.050			
	Deduction :-	-1	X	1.800	X	0.250	X	2.100	=	-0.945			
		-3	X	1.500	X	0.250	X	2.100	=	-2.363			
		-2	X	0.900	X	0.250	X	2.100	=	-0.945			
		-12	X	1.800	X	0.250	X	1.350	=	-7.290			
		-1	X	7.000	X	0.250	X	1.350	=	-2.363			
		-1	X	2.450	X	0.250	X	1.350	=	-0.827			
								Total	=	79.971	Cum	6015.72	481080.89
9	First class Fly ash Brick masonry using bricks of size 23cm. x 12 cm. x 8 cm. having crushing strength not less than 75 kg. Per. Sqr. Cm. in cement mortar of mix (1:4) with ordinary Portland slag cement(PSC) and screened & washed sand for mortar after immersing the bricks for 6 (Six) hours in water before use in Super structure including splays cutting, circular moulding, corbelling, chamfering and similar such type of works, watering and curing etc. including cost, conveyance, loading, unloading, royalties and taxes of all materials, cost of all labour, scaffolding, sundries, T&P required for the works etc. complete in all respect as directed by the Engineer-In-Charge.												
	item	2	X	5.000	X	0.125	X	2.100	=	2.625			
								Total	=	2.625	Cum	6298.34	16533.15

GROUND Floor				Length		Width		Height				Rate	Amount
Sl. No	Description of the work	Nos		In Mtr.	In Mtr.	In Mtr.	Quantity	Unit	In Rs.			In Rs.	
10	Providing, lifting, hoisting and laying Reinforced cement concrete of M-25 grade as per approved designs and drawings having a minimum compressive strength (in work test) 25 Kg. / Square cm. in 15 cm. cubes at 28 days after mixing and test conducted in accordance with I.S. 516 using 12 mm. to 20 mm. size black hard crushed broken granite stone chips and screened and washed sharp sand for mortar of approved quality from approved quarry, washed and cleaned (20mm. size chips not to exceeds 25 %) to be mixed in concrete mixture with Portland slag cement (PSC) including hoisting, lowering, laying and compaction concrete by using vibrators, watering and curing for 28 days, centering and shuttering then after dismantling and removing debris from the work site and finishing the exposed surface smooth providing grooves or beads wherever necessary including cost, conveyance, loading, unloading, royalties and taxes of all materials and cost of all labours, sundries, T & P required of the work etc. complete in all respect as directed by the Engineer-in-Charge. But excluding cost and conveyance of M.S. rods or Tor steel and binding wires and labour charges for straightening, cutting, bending etc. of M.S. rods or tor steel tying the grills and placing in proper position.												
	a) Footing												
	Raft Foundation(Block-A)	1	X	12.900	X	37.170	X	1.500	=	719.240			
	Raft Foundation(Block-B)	1	X	27.200	X	37.300	X	1.500	=	1521.840			
							Total	=	2241.080	Cum	8010.26	17951640.08	
	b) Columns.												
	Col up to PL Lvl.												
	C1	17	X	0.300	X	0.750	X	2.000	=	7.650			
	C2	0	X	0.300	X	0.000	X	2.000	=	0.000			
	Lift	2	X	3.000	X	0.250	X	2.000	=	3.000			
		2	X	2.300	X	0.250	X	2.000	=	2.300			
	Col up to Top Lvl.												
	C1	17	X	0.300	X	0.750	X	3.150	=	12.049			
	C2	0	X	0.300	X	0.000	X	3.150	=	0.000			
	Lift	2	X	3.000	X	0.250	X	3.150	=	4.725			
		2	X	2.300	X	0.250	X	3.150	=	3.623			
							Total	=	33.346	Cum	15856.57	528757.01	
	c) Plinth Beams												
	X-AXIS	8	X	10.600	X	0.250	X	0.500	=	10.600			
		4	X	4.550	X	0.250	X	0.500	=	2.275			
		2	X	1.600	X	0.250	X	0.500	=	0.400			
	y-AXIS	4	X	32.900	X	0.250	X	0.500	=	16.450			
		2	X	13.150	X	0.250	X	0.500	=	3.288			
		1	X	6.000	X	0.250	X	0.500	=	0.750			
							Total	=	33.763	Cum	8835.00	298291.75	
	d) Lintel beam .												
	X-AXIS	2	X	10.600	X	0.250	X	0.150	=	0.795			
		4	X	4.550	X	0.250	X	0.150	=	0.683			
		2	X	1.600	X	0.250	X	0.150	=	0.120			
	y-AXIS	2	X	32.900	X	0.250	X	0.150	=	2.468			
		2	X	13.150	X	0.250	X	0.150	=	0.986			
		1	X	6.000	X	0.250	X	0.150	=	0.225			
							Total	=	5.276	Cum	15102.15	79682.70	
	e) Roof Beams.												
	X-AXIS	8	X	10.600	X	0.250	X	0.600	=	12.720			
		4	X	4.550	X	0.250	X	0.600	=	2.730			
		2	X	1.600	X	0.250	X	0.600	=	0.480			
	y-AXIS	4	X	32.900	X	0.250	X	0.600	=	19.740			
		2	X	13.150	X	0.250	X	0.600	=	3.945			
		1	X	6.000	X	0.250	X	0.600	=	0.900			
							Total	=	40.515	Cum	15856.57	642428.77	
	f) RCC Slab .												
	Slab area	1	X	394.000	X	area	X	0.150	=	59.100			
							Total	=	59.100	Cum	14461.02	854646.34	
	g) Staircase												
	Landing	1	X	1.500	X	2.850	X	0.150	=	0.641			
	Waste Slab	1	X	6.500	X	1.250	X	0.150	=	1.219			
	Beam	1	X	2.850	X	0.250	X	0.450	=	0.321			
	Steps	20	X	1.250	X	0.300	X	0.150	=	1.125			
							Total	=	3.306	Cum	15799.22	52226.28	
	TOTAL R.C.C QNTY.							2416.385	Cum				
11	Supplying, straightening, cutting, bending, placing in position and binding reinforcement steel work in RCC/reinforced brick works as per drawing and specification including preparation of respective bar bending schedule and binding (Binding wire to be used as per the IS code) etc. all complete as per direction of Engineer-in-charge Cold Twisted bars, Thermo-Mechanically-treated bars.												
					Kg/Cum								
	a) Footing & Pedestal	1	x	719.240	x	180.000		=	129463.110				
	a) Footing & Pedestal	1	x	1521.840	x	180.000		=	273931.200				
	b) Column	1	x	33.346	x	176.000		=	5868.940				
	c) Plinth Beam	1	x	33.763	x	150.000		=	5064.375				
	d) Lintel	1	x	5.276	x	123.000		=	648.979				
	e) Roof beam	1	x	40.515	x	176.000		=	7130.640				
	f) Roof Slab	1	x	59.100	x	180.000		=	10638.000				
	g)Staircase	1	x	3.306	x	150.000		=	495.844				
							Total	=	433241.088	Kg			
							Total	=	4332.411	Qntl.	9743.85	42214342.96	

GROUND Floor				Length	Width	Height			Rate	Amount
Sl. No	Description of the work	Nos		In Mtr.	In Mtr.	In Mtr.	Quantity	Unit	In Rs.	In Rs.
12	12mm cement plaster on external RCC/brick surfaces in cement plaster 1:6 (1 cement : 6 coarse sand) including necessary scaffolding, curing etc. all complete at all floors and all heights.									
	External wall									
	Peripheral wall	1	X	92.000	X	X	1.000	=	92.000	
	X-AXIS	2	X	10.500	X	X	3.150	=	66.150	
		4	X	4.500	X	X	3.150	=	56.700	
		2	X	1.600	X	X	3.150	=	10.080	
	y-AXIS	2	X	32.500	X	X	3.150	=	204.750	
		2	X	13.150	X	X	3.150	=	82.845	
		1	X	6.000	X	X	3.150	=	18.900	
	Deduction :-	-0.5	X	1.800	X	X	2.100	=	-1.890	
		-1.5	X	1.500	X	X	2.100	=	-4.725	
		-1	X	1.200	X	X	2.100	=	-2.520	
		-7	X	1.800	X	X	1.350	=	-17.010	
		-0.5	X	7.000	X	X	1.350	=	-4.725	
		-0.5	X	2.450	X	X	1.350	=	-1.654	
	item	2	X	5.000	X	X	2.100	=	21.000	
							Total	=	519.901	Sqm 172.87 89875.33
13	16mm cement plaster on internal smooth side of RCC/brick surfaces with cement mortar of mix 1:6 (1 cement : 6 fine sand) including necessary scaffolding, curing etc. all complete at all floors and all heights.									
	Internal wall									
	X-AXIS	2	X	10.500	X	X	3.000	=	63.000	
		4	X	4.500	X	X	3.000	=	54.000	
		2	X	1.600	X	X	3.000	=	9.600	
	y-AXIS	2	X	32.500	X	X	3.000	=	195.000	
		2	X	13.150	X	X	3.000	=	78.900	
		1	X	6.000	X	X	3.000	=	18.000	
	Deduction :-	-0.5	X	1.800	X	X	2.100	=	-1.890	
		-1.5	X	1.500	X	X	2.100	=	-4.725	
		-1	X	1.200	X	X	2.100	=	-2.520	
		-7	X	1.800	X	X	1.350	=	-17.010	
		-0.5	X	7.000	X	X	1.350	=	-4.725	
		-0.5	X	2.450	X	X	1.350	=	-1.654	
	item	2	X	5.000	X	X	2.100	=	21.000	
							Total	=	406.976	Sqm 243.29 99012.79
14	6 mm cement plaster on RCC surfaces at ceiling/slab soffit and other locations with cement mortar of mix 1:4 (1 cement : 4 fine sand) including necessary scaffolding, curing etc. all complete at all floors and all heights.									
	Slab area	1	X	394.000	X	area	X	=	394.000	
							Total	=	394.000	sqm 184.07 72521.99
15	Providing and fixing 20mm thick Granite stone flooring (sample of Granite stone should be approved by Engineer-In-Charge) for stair case trade, riser and similar locations where ever required in horizontal/vertical surfaces of required size of approved shade, colour and texture, with moulding edge & approved groove pattern etc. laid over 20mm thick bed of cement mortar 1:4 (1 cement: 4 coarse sand) with joints treated with white cement mixed with matching pigment, epoxy touch ups including rubbing, curing, moulding and polishing to give high gloss finish etc. complete as per direction of Engineer-in-charge. In all floors and all heights.									
	Ramp	1	X	9.000	X	1.500	X	=	13.500	
	Verandah	1	X	3.000	X	1.800	X	=	5.400	
	Lift Front	1	X	2.500	X	3.000	X	=	7.500	
	Tread	19	X	1.250	X	0.300	X	=	7.125	
		21	X	1.250	X	0.150	X	=	3.938	
	wash	1	X	10.000	X	0.750	X	=	7.500	
							Total	=	44.963	Sqm 2848.10 128057.70
16	Providing and laying Vitrified floor tiles 600x600 mm (thickness to be specified by the manufacturer) 1st quality conforming to IS: 15622 of NITCO, SOMANY, ASIAN, KAJARIA or equivalent approved make, colours & shades, except white, ivory, grey, fume red brown, laid on 20 mm thick cement mortar 1:4 (1cement: 4coarse sand) including pointing the joints with white cement and matching pigments, etc. complete as per direction of EIC at all floors and all heights.									
	Office	1	X	11.300	X	6.050	X	=	68.365	
	Receiption	1	X	6.100	X	3.650	X	=	22.265	
	Staircase room	1	X	11.300	X	2.850	X	=	32.205	
	library	1	X	15.130	X	4.300	X	=	65.059	
	E.Room	1	X	4.300	X	17.640	X	=	75.852	
	Corridor	1	X	18.000	X	1.500	X	=	27.000	
	Hall	1	X	15.150	X	10.500	X	=	159.075	
							Total	=	449.821	Sqm 1353.37 608772.65
17	Providing and laying Vitrified skirting tiles 600x600 mm (thickness to be specified by the manufacturer) 1st quality conforming to IS: 15622 of NITCO, SOMANY, ASIAN, KAJARIA or equivalent approved make, colours & shades, except white, ivory, grey, fume red brown, laid on 12 mm thick cement mortar 1:3 (1cement: 3coarse sand) including pointing the joints with white cement and matching pigments, etc. complete as per direction of EIC at all floors and all heights.									
	Office	1	X	34.700	X	0.150	X	=	5.205	
	Receiption	1	X	19.500	X	0.150	X	=	2.925	
	Staircase room	1	X	28.300	X	0.150	X	=	4.245	
	llbrary	1	X	38.860	X	0.150	X	=	5.829	
	E.Room	1	X	43.880	X	0.150	X	=	6.582	
	Corridor	1	X	39.000	X	0.150	X	=	5.850	
	Hall	1	X	51.300	X	0.150	X	=	7.695	
							Total	=	38.331	Sqm 1270.59 48703.00

GROUND Floor				Length		Width		Height				Rate	Amount
Sl. No	Description of the work	Nos		In Mtr.		In Mtr.		In Mtr.		Quantity	Unit	In Rs.	In Rs.
18	Providing and fixing 1st quality Ceramic glazed wall tiles conforming to IS : 15622 (thickness to be specified by the manufacturer) minimum thickness 5mm of NITCO, SOMANY, ASIAN, KAJARIA or equivalent approved make in all colours, shades except burgundy, bottle green, black of size 300x600 in skirting and dados over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3 kg per sqm including pointing in white cement mixed with pigment of matching shade complete as per direction of Engineer-In-Charge. In all floors and all heights.												
	Office	1	X	34.700	X	1.500	X		=	52.050			
	Reception	1	X	19.500	X	1.500	X		=	29.250			
	Staircase room	1	X	28.300	X	1.500	X		=	42.450			
	Library	1	X	38.860	X	1.500	X		=	58.290			
	E.Room	1	X	43.880	X	1.500	X		=	65.820			
	Corridor	1	X	39.000	X	1.500	X		=	58.500			
	Hall	1	X	51.300	X	1.500	X		=	76.950			
								Total	=	383.310	Sqm	1017.02	389835.15
19	Providing and fixing of factory made Fenesta or equivalent UPVC sliding Window/Ventilator (colour or approved) complete with U value=1.9-1.3 W/m 2k, flame resistance, self extinguishing, lead free comprising UPVC multi chambered frame having in built UPVC roller track on top and UPVC sash with wall thickness of 2.3mm duly reinforced with G.I section 2.6 mm where ever required. All corners of frame and sash will be fusion welded. After placing 12.5mm laminate glass (6mm clear toughened +1.5 pvg laminate+5mm clear glass) Annealed glass in the sash, with support of hurricane bar for high wind support. uPVC glazing bead, interlock, EPDM gasket brush shall be provided including multi lock and rollers & proper drainage system shall be provided. window frame will be fixed to the wall with 100mm long and 8mm dia. Fasteners and after fixing the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of required size, of approved quality complete in all respect as per approved drawing & direction of the Engineer -In-Charge. Note:- Profile Manufacturer & window manufacturer, installation of windows must be done through Manufacturing company, and then only Manufacturer warranty is acceptable)												
		14	X	1.800	X		X	1.350	=	34.020			
		1	X	7.000	X		X	1.350	=	9.450			
		1	X	2.450	X		X	1.350	=	3.308			
								Total	=	46.778	Sqm	8500.00	397608.75
20	Providing and fixing of factory made Fenesta or equivalent UPVC sliding Door (colour or approved) complete with U value=1.9-1.3 W/m 2k, flame resistance, self extinguishing, lead free comprising UPVC multi chambered frame having in built UPVC roller track on top and UPVC sash with wall thickness of 2.3mm duly reinforced with G.I section 2.6 mm where ever required. All corners of frame and sash will be fusion welded. After placing 12.5mm laminate glass (6mm clear toughened +1.5 pvg laminate+5mm clear glass) Annealed glass in the sash, with support of hurricane bar for high wind support. uPVC glazing bead, interlock, EPDM gasket brush shall be provided including multi lock and rollers & proper drainage system shall be provided. window frame will be fixed to the wall with 100mm long and 8mm dia. Fasteners and after fixing the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of required size, of approved quality complete in all respect as per approved drawing & direction of the Engineer -In-Charge. Note:- Profile Manufacturer & window												
		1	X	1.800	X	2.100	X		=	3.780			
								Total	=	3.780	Sqm	10500.00	39690.00
21	Providing and fixing seasoned sal wood work in frames at any locations including doors, windows, cupboard, clerestory and other frames fixing in position including cost of hinges, M.S. flat (30mm x 6mm) hold fasts lugs or dash fasteners of required dia and length as per drawing / specification, at all floors and all heights.												
		3	X	5.400	X	0.125	X	0.075	=	0.152			
		2	X	5.700	X	0.125	X	0.075	=	0.107			
								Total	=	0.259	Cum	100794.60	26080.60
22	Providing, fitting and fixing of approved make 32mm thick (laminate finished thickness of the door) factory made flush doors of the followings size, outside finished with 1mm thk. laminate of approved colour & shade and inside of the Room finished with 4mm thick veneer with melamine polish of approved make, colour & shade fixed to the teak wood bidding, complete in all respect bidding/lipping as per drawing/design. The door will be provided with all necessary fittings & fixtures, i.e. hinges, door stopper, door buffer etc. of Godrej of equivalent approved make with all materials, labour, T&P, taxes etc. as per direction of Architect/Engineer-in-Charge at all floors and all heights.												
		3	X	1.500	X		X	2.100	=	9.450			
		2	X	1.200	X		X	2.100	=	5.040			
								Total	=	14.490	Sqm	10668.61	154588.16
23	Providing and fixing M.S grill of required patterns for windows/verandahs etc. with M.S flats, square or round bars etc. including applying a coat of approved steel primer and two or more coats of synthetic enamel paint of approved make & shade, all complete as per drawing & specification. (All steel sections contractor's own supply).												
		14	X	1.800	X	27.000	X	1.350	=	918.540			
		1	X	7.000	X	27.000	X	1.350	=	255.150			
		1	X	2.450	X	27.000	X	1.350	=	89.303			
								Total	=	1262.993	Kg.	68.73	86804.91
24	Providing & Applying priming one coat with Cement primer of approved brand and manufacture on plaster surface as per the instruction of Engineer-In-Charge at all elevations including all material & labour complete.												
	External area	1	X	519.901	X	area			=	519.901			
	Internal area	1	X	406.976	X	area			=	406.976			
	Ceilling area	1	X	394.000	X	area			=	394.000			
								Total	=	1320.878	Sqm	68.53	90519.74
25	Providing and applying to outside walls with two or more coats of Anti-Fungal Weather coat water proofing paint including scaffolding and cleaning the surface before application of approved colour and manufacture as per specification, instruction of Engineer-In-charge at all elevations including all material labour complete.												
	External area	1	X	519.901	X	area			=	519.901			
								Total	=	519.901	Sqm	82.02	42641.50
26	Preparing surface and painting at all height with two or more coats of interior Plastic Emulsion "Royale Shyne" of Asian Paints or equivalent of approved shade as per the instructions of the manufacturers; giving uniform shade etc in all heights of walls etc. including interior wall primer & providing scaffolding, cleaning, curing and supply of all materials and labour complete as per drawing, design and direction of Architect/Engineer-In-Charge.												
	Internal area	1	X	406.976	X	area			=	406.976			
	Ceilling area	1	X	394.000	X	area			=	394.000			

	GROUND Floor			Length	Width	Height			Rate	Amount
Sl. No	Description of the work	Nos		In Mtr.	In Mtr.	In Mtr.	Quantity	Unit	In Rs.	In Rs.
						Total =	800.976	Sqm	93.90	75211.67

[illegible]

ESTIMATE FOR THE WORK :- CONSTRUCTION OF 120 BEDDED OLD AGE HOME FOR ELDERLY BLIND PERSONS AT, UNIT-III, BHUBANESWAR-BLOCK-A														
	FIRST Floor			Length		Width		Height				Rate	Amount	
Sl. No	Description of the work	Nos		In Mtr.		In Mtr.		In Mtr.		Quantity	Unit	In Rs.	In Rs.	
33	First class Fly ash Brick masonry using bricks of size 25cm. x 12 cm. x 8 cm. having crushing strength not less than 75 kg. Per. Sqr. Cm. in cement mortar of mix (1:6) with ordinary Portland slag cement(PSC) and screened & washed sand for mortar after immersing the bricks for 6 (Six) hours in water before use in Super stracture including splays cutting, circular moulding, corbelling, chamfering and similar such type of works, watering and curing etc. including cost, conveyance, loading, unloading, royalties and taxes of all materials, cost of all labour, scaffolding, sundries, T&P required for the works etc. complete in all respect as directed by the Engineer-In-Charge.													
	X-AXIS	3	X	10.500	X	0.250	X	2.700	=	21.263				
		9	X	4.500	X	0.250	X	2.700	=	27.338				
		2	X	1.600	X	0.250	X	2.700	=	2.160				
	y-AXIS	4	X	32.500	X	0.250	X	2.700	=	87.750				
		3	X	4.350	X	0.250	X	2.700	=	8.809				
	Deduction :-	-20	X	0.900	X	0.250	X	2.100	=	-9.450				
		-20	X	1.800	X	0.250	X	1.350	=	-12.150				
		-1	X	7.000	X	0.250	X	1.350	=	-2.363				
								Total	=	123.356	Cum	6308.70	778217.57	
34	First class Fly ash Brick masonry using bricks of size 23cm. x 12 cm. x 8 cm. having crushing strength not less than 75 kg. Per. Sqr. Cm. in cement mortar of mix (1:4) with ordinary Portland slag cement(PSC) and screened & washed sand for mortar after immersing the bricks for 6 (Six) hours in water before use in Super stracture including splays cutting, circular moulding, corbelling, chamfering and similar such type of works, watering and curing etc. including cost, conveyance, loading, unloading, royalties and taxes of all materials, cost of all labour, scaffolding, sundries, T&P required for the works etc. complete in all respect as directed by the Engineer-In-Charge.													
		9	X	4.500	X	0.125	X	2.700	=	13.669				
								Total	=	13.669	Cum	6591.34	90095.40	
35	Providing, lifting, hoisting and laying Reinforced cement concrete of M-25 grade as per approved designs and drawings having a minimum compressive strength (in work test) 25 Kg. / Square cm. in 15 cm. cubes at 28 days after mixing and test conducted in accordance with I.S. 516 using 12 mm. to 20 mm. size black hard crushed broken granite stone chips and screened and washed sharp sand for mortar of approved quality from approved quarry, washed and cleaned (20mm. size chips not to exceeds 25 %) to be mixed in concrete mixture with Portland slag cement (PSC) including hoisting, lowering, laying and compaction concrete by using vibrators, watering and curing for 28 days, centering and shuttering then after dismantling and removing debris from the work site and finishing the exposed surface smooth providing grooves or beads wherever necessary including cost, conveyance, loading, unloading, royalties and taxes of all materials and cost of all labours, sundries, T & P required of the work etc. complete in all respect as directed by the Engineer-in-Charge. But excluding cost and conveyance of M.S. rods or Tor steel and binding wires and labour charges for straightening, cutting, bending etc. of M.S. rods or tor steel tying the grills and placing in proper position.													
	b) Columns.													
	Col up to Top Lvl.													
	C1	16	X	0.300	X	0.400	X	3.150	=	6.048				
	C2	16	X	0.300	X	0.500	X	3.150	=	7.560				
	Lift	2	X	3.000	X	0.250	X	3.150	=	4.725				
		2	X	2.300	X	0.250	X	3.150	=	3.623				
								Total	=	21.956	Cum	17590.19	386201.46	
	d) Lintel beam .													
		3	X	10.500	X	0.250	X	0.150	=	1.181				
		9	X	4.500	X	0.250	X	0.150	=	1.519				
		2	X	1.600	X	0.250	X	0.150	=	0.120				
		4	X	32.500	X	0.250	X	0.150	=	4.875				
		3	X	4.350	X	0.250	X	0.150	=	0.489				
		9	X	4.500	X	0.125	X	0.150	=	0.759				
								Total	=	8.944	Cum	16684.60	149222.92	
	e) Roof Beams.													
	X-AXIS	8	X	10.500	X	0.250	X	0.600	=	12.600				
		4	X	4.500	X	0.250	X	0.600	=	2.700				
		2	X	1.600	X	0.250	X	0.600	=	0.480				
	y-AXIS	4	X	32.500	X	0.250	X	0.600	=	19.500				
		2	X	13.150	X	0.250	X	0.600	=	3.945				
		1	X	6.000	X	0.250	X	0.600	=	0.900				
								Total	=	40.125	Cum	17590.19	705806.45	
	f) RCC Slab .													
	Slab area	1	X	395.000	X	area	X	0.150	=	59.250				
								Total	=	59.250	Cum	15915.25	942978.56	
	g) Staircase													
	Landing	1	X	1.500	X	2.850	X	0.150	=	0.641				
	Waste Slab	1	X	6.500	X	1.250	X	0.150	=	1.219				
	Beam	1	X	2.850	X	0.250	X	0.450	=	0.321				
	Steps	20	X	1.250	X	0.300	X	0.150	=	1.125				
								Total	=	3.306	Cum	17521.08	57918.13	
	TOTAL R.C.C QNTY.									133.580	Cum			

FIRST Floor				Length		Width		Height		Rate		Amount	
Sl. No	Description of the work	Nos		In Mtr.		In Mtr.		In Mtr.	Quantity	Unit	In Rs.		In Rs.
36	Supplying, straightening, cutting, bending, placing in position and binding reinforcement steel work in RCC/reinforced brick works as per drawing and specification including preparation of respective bar bending schedule and binding (Binding wire to be used as per the IS code) etc. all complete as per direction of Engineer-in-charge Cold Twisted bars, Thermo-Mechanically-treated bars.												
	b) Column	1	x	21.956	x	176.000			=	3864.168			
	d) Lintel	1	x	8.944	x	123.000			=	1100.081			
	e) Roof beam	1	x	40.125	x	176.000			=	7062.000			
	f) Roof Slab	1	x	59.250	x	180.000			=	10665.000			
	g) Staircase	1	x	3.306	x	150.000			=	495.844			
								Total	=	23187.093	Kg		
								Total	=	231.871	Qntl.	9769.95	2265366.78
37	12mm cement plaster on external RCC/brick surfaces in cement plaster 1:6 (1 cement : 6 coarse sand) including necessary scaffolding, curing etc. all complete at all floors and all heights.												
	External wall												
	X-AXIS	3	X	10.500	X		X	3.150	=	14.175			
		9	X	4.500	X		X	3.150	=	12.150			
		2	X	1.600	X		X	3.150	=	2.160			
	y-AXIS	4	X	32.500	X		X	3.150	=	43.875			
		3	X	4.350	X		X	3.150	=	17.753			
	Deduction :-	-10	X	0.900	X		X	2.100	=	4.050			
		-10	X	1.800	X		X	1.350	=	-0.945			
		-0.5	X	7.000	X		X	1.350	=	-2.363			
		9	X	4.500	X		X	3.150	=	-2.363			
								Total	=	88.493	Sqm	178.92	15832.79
38	16mm cement plaster on internal smooth side of RCC/brick surfaces with cement mortar of mix 1:6 (1 cement : 6 fine sand) including necessary scaffolding, curing etc. all complete at all floors and all heights.												
	Internal wall												
	X-AXIS	3	X	10.500	X		X	3.000	=	14.175			
		9	X	4.500	X		X	3.000	=	12.150			
		2	X	1.600	X		X	3.000	=	2.160			
	y-AXIS	4	X	32.500	X		X	3.000	=	43.875			
		3	X	4.350	X		X	3.000	=	17.753			
	Deduction :-	-10	X	0.900	X		X	2.100	=	4.050			
		-10	X	1.800	X		X	1.350	=	-0.945			
		-0.5	X	7.000	X		X	1.350	=	-2.363			
		9	X	4.500	X		X	3.000	=	-2.363			
								Total	=	88.493	Sqm	248.70	22007.80
39	6 mm cement plaster on RCC surfaces at ceiling/slab soffit and other locations with cement mortar of mix 1:4 (1 cement : 4 fine sand) including necessary scaffolding, curing etc. all complete at all floors and all heights.												
	Slab area	1	X	395.000	X	area	X		=	395.000			
								Total	=	36.710	Sqm	188.31	6912.77
40	Providing and fixing 20mm thick Granite stone flooring (sample of Granite stone should be approved by Engineer-In-Charge) for stair case trade, riser and similar locations where ever required in horizontal/vertical surfaces of required size of approved shade, colour and texture, with moulding edge & approved groove pattern etc. laid over 20mm thick bed of cement mortar 1:4 (1 cement: 4 coarse sand) with joints treated with white cement mixed with matching pigment, epoxy touch ups including rubbing, curing, moulding and polishing to give high gloss finish etc. complete as per direction of Engineer-in-charge. In all floors and all heights.												
	Lift Front	1	X	2.500	X	3.000	X		=	7.500			
	Tread	19	X	1.250	X	0.300	X		=	7.125			
		21	X	1.250	X	0.150	X		=	3.938			
	wash	2	X	10.000	X	0.750	X		=	15.000			
								Total	=	33.563	Sqm	2858.70	95945.12
41	Providing and laying Vitrified floor tiles 600x600 mm (thickness to be specified by the manufacturer) 1st quality conforming to IS: 15622 of NITCO, SOMANY, ASIAN, KAJARIA or equivalent approved make, colours & shades, except white, ivory, grey, fume red brown, laid on 20 mm thick cement mortar 1:4 (1cement: 4coarse sand) including pointing the joints with white cement and matching pigments, etc. complete as per direction of EIC at all floors and all heights.												
	Room	19	X	4.300	X	2.440	X		=	199.348			
	Corridor	1	X	10.500	X	1.500	X		=	15.750			
		1	X	29.150	X	1.500	X		=	43.725			
								Total	=	258.823	Sqm	1364.08	353055.07
42	Providing and laying Vitrified skirting tiles 600x600 mm (thickness to be specified by the manufacturer) 1st quality conforming to IS: 15622 of NITCO, SOMANY, ASIAN, KAJARIA or equivalent approved make, colours & shades, except white, ivory, grey, fume red brown, laid on 12 mm thick cement mortar 1:3 (1cement: 3coarse sand) including pointing the joints with white cement and matching pigments, etc. complete as per direction of EIC at all floors and all heights.												
	Room	19	X	13.480	X	0.150	X		=	38.418			
	Corridor	1	X	24.000	X	0.150	X		=	3.600			
		1	X	61.300	X	0.150	X		=	9.195			
								Total	=	51.213	Sqm	1285.42	65830.11
43	Providing and laying Matte Finish Vitrified floor tiles 300x300/450x450 mm (thickness to be specified by the manufacturer) 1st quality conforming to IS: 15622 of NITCO, SOMANY, ASIAN, KAJARIA or equivalent approved make, colours & shades, except white, ivory, grey, fume red brown, laid on 20 mm thick cement mortar 1:4 (1cement:4coarse sand) including pointing the joints with white cement and matching pigments, etc. complete as per direction of Engineer-In-Charge at all floors and all heights.												
	Toilet	1	X	4.300	X	13.000	X		=	55.900			
								Total	=	5.195	Sam	1364.08	7086.62

FIRST Floor				Length		Width		Height		Quantity	Unit	Rate In Rs.	Amount In Rs.
Sl. No	Description of the work	Nos		In Mtr.		In Mtr.		In Mtr.					
44	Providing and fixing 1st quality Ceramic glazed wall tiles conforming to IS : 15622 (thickness to be specified by the manufacturer) minimum thickness 5mm of NITCO, SOMANY, ASIAN, KAJARIA or equivalent approved make in all colours, shades except burgundy, bottle green, black of size 300x600 in skirting and dados over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3 kg per sqm including pointing in white cement mixed with pigment of matching shade complete as per direction of Engineer-In-Charge. In all floors and all heights.												
	Room	19	X	13.480	X	1.500	X		=	384.180			
	Corridor	1	X	24.000	X	1.500	X		=	36.000			
		1	X	61.300	X	1.500	X		=	91.950			
	Toilet	2	X	4.300	X	2.100	X		=	18.060			
	E.Room	2	X	13.000	X	2.100	X		=	54.600			
								Total	=	584.790	Sqm	1033.14	604171.04
45	Providing and fixing of factory made Fenesta or equivalent UPVC sliding Window/Ventilator (colour or approved) complete with U value=1.9-1.3 W/m 2k, flame resistance, self extinguishing, lead free comprising UPVC multi chambered frame having in built UPVC roller track on top and UPVC sash with wall thickness of 2.3mm duly reinforced with G.I section 2.6 mm where ever required. All corners of frame and sash will be fusion welded. After placing 12.5mm laminate glass (6mm clear toughened +1.5 pvg laminate+5mm clear glass) Annealed glass in the sash, with support of hurricane bar for high wind support. uPVC glazing bead, interlock, EPDM gasket brush shall be provided including multi lock and rollers & proper drainage system shall be provided. window frame will be fixed to the wall with 100mm long and 8mm dia. Fasteners and after fixing the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of required size, of approved quality complete in all respect as per approved drawing & direction of the Engineer -In-Charge. Note:- Profile Manufacturer & window manufacturer, installation of windows must be done through Manufacturing company, and then only Manufacturer warranty is acceptable)												
		19	X	1.800	X		X	1.350	=	46.170			
		1	X	7.000	X		X	1.350	=	9.450			
								Total	=	55.620	Sqm	8500.00	472770.00
46	Providing and fixing seasoned sal wood work in frames at any locations including doors, windows, cupboard, clerestory and other frames fixing in position including cost of hinges, M.S. flat (30mm x 6mm) hold fasts lugs or dash fasteners of required dia and length as per drawing / specification, at all floors and all heights.												
		20	X	5.100	X	0.125	X	0.075	=	0.956			
								Total	=	0.956	Cum	100794.60	96384.84
47	Providing, fitting and fixing of approved make 32mm thick (laminate finished thickness of the door) factory made flush doors of the followings size, outside finished with 1mm thk. laminate of approved colour & shade and inside of the Room finished with 4mm thick veneer with melamine polish of approved make, colour & shade fixed to the teak wood bidding, complete in all respect bidding/lipping as per drawing/design. The door will be provided with all necessary fittings & fixtures, i.e. hinges, door stopper, door buffer etc. of Godrej or equivalent approved make with all materials, labour, T&P, taxes etc. as per direction of Architect/Engineer-in-Charge at all floors and all heights.												
		20	X	0.900	X		X	2.100	=	37.800			
								Total	=	37.800	Sqm	10668.61	403273.46
48	Providing and fixing M.S grill of required patterns for windows/verandahs etc. with M.S flats, square or round bars etc. including applying a coat of approved steel primer and two or more coats of synthetic enamel paint of approved make & shade, all complete as per drawing & specification. (All steel sections contractor's own supply).												
		19	X	1.800	X	27.000	X	1.350	=	1246.590			
		1	X	7.000	X	27.000	X	1.350	=	255.150			
								Total	=	1501.740	Kg.	68.73	103213.92
49	Providing & Applying priming one coat with Cement primer of approved brand and manufacture on plaster surface as per the instruction of Engineer-In-Charge at all elevations including all material & labour complete.												
	External area	1	X	88.493	X	area			=	88.493			
	Internal area	1	X	88.493	X	area			=	88.493			
	Ceiling area	1	X	36.710	X	area			=	36.710			
								Total	=	213.695	Sqm	70.13	14986.41
50	Providing and applying to outside walls with two or more coats of Anti-Fungal Weather coat water proofing paint including scaffolding and cleaning the surface before application of approved colour and manufacture as per specification, instruction of Engineer-In-charge at all elevations including all material labour complete.												
	External area	1	X	88.493	X	area			=	88.493			
								Total	=	88.493	Sqm	84.90	7513.11
51	Preparing surface and painting at all height with two or more coats of interior Plastic Emulsion "Royale Shyne" of Asian Paints or equivalent of approved shade as per the instructions of the manufacturers; giving uniform shade etc in all heights of walls etc. including interior wall primer & providing scaffolding, cleaning, curing and supply of all materials and labour complete as per drawing, design and direction of Architect/Engineer-In-Charge.												
	Internal area	1	X	88.493	X	area			=	88.493			
	Ceiling area	1	X	36.710	X	area			=	36.710			
								Total	=	125.203	Sqm	95.60	11969.36
52	Providing and applying white cement based putty of average thickness 1 mm of approved brand and manufacturer, over the plastered wall surfaces to prepare the surface even and smooth as per the instruction of Engineer-In-Charge at all elevations including all material & labour complete.												
	External area	1	X	88.493	X	area			=	88.493			
	Internal area	1	X	88.493	X	area			=	88.493			
	Ceiling area	1	X	36.710	X	area			=	36.710			
								Total	=	213.695	Sqm	72.39	15469.21

ESTIMATE FOR THE WORK :- CONSTRUCTION OF 120 BEDDED OLD AGE HOME FOR ELDERLY BLIND PERSONS AT, UNIT-III, BHUBANESWAR-BLOCK-A															
	SECOND Floor					Length		Width		Height				Rate	Amount
Sl. No	Description of the work	Nos			In Mtr.		In Mtr.		In Mtr.	Quantity	Unit		In Rs.	In Rs.	
59	First class Fly ash Brick masonry using bricks of size 25cm. x 12 cm. x 8 cm. having crushing strength not less than 75 kg. Per. Sqr. Cm. in cement mortar of mix (1:6) with ordinary Portland slag cement(PSC) and screened & washed sand for mortar after immersing the bricks for 6 (Six) hours in water before use in Super structure including splays cutting, circular moulding, corbelling, chamfering and similar such type of works, watering and curing etc. including cost, conveyance, loading, unloading, royalties and taxes of all materials, cost of all labour, scaffolding, sundries, T&P required for the works etc. complete in all respect as directed by the Engineer-In-Charge.														
	X-AXIS	3	X		10.500	X	0.250	X	2.700	=	21.263				
		9	X		4.500	X	0.250	X	2.700	=	27.338				
		2	X		1.600	X	0.250	X	2.700	=	2.160				
	y-AXIS	4	X		32.500	X	0.250	X	2.700	=	87.750				
		3	X		4.350	X	0.250	X	2.700	=	8.809				
	Deduction :-	-20	X		0.900	X	0.250	X	2.100	=	-9.450				
		-20	X		1.800	X	0.250	X	1.350	=	-12.150				
		-1	X		7.000	X	0.250	X	1.350	=	-2.363				
									Total	=	123.356	Cum	6645.60	819776.30	
60	First class Fly ash Brick masonry using bricks of size 23cm. x 12 cm. x 8 cm. having crushing strength not less than 75 kg. Per. Sqr. Cm. in cement mortar of mix (1:4) with ordinary Portland slag cement(PSC) and screened & washed sand for mortar after immersing the bricks for 6 (Six) hours in water before use in Super structure including splays cutting, circular moulding, corbelling, chamfering and similar such type of works, watering and curing etc. including cost, conveyance, loading, unloading, royalties and taxes of all materials, cost of all labour, scaffolding, sundries, T&P required for the works etc. complete in all respect as directed by the Engineer-In-Charge.														
		9	X		4.500	X	0.125	X	2.700	=	13.669				
									Total	=	13.669	Cum	6928.29	94701.05	
61	Providing, lifting, hoisting and laying Reinforced cement concrete of M-25 grade as per approved designs and drawings having a minimum compressive strength (in work test) 25 Kg. / Square cm. in 15 cm. cubes at 28 days after mixing and test conducted in accordance with I.S. 516 using 12 mm. to 20 mm. size black hard crushed broken granite stone chips and screened and washed sharp sand for mortar of approved quality from approved quarry, washed and cleaned (20mm. size chips not to exceeds 25 %) to be mixed in concrete mixture with Portland slag cement (PSC) including hoisting, lowering, laying and compaction concrete by using vibrators, watering and curing for 28 days, centering and shuttering then after dismantling and removing debris from the work site and finishing the exposed surface smooth providing grooves or beads wherever necessary including cost, conveyance, loading, unloading, royalties and taxes of all materials and cost of all labours, sundries, T & P required of the work etc. complete in all respect as directed by the Engineer-in-Charge. But excluding cost and conveyance of M.S. rods or Tor steel and binding wires and labour charges for straightening, cutting, bending etc. of M.S. rods or tor steel tying the grills and placing in proper position.														
	b) Columns.														
	Col up to Top Lvl.														
	C1	16	X		0.300	X	0.400	X	3.150	=	6.048				
	C2	16	X		0.300	X	0.500	X	3.150	=	7.560				
	Lift	2	X		3.000	X	0.250	X	3.150	=	4.725				
		2	X		2.300	X	0.250	X	3.150	=	3.623				
									Total	=	21.956	Cum	19665.59	431767.77	
	d) Lintel beam .														
		3	X		10.500	X	0.250	X	0.150	=	1.181				
		9	X		4.500	X	0.250	X	0.150	=	1.519				
		2	X		1.600	X	0.250	X	0.150	=	0.120				
		4	X		32.500	X	0.250	X	0.150	=	4.875				
		3	X		4.350	X	0.250	X	0.150	=	0.489				
		9	X		4.500	X	0.125	X	0.150	=	0.759				
									Total	=	8.944	Cum	18578.88	166164.88	
	e) Roof Beams.														
	X-AXIS	8	X		10.500	X	0.250	X	0.600	=	12.600				
		4	X		4.500	X	0.250	X	0.600	=	2.700				
		2	X		1.600	X	0.250	X	0.600	=	0.480				
	y-AXIS	4	X		32.500	X	0.250	X	0.600	=	19.500				
		2	X		13.150	X	0.250	X	0.600	=	3.945				
		1	X		6.000	X	0.250	X	0.600	=	0.900				
									Total	=	40.125	Cum	19665.59	789081.63	
	f) RCC Slab .														
	Slab area	1	X		395.000	X	area	X	0.150	=	59.250				
									Total	=	59.250	Cum	17655.66	1046097.58	
	g) Staircase														
	Landing	1	X		1.500	X	2.850	X	0.150	=	0.641				
	Waste Slab	1	X		6.500	X	1.250	X	0.150	=	1.219				
	Beam	1	X		2.850	X	0.250	X	0.450	=	0.321				
	Steps	20	X		1.250	X	0.300	X	0.150	=	1.125				
									Total	=	3.306	Cum	19582.66	64732.92	
	TOTAL R.C.C QNTY.										133.580	Cum			
62	Supplying, straightening, cutting, bending, placing in position and binding reinforcement steel work in RCC/reinforced brick works as per drawing and specification including preparation of respective bar bending schedule and binding (Binding wire to be used as per the IS code) etc. all complete as per direction of Engineer-in-charge Cold Twisted bars, Thermo-Mechanically-treated bars.														
	b) Column	1	x		21.956	x	Kg/Cum			=	3864.168				

SECOND Floor				Length		Width		Height		Quantity	Unit	Rate In Rs.	Amount In Rs.
Sl. No	Description of the work	Nos		In Mtr.		In Mtr.		In Mtr.					
	d) Lintel	1	x	8.944	x	123.000			=	1100.081			
	e) Roof beam	1	x	40.125	x	176.000			=	7062.000			
	f) Roof Slab	1	x	59.250	x	180.000			=	10665.000			
	g) Staircase	1	x	3.306	x	150.000			=	495.844			
								Total	=	23187.093	Kg		
								Total	=	231.871	Qntl.	9797.35	2271721.62
63	12mm cement plaster on external RCC/brick surfaces in cement plaster 1:6 (1 cement : 6 coarse sand) including necessary scaffolding, curing etc. all complete at all floors and all heights.												
	External wall												
	X-AXIS	3	X	10.500	X		X	3.150	=	14.175			
		9	X	4.500	X		X	3.150	=	12.150			
		2	X	1.600	X		X	3.150	=	2.160			
	y-AXIS	4	X	32.500	X		X	3.150	=	43.875			
		3	X	4.350	X		X	3.150	=	17.753			
	Deduction :-	-10	X	0.900	X		X	2.100	=	4.050			
		-10	X	1.800	X		X	1.350	=	-0.945			
		-0.5	X	7.000	X		X	1.350	=	-2.363			
		9	X	4.500	X		X	3.150	=	-2.363			
								Total	=	88.493	Sqm	185.27	16394.64
64	16mm cement plaster on internal smooth side of RCC/brick surfaces with cement mortar of mix 1:6 (1 cement : 6 fine sand) including necessary scaffolding, curing etc. all complete at all floors and all heights.												
	Internal wall												
	X-AXIS	3	X	10.500	X		X	3.000	=	14.175			
		9	X	4.500	X		X	3.000	=	12.150			
		2	X	1.600	X		X	3.000	=	2.160			
	y-AXIS	4	X	32.500	X		X	3.000	=	43.875			
		3	X	4.350	X		X	3.000	=	17.753			
	Deduction :-	-10	X	0.900	X		X	2.100	=	4.050			
		-10	X	1.800	X		X	1.350	=	-0.945			
		-0.5	X	7.000	X		X	1.350	=	-2.363			
		9	X	4.500	X		X	3.000	=	-2.363			
								Total	=	88.493	Sqm	254.27	22500.72
65	6 mm cement plaster on RCC surfaces at ceiling/slab soffit and other locations with cement mortar of mix 1:4 (1 cement : 4 fine sand) including necessary scaffolding, curing etc. all complete at all floors and all heights.												
	Slab area	1	X	395.000	X	area	X		=	395.000			
								Total	=	36.710	Sqm	192.68	7073.14
66	Providing and fixing 20mm thick Granite stone flooring (sample of Granite stone should be approved by Engineer-In-Charge) for stair case trade, riser and similar locations where ever required in horizontal/vertical surfaces of required size of approved shade, colour and texture, with moulding edge & approved groove pattern etc. laid over 20mm thick bed of cement mortar 1:4 (1 cement: 4 coarse sand) with joints treated with white cement mixed with matching pigment, epoxy touch ups including rubbing, curing, moulding and polishing to give high gloss finish etc. complete as per direction of Engineer-in-charge. In all floors and all heights.												
	Lift Front	1	X	2.500	X	3.000	X		=	7.500			
	Tread	19	X	1.250	X	0.300	X		=	7.125			
		21	X	1.250	X	0.150	X		=	3.938			
	wash	2	X	10.000	X	0.750	X		=	15.000			
								Total	=	33.563	Sqm	2869.80	96317.66
67	Providing and laying Vitrified floor tiles 600x600 mm (thickness to be specified by the manufacturer) 1st quality conforming to IS: 15622 of NITCO, SOMANY, ASIAN, KAJARIA or equivalent approved make, colours & shades, except white, ivory, grey, fume red brown, laid on 20 mm thick cement mortar 1:4 (1cement: 4coarse sand) including pointing the joints with white cement and matching pigments, etc. complete as per direction of EIC at all floors and all heights.												
	Room	19	X	4.300	X	2.440	X		=	199.348			
	Corridor	1	X	10.500	X	1.500	X		=	15.750			
		1	X	29.150	X	1.500	X		=	43.725			
								Total	=	258.823	Sqm	1625.28	420660.46
68	Providing and laying Vitrified skirting tiles 600x600 mm (thickness to be specified by the manufacturer) 1st quality conforming to IS: 15622 of NITCO, SOMANY, ASIAN, KAJARIA or equivalent approved make, colours & shades, except white, ivory, grey, fume red brown, laid on 12 mm thick cement mortar 1:3 (1cement: 3coarse sand) including pointing the joints with white cement and matching pigments, etc. complete as per direction of EIC at all floors and all heights.												
	Room	19	X	13.480	X	0.150	X		=	38.418			
	Corridor	1	X	24.000	X	0.150	X		=	3.600			
		1	X	61.300	X	0.150	X		=	9.195			
								Total	=	51.213	Sqm	1302.34	66696.87
69	Providing and laying Matte Finish Vitrified floor tiles 300x300/450x450 mm (thickness to be specified by the manufacturer) 1st quality conforming to IS: 15622 of NITCO, SOMANY, ASIAN, KAJARIA or equivalent approved make, colours & shades, except white, ivory, grey, fume red brown, laid on 20 mm thick cement mortar 1:4 (1cement:4coarse sand) including pointing the joints with white cement and matching pigments, etc. complete as per direction of Engineer-In-Charge at all floors and all heights.												
	Toilet	1	X	4.300	X	13.000	X		=	55.900			
								Total	=	5.195	Sqm	1375.33	7145.06

	SECOND Floor			Length		Width		Height				Rate	Amount
Sl. No	Description of the work	Nos		In Mtr.		In Mtr.		In Mtr.		Quantity	Unit	In Rs.	In Rs.
		19	X	1.800	X	0.500	X	1.350	=	23.085			

ESTIMATE FOR THE WORK :- CONSTRUCTION OF 120 BEDDED OLD AGE HOME FOR ELDERLY BLIND PERSONS AT, UNIT-III, BHUBANESWAR-BLOCK-A													
	THIRD Floor			Length		Width		Height				Rate	Amount
Sl. No	Description of the work	Nos		In Mtr.		In Mtr.		In Mtr.		Quantity	Unit	In Rs.	In Rs.
85	First class Fly ash Brick masonry using bricks of size 25cm. x 12 cm. x 8 cm. having crushing strength not less than 75 kg. Per. Sqr. Cm. in cement mortar of mix (1:6) with ordinary Portland slag cement(PSC) and screened & washed sand for mortar after immersing the bricks for 6 (Six) hours in water before use in Super stracture including splays cutting, circular moulding, corbelling, chamfering and similar such type of works, watering and curing etc. including cost, conveyance, loading, unloading, royalties and taxes of all materials, cost of all labour, scaffolding, sundries, T&P required for the works etc. complete in all respect as directed by the Engineer-In-Charge.												
	X-AXIS	3	X	10.500	X	0.250	X	2.700	=	21.263			
		9	X	4.500	X	0.250	X	2.700	=	27.338			
		2	X	1.600	X	0.250	X	2.700	=	2.160			
	y-AXIS	4	X	32.500	X	0.250	X	2.700	=	87.750			
		3	X	4.350	X	0.250	X	2.700	=	8.809			
	Deduction :-	-20	X	0.900	X	0.250	X	2.100	=	-9.450			
		-20	X	1.800	X	0.250	X	1.350	=	-12.150			
		-1	X	7.000	X	0.250	X	1.350	=	-2.363			
								Total	=	123.356	Cum	7033.10	867576.84
86	First class Fly ash Brick masonry using bricks of size 23cm. x 12 cm. x 8 cm. having crushing strength not less than 75 kg. Per. Sqr. Cm. in cement mortar of mix (1:4) with ordinary Portland slag cement(PSC) and screened & washed sand for mortar after immersing the bricks for 6 (Six) hours in water before use in Super stracture including splays cutting, circular moulding, corbelling, chamfering and similar such type of works, watering and curing etc. including cost, conveyance, loading, unloading, royalties and taxes of all materials, cost of all labour, scaffolding, sundries, T&P required for the works etc. complete in all respect as directed by the Engineer-In-Charge.												
		9	X	4.500	X	0.125	X	2.700	=	13.669			
								Total	=	13.669	Cum	7315.78	99997.54
87	Providing, lifting, hoisting and laying Reinforced cement concrete of M-25 grade as per approved designs and drawings having a minimum compressive strength (in work test) 25 Kg. / Square cm. in 15 cm. cubes at 28 days after mixing and test conducted in accordance with I.S. 516 using 12 mm. to 20 mm. size black hard crushed broken granite stone chips and screened and washed sharp sand for mortar of approved quality from approved quarry, washed and cleaned (20mm. size chips not to exceeds 25 %) to be mixed in concrete mixture with Portland slag cement (PSC) including hoisting, lowering, laying and compaction concrete by using vibrators, watering and curing for 28 days, centering and shuttering then after dismantling and removing debris from the work site and finishing the exposed surface smooth providing grooves or beads wherever necessary including cost, conveyance, loading, unloading, royalties and taxes of all materials and cost of all labours, sundries, T & P required of the work etc. complete in all respect as directed by the Engineer-in-Charge. But excluding cost and conveyance of M.S. rods or Tor steel and binding wires and labour charges for straightening, cutting, bending etc. of M.S. rods or tor steel tying the grills and placing in proper position.												
	b) Columns.												
	Col up to Top Lvl.												
	C1	16	X	0.300	X	0.400	X	3.150	=	6.048			
	C2	16	X	0.300	X	0.500	X	3.150	=	7.560			
	Lift	2	X	3.000	X	0.250	X	3.150	=	4.725			
		2	X	2.300	X	0.250	X	3.150	=	3.623			
								Total	=	21.956	Cum	22150.69	486329.45
	d) Lintel beam .												
		3	X	10.500	X	0.250	X	0.150	=	1.181			
		9	X	4.500	X	0.250	X	0.150	=	1.519			
		2	X	1.600	X	0.250	X	0.150	=	0.120			
		4	X	32.500	X	0.250	X	0.150	=	4.875			
		3	X	4.350	X	0.250	X	0.150	=	0.489			
		9	X	4.500	X	0.125	X	0.150	=	0.759			
								Total	=	8.944	Cum	20846.65	186447.20
	e) Roof Beams.												
	X-AXIS	8	X	10.500	X	0.250	X	0.600	=	12.600			
		4	X	4.500	X	0.250	X	0.600	=	2.700			
		2	X	1.600	X	0.250	X	0.600	=	0.480			
	y-AXIS	4	X	32.500	X	0.250	X	0.600	=	19.500			
		2	X	13.150	X	0.250	X	0.600	=	3.945			
		1	X	6.000	X	0.250	X	0.600	=	0.900			
								Total	=	40.125	Cum	22150.69	888796.39
	f) RCC Slab .												
	Slab area	1	X	395.000	X	area	X	0.150	=	59.250			
								Total	=	59.250	Cum	19738.77	1169522.26
	g) Staircase												
	Landing	1	X	1.500	X	2.850	X	0.150	=	0.641			
	Waste Slab	1	X	6.500	X	1.250	X	0.150	=	1.219			
	Beam	1	X	2.850	X	0.250	X	0.450	=	0.321			
	Steps	20	X	1.250	X	0.300	X	0.150	=	1.125			
								Total	=	3.306	Cum	22051.17	72892.91
	TOTAL R.C.C QNTY.									133.580	Cum		

THIRD Floor				Length		Width		Height				Rate	Amount
Sl. No	Description of the work	Nos		In Mtr.		In Mtr.		In Mtr.		Quantity	Unit	In Rs.	In Rs.
88	Supplying, straightening, cutting, bending, placing in position and binding reinforcement steel work in RCC/reinforced brick works as per drawing and specification including preparation of respective bar bending schedule and binding (Binding wire to be used as per the IS code) etc. all complete as per direction of Engineer-in-charge Cold Twisted bars, Thermo-Mechanically-treated bars.												
						Kg/Cum							
	b) Column	1	x	21.956	x	176.000		=	3864.168				
	d) Lintel	1	x	8.944	x	123.000		=	1100.081				
	e) Roof beam	1	x	40.125	x	176.000		=	7062.000				
	f) Roof Slab	1	x	59.250	x	180.000		=	10665.000				
	g)Staircase	1	x	3.306	x	150.000		=	495.844				
								Total	=	23187.093	Kg		
								Total	=	231.871	Qntl.	9826.13	2278394.19
89	12mm cement plaster on external RCC/brick surfaces in cement plaster 1:6 (1 cement : 6 coarse sand) including necessary scaffolding, curing etc. all complete at all floors and all heights.												
	External wall												
	X-AXIS	3	X	10.500	X		X	3.150	=	14.175			
		9	X	4.500	X		X	3.150	=	12.150			
		2	X	1.600	X		X	3.150	=	2.160			
	y-AXIS	4	X	32.500	X		X	3.150	=	43.875			
		3	X	4.350	X		X	3.150	=	17.753			
	Deduction :-	-10	X	0.900	X		X	2.100	=	4.050			
		-10	X	1.800	X		X	1.350	=	-0.945			
		-0.5	X	7.000	X		X	1.350	=	-2.363			
		9	X	4.500	X		X	3.150	=	-2.363			
								Total	=	88.493	Sqm	191.93	16984.58
90	16mm cement plaster on internal smooth side of RCC/brick surfaces with cement mortar of mix 1:6 (1 cement : 6 fine sand) including necessary scaffolding, curing etc. all complete at all floors and all heights.												
	Internal wall												
	X-AXIS	3	X	10.500	X		X	3.000	=	14.175			
		9	X	4.500	X		X	3.000	=	12.150			
		2	X	1.600	X		X	3.000	=	2.160			
	y-AXIS	4	X	32.500	X		X	3.000	=	43.875			
		3	X	4.350	X		X	3.000	=	17.753			
	Deduction :-	-10	X	0.900	X		X	2.100	=	4.050			
		-10	X	1.800	X		X	1.350	=	-0.945			
		-0.5	X	7.000	X		X	1.350	=	-2.363			
		9	X	4.500	X		X	3.000	=	-2.363			
								Total	=	88.493	Sqm	260.00	23008.43
91	6 mm cement plaster on RCC surfaces at ceiling/slab soffit and other locations with cement mortar of mix 1:4 (1 cement : 4 fine sand) including necessary scaffolding, curing etc. all complete at all floors and all heights.												
	Slab area	1	X	395.000	X	area	X		=	395.000			
								Total	=	36.710	Sqm	197.18	7238.32
92	Providing and fixing 20mm thick Granite stone flooring (sample of Granite stone should be approved by Engineer-In-Charge) for stair case trade, riser and similar locations where ever required in horizontal/vertical surfaces of required size of approved shade, colour and texture, with moulding edge & approved groove pattern etc. laid over 20mm thick bed of cement mortar 1:4 (1 cement: 4 coarse sand) with joints treated with white cement mixed with matching pigment, epoxy touch ups including rubbing, curing, moulding and polishing to give high gloss finish etc. complete as per direction of Engineer-in-charge. In all floors and all heights.												
	Lift Front	1	X	2.500	X	3.000	X		=	7.500			
	Tread	19	X	1.250	X	0.300	X		=	7.125			
		21	X	1.250	X	0.150	X		=	3.938			
	wash	2	X	10.000	X	0.750	X		=	15.000			
								Total	=	33.563	Sqm	2881.50	96710.34
93	Providing and laying Vitrified floor tiles 600x600 mm (thickness to be specified by the manufacturer) 1st quality conforming to IS: 15622 of NITCO, SOMANY, ASIAN, KAJARIA or equivalent approved make, colours & shades, except white, ivory, grey, fume red brown, laid on 20 mm thick cement mortar 1:4 (1cement: 4coarse sand) including pointing the joints with white cement and matching pigments, etc. complete as per direction of EIC at all floors and all heights.												
	Room	19	X	4.300	X	2.440	X		=	199.348			
	Corridor	1	X	10.500	X	1.500	X		=	15.750			
		1	X	29.150	X	1.500	X		=	43.725			
								Total	=	258.823	Sqm	1387.14	359023.32
94	Providing and laying Vitrified skirting tiles 600x600 mm (thickness to be specified by the manufacturer) 1st quality conforming to IS: 15622 of NITCO, SOMANY, ASIAN, KAJARIA or equivalent approved make, colours & shades, except white, ivory, grey, fume red brown, laid on 12 mm thick cement mortar 1:3 (1cement: 3coarse sand) including pointing the joints with white cement and matching pigments, etc. complete as per direction of EIC at all floors and all heights.												
	Room	19	X	13.480	X	0.150	X		=	38.418			
	Corridor	1	X	24.000	X	0.150	X		=	3.600			
		1	X	61.300	X	0.150	X		=	9.195			
								Total	=	51.213	Sqm	1320.11	67606.97
95	Providing and laying Matte Finish Vitrified floor tiles 300x300/450x450 mm (thickness to be specified by the manufacturer) 1st quality conforming to IS: 15622 of NITCO, SOMANY, ASIAN, KAJARIA or equivalent approved make, colours & shades, except white, ivory, grey, fume red brown, laid on 20 mm thick cement mortar 1:4 (1cement:4coarse sand) including pointing the joints with white cement and matching pigments, etc. complete as per direction of Engineer-In-Charge at all floors and all heights.												
	Toilet	1	X	4.300	X	13.000	X		=	55.900			

THIRD Floor			Length		Width		Height		Rate		Amount
Sl. No	Description of the work	Nos		In Mtr.		In Mtr.	In Mtr.	Quantity	Unit	In Rs.	In Rs.
							Total	= 5.195	Sqm	1387.14	7206.42
96	Providing and fixing 1st quality Ceramic glazed wall tiles conforming to IS : 15622 (thickness to be specified by the manufacturer) minimum thickness 5mm of NITCO, SOMANY, ASIAN, KAJARIA or equivalent approved make in all colours, shades except burgundy, bottle green, black of size 300x600 in skirting and dados over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3 kg per sqm including pointing in white cement mixed with pigment of matching shade complete as per direction of Engineer-In-Charge. In all floors and all heights.										
	Room	19	X	13.480	X	1.500	X	= 384.180			
	Corridor	1	X	24.000	X	1.500	X	= 36.000			
		1	X	61.300	X	1.500	X	= 91.950			
	Toilet	2	X	4.300	X	2.100	X	= 18.060			
	E.Room	2	X	13.000	X	2.100	X	= 54.600			
							Total	= 584.790	Sqm	1067.84	624460.64
97	Providing and fixing of factory made Fenesta or equivalent UPVC sliding Window/Ventilator (colour or approved) complete with U value=1.9-1.3 W/m 2k, flame resistance, self extinguishing, lead free comprising UPVC multi chambered frame having in built UPVC roller track on top and UPVC sash with wall thickness of 2.3mm duly reinforced with G.I section 2.6 mm where ever required. All corners of frame and sash will be fusion welded. After placing12.5mm laminate glass (6mm clear toughened +1.5 pvg laminate+5mm clear glass) Annealed glass in the sash, with support of hurricane bar for high wind support. uPVC glazing bead, interlock, EPDM gasket brush shall be provided including multi lock and rollers & proper drainage system shall be provided. window frame will be fixed to the wall with 100mm long and 8mm dia.Fasteners and after fixing the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of required size, of approved quality complete in all respect as per approved drawing & direction of the Engineer -In-Charge. Note:- Profile Manufacturer & window manufacturer, installation of windows must be done through Manufacturing company, and then only Manufacturer warranty is acceptable)										
		19	X	1.800	X		X	1.350	= 46.170		
		1	X	7.000	X		X	1.350	= 9.450		
							Total	= 55.620	Sqm	8500.00	472770.00
98	Providing and fixing seasoned sal wood work in frames at any locations including doors, windows, cupboard, clerestory and other frames fixing in position including cost of hinges, M.S. flat (30mm x 6mm) hold fasts lugs or dash fasteners of required dia and length as per drawing / specification, at all floors and all heights.										
		20	X	5.100	X	0.125	X	0.075	= 0.956		
							Total	= 0.956	Cum	100794.60	96384.84
99	Providing, fitting and fixing of approved make 32mm thick (laminate finished thickness of the door) factory made flush doors of the followings size, outside finished with 1mm thk. laminate of approved colour & shade and inside of the Room finished with 4mm thick vineer with melamine polish of approved make, colour & shade fixed to the teak wood bidding, complete in all respect bidding/lipping as per drawing/design. The door will be provided with all necessary fittings & fixtures, i.e. hinges, door stopper, door buffer etc. of Godrej of equivalent approved make with all materials, labour, T&P, taxes etc. as per direction of Architect/Engineer-in-Charge at all floors and all heights.										
		20	X	0.900	X		X	2.100	= 37.800		
							Total	= 37.800	Sqm	10668.61	403273.46
100	Providing and fixing M.S grill of required patterns for windows/verandahs etc. with M.S flats, square or round bars etc. including applying a coat of approved steel primer and two or more coats of synthetic enamel paint of approved make & shade, all complete as per drawing & specification. (All steel sections contractor's own supply).										
		19	X	1.800	X	27.000	X	1.350	= 1246.590		
		1	X	7.000	X	27.000	X	1.350	= 255.150		
							Total	= 1501.740	Kg.	68.73	103213.92
101	Providing & Applying priming one coat with Cement primer of approved brand and manufacture on plaster surface as per the instruction of Engineer-In-Charge at all elevations including all material & labour complete.										
	External area	1	X	88.493	X	area		= 88.493			
	Internal area	1	X	88.493	X	area		= 88.493			
	Ceilling area	1	X	36.710	X	area		= 36.710			
							Total	= 213.695	Sqm	73.48	15701.25
102	Providing and applying to outside walls with two or more coats of Anti-Fungal Weather coat water proofing paint including scaffolding and cleaning the surface before application of approved colour and manufacture as per specification, instruction of Engineer-In-charge at all elevations including all material labour complete.										
	External area	1	X	88.493	X	area		= 88.493			
							Total	= 88.493	Sqm	91.11	8062.19
103	Preparing surface and painting at all height with two or more coats of interior Plastic Emulsion "Royale Shyne" of Asian Paints or equivalent of approved shade as per the instructions of the manufacturers; giving uniform shade etc in all heights of walls etc. including interior wall primer & providing scaffolding, cleaning, curing and supply of all materials and labour complete as per drawing, design and direction of Architect/Engineer-In-Charge.										
	Internal area	1	X	88.493	X	area		= 88.493			
	Ceilling area	1	X	36.710	X	area		= 36.710			
							Total	= 125.203	Sqm	99.22	12422.14
104	Providing and applying white cement based putty of average thickness 1 mm of approved brand and manufacturer, over the plastered wall surfaces to prepare the surface even and smooth as per the instruction of Engineer-In-Charge at all elevations including all material & labour complete.										
	External area	1	X	88.493	X	area		= 88.493			
	Internal area	1	X	88.493	X	area		= 88.493			
	Ceilling area	1	X	36.710	X	area		= 36.710			
							Total	= 213.695	Sqm	75.46	16125.68

[illegible]

ESTIMATE FOR THE WORK :- CONSTRUCTION OF 120 BEDDED OLD AGE HOME FOR ELDERLY BLIND PERSONS AT, UNIT-III, BHUBANESWAR-BLOCK-A												
FORTH Floor												
Sl. No	Description of the work	Nos		Length In Mtr.		Width In Mtr.		Height In Mtr.		Quantity	Unit	Rate In Rs.
												Amount In Rs.
111	First class Fly ash Brick masonry using bricks of size 25cm. x 12 cm. x 8 cm. having crushing strength not less than 75 kg. Per. Sqr. Cm. in cement mortar of mix (1:6) with ordinary Portland slag cement(PSC) and screened & washed sand for mortar after immersing the bricks for 6 (Six) hours in water before use in Super structure including splays cutting, circular moulding, corbelling, chamfering and similar such type of works, watering and curing etc. including cost, conveyance, loading, unloading, royalties and taxes of all materials, cost of all labour, scaffolding, sundries, T&P required for the works etc. complete in all respect as directed by the Engineer-In-Charge.											
	X-AXIS	3	X	10.500	X	0.250	X	2.700	=	21.263		
		9	X	4.500	X	0.250	X	2.700	=	27.338		
		2	X	1.600	X	0.250	X	2.700	=	2.160		
	y-AXIS	4	X	32.500	X	0.250	X	2.700	=	87.750		
		3	X	4.350	X	0.250	X	2.700	=	8.809		
	Deduction :-	-20	X	0.900	X	0.250	X	2.100	=	-9.450		
		-20	X	1.800	X	0.250	X	1.350	=	-12.150		
		-1	X	7.000	X	0.250	X	1.350	=	-2.363		
								Total	=	123.356	Cum	7478.70
												922544.39
112	First class Fly ash Brick masonry using bricks of size 23cm. x 12 cm. x 8 cm. having crushing strength not less than 75 kg. Per. Sqr. Cm. in cement mortar of mix (1:4) with ordinary Portland slag cement(PSC) and screened & washed sand for mortar after immersing the bricks for 6 (Six) hours in water before use in Super structure including splays cutting, circular moulding, corbelling, chamfering and similar such type of works, watering and curing etc. including cost, conveyance, loading, unloading, royalties and taxes of all materials, cost of all labour, scaffolding, sundries, T&P required for the works etc. complete in all respect as directed by the Engineer-In-Charge.											
		9	X	4.500	X	0.125	X	2.700	=	13.669		
								Total	=	13.669	Cum	7761.39
												106088.51
113	Providing, lifting, hoisting and laying Reinforced cement concrete of M-25 grade as per approved designs and drawings having a minimum compressive strength (in work test) 25 Kg. / Square cm. in 15 cm. cubes at 28 days after mixing and test conducted in accordance with I.S. 516 using 12 mm. to 20 mm. size black hard crushed broken granite stone chips and screened and washed sharp sand for mortar of approved quality from approved quarry, washed and cleaned (20mm. size chips not to exceeds 25 %) to be mixed in concrete mixture with Portland slag cement (PSC) including hoisting, lowering, laying and compaction concrete by using vibrators, watering and curing for 28 days, centering and shuttering then after dismantling and removing debris from the work site and finishing the exposed surface smooth providing grooves or beads wherever necessary including cost, conveyance, loading, unloading, royalties and taxes of all materials and cost of all labours, sundries, T & P required of the work etc. complete in all respect as directed by the Engineer-in-Charge. But excluding cost and conveyance of M.S. rods or Tor steel and binding wires and labour charges for straightening, cutting, bending etc. of M.S. rods or tor steel tying the grills and placing in proper position.											
	b) Columns.											
	Col up to Top Lvl.											
	C1	16	X	0.300	X	0.400	X	3.150	=	6.048		
	C2	16	X	0.300	X	0.500	X	3.150	=	7.560		
	Lift	2	X	3.000	X	0.250	X	3.150	=	4.725		
		2	X	2.300	X	0.250	X	3.150	=	3.623		
								Total	=	21.956	Cum	25124.91
												551629.98
	d) Lintel beam .											
		3	X	10.500	X	0.250	X	0.150	=	1.181		
		9	X	4.500	X	0.250	X	0.150	=	1.519		
		2	X	1.600	X	0.250	X	0.150	=	0.120		
		4	X	32.500	X	0.250	X	0.150	=	4.875		
		3	X	4.350	X	0.250	X	0.150	=	0.489		
		9	X	4.500	X	0.125	X	0.150	=	0.759		
								Total	=	8.944	Cum	23560.38
												210718.19
	e) Roof Beams.											
	X-AXIS	8	X	10.500	X	0.250	X	0.600	=	12.600		
		4	X	4.500	X	0.250	X	0.600	=	2.700		
		2	X	1.600	X	0.250	X	0.600	=	0.480		
	y-AXIS	4	X	32.500	X	0.250	X	0.600	=	19.500		
		2	X	13.150	X	0.250	X	0.600	=	3.945		
		1	X	6.000	X	0.250	X	0.600	=	0.900		
								Total	=	40.125	Cum	25124.91
												1008137.05
	f) RCC Slab .											
	Slab area	1	X	395.000	X	area	X	0.150	=	59.250		
								Total	=	59.250	Cum	22230.93
												1317182.67
	g) Staircase											
	Landing	1	X	1.500	X	2.850	X	0.150	=	0.641		
	Waste Slab	1	X	6.500	X	1.250	X	0.150	=	1.219		
	Beam	1	X	2.850	X	0.250	X	0.450	=	0.321		
	Steps	20	X	1.250	X	0.300	X	0.150	=	1.125		
								Total	=	3.306	Cum	25005.81
												82659.84
	TOTAL R.C.C QNTY.									133.580	Cum	

FORTH Floor				Length		Width		Height		Rate		Amount	
Sl. No	Description of the work	Nos		In Mtr.		In Mtr.		In Mtr.		Quantity	Unit	In Rs.	In Rs.
122	Providing and fixing 1st quality Ceramic glazed wall tiles conforming to IS : 15622 (thickness to be specified by the manufacturer) minimum thickness 5mm of NITCO, SOMANY, ASIAN, KAJARIA or equivalent approved make in all colours, shades except burgundy, bottle green, black of size 300x600 in skirting and dados over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3 kg per sqm including pointing in white cement mixed with pigment of matching shade complete as per direction of Engineer-In-Charge. In all floors and all heights.												
	Room	19	X	13.480	X	1.500	X	=	384.180				
	Corridor	1	X	24.000	X	1.500	X	=	36.000				
		1	X	61.300	X	1.500	X	=	91.950				
	Toilet	2	X	4.300	X	2.100	X	=	18.060				
	E.Room	2	X	13.000	X	2.100	X	=	54.600				
								Total	=	584.790	Sqm	1086.50	635372.49
123	Providing and fixing of factory made Fenesta or equivalent UPVC sliding Window/Ventilator (colour or approved) complete with U value=1.9-1.3 W/m 2k, flame resistance, self extinguishing, lead free comprising UPVC multi chambered frame having in built UPVC roller track on top and UPVC sash with wall thickness of 2.3mm duly reinforced with G.I section 2.6 mm where ever required. All corners of frame and sash will be fusion welded. After placing12.5mm laminate glass (6mm clear toughened +1.5 pvg laminate+5mm clear glass) Annealed glass in the sash, with support of hurricane bar for high wind support. uPVC glazing bead, interlock, EPDM gasket brush shall be provided including multi lock and rollers & proper drainage system shall be provided. window frame will be fixed to the wall with 100mm long and 8mm dia.Fasteners and after fixing the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of required size, of approved quality complete in all respect as per approved drawing & direction of the Engineer -In-Charge. Note:- Profile Manufacturer & window manufacturer, installation of windows must be done through Manufacturing company, and then only Manufacturer warranty is acceptable)												
		19	X	1.800	X		X	1.350	=	46.170			
		1	X	7.000	X		X	1.350	=	9.450			
								Total	=	55.620	Sqm	8500.00	472770.00
124	Providing and fixing seasoned sal wood work in frames at any locations including doors, windows, cupboard, clerestory and other frames fixing in position including cost of hinges, M.S. flat (30mm x 6mm) hold fasts lugs or dash fasteners of required dia and length as per drawing / specification, at all floors and all heights.												
		20	X	5.100	X	0.125	X	0.075	=	0.956			
								Total	=	0.956	Cum	100794.60	96384.84
125	Providing, fitting and fixing of approved make 32mm thick (laminate finished thickness of the door) factory made flush doors of the followings size, outside finished with 1mm thk. laminate of approved colour & shade and inside of the Room finished with 4mm thick veneer with melamine polish of approved make, colour & shade fixed to the teak wood bidding, complete in all respect bidding/lipping as per drawing/design. The door will be provided with all necessary fittings & fixtures, i.e. hinges, door stopper, door buffer etc. of Godrej of equivalent approved make with all materials, labour, T&P, taxes etc. as per direction of Architect/Engineer-in-Charge at all floors and all heights.												
		20	X	0.900	X		X	2.100	=	37.800			
								Total	=	37.800	Sqm	10668.61	403273.46
126	Providing and fixing M.S grill of required patterns for windows/verandahs etc. with M.S flats, square or round bars etc. including applying a coat of approved steel primer and two or more coats of synthetic enamel paint of approved make & shade, all complete as per drawing & specification. (All steel sections contractor's own supply).												
		19	X	1.800	X	27.000	X	1.350	=	1246.590			
		1	X	7.000	X	27.000	X	1.350	=	255.150			
								Total	=	1501.740	Kg.	68.73	103213.92
127	Providing & Applying priming one coat with Cement primer of approved brand and manufacture on plaster surface as per the instruction of Engineer-In-Charge at all elevations including all material & labour complete.												
	External area	1	X	88.493	X	area		=	88.493				
	Internal area	1	X	88.493	X	area		=	88.493				
	Ceilling area	1	X	36.710	X	area		=	36.710				
								Total	=	213.695	Sqm	75.22	16074.84
128	Providing and applying to outside walls with two or more coats of Anti-Fungal Weather coat water proofing paint including scaffolding and cleaning the surface before application of approved colour and manufacture as per specification, instruction of Engineer-In-charge at all elevations including all material labour complete.												
	External area	1	X	88.493	X	area		=	88.493				
								Total	=	88.493	Sqm	94.44	8357.49
129	Preparing surface and painting at all height with two or more coats of interior Plastic Emulsion "Royale Shyne" of Asian Paints or equivalent of approved shade as per the instructions of the manufacturers; giving uniform shade etc in all heights of walls etc. including interior wall primer & providing scaffolding, cleaning, curing and supply of all materials and labour complete as per drawing, design and direction of Architect/Engineer-In-Charge.												
	Internal area	1	X	88.493	X	area		=	88.493				
	Ceilling area	1	X	36.710	X	area		=	36.710				
								Total	=	125.203	Sqm	101.11	12658.76
130	Providing and applying white cement based putty of average thickness 1 mm of approved brand and manufacturer, over the plastered wall surfaces to prepare the surface even and smooth as per the instruction of Engineer-In-Charge at all elevations including all material & labour complete.												
	External area	1	X	88.493	X	area		=	88.493				
	Internal area	1	X	88.493	X	area		=	88.493				
	Ceilling area	1	X	36.710	X	area		=	36.710				
								Total	=	213.695	Sqm	77.07	16468.75
131	Providing & Painting with synthetic enamel paint of approved brand and manufacture to give an even shade as per the instruction of Engineer-In-Charge at all floors and all heights including all material & labour complete.												
		19	X	1.800	X	0.500	X	1.350	=	23.085			

ESTIMATE FOR THE WORK :- CONSTRUCTION OF 120 BEDDED OLD AGE HOME FOR ELDERLY BLIND PERSONS AT, UNIT-III, BHUBANESWAR-BLOCK-A													
	TERRACE Floor			Length		Width		Height				Rate	Amount
Sl. No	Description of the work	Nos		In Mtr.		In Mtr.		In Mtr.		Quantity	Unit	In Rs.	In Rs.
137	First class Fly ash Brick masonry using bricks of size 25cm. x 12 cm. x 8 cm. having crushing strength not less than 75 kg. Per. Sqr. Cm. in cement mortar of mix (1:6) with ordinary Portland slag cement(PSC) and screened & washed sand for mortar after immersing the bricks for 6 (Six) hours in water before use in Super structure including splays cutting, circular moulding, corbelling, chamfering and similar such type of works, watering and curing etc. including cost, conveyance, loading, unloading, royalties and taxes of all materials, cost of all labour, scaffolding, sundries, T&P required for the works etc. complete in all respect as directed by the Engineer-In-Charge.												
		2	X	11.000	X	0.250	X	2.400	=	13.200			
		2	X	5.500	X	0.250	X	2.400	=	6.600			
		1	X	1.800	X	0.250	X	2.400	=	1.080			
		-2	X	1.200	X	0.250	X	2.100	=	-1.260			
	Parapet	1	X	92.000	X	0.250	X	1.200	=	27.600			
								Total	=	47.220	Cum	7991.20	377344.46
138	Providing, lifting, hoisting and laying Reinforced cement concrete of M-25 grade as per approved designs and drawings having a minimum compressive strength (in work test) 25 Kg. / Square cm. in 15 cm. cubes at 28 days after mixing and test conducted in accordance with I.S. 516 using 12 mm. to 20 mm. size black hard crushed broken granite stone chips and screened and washed sharp sand for mortar of approved quality from approved quarry, washed and cleaned (20mm. size chips not to exceeds 25 %) to be mixed in concrete mixture with Portland slag cement (PSC) including hoisting, lowering, laying and compaction concrete by using vibrators, watering and curing for 28 days, centering and shuttering then after dismantling and removing debris from the work site and finishing the exposed surface smooth providing grooves or beads wherever necessary including cost, conveyance, loading, unloading, royalties and taxes of all materials and cost of all labours, sundries, T & P required of the work etc. complete in all respect as directed by the Engineer-in-Charge. But excluding cost and conveyance of M.S. rods or Tor steel and binding wires and labour charges for straightening, cutting, bending etc. of M.S. rods or tor steel tying the grills and placing in proper position.												
	b) Columns.												
	Col up to Top Lvl.												
	C2	4	X	0.300	X	0.400	X	2.400	=	1.152			
								Total	=	1.152	Cum	28690.45	33051.40
	d) Lintel beam .												
		2	X	1.800	X	0.250	X	0.150	=	0.135			
								Total	=	0.135	Cum	26649.53	3597.69
	e) Roof Beams.												
		2	X	11.000	X	0.250	X	0.400	=	2.200			
		2	X	5.500	X	0.250	X	0.400	=	1.100			
		1	X	1.800	X	0.250	X	0.400	=	0.180			
								Total	=	3.480	Cum	28690.45	99842.77
	f) RCC Slab .												
	Slab area	1	X	11.500	X	5.500	X	0.150	=	9.488			
								Total	=	9.488	Cum	25217.51	239251.17
	TOTAL R.C.C QNTY.									14.255	Cum		
139	Supplying, straightening, cutting, bending, placing in position and binding reinforcement steel work in RCC/reinforced brick works as per drawing and specification including preparation of respective bar bending schedule and binding (Binding wire to be used as per the IS code) etc. all complete as per direction of Engineer-in-charge Cold Twisted bars, Thermo-Mechanically-treated bars.												
						Kg/Cum							
	b) Column	1	x	1.152	x	176.000			=	202.752			
	d) Lintel	1	x	0.135	x	123.000			=	16.605			
	e) Roof beam	1	x	3.480	x	176.000			=	612.480			
	f) Roof Slab	1	x	9.488	x	180.000			=	1707.750			
								Total	=	2539.587	Kg		
								Total	=	25.396	Qntl.	9888.07	251116.24
140	12mm cement plaster on external RCC/brick surfaces in cement plaster 1:6 (1 cement : 6 coarse sand) including necessary scaffolding, curing etc. all complete at all floors and all heights.												
	External wall												
		2	X	11.000	X		X	2.400	=	52.800			
		2	X	5.500	X		X	2.400	=	26.400			
		1	X	1.800	X		X	2.400	=	4.320			
		-2	X	1.200	X		X	2.100	=	-5.040			
	Parapet	1	X	92.000	X		X	1.200	=	110.400			
								Total	=	188.880	Sqm	206.28	38962.58

TERRACE Floor				Length		Width		Height		Rate		Amount	
Sl. No	Description of the work	Nos		In Mtr.		In Mtr.		In Mtr.		Quantity	Unit	In Rs.	In Rs.
141	16mm cement plaster on internal smooth side of RCC/brick surfaces with cement mortar of mix 1:6 (1 cement : 6 fine sand) including necessary scaffolding, curing etc. all complete at all floors and all heights.												
	Internal wall												
		2	X	11.000	X			2.400	=	52.800			
		2	X	5.500	X			2.400	=	26.400			
		1	X	1.800	X			2.400	=	4.320			
		-2	X	1.200	X			2.100	=	-5.040			
	Parapet	1	X	92.000	X			1.200	=	110.400			
								Total	=	188.880	Sqm	272.00	51375.43
142	6 mm cement plaster on RCC surfaces at ceiling/slab soffit and other locations with cement mortar of mix 1:4 (1 cement : 4 fine sand) including necessary scaffolding, curing etc. all complete at all floors and all heights.												
	Slab area	1	X	11.500	X	5.500	X		=	63.250			
								Total	=	63.250	Sqm	206.58	13066.42
143	Providing and fixing of factory made Fenesta or equivalent UPVC sliding Window/Ventilator (colour or approved) complete with U value=1.9-1.3 W/m 2k, flame resistance, self extinguishing, lead free comprising UPVC multi chambered frame having in built UPVC roller track on top and UPVC sash with wall thickness of 2.3mm duly reinforced with G.I section 2.6 mm where ever required. All corners of frame and sash will be fusion welded. After placing 12.5mm laminate glass (6mm clear toughened +1.5 pvg laminate+5mm clear glass) Annealed glass in the sash, with support of hurricane bar for high wind support. uPVC glazing bead, interlock, EPDM gasket brush shall be provided including multi lock and rollers & proper drainage system shall be provided. window frame will be fixed to the wall with 100mm long and 8mm dia.Fasteners and after fixing the gap between frame and adjucent finished wall shall be filled with weather proof silicon sealant over backer rod of required size, of approved quality complete in all respect as per approved drawing & direction of the Engineer -In-Charge. Note:- Profile Manufacturer & window manufacturer, installation of windows must be done through Manufacturing company, and then only Manufacturer warranty is acceptable)												
	W2	1	X	1.800	X	1.350	X		=	2.430			
								Total	=	2.430	Sqm	8500.00	20655.00
144	Providing and fixing M.S grill of required patterns for windows/verandahs etc. with M.S flats, square or round bars etc. including applying a coat of approved steel primer and two or more coats of synthetic enamel paint of approved make & shade, all complete as per drawing & specification. (All steel sections contractor's own supply).												
	W2	1	X	1.800	X	27.000	X	1.350	=	65.610			
		2	X	1.200	X	30.000	X	2.100	=	151.200			
								Total	=	216.810	Kg.	68.73	14901.25
145	Providing & Applying priming one coat with Cement primer of approved brand and manufacture on plaster surface as per the instruction of Engineer-In-Charge at all elevations including all material & labour complete.												
	External area	1	X	188.880	X	area			=	188.880			
	Internal area	1	X	188.880	X	area			=	188.880			
	Ceilling area	1	X	63.250	X	area			=	63.250			
								Total	=	441.010	Sqm	77.02	33968.33
146	Providing and applying to outside walls with two or more coats of Anti-Fungal Weather coat water proofing paint including scaffolding and cleaning the surface before application of approved colour and manufacture as per specification, instruction of Engineer-In-charge at all elevations including all material labour complete.												
	External area	1	X	188.880	X	area			=	188.880			
								Total	=	188.880	Sqm	97.95	18500.17
147	Preparing surface and painting at all height with two or more coats of interior Plastic Emulsion "Royale Shyne" of Asian Paints or equivalent of approved shade as per the instructions of the manufacturers; giving uniform shade etc in all heights of walls etc. including interior wall primer & providing scaffolding, cleaning, curing and supply of all materials and labour complete as per drawing, design and direction of Architect/Engineer-In-Charge.												
	Internal area	1	X	188.880	X	area			=	188.880			
	Ceilling area	1	X	63.250	X	area			=	63.250			
								Total	=	252.130	Sqm	103.05	25982.74
148	Providing and applying white cement based putty of average thickness 1 mm of approved brand and manufacturer, over the plastered wall surfaces to prepare the surface even and smooth as per the instruction of Engineer-In-Charge at all elevations including all material & labour complete.												
	External area	1	X	188.880	X	area			=	188.880			
	Internal area	1	X	188.880	X	area			=	188.880			
	Ceilling area	1	X	63.250	X	area			=	63.250			
								Total	=	441.010	Sqm	78.72	34716.40
149	Providing & Painting with synthetic enamel paint of approved brand and manufacture to give an even shade as per the instruction of Engineer-In-Charge at all floors and all heights including all material & labour complete.												
		1	X	1.800	X	0.500	X	1.350	=	1.215			
		2	X	1.200	X	0.500	X	2.100	=	2.520			

ESTIMATE FOR THE WORK :- CONSTRUCTION OF 120 BEDDED OLD AGE HOME FOR ELDERLY BLIND PERSONS AT, UNIT-III, BHUBANESWAR-BLOCK-A										
Sl. No	COMPOUND WALL Description of the work	Nos	Length In Mtr.	Width In Mtr.	Height In Mtr.	Quantity	Unit	Rate In Rs.	Amount In Rs.	
	Total lenth of Boundary wall = 615mtr									
151	Earthwork in excavation in all types of soil for site leveling, foundation, pits, trenches and other civil works upto and including 1.5metre depth and stacking the soil upto a lead of 100 metre and including dewatering, removing slush, shoring and strutting (as required), complete as per specification and as directed by the Engineer-In-Charge.									
	Footing	26	x	1.200	x	1.200	x	1.200	=	44.434
										44.434 Cum
								232.30		10,322.085
152	Supplying and filling sand in foundation and over areas including watering, ramming, consolidating and dressing, labours, tools, taxes etc. all complete as per the specification and direction of Engineer-In-charge.									
	Footing	26	x	1.200	x	1.200	x	0.150	=	5.554
										5.554 Cum
								1,439.58		7,995.825
153	Providing and laying plain cement concrete 1:4:8 (1 cement : 4 sand : 8 stone agregate 40mm nominal size) as levelling course in foundation and plinth etc. including tempering, curring, shuttering etc. complete all depth and height.									
	Footing	26	x	1.200	x	1.200	x	0.150	=	5.554
										5.554 Cum
								6,011.89		33,391.755
154	Providing, lifting, hoisting and laying Reinforced cement concrete of M-25 grade as per approved designs and drawings having a minimum compressive strength (in work test) 25 Kg. / Square cm. in 15 cm. cubes at 28 days after mixing and test conducted in accordance with I.S. 516 using 12 mm. to 20 mm. size black hard crushed broken granite stone chips and screened and washed sharp sand for mortar of approved quality from approved quarry, washed and cleaned (20mm. size chips not to exceeds 25 %) to be mixed in concrete mixture with Portland slag cement (PSC) including hoisting, lowering, laying and compaction concrete by using vibrators, watering and curing for 28 days, centering and shuttering then after dismantling and removing debris from the work site and finishing the exposed surface smooth providing grooves or beads wherever necessary including cost, conveyance, loading, unloading, royalties and taxes of all materials and cost of all labours, sundries, T & P required of the work etc. complete in all respect as directed by the Engineer-in-Charge. But excluding cost and conveyance of M.S. rods or Tor steel and binding wires and labour charges for									
i)	Footing	26	x	1.200	x	1.200	x	0.500	=	18.514
										18.514 Cum
								8,010.26		148,304.330
ii)	Tie Beam	1	x	90.000	x	0.250	x	0.300	=	6.750
	Tie beam over brick work.	1	x	90.000	x	0.250	x	0.150	=	3.375
										10.125 Cum
								8,835.00		89,454.394
iii)	Column up to Top Lvl.	26	X	0.300	X	0.300	X	3.000	=	6.943
										6.943 Cum
								15,856.57		110,089.872
155	Supplying, straightening, cutting, bending, placing in position and binding reinforcement steel work in RCC/reinforced brick works as per drawing and specification including preparation of respective bar bending schedule and binding (Binding wire to be used as per the IS code) etc. all complete as per direction of Engineer-in-charge Cold Twisted bars, Thermo-Mechanically-treated bars complete at all floors and all heights.									
i)	Footing			18.514	@	106.000	Kg/Cum	=	1962.514	
ii)	Tie Beam			10.125	@	150.000	Kg/Cum	=	1518.750	
iii)	Column			6.943	@	176.000	Kg/Cum	=	1221.943	
									4703.207	Kg
									47.032	Qntl
								9,743.85		458,273.246
156	First class Fly ash Brick masonry using bricks of size 25cm. x 12 cm. x 8 cm. having crushing strength not less than 75 kg. Per. Sqr. Cm. in cement mortar of mix(1:6) with ordinary Portland slag cement(PSC) and screened & washed sand for mortar after immersing the bricks for 6 (Six) hours in water before use in Super structure including splays cutting, circular moulding, corbelling, chamfering and similar such type of works, watering and curing etc. including cost, conveyance, loading, unloading, royalties and taxes of all materials, cost of all labour, scaffolding, sundries, T&P required for the works etc. complete in all respect as directed by									
		1	X	90.000	X	0.250	X	2.400	=	54.000
	Column Deduction :-	-26	X	0.300	X	0.300	X	2.400	=	-5.554
										48.446 Cum
								6,015.72		291,435.852
157	16mm cement plaster on external smooth side of RCC/brick surfaces with cement mortar of mix 1:6 (1 cement : 6 fine sand) including necessary scaffolding, curing etc. all complete at all floors and all heights as direction of the Engineer-In-Charge.									
		1	X	90.000	X		X	2.850	=	256.500
										= 256.500 Sqm
								243.29		62,403.597
158	12mm cement plaster on internal smooth side of RCC/brick surfaces with cement mortar of mix 1:6 (1 cement : 6 fine sand) including necessary scaffolding, curing etc. all complete at all floors and all heights as direction of the Engineer-In-Charge.									
		1	X	90.000	X		X	2.850	=	256.500

COMPOUND WALL				Length		Width		Height				Rate	Amount
Sl. No	Description of the work	Nos		In Mtr.		In Mtr.		In Mtr.		Quantity	Unit	In Rs.	In Rs.
										256.500	Sqm	172.87	44,341.155
159	Providing and fixing M.S grill of required patterns for windows/verandahs etc. with M.S flats, square or round bars etc. including applying a coat of approved steel primer paint of approved make & shade, all complete as per drawing & specification. (All steel sections contractor's own supply) at all floors and all heights.												
		1	X	90.000	X	27.000	X	0.600	=	1458.000			
									=	1458.000	Kg.	68.73	100,207.692
160	Providing and applying to outside walls with one coat wall Primer, two or more coats of Anti-Fungal Weather coat water proofing paint make & shade manufactured by reputed manufacturer like NEROLAC / ASIAN / BERGER / DULOX or equivalent including scaffolding and cleaning the surface before application of approved colour and manufacture as per specification, instruction of Engineer-In-charge at all elevations including all material labour complete at all floors and all heights.												
		1	x	256.500	x	area			=	256.500			
		1	x	256.500	x	area			=	256.500			
									=	513.000	Sqm	150.55	77,231.36
161	Providing & Painting with 2 coats with any synthetic enamel paint on new iron work including cost of paint in all heights with all scaffolding and staging charges including cost, conveyance, taxes of all materials, cost of all labour, etc. complete as per specification and direction of Engineer-in-Charge.												
		1	X	90.000	X	0.500	X	0.600	=	27.000			
										27.000	Sqm	129.06	3,484.729
													=====
												Total Rs.	1,436,935.89
												Say Rs.	1,436,936.00

ESTIMATE FOR THE WORK :- CONSTRUCTION OF 120 BEDDED OLD AGE HOME FOR ELDERLY BLIND PERSONS AT, UNIT-III, BHUBANESWAR-BLOCK-A													
DRAINAGE SYSTEM													
Sl. No	Description of the work	Nos	Length In Mtr.		Width In Mtr.		Height In Mtr.		Quantity		Unit	Rate In Rs.	Amount In Rs.
	Main Drain of Lnt 650mtr of size-(600x600)mm & Peripheral Drain-300 mtr of Size-(450x450)mm.												
170	Earthwork in excavation in all types of soil for site leveling, foundation, pits, trenches and other civil works upto and including 1.5metre depth and stacking the soil upto a lead of 100 metre and including dewatering, removing slush, shoring and strutting (as required), complete as per specification and as directed by the Engineer-In-Charge.												
	600x600	1	x	90.000	x	0.900	x	0.900	=	72.900			
	450x450	1	x	100.000	x	0.750	x	0.750	=	56.250			
										129.150	Cum	232.30	30,001.545
171	Supplying and filling in foundation trenches and plinth, ditches with sand well-watered and rammed in layers not exceeding 23 cm. in depth with all lead and lift including cost, conveyance, loading, unloading, royalties, cost of all labour, sundries, T&P required for the work etc. complete in all respect as per specification and direction of Engineer-in-charge. (Measurement will be taken on finished compacted section only).												
	600x600	1	x	90.000	x	0.900	x	0.150	=	12.150			
	450x450	1	x	100.000	x	0.750	x	0.150	=	11.250			
										23.400	Cum	1,439.58	33,686.114
172	Providing and lying plain cement concrete of proportion (1:4:8) in foundation and floors using 4 cm. Size black hard crusher broken granite stone metal and screened and washed sharp sand for mortar of approved quality from approved quarry, washed and cleaned including hoisting, lowering, laying concrete, ramming, watering and curing etc. complete to required levels laid in layers not exceeding 15 cm thick in each layer including cost, conveyance, loading, unloading, royalties, cost all labours, sundries, T & P required for the work including shoring, shuttering and dewatering if required including hire & running charges of water pump complete as per specification and direction of Engineer-in-charge.												
	600x600	1	x	90.000	x	0.900	x	0.100	=	8.100			
	450x450	1	x	100.000	x	0.750	x	0.100	=	7.500			
										15.600	Cum	6,011.89	93,785.484
173	Providing, lifting, hoisting and laying Reinforced cement concrete of M-25 grade as per approved designs and drawings, to be mixed in concrete mixture including hoisting, lowering, laying and compaction concrete by using vibrators, watering and curing for 28 days, and finishing the exposed surface smooth providing grooves or beads wherever necessary including cost, conveyance, loading, unloading, royalties and cost of all labours, sundries, T & P required of the work etc. complete in all respect.												
	600x600 :- Base	1	x	90.000	x	0.900	x	0.150	=	12.150			
	Wall	2	x	90.000	x	0.600	x	0.150	=	16.200			
	Cover	1	x	90.000	x	0.900	x	0.150	=	12.150			
	450x450 :- Base	1	x	100.000	x	0.750	x	0.150	=	11.250			
	Wall	2	x	100.000	x	0.450	x	0.150	=	13.500			
	Cover	1	x	100.000	x	0.750	x	0.150	=	11.250			
										76.500	Cum	8,010.26	612,785.252
174	Providing, fixing and placing of Tor steel (HYSD) Fe-500 IS 1786-2008 for RCC work in all floors of required diameter of approved quality with straightening, Cutting, bending, binding welding or jointing if necessary, bending, binding, tying the grills as required for R.C.C. works, providing fan hooks where necessary and hoisting, lowering and placing in proper position according to approved designs and drawings including cost, conveyance, loading, unloading, taxes of M.S. rods or Tor steel and binding wires of 18 to 20 gauge required for the work and cost of all labour, sundries, T & P and scaffolding complete in all respect as directed by the Engineer-in-Charge (payment will be made according to the actual weight of M.S rod /Tor steel consumed in the work and Each No separate payment will be made towards weight of binding wires which is to be borne by the contractor at his own cost.												
	Drain	1	X	76.500	@	55.000		Kg/Cum	=	4207.500			
										4207.500	Kg		
										42.075	Qntl	9,743.85	409,972.307
175	12mm thick cement plaster (1:6) on brick work with screened and washed sharp sand for mortar and finished smooth to the rough surface of brick masonry walls after racking out joints including watering and curing rounding of corners etc. complete with cost, conveyance, loading, unloading, royalties, cost of all labour, T&P, sundries and scaffolding required for the work etc. with providing grooves as directed by the Engineer-in-Charge.												
	600x600	1	X	90.000	X		X	0.600	=	54.000			
		2	x	90.000	x		x	0.750	=	135.000			
	450x450	1	X	100.000	X		X	0.450	=	45.000			
		2	x	100.000	x		x	0.600	=	120.000			
										354.000	Sqm	172.87	61,195.980
													=====
												Total Rs.	1,241,426.68
												Say Rs.	1,241,427.00

**ESTIMATE FOR THE WORK :- CONSTRUCTION OF 120 BEDDED OLD AGE HOME FOR ELDERLY BLIND PERSONS AT,
UNIT-III, BHUBANESWAR-BLOCK-A**

SITE DEVELOPMENT													
Sl. No	Description of the work	Nos		Length		Width		Height		Quantity	Unit	Rate	Amount
				In Mtr.		In Mtr.		In Mtr.				In Rs.	
176	Supplying and filling in Site fillup, foundation trenches and plinth, ditches with sand well-watered and rammed in layers not exceeding 23 cm. in depth with all lead and lift including cost, conveyance, loading, unloading, royalties, cost of all labour, sundries, T&P required for the work etc. complete in all respect as per specification and direction of Engineer-in-charge. (Measurement will be taken on finished compacted section only).												
	600x600	1	x	400.000	x	area	x	0.600	=	240.000			
										240.000	Cum	1,439.58	345,498.605
177	Supply, Filling, Spreading of Good Filling earth, including cost of material, carriage, labour and cost of application.												
		1	x	400.000	x	area	x	0.600	=	240.000			
										240.000	Cum	550.00	132,000.000
													=====
												Total Rs.	477,498.61
												Say Rs.	477,499.00

ESTIMATE FOR THE WORK :- CONSTRUCTION OF 120 BEDDED OLD AGE HOME FOR ELDERLY BLIND PERSONS AT, UNIT-III, BHUBANESWAR-BLOCK-A

GARDEN & PLANTATION									
SI.No.	Description of work	No	Length	Breath	Height	Quantity	Unit	Rate	Amount (In Rs.)
178	EXCAVATION OF PITS								
a	Earth work in Stoney earth for small trees with initial lead and lift including rough dressing in layers not exceeding 0.3m in depth of size 0.2x0.2x0.2 m. @ 138.71/cum and the Earth transported by transport vehicles as directed by the Engineer-in-charge.	380					Nos	2.49	946.05
b	Earth work in Ordinary soil for big trees with initial lead and lift including rough dressing in layers not exceeding 1m in depth of size 0.60mx0.60mx0.75 m. @ 138.71/cum and the Earth transported by transport vehicles as directed by the Engineer-in-charge.	170					Nos	84.02	14284.08
179	Filling pits with fertile soil/ silt including carriage up to each pit by tractor/ truck up to site and by head load up to pit.								
a	Pit size 0.2x0.2x0.2 m	380					Nos	3.85	1462.90
b	Pit size 0.60mx0.60mx0.75 m	170					Nos	129.93	22087.93
180	Application of organic manure (FYM/cimpost/sludge) Including carriage upto pit								
	By tractor/truck upto site and by head load upto pit								
a	Pit size 0.2x0.2x0.2 m	380					Nos	5.00	1900.00
b	Pit size 0.60mx0.60mx0.75 m	170					Nos	22.00	3740.00
181	Application of chemical fertilisers npk and insecticited/termicide including cost of materials/carriage and cost of application.								
a	Pit size 0.20mtx 0.20mtx0.20mt @ 50gm of NPK and 10gm of termicides	380					Nos	1.50	570.00
b	Pit size 1.00mtx 0.60X0.60X0.75 cum @ 50gm of NPK and 10gm of termicides	170					Nos	5.00	850.00
182	Cost of planting including mixing of manure, fertilizer, pesticides and initial watering.								
	For shrub category	380					Nos	2.00	760.00
	For tree category	170					Nos	8.00	1360.00
183	Supporting plants with stakes including cost of stakes								
	For shrub category	380					Nos	3.00	1140.00
	For tree category	170					Nos	20.00	3400.00
184	Replanting of Trees of by Uprooting and Digging Pits								
	For shrub category	4					Nos	20.00	80.00
	For tree category	3					Nos	100.00	300.00
185	Supply, Filling, Spreading of Good earth, Garden Soil including cost of material, carriage, labour and cost of application.								
	Lawn area	1	200		0.600	120	Cum		
						120	Cum	550.00	66000.00
186	Contingent expenditure including cost of ropes, implement,baskets, drums etc.	550					Nos	2.00	1100.00
187	Cost of planting trees & palm including transportation upto site (including Providing, Laying,loading, unloading, transportation, royalties, cost of all materials, labour, sundries, T&P, scaffolding, watering and curing etc. complete in all respect as per specification and direction of Engineer-in-charge.)								
	Trees								
	Hibiscus tiliaceus variegated				8-10'	10	Nos	700.00	7000.00
	Bauhinia blackae				8-10'	10	Nos	700.00	7000.00

GARDEN & PLANTATION									
Sl.No.	Description of work	No	Length	Breath	Height	Quantity	Unit	Rate	Amount (In Rs.)
	Azardirachta indica				8-10'	10	Nos	700.00	7000.00
	Melia azadirach				8-10'	10	Nos	490.00	4900.00
	Podocarpus macrophyllus				8-10'	10	Nos	700.00	7000.00
	Plumeria alba				8-10'	10	Nos	315.00	3150.00
	Plumeria Thai varieties				8-10'	10	Nos	700.00	7000.00
	Michelia champaca				8-10'	10	Nos	700.00	7000.00
	Albizia lebbeck				8-10'	10	Nos	91.00	910.00
	Arecanut palm				5-6'	10	Nos	700.00	7000.00
	Raphis palm				3-4'	10	Nos	700.00	7000.00
	Foxtail Palm				8-10'	10	Nos	700.00	7000.00
	Arenga palm				8-10'	10	Nos	525.00	5250.00
	Bottle palm				8-10'	10	Nos	91.00	910.00
	Veitchia golden				5-6'	10	Nos	560.00	5600.00
	Kentia palm				8-10'	10	Nos	560.00	5600.00
188	Cost of planting shrubs including transportation upto site (including Providing, Laying,loading, unloading, transportation, royalties, cost of all materials, labour, sundries, T&P, scaffolding, watering and curing etc. complete in all respect as per specification and direction of Engineer-in-charge)								
	Small Palms								
	Murraya exotica				3-4'	20	Nos	35.00	700.00
	Sanchezia nobilis				3-4'	20	Nos	70.00	1400.00
	Eugenia myrtifolia				3-4'	20	Nos	35.00	700.00
	Nicodivia spp				3-4'	20	Nos	70.00	1400.00
	Jatropha panduraefolia green				3-4'	20	Nos	70.00	1400.00
	Jatropha panduraefolia variegated				3-4'	20	Nos	140.00	2800.00
	Cerbera odollam				3-4'	20	Nos	140.00	2800.00
	Alpinia zerumbet				1-2'	20	Nos	35.00	700.00
	Malphigia golden				1-2'	20	Nos	140.00	2800.00
	Malphigia green				1-2'	20	Nos	70.00	1400.00
	Mini tagar variegated				1-2'	20	Nos	70.00	1400.00
	Areca Palm				1-2'	20	Nos	45.92	918.40
	Allamanda dwarf				1-2'	20	Nos	56.00	1120.00
	Graptophyllum spp				1-2'	20	Nos	28.00	560.00
	Eranthemum tricolor				1-2'	20	Nos	28.00	560.00
	Justicia variegated				1-2'	20	Nos	28.00	560.00
	Barleria cristata				1-2'	20	Nos	56.00	1120.00
	Verbena perennial				1-2'	20	Nos	56.00	1120.00
	Abelia variegated				1-2'	20	Nos	252.00	5040.00
189	Development of lawn								
a	Clearance of site, excavation of around upto a depth of 30cm, removal of excavated materials to outside for dumping at suitable places.								
						200	Sqm	20.00	4000.00
b	Providing and laying Neelgiri /Mexican grass turf with earth 50mm to 60mm thickness of existing ground prepared with proper level and ramming with tools wooden (Dhurmos) and than rolling the surface with light roller make the surface smoothen and light watering with sprinkler and maintenance for 30 days or more till the grass establish properly, as per direction of officer-in-charge. Mexican grass					100	Sqm	214.40	21440.00
c	Providing and laying Bermuda grass with earth 50mm to 60mm thickness of existing ground prepared with proper level and ramming with tools wooden (Dhurmos) and than rolling the surface with light roller make the surface smoothen and light watering with sprinkler and maintenance for 30 days or more till the grass establish properly, as per direction of officer-in-charge.					100	Sqm	120.00	12000.00

								Total Rs.	443239.36
								SAY Rs.	443239.00

NAME OF WORK :-CONSTRUCTION OF 120 BEDDED OLD AGE HOME FOR ELDERLY BLIND PERSONS AT, UNIT-III, BHUBANESWAR-BLOCK-A					
Sl. No.	Description of items	Quantity	Unit	Rate	Amount(Rs.)
A	INTERNAL WATER SUPPLY & SANITATION WORKS				
190	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes conforming to IS:15778, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer-in-Charge				
i	50 mm dia	40.00	Mtr	1207.32	48,292.99
ii	40 mm dia	9.00	Mtr	796.07	7,164.67
iii	32 mm dia	9.00	Mtr	592.82	5,335.40
iv	25 mm dia	159.00	Mtr	413.59	65,760.69
v	20 mm dia	93.00	Mtr	312.11	29,025.81
191	Providing and fixing to wall or ceiling and floor pvc pipes class conforming to ASTM-D1785/89 (Sch-80) and pipe fittings of the following nominal bore with clamps including making good the wall, ceiling and floor all complete as per specification complete.	120.00	Mtr	1151.51	138,181.33
i	65mm cpvc sch -80 pipe				
192	Supplying all materials, Labour, T & P & fitting and fixing of following different water supply fitting as per ASTMD-2846 with supply of all necessary joint materials etc all complete as per direction of engineer-in-charge				
i	65mm dia CPVC ball valve	2.00	Each	2644.95	5,289.90
ii	50mm dia CPVC ball valve	4.00	Each	2645.00	10,580.00
iii	40mm dia CPVC ball valve	6.00	Each	1656.00	9,936.00
iv	32mm dia CPVC ball valve	4.00	Each	1183.00	4,732.00
v	25mm dia CPVC ball valve	4.00	Each	648.00	2,592.00
193	Cutting grooves in pucca floors and walls for taking GI/PVC pipes and making good the damages as per specification complete				
	15mm to 32mm dia pipe	252.00	Mtr	214.00	53,928.00
194	Cutting holes through existing brick work including making good the same in cement mortar (1:4) for taking GI/PVC pipes and fittings etc all complete as per specification.				
	In all Floor				
	20mm to 50mm PVC to pass in 125 mm to 250mm thick Brick/stone wall	45.00	Each	72.00	3,240.00
195	Cutting hole in R.C.C floors and roofs upto 19 cm thick for passing G.I / P.V.C pipes and fittings etc and repairing the holes after insertion of pipes etc with cement concrete (1:2:4) including finishing complete so as to make it leak proof.				
	20mm to 50mm PVC to pass in 125 mm to 250mm thk RCC	45.00	Each	286.00	12,870.00
196	Providing & Fixing Wash Down Water Closet (European type W.C pan) with integral 'S' or 'P' trap conforming to IS 2556 : Part 8-2004, to the floor with wooden plug and chromium plated screws including jointing the trap with soil pipe in cement mortar (1:1) etc all complete as per specification				
	European Water Closet -WC	40.00	Each	4788.00	191,520.00
197	Providing and fixing P.V.C. low level flushing cistern with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete.	40.00	Each	1405.40	56,216.00
198	Providing and Fixing wash basins with hole for pillar taps confirming to IS 2556 Part 4-2004 with cast iron or M.S brackets painted white including cutting holes in walls and making good the damages etc all complete as per specification				
	Wash Basin	45.00	Each	2744.00	123,480.00

199	Providing and Fixing PVC waste pipe with fittings of following nominal diameter for wash basin or sink including brass check nut complete as per specification	45.00	Each	125.00	5,625.00
200	Providing and Fixing Chromium Plated brass waste coupling of the following nominal diameter for wash basin and sink as per specification	45.00	Each	381.00	17,145.00
201	Supplying all materials, labour, taxes,T&P for fitting & fixing of different water supply CP, Brass or GM concealed fitting and fixtures of ISI approved make of following sizes and specification with leak proof threaded joints tightened with spun yam and white zinc or any other method as required and directed including testing and rectification of defects after testing,including cost of all labours,materials,conveyance,loading and unloading,all taxes and rovalies, sundries and T&P etc all				
i	Pillar Cock	45.00	Nos	1,635.00	73,575.00
ii	2 in 1 Bib cock	40.00	Nos	1,943.00	77,720.00
iii	Angular stop cock	85.00	Nos	1,166.00	99,110.00
iv	CP Health Faucet with 1.01 RM PVC tube	40.00	Nos	1,169.00	46,760.00
v	Soap Dish	40.00	Nos	782.00	31,280.00
vi	Towel Ring	40.00	Nos	1,034.00	41,360.00
vii	TOWEL RAIL	40.00	Nos	1,322.00	52,880.00
viii	GLASS SHELF	45.00	Nos	1,349.00	60,705.00
ix	Bathroom mirror 600x600 mm	45.00	Nos	2,000.00	90,000.00
x	SHOWER ARM	40.00	Nos	1,733.00	69,320.00
xi	OVERHEAD SHOWER	40.00	Nos	2,582.00	103,280.00
xii	Longbody Bibcock	40.00	Nos	1,600.00	64,000.00
xiii	Concealed stop cock	40.00	Nos	2,762.00	110,480.00
xiv	CP Flange small	205.00	Nos	40.00	8,200.00
xv	110mm dia pvc floor trap with jally	85.00	Nos	450.00	38,250.00
xvi	CP extension piece	250.00	Nos	120.00	30,000.00
xvii	CP Grating	85.00	Nos	50.00	4,250.00
xviii	Toilet roll holder	40.00	Nos	1,150.00	46,000.00
202	Making khurras 45x45 cm with average minimum thickness of 5 cm cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate of 20 mm nominal size) over P.V.C. sheet 1 m x1 m x 400 micron, finished with 12 mm cement plaster 1:3 (1 cement : 3 coarse sand) and a coat of neat cement, rounding the edges and making and finishing the outlet complete.	8.00	Nos	239.00	1,912.00
203	Providing and fixing on wall face unplasticised Rigid PVC rain water pipes conforming to IS: 13592 Type A, including jointing with seal ring conforming to IS: 5382, leaving 10 mm gap for thermal expansion.(i) Single socketed pipes.				
	110MM OD P.V.C SWR S/S PIPE(ISI TYPEA)	192.00	Mtr	412.38	79,177.13
204	Supply all material, labour ,T&P ,fitting and fixing UPVC SWR Type B pipes & fitting of approved make conforming to IS-13592 including jointing of approved solvent cement non-heat application method including testing of as per stanard specification, both below & above ground level/floor & on walls including supply of bobbins,nains,screws,wooden cleant,pipe clamps as per requirement including cutting walls & floor & making good the damages with cement concrete (1:2:4) with hard granite chips, including scaffolding wherever necessary all complete with requisite testing as per direction of the EIC				
i	75mm dia OD PVC SWR S/S PIPE (ISI TYPE-B)	103.00	Mtr	374.96	38,620.81
ii	110mm dia OD PVC SWR S/S PIPE (ISI TYPE-B)	308.00	Mtr	555.58	171,117.60
iii	110mm p.v.c s/j with door	40.00	Nos	228.77	9,150.80
iv	110mm p.v.c swr plain bend 87.5	40.00	Nos	140.03	5,601.20
v	110mm pipe clip	513.00	Nos	24.93	12,789.09
vi	110mm dia p.v.c vent cowl	2.00	Nos	34.45	68.90
vii	110mm dia p.v.c swr coupler	107.00	Nos	91.87	9,830.09

viii	110mm dia p.v.c Y with door	40.00	Nos	412.64	16,505.60
ix	110x110x110 mm dia pvc swr Tee	40.00	Nos	196.66	7,866.40
205	Providing and fixing pvc gully trap compete with grating brick masonry chamber with water tight SFRC cover with frame of 300*300 mm size(inside)the weight of cover to be notless than 4.50kg and frame to be not less than 2.70kg as per standard design:100*100 mm size P type .including cost of all labours,material,conveyance,loading and unloading,all taxes and royalties,sundries and T&P etc all complete as per direction of the Engineer-in-charge				-
	With flyash bricks of minimum compressive strength 75 kg/sqcm (Size 300 x 300 x 300 mm)	4.00	Nos	2,949.20	11,796.80
206	Constructing brick masonry road gully chamber 45x45x77.5cm with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) with precast R.C.C. vertical grating complete as per standard design Including all cost of labour, material, T&P etc. all complete as per the direction of Engineer-in-charge.	8.00	Nos	5,503.20	44,025.60
207	Constructing brick masonry chamber for underground SFRC inspection chamber and bends with brick in cement mortar 1:4 (1 cement :4 coarse sand)SFRC cover with frame 455*610mm internal dimensions ,total weight of cover with frame be not less than 38kg (weight of cover 23kg and weight of frame 15 kg), R.C.C TOP SLAB WITH 1:2:4mix(1 cement:2 coarse sad:4 graded stone aggregate 20mm nominal size),foundation concrete 1:5:10(1 cement :5 fine sand :10 graded stone aggregate 40mm nominal size)insideplastering 12mm thick with cement mortar 1:3(i cement:3 coarse sand),finished smooth with a floating coat of neat cement on walls and bed concrete etc.compete as per standard design Including all cost of labour,material,T&P etc.all compete as per the engineer-in-charge.				
	Inside dimensions 600*850mm and 45cm deep for pipe line with three or more inlets.	2.00	Nos	6,422.20	12,844.40
208	Fixing of Gun Metal Non-return Valve Class - I conforming to IS : 5312 (Part-I) 2004 of the following nominal bore as per specification complete				
	25mm dia Non-return Valve	40.00	Nos	1,475.08	59,003.27
209	Supplying all materials,labour,T&P and fixing PVC water storage tanks of as required capacity confirming to IS:12701-1996 including cutting holes through the tank and fixing pvc pipe and fittings and providing extre sockets and jam nuts,fixing ball valve etc,including conveyance of all materials to work site etc all complete as per specification and direction of Engineer-in-charge (Sintex /Equivalent)	20000.00	Ltrs	15.00	300,000.00
	10000 Ltr Capacity-2Nos				
210	Supplying and fixing Aquaguard Storage Cooler#Cum-Purifier (80 Ltr. Capacity) with all cost complete.	8.00	Nos	95,528.73	764,229.83
211	Supplying and installation of rest room cubicles of following types of specification etc. including cost of all labour,material,conveyance , loading and unloading etc all complete as per the direction of Architect/Engineer-in-charge.	80.00	Nos	45,752.00	3,660,160.00
	Thickness of Compact Laminate : 12 m				
	Colour of HPL Boards: Single Colour				
	Size of Cubicle : 1200mm (W) X 1500mm (D) X 2100mm (H)				
	Door Size : 1925mm (H) x 600mm (W)				
	Divider Size : 1945mm (H)				
	Overall Height Of Cubicle : 2100mm (Including bottom Gap of 100mm)				
	Accessories: Standard - Stainless Steel - 304 Grade accessories)				
	a) SS "U" Channel				
	b) SS "F" channel (Only Corner Unit)				

	c) SS Door Stopper Channel				
	c) SS Top Rail				
	d) SS Coat Hook				
	e) SS Privacy Thumb turn c/w Occupancy Indicator				
	f) SS Door Knob				
	g) SS Hinges with Cover				
	h) SS Shoe Box Leg 12mm - 316 Grade				
	i) Rubber Lining for Groove				
	j) S.S.Screws 304 G & P.V.C Wall Plugs				
	SPECIAL NOTE - Warpage Criteria is 3.0 mm/1000mm for MRS panels as per EN standard- 438.				
	TOTAL				7,042,784.32

ABSTRACT ESTIMATE OF BOREWELL & WATER SUPPLY LINE					
Sl No	Description of Item	Quantity	Unit	Rate	Amount (Rs.)
A	BOREWELL				
212	Labour for drilling a perfectly vertical bore hole of specified dia for a specified depth below ground level through consolidated and unconsolidated rock with down the hole hammer drilling rigs or combination drilling rigs (1200cfm/300psi) as required to suit the site condition as per the direction of Engineer-in-charge including use of own rigs with its accessories,tools and plant and consumables etc for lowering of 200mm dia PVC pipes for housing fitted with socket and with or without well screen as per tenecessity for soft,medium,hard and boulder formation (PVC casing pipes if required to prevent collapse of overburden is to be provided by the contractor including lowering and with drawing after completion of the tube well).(Icluding both LABOUR FOR DRILLING 200MM DIA FOR 180 MTR DEPTH	240	Mtr	866.47	207952.8
213	Cost of P.V.C (A S T M SCHEDULE-80) pipe 200 mm dia (ASTM D-1785) Make-Oriplast, Hariplast,(ASTM SCH-80 200MM DIA PIPE	240	Mtr	2290.46	549710.4
214	Lowering 200mm dia. PVC pipes with or without slotted pipes as per the necessity from ground level with fitting and fixing the same in a perfectly vertical position. This includes cutting, threading pipes/slotted pipes with providing and fixing of required jointing materials, tools and plant etc. complete and keeping the top of the casing pipe threaded including plugging tube wells so as to prevent entry of foreign materials from above. (FOR HAMMER DRILLING RIG/ COMBINITION DRILLING RIG)	240	Mtr	217.01	52082.4
215	Cleaning and developing 200mm dia. tube well using their own compressor continuously worked till clear and adequate discharge is obtained from the tube well including supply and use of all necessary equipment and labour .(FOR HAMMER DRILLING RIG/ COMBINITION DRILLING RIG).	2	Set	7904.09	15808.18
216	Supplying and fixing of HDPE Pipes 32/40 mm (High Density Polyethylene pipes having inner dia. 32mm and outer dia. 40mm) 6Kg/Sq. cm With IS specification.(32MM NOMINAL BORE SIZE).	240	Mtr	91.57	21976.8
217	Supplying and fixing of PVC coated steel rope including cost of material, labour etc. complete	240	Mtr	26.7	6408
218	Supplying and fixing of Finolex/L&T/BCH Cable 4 Sq. mm (3core copper wire flat cable with PVC insulation)	290	Mtr	140	40600
219	Supplying and fixing of accessories like Nipple, Bore cover, MS clamp, Nut Bolt, Stainless steel nipple, Short piece, GI bend, Socket etc. complete.	2	Set	961.54	1923.08
220	Installation charges pump set with all accessories including transportation etc	2	Set	4200	8400
221	Supply, fitting & fixing of 3 HP,3-Phase Submersible Pump (KSB Make, 7C/15, 80M Head) including cost of all labour, material , transportation & excluding GST complete in all charges & installation as per direction of EIC.	2	Nos	33500	67000
222	Supply, fitting & fixing of Control Panel Board for 3-HP, 3-Phase Submersible Pump including cost of all, labour, material , transportation & excluding GST complete in all charges & as per direction of EIC	2	Nos	7500	15000
					986861.66
B	EXTERNAL WATER SUPPLY SYSTEM				
223	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m including cost of all labours, materials, conveyance, loading and unloading, all taxes , sundries and T&P etc all complete as per direction of the Engineer -in-charge.				
	All kinds of soil				
	Pipes, cables etc, not exceeding 80 mm dia.	120.00	Mtr	215.60	25,872.00
224	Extra for excavating trenches for pipes, cables etc. in all kinds of soil for depth exceeding 1.5 m, but not exceeding 3 m. (Rate is over corresponding basic item for depth upto 1.5 metre).	30.00	Mtr	425.30	12,759.00
225	Filling in foundation, trenches and plinth with river sand, well watered and compacted in layers of with top surface dressed and leveled to proper gradient including cost of all labours, materials, conveyance, loading and unloading, all taxes and royalties, sundries and T&P etc all complete as per direction of the Engineer -in-charge	129.60	Cum	606.90	78,654.24

Sl No	Description of Item	Quantity	Unit	Rate	Amount (Rs.)
226	Providing and laying Chlorinated Polyvinyl Chloride (CPVC) pipes & specials in trenches conforming to IS:15778 including all CPVC plain & brass threaded fittings like bend, tees, reducer etc, jointing by solvent cement with non heating process. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer-in-Charge.				
	80mm dia CPVC SCH-80 Pipe	120.00	Rmt	897.00	107,640.00
227	Providing & fitting fixing cast iron sluice valve with double flange ends for water work purpose conforming to IS -2685-1974 for the following rating & nominal diameter as per specification including cost of all labours, materials, conveyance, loading and unloading, sundries and T&P etc all complete as per direction of the Engineer -in-charge.				
	80 mm dia C.I D/F sluice valve with hand wheel (PN-10)	4.00	Nos.	7887.40	31,549.60
228	Providing & fitting fixing cast iron non return valve with double flange ends for water works purpose conforming to I.S: 2685-1971 for following rating & nominal diameter as per specification including cost of all labours, materials, conveyance, loading and unloading, all taxes, sundries and T&P etc all complete as per direction of the Engineer -in-charge.				
	80 mm dia C.I D/F non return valve	2.00	Nos.	7614.00	15,228.00
229	Fixing of Brass or Gun Metal Full Way Valve conforming to IS:781-1995 of the following nominal sizes with wheel as per specification complete.including cost of all labours, materials, conveyance, loading and unloading, sundries and T&P etc all complete as per direction of the Engineer -in-charge.				
	80 mm dia	2.00	Nos.	9682.00	19,364.00
230	Providing flanged joints to PVC. pipes and specials, including testing of joints : including cost of all labours, materials, conveyance, loading and unloading, all taxes , sundries and T&P etc all complete as per direction of the Engineer -in-charge.				
	For 80 mm diameter pipe	2	Each	284.75	569.50
231	Constructing masonry Chamber 90x90x100 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with SFRC surface box 100 mm top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design :				
	With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	4.00	Nos.	13080.00	52,320.00
232	Constructing masonry Chamber 60x60x75 cm, inside in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for fire hydrants, with C.I. surface box 350 x 350 mm top and 165 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) , i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand:10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design :				
	With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	6.00	Nos.	7028.00	42,168.00
	SUB TOTAL-A				386,124.34

ABSTRACT ESTIMATE OF SEWERAGE SYSTEM INCLUDING OF STP					
Sl No	Description of Item	Quantity	Unit	Rate	Amount (Rs.)
A	SEWERAGE SYSTEM				
233	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m. including cost of all labours, materials, conveyance, loading and unloading, all taxes, sundries and T&P etc all complete as per direction of the Engineer -in-charge.				
a)	All kinds of soil				
	Pipes, cables etc. exceeding 80 mm dia. but not exceeding 300 mm dia	85.00	Mtr	215.60	18,326.00
	From 1.5 Mtr to 3.0 Mtr Depth	10.00	Mtr	425.30	4,253.00
234	Supplying and filling with sand in trenches, including watering, ramming, consolidating and dressing complete etc.including cost of all labours, materials, conveyance, loading and unloading, all taxes and royalties, sundries and T&P etc all complete as per direction of the Engineer -in-charge.	127.50	Cum	606.90	77,379.75
235	Supplying, laying, jointing,fitting and fixing, testing and commission-ing uPVC foam core structured pipes conforming to IS certification with SN4 or SN8 Solvent Cement joints with or without rubber ring for Soil Pipes and coupler complete for external sewerage system, including supply of bobbins, nails, screws, wooden cleats, pipe clamps as per requirement.including cost of all labours, materials, conveyance, loading and unloading, all taxes and sundries and T&P etc all complete as per direction of the Engineer -in-charge.				
a)	160 mm dia UPVC S/S SN-8 Foam Core Pipe	85.00	Mtr	1415.24	120,295.40
236	Supplying all material, labour, T & P and necessary toward laying of RCC NP2 hume pipe push-on joint including cost R.C.C hume pipe push on type rubber gasket laying in proper slope & gradient lowering the pipe to trench with required plastic rope without damage to the pipe & fitting with selected excavated material after laying the pipe complete etc. including cost of all labours, materials, conveyance, loading and unloading, sundries and T&P etc all complete as per direction of the Engineer -in-charge				
a)	200 mm dia. R.C.C. pipe S/S NP2	85.00	Rmt	951.80	80,903.00
237	Providing and laying in trench cement concrete (1:4:8) with 40mm size hard granite metal in the following type of surrounding or encasing uPVC/RCC pipes of the following diameter including concrete for bedding and curing complete as per specification & direction of EIC.				
a)	200 mm dia with A-1 type standard bedding	85.00	Rmt	503.90	42,831.50
238	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 : all complete as per the direction of Engineer in charge				
	Inside size 120x90 cm and 90 cm deep including SFRC cover with frame 560 mm internal diameter, total weight of cover and frame to be not less than 208 kg (weight of cover 108 kg and weight of frame 100 kg)				
	With Sewer bricks conforming to IS : 4885	9.00	Nos	19,400.05	174,600.45
239	Extra additional depth for manholes				
	Size 120x90 cm				
	With Sewer bricks conforming to IS : 4885	5.40	Rmt	6,577.52	35,518.63
240	Design, Supply, installation, testing and commissioning of following capacity compact type STP (Sewage treatment Plant) including equalisation tank, dosing tank, treated sewage tank multi grade filter, activated carbon filter and treated water tank. etc all complete as per IS Specification including all cost of labour, material, conveyance T&P etc. as per direction of Engineer -in-charge.				
a)	64 KLD	1.00	Nos	#####	3,406,779.66

Sl No	Description of Item	Quantity	Unit	Rate	Amount (Rs.)
	SHED FOR STP				
241	Earth work in excavation by manual / mechanical means (Hydraulic excavator) in foundation trenches or drains, including dressing of sides and ramming of bottoms and dewatering wherever required, including all lifts, including getting out the excavated soil and disposal of surplus excavated soil as directed within a lead of 5km including cost of all labours/ equipments , taxes, sundries and T&P etc all complete as per the direction of Engineer-in-charge				
	All kinds of soil				
	Upto 1.5 Mtr Depth	40.00	Cum	240.00	9,600.00
242	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering etc. including all lead and lift, cost of labour ,material, conveyance,royalties and taxes ,sundries ,T & P etc.complete as per the directions of Engineer-in-charge.	53.60	Cum	606.90	32,530.00
243	Disposal of building rubbish / malba /rock/ similar unserviceable, dismantled or waste materials by mechanical means within 1km Lead away from the site, including loading, transporting, unloading to approved dumping ground or as approved /directed by Engineer-in-charge, including cost of equipments/ labour, conveyance, T&P and taxes etc. as per the direction of Engineer-in-charge.	26.40	Cum	300.00	7,920.00
244	Providing and laying of Cement Concrete of grade 1: 4 :8 (1cement : 4 sand : 8 graded stone aggregate of size 40 mm hard granite crusher broken metal) ,below plinth & trenches and mixing in concrete mixer ,lowering and compacting in proper thickness , watering & curing for the required period .including all cost of labour ,material, conveyance,royalties and taxes ,sundries ,T & P etc.complete as per the directions of Engineer-in-charge	20.00	Cum	5,400.00	108,000.00
245	Providing, lifting, hoisting and laying in position machine batched , machine mixed and machine vibrated design mix cement concrete of M-25 grade Including the cost of Centering and Shuttering in reinforced cement concrete structural elements using black hard crusher broken granite chips of approved quality from approved quarry including mixing and compacting to proper shape and size, level and plumbs and finishing the exposed surfaces smooth including the cost of all materials, cost of labour, conveyance,loading, unloading, royalties, watering and curing for the required period, T&P , hire & running charges of concrete mixer and vibrator, cost of Admixtures in recommended proportions (as per IS 9103) to accelerate, retard setting of concrete, improve workability without impairing strength and durability etc. complete as per the direction of the Engineer-in-charge but excluding the cost of steel reinforcement.				
	Footing	60.00	Cum	6,546.00	392,760.00
246	Providing steel centering and shuttering(steel plate/ ply board) to required shape and size for all kinds of R.C.C. works, centering materials with all necessary props, bracing, ties and supports with level centering using bituminous paper wherever required, as per the direction of the Engineer -in-charge and dismantling and removing the shuttering after the required interval from the date of casting, including cost of all materials with transportation, taxes, loading and unloading etc. and all labour, sundries, T&P scaffolding etc. complete.	90.00	sqm	500.00	45,000.00
247	shuttering Providing, fixing in position TMT/Fe-500 reinforcement bars for RCC work of required diameter of approved quality including straightening, cutting, bending, binding, welding and joining (if necessary) and tying the grills and placing in position as required for R.C.C. work and providing hoisting, lowering and laying including cost of materials, conveyance and taxes of steel and binding wires of 16 to 20 gauge and labour required for the work for bending, binding and tying the grills in all heights as per the specification & direction of Engineer -in-charge.				
	Thermo-Mechanically Treated bars of grade Fe-500D or more.	46.00	Qtl	7,900.00	363,400.00

Sl No	Description of Item	Quantity	Unit	Rate	Amount (Rs.)
248	Supplying and fixing structural steel framed work , including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer etc as required In frames and similar works as per the shop drawing submitted by contractor & approved by EIC including cost of all labours, materials, conveyance, loading and unloading, all taxes and royalties, sundries and T&P etc all complete as per direction of the Engineer -in-charge	1404.00	Kg	220.00	308,880.00
249	Providing and fixing of UV Protected Polycarbonate sheet with aluminium /MS structure with necessary fitting and fixtures and fasteners etc as per the shop drawing provided by approved agency) conforming to the detail technical specifications as below and as per approved colour and directions of Engineer-In-Charge including the cost of cost of all labours, materials, conveyance, loading and unloading, sundries and T&P etc all complete as per direction of the Engineer -in-charge	154.00	Sqm	6,500.00	1,001,000.00
	TOTAL				6,229,977.39

NAME OF WORK -CONSTRUCTION OF 120 BEDDED OLD AGE HOME FOR ELDERLY BLIND PERSONS AT, UNIT-III, BHUBANESWAR-BLOCK-A							
		(SH: INTERNAL ELECTRICAL WORK WITH FITTINGS,DATA,CCTV,FIRE FIGHTING.LA,AIRCONDITION SYSTEM,TRANSFORMER,DG & LANNSCAPE LIGHTING WORK.					
Sl. No.			Description	Qty	Unit	Rate	Amount
I			WIRING:-				
A							
250			Recess Wiring for light point/ fan point/ exhaust fan/wall 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 1way modular switch, modular plate, suitable GI box including supplying the same and earthing the point with 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable etc as required including the cost of labor & material T & P as required as EIC.				
			First Point				
a	sch	1.1.1	Group A	221	point	537.00	118677.00
b		1.1.2	Group B	115	point	782.00	89930.00
c	sch	1.1.3	Group C	98	Point	1091.00	106918.00
e			Looping Point .(Looping Point)				
	Non-Sch		(Controlled by same switch-with Gr.A wire quantity Only)	188	point	405.00	76140.00
251	sch	1.8	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 including the cost of labor &				
a	sch	1.8.1	2 X 1.5 sq. mm + 1 X 1.5 sq. mm earth wire for 6A PP looping & UPS lighting	2100	Metre	135.00	283500.00
b	sch	1.8.2	2 X 2.5 sq. mm + 1 X 1.5 sq. mm earth wire for 15A PP & Switch Boards & Computer points	3110	Metre	149.00	463390.00
c	sch	1.8.3	2 X 4.0 sq. mm + 1 X 2.5 sq. mm earth wire for AC & Geyser Point.	50	Metre	174.00	8700.00
d	sch	1.8.4	2 X 6.0 sq. mm + 1 X 4 sq. mm earth wire for Room AC & from Main DB to Room DB	5	Metre	205.00	1025.00
e	sch	1.8.9	4 X 4 sq. mm + 2 X 2.5 sq. mm earth wire for L.DB .	400	Metre	249.00	99600.00
f	sch	1.8.10	4 X 6 sq. mm + 2 X 4 sq. mm earth wire for P.BDB	200	Metre	313.00	62600.00
g	sch	1.8.11	4 X 10 sq. mm + 2 X 6 sq. mm earth wire for P.BDB.	200	Metre	445.00	89000.00
h	sch	1.8.12	4 X 16 sq. mm + 2 X 10 sq. mm earth wire for P.BDB.	40	Metre	631.00	25240.00
i	sch	1.8.5	2 X 10.0 sq. mm + 1 X 6.0 sq. mm earth wire .	5	Metre	270.00	1350.00
252	sch		Supplying and drawing following pair 0.5 sq mm FRLS PVC insulated annealed copper conductor, unarmored telephone cable in the existing surface/ recessed steel/ PVC conduit as				
	sch	1.20.2	2 Pair	5	Metre	43.00	215.00
253	sch	1.21	Supplying and drawing co-axial TV cable RG-6 grade, 0.7 mm solid copper conductor PE insulated, shielded with fine tinned copper braid and protected with PVC sheath in the existing surface/ recessed steel/ PVC conduit as required including the cost of labor & material T & P as required as EIC.	60	Metre	44.00	2640.00
254	sch	1.22.2	Supplying and fixing of following sizes of steel conduit along with accessories in surface/recess including painting in case of surface conduit, or cutting the wall and making good the same in case of recessed conduit as requiredincluding the cost of labor & material T & P as required as EIC.				
a	sch	1.20.2	25 mm	30	Metre	144.00	4320.00

Sl. No.			Description	Qty	Unit	Rate	Amount
255	sch	1.23	Supplying and fixing of following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required including the cost of labor & material T & P as required as EIC.				
a	sch	1.23.1	20 mm	100	Metre	102.00	10200.00
b	sch	1.23.2	25 mm	100	Metre	104.00	10400.00
c	sch	1.23.3	32 mm	100	Metre	112.00	11200.00
256	sch	1.24	Supplying and fixing metal box of 1.63 mm thick following sizes (nominal size) on surface or in recess without cover including cutting the wall and making good the same in case of recessed conduit ,also including painting etc as required including the cost of labor & material T & P as required as EIC.				
a	sch	1.24.1	75 mm X 75 mm X 60 mm deep	80	Each	119.00	9520.00
b	sch	1.24.2	100 mm X 100 mm X 60 mm deep	45	Each	130.00	5850.00
c	sch	1.24.3	150 mm X 75 mm X 60 mm deep	30	Each	136.00	4080.00
d	sch	1.24.6	200 mm X 125 mm X 60 mm deep	15	Each	176.00	2640.00
e	sch	1.24.1 3	250 mm X 300 mm X 60 mm deep	15	Each	295.00	4425.00
257-a	sch	1.31	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 3 pin 5/6 amps modular socket outlet and 5/6 amps modular switch, connection etc. as required including the cost of labor & material T & P as required as EIC.	258	Each	500.00	129000.00
b	sch	1.31	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 3nos 3 pin 5/6 amps modular socket outlet with 2nos 5/6 amps modular switch, connection etc. as required including the cost of labor & material T & P as required as EIC.	6	Each	1160.00	6960.00
c	sch	1.31	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 2nos 3 pin 5/6 amps modular socket outlet with 2nos 5/6 amps modular switch, connection etc. as required.	6	Each	879.00	5274.00
258	sch	1.32	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 6 pin 5/6 & 15/16 amps modular socket outlet and 15/16 amps modular switch, connection etc. as required.	22	Each	633.00	13926.00
259-a	Non sch		Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 25 amps modular switch, connection etc. as required including the cost of labor & material T & P as required as EIC.	2	Each	502.00	1004.00
b	Non sch		Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 25 amps modular Socket , connection etc. as required including the cost of labor & material T & P as required as EIC.	2	Each	629.00	1258.00

Sl. No.			Description	Qty	Unit	Rate	Amount
260	sch	1.25.6	Supplying and fixing of Telephone socket out let with suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing , connection etc. as required including the cost of labor & material T & P as required as EIC.	1	Each	263.00	263.00
261	sch	1.25.6	Supplying and fixing of TV antenna socket out let with suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing , connection etc. as required including the cost of labor & material T & P as required as EIC.	2	Each	263.00	526.00
262	Non-sch		Installation, testing and commissioning of wall bracket /ceiling fittings /Hanging/Linear Hanging/LED down light/Occupancy sensor of all sizes and shapes containing upto two GLS lamps per fitting, complete with all accessories including connection etc. as required including the cost of labor & material T & P as required as EIC.	24	each	98.00	2352.00
263	sch	1.29	Supplying and fixing brass decorative angle / Batten Holder fitting including connection etc. as required including the cost of labor & material T & P as required as EIC.	77	Each	63.00	4851.00
264	sch	1.30	Supplying and fixing call bell/ buzzer suitable for single phase, 230 volts, complete as required.	1	Each	125.00	125.00
265	sch	1.33	Installation, testing and commissioning of pre-wired, fluorescent fitting / compact fluorescent fitting of all types, complete with all accessories and tube etc. directly on ceiling/ wall, including connection with 1.5 sq. mm FR PVC insulated, copper conductor, single core cable and earthing etc. as required including the cost of labor & material T & P as required as EIC.	382	Each	130.00	49660.00
266	sch	1.36	Installation, testing and commissioning of ceiling fan on down rod or wall fan on the existing ceiling /surface, including wiring the down rods of standard length (upto 30 cm) with 1.5 sq. mm FR PVC insulated, copper conductor, single core cable etc. as required including the cost of labor & material T & P as required as EIC.	98	Each	134.00	13132.00
267	sch	1.50	Installation of exhaust fan with shutters/louvers in the existing opening, including making good the damage, connection, testing, commissioning etc. as required including the cost of labor & material T & P as required as EIC.				
	sch	1.43	Upto 450 mm sweep	41	Each	669.00	27429.00
268		1.38	Installation, Testing and Commissioning of resistance type ceiling fan regulator, in existing box including connection with 1.5 sq.mm FR PVC insulated single core multistrand copper conductor, earthing the regulator as required including the cost of labor & material T & P as required as EIC.	1	Each	75.00	75.00
269	Non-Sch		Supplying and fixing of support arrangement for fixing of cable tray, light fittings ,Panel Board etc with MS angles / flats / rods /anchor flashner/extra rod for fan & Lights including jointing the steel sections of the support arrangement with nuts & bolts / welding / Fecicating complete as required including the cost of labor & material T & P as required as EIC.	120	kg	127.00	15240.00

Sl. No.			Description	Qty	Unit	Rate	Amount
B			SDB'S, MCB, ISOLATOR,CABLE,PANELS:-				
270	sch	2.5	Supplying and fixing following way, horizontal type three pole and neutral, sheet steel, MCB distribution board, 415 volts, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required including the cost of labor & material T & P as required as EIC. (But without MCB/RCCB/Isolator)				
a	sch	2.5.5	4 way (4 + 12), Double door	20	Each	2176.00	43520.00
b	sch	2.5.6	6 way (4 + 18), Double door	1	Each	2519.00	2519.00
c	sch	2.5.7	8 way (4 + 24), Double door	0	Each	2711.00	0.00
271	sch	2.3	Supplying and fixing following way, single pole and neutral, sheet steel, MCB distribution board, 240 V, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required including the cost of labor & material T & P as required as EIC. (But without MCB/RCCB/Isolator)(But without MCB/RCCB/Isolator)				
a		2.3.6	8 way (2 + 6), Double door	1	Each	1642.00	1642.00
b			FP MCCB Metal one way enlouser upto200A	0	Each	3730.00	0.00
272			Supplying and fixing following way, Vertical type three pole and neutral, sheet steel, MCB distribution board, 415 volts, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required including the cost of labor & material T & P as required as EIC. (But without MCB/RCCB/Isolator)(But without MCB/RCCB/Isolator)				
a			4 way (4 + 12), Double door	0	Each	12387.00	0.00
b			6 way (4 + 18), Double door	0	Each	14076.00	0.00
273	sch	2.7	Supplying and fixing 5 amps to 32 amps rating, 240/415 volts, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required including the cost of labor & material T & P as required as EIC. (But without MCB/RCCB/Isolator)				
a	sch	2.7.1	Single pole	252	Each	134.00	33768.00
b	sch	2.7.2	Single pole & Neutral	4	Each	335.00	1340.00
c	sch	2.7.4	Triple pole & Neutral	2	Each	881.00	1762.00
274	sch	2.9	Supplying and fixing following rating, Four pole, 440 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
a	sch	2.9.1	40 amps	1	Each	575.00	575.00
275	sch	2.11	Supplying and fixing following rating, four pole, (three phase andneutral), 415 volts, residual current circuit breaker (RCCB), having a sensitivity current upto 300 milliamperes in the existing MCB DB complete with connections, testing and commissioning etc. as required including the cost of labor & material T & P as required as EIC.				
a	sch	2.11.1	25 amps	10	Each	2244.00	22440.00
b	sch	2.11.2	40/63amps	11	Each	2648.00	29128.00

Sl. No.			Description	Qty	Unit	Rate	Amount
C	sch	2.10	Supplying and fixing following rating, double pole, (single phase and neutral), 240 V, residual current circuit breaker (RCCB), having a sensitivity current 300 mA in the existing MCB DB complete with connections, testing and commissioning etc. as required including the cost of labor & material T & P as required as EIC.				
a	sch	2.10.1	25 amps	1	Each	1692.00	1692.00
b	sch	2.10.1	40 amps	1	Each	1929.00	1929.00
276			Supplying and fixing following rating, four pole, neutral, 415 volts, Module case circuit Breaker (MCCB), having breaking capacity of 16KA in the existing MCCB DB / Panel Board complete with connections, testing and commissioning etc. as required including the cost of labor & material T & P as required as EIC.				
a	sch	2.2.3	100/125 A, 16 KA MCCB	0	Each	3250.00	0.00
b	sch	2.2.4	160 A, 16 KA MCCB	0	Each	5283.00	0.00
277			Supplying the following Size ISI mark Aluminum conductor, XLPE insulated cable, FRLS PVC, galvanized steel flat strip armoured and overall PVC sheathed cable conforming to IS: 7098 (Part - I) with latest amendments & complete all as required including the cost of material T & P as required as EIC.				
a	Non-Sch		4 core 10 sq.mm-	5	mtr	243.00	1215.00
b	Non-Sch		4 core 16 sq.mm-	30	mtr	291.00	8730.00
c	Non-Sch		3 1/2 core 25 sq.mm	35	mtr	336.00	11760.00
d	Non-Sch		3 1/2 core 35 sq.mm	40	mtr	405.00	16200.00
e	Non-Sch		3 1/2 core 50 sq.mm	100	mtr	545.00	54500.00
f	Non-Sch		3 1/2 core 70 sq.mm-	90	mtr	727.00	65430.00
g	no sch		3 1/2 core 150 sq.mm-	0	mtr	1334.00	0.00
h	no sch		3 1/2 core 185 sq.mm-	0	mtr	1712.00	0.00
278	sch	5.5	Laying and fixing of one number of following size of cable on wall surface as required, ISI mark Aluminum/copper conductor, XLPE insulated cable, FRLS PVC, galvanized steel flat strip armoured and overall PVC sheathed cable conforming to IS: 7098 (Part - I) with latest amendments & complete all as required				
a	sch	5.5.2	Above 25 sq. mm and upto 120 sq. mm	65	mtr	133.00	8645.00
279	sch	5.1	Laying and fixing of one number .following size cable direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc as required. ISI mark Aluminum/copper conductor, XLPE insulated cable, FRLS PVC, galvanized steel flat strip armoured and overall PVC sheathed cable conforming to IS: 7098 (Part - I) with latest amendments & complete all as required				
a	sch	5.1.1	upto 25 sq. mm	35	20	134.00	4690.00
b	sch	5.1.2	Above 25 sq. mm and upto 120 sq. mm	200	mtr	150.00	30000.00
c	sch	5.1.3	Above 120 sq. mm and upto 400 sq. mm	0	mtr	166.00	0.00

Sl. No.			Description	Qty	Unit	Rate	Amount
280	sch	5.8	Supplying and making end termination with brass compression gland and aluminium lugs/copper for following size of PVC insulated and PVC sheathed / XLPE aluminium/copper conductor cable of 1.1 KV grade as required.				
a	sch	5.8.32	a- 4 core 10 sq.mm	2	nos	186.00	372.00
a	sch	5.8.32	a- 4 core 16 sq.mm	2	nos	202.00	404.00
b	sch	5.8.20	a- 3 1/2 core 25 sq.mm	2	nos	338.00	676.00
c	sch	5.8.21	a- 3 1/2 core 35 sq.mm	2	nos	342.00	684.00
d	sch	5.8.22	a- 3 1/2 core 50 sq.mm	2	nos	356.00	712.00
e	sch	5.8.23	a- 3 1/2 core 70 sq.mm	4	nos	407.00	1628.00
f	sch	5.8.24	4 1/2 core 150 sq.mm-	0	nos	535.00	0.00
g	sch	5.8.25	5 1/2 core 185 sq.mm-	0	nos	596.00	0.00
281			Panels .				
	Non Sch		Design, supply, installation, testing and commisioning of cubicle main panel for indoor/Outdoor installation of wether proof design as per IP 44 class, made out of 2 mm thick CRCA sheet as per the drawing with cubicle type internal arrangement of 1.6 mm thick sheet and with front & back opening system suitable for mounting following switch gears, busbars, metering unit, including painting with powder coated paint of approved colour and shed with earthing the body etc as reqd including the cost of material ,labor T & P as required as EIC. (drawing shall be approved by engineer -in charge)				
1.1			Main Panel Board = (Indoor floor mounted type)				
			1no 65KA FP VSD with 32A FP MCB				
			Incommer-1:- 01 no. 125A., 25KA FP MCCB with OI,SC,EL protection .				
			Incommer-2:- 01 no. 100A., 25KA FP MCCB with OI,SC,EL protection .with 1nos 100A FP On load Change Over switch, 2 sets 100A FP AC duty contactor,relay for auto manual operation, AM selection switch				
			Busbar-1:- 04 nos. 300A. Al. bus bar duly sleeved.with Locking arrangement.				
			Busbar-2:- 04 nos. 150A. Al. bus bar duly sleeved.with Locking arrangement.				
			Outgoing:-i)				
			ii) 04 no. 100A. , 25KA FP MCCB , 1 no. 63A. , 25KA FP MCCB				
			12-nos 32A, 10kA FP MCB & 3-nos 32A, 10kA DP MCB ,13-nos 40/ 63A, 10kA FP MCB				
			Instrument:- i) 06 nos. phase indicating lamp with toggle switch & control fuse.				
			ii) 01 Set of Digital.MFM with CT & PT				
			(Duly factory wired)	1	Set	225000.00	225000.00
1.1			30KVAR APFC Panel Board = (Indoor floor mounted type)	1	Set	105000.00	105000.00
282	DSR	4.1	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 including the cost of material ,labor T & P as required as EIC.				
a	sch	4.1.1	100 mm width X 50 mm depth X 1.6 mm thickness	100	mtr	490.00	49000.00
b	sch	4.1.3	200mm width X 50 mm depth X 1.6 mm thickness	100	mtr	689.00	68900.00
c	sch	4.1.4	300mm width X 50 mm depth X 1.6 mm thickness	150	mtr	777.00	116550.00

Sl. No.			Description	Qty	Unit	Rate	Amount
283	DSR	4.2	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 including the cost of material ,labor T & P as required as EIC.				
a	sch	4.2.1	100 mm width X 50 mm depth X 1.6 mm thickness	12	Each	815.00	9780.00
b	sch	4.2.3	200mm width X 50 mm depth X 1.6 mm thickness	12	mtr	1227.00	14724.00
c	sch	4.2.4	300mm width X 50 mm depth X 1.6 mm thickness	15	mtr	1438.00	21570.00
284	DSR	4.4	Supplying and installing following size of perforated pre-painted M.S. cable trays Tee's 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.				
a	sch	4.3.1	100 mm width X 50 mm depth X 1.6 mm thickness	6	Each	745.00	4470.00
b	sch	4.3.3	225mm width X 50 mm depth X 1.6 mm thickness	6	mtr	1074.00	6444.00
c	sch	4.3.4	300mm width X 50 mm depth X 1.6 mm thickness	8	mtr	1270.00	10160.00
285	sch	ref-2.12	Supplying and fixing 30 A, 415 V, TPN Industrial type socket outlet, with 4 pole and earth, metal enclosed plug top alongwith 30 A, "C" curve, TPMCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket outlet and complete with connections, testing and commissioning etc. as required including the cost of material ,labor T & P as required as EIC.	2	Each	1774.00	3548.00
C			Earthing				
286	Sch	3.4+3.6	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 including the cost of material ,labor T & P as required as EIC.	12	set	5241.00	62892.00
287	Sch	3.5+3.6	Earthing with CU earth plate 600 mm X 600 mm X 3 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 including the cost of material ,labor T & P as required as EIC.	6	set	7532.00	45192.00
288	Sch	3.10	Supplying and laying 25 mm x 5 mm CU earth strip ISI marked at 0.5 meter below ground level as strip earth electrode including soldering etc. as required including the cost of material ,labor T & P as required as EIC.	120	mtr	464.00	55680.00
289	Sch	3.9	Supplying and laying 25 mm x 5 mm G.I earth strip ISI marked at 0.5 meter below ground level as strip earth electrode including soldering etc. as required including the cost of material ,labor T & P as required as EIC.	240	mtr	66.00	15840.00
			Sub Total Cost =				2923346.00
II			FITTING & FIXTURE:-				

Sl. No.			Description	Qty	Unit	Rate	Amount
290	Non Sch		Supply, Installation, Testing, and commissioning of Exhaust fan of following size (dia) suitable to work on 230/250 volts, 50HZ complete with mounting frame and louvers in the existing opening, making good the damage, connections,etc as required.(Make-Usha/Havells/RR/Hallonix)				
			a)250mm Dia PVC	41	nos	1,700.00	69,700.00
			b) 300 mm Dia Metal Industrial	1	nos	2,500.00	2,500.00
291	DSR-Sch	19.1	Supplying of 1200 mm sweep ceiling fan ,BEE 5star Rated, Brush Less direct current(BLDC)motor,class of Insulation:B , 3nos Blade,30cm long Rod,2nos canopies,shakel kit,safety rope,copper winding, Power factor not less than 0.9, service value (CMM/W) minimum 6.85 ,Air deliver minnum 215 CMM ,350 RPM (tolearance as per IS-2019).THD not less than 10% with Remote for speed control remaining all other accessories like safety pin, nut bolts,washer, temperture rise 75degree C. max,insulation resitance more than 2-Megaohm suitable for single phase 230v,50Hz AC supply ,earthing as per EIC of approved make including the cost of material ,labor T & P as required as EIC.	98	each	3000.00	294000.00
292	Non-Sch		Supply, Installation, Testing, and commissioning of 400mm sweep energy efficient Wall mounted fan complete with 1.5 sq.mm PVC insulated, copper conductor,single core cable etcincluding the cost of material ,labor T & P as required as EIC.	1	each	2500.00	2500.00
293			Supply, Testing & commissioning of 1 no of 10 watt LED Lamp(White) as per EIC of approved makeincluding the cost of material ,labor T & P as required as EIC.	77	No.	210.00	16170.00
294	Non Sch		Supply, Testing & commissioning of Surface or wall mounting 1 x 20W LED tube light fitting (5700K) including 1 no. of 20watt LED luminaires as per EIC of approved make including the cost of material ,labor T & P as required as EIC.	198	Each	730.00	144540.00
295	Non Sch		Supply, Testing & commissioning of Surface or wall mounting 1 x 10W LED tube light fitting (5700K) including 1 no. of 10watt LED luminaires as per EIC of approved make including the cost of material ,labor T & P as required as EIC. .	148	Each	420.00	62160.00
296	Non Sch		Supply, Testing & commissioning of Surface or wall mounting 1 x 36W LED tube light fitting (5700K) including 1 no. of 36watt LED luminaires as per EIC of approved make including the cost of material ,labor T & P as required as EIC. .	36	No.	1700.00	61,200.00
297	Non Sch		Supplying of surface mounted round/squre White LED downlighter with pressure die cast aluminium housing & PMMA diffuser suitable for 12W LED fitting (4000K)included luminaires of approved make including the cost of material ,labor T & P as required as EIC..	6	No.	1350.00	8,100.00

Sl. No.		Description	Qty	Unit	Rate	Amount
298		Supply of Recess mounted maximum 36 W 600mmX600mm high efficient LED luminaire with white powder coated rough aluminium extruded housing with polycarbonate diffuser for Uniform illumination and wider light distribution. Minimum 93 Lumens/Watt system efficacy; 36 W providing minimum 3065 lm system output. LED chip life of 50,000 burning hours at L70. IP 20, CCT 5700K, CRI> 80. Luminaire driver should be Isolated and multistage constant current constant voltage APFC type. Driver should be BIS registered with Input voltage range of 150V to 270V (nominal rated voltage – 240V) with minimum 4 KV surge protection, PF >0.95, THD <10% including with all, materials as required.	6	No.	4700.00	28,200.00
299		Supply, Testing & commissioning of Recess mounted LED Luminare including 36W LED(4'x1') fitting including the cost of labor & material T & P as required as EIC.	1	No.	3120.00	3120.00
300	Non Sch	Supply of Recess mounted Round LED Downlight with pressure die cast Aluminium housing and high transmissive PS diffuser with power consumption Maximum upto 12 W having system lumen output of Minimum 1200 Lumen. LED chip life of 50,000 burning hours at L70. The LED used shall have CCT of 5700K, CRI of 80 Ra. Luminaire driver should be Isolated and multistage constant current APFC type. Driver should be BIS registered with Input voltage range of 90V to 265V (nominal rated voltage – 240V) with minimum 2 KV surge protection, PF >0.90, THD <10%; IP 40; including with all, materials as required.	6	No.	1225.00	7,350.00
301	Non Sch	Supply, Testing & commissioning of wall mounting 1 x 10W LED wall mounted IP-65 bulk head / Outdoor wall light fitting including 10watt LED luminaires (5700K) as per EIC of approved make including the cost of material ,labor T & P as required as EIC..(Make- Wipro/Philips/Trilux/LT/Jaquar/Havells)	10	No.	1282.00	12820.00
		Sub Total Cost =				712360.00
III		Data Networking,WIFI,CCTV,IP-PBX System				
302		Supply and laying of Cat6 4-pair 23AWG UTP Cable in the existing ISI marked PVC conduits for data and voiceincluding the cost of labor & material T & P as required as EIC.(Make: Tyco/ Legrand/ Digisol)	2,000	Mtr.	72.00	144,000.00
303		Supply, installation and commissioning of RJ-45 Jack of Category 6 with Single-port British-style Face plate 86x86 mm with Curvature and Wall Mount Box I(G.I./PVC) , to be fixed in concealed manner in partition/wall by necessary bolts & nuts including the cost of labor & material T & P as required as EIC.(Make: Tyco/ Legrand/ Digisol)	25	No.	570.00	14,250.00
304		Supply and Installation of Cat6 24-port loaded, Modular Jack Panel having 24-port individually replaceable module including the cost of labor & material T & P as required as EIC.. (Make: Tyco/ Legrand/ Digisol)	4	No.	7860.00	31,440.00

Sl. No.		Description	Qty	Unit	Rate	Amount
305		Supply, installation of Cat6 UTP 24AWG LSZH Patch Cord as required including the cost of labor & material T & P as required as EIC.. (Make: Tyco-AMP/ Legrand/ Digisol)				
		For 1 mtr. Long	52	No.	245.00	12,740.00
		For 2 mtr. Long	52	No.	270.00	14,040.00
306		SITC of 27U 600/650D UL Listed Floor mount Rack with Front glass door with Cam lock, Rear mesh door with Cam lock and 3inch Castor Wheel included with 2 no 6/16 Amp Indian-Standard - 06 Socket - Single Pole / Screw Mountable / 16 Amp MCB / Alternating Current - 16 Amp 3 Pin Plug with Power Cable 2.5 sq.mm 3 meter Length, 4nos 1U Metal Cable manager with Plastic cable loops, 2nos CFM FAN set, 1no Monitor Tray - Ventilation - 495W - 375D and H/W screw920sets). Make: Valrack/Rittal/ APW	1	Nos	40000.00	40000.00
307-a		Supply and Installation of 24portt PoE 10/100/1000Mbps Managed Switch with Two Combo ports and minimum PoE power budget of 370W, Support IPv6 management, CLI/ WEB/ SNMP Management including 3years product warranty including the cost of labor & material T & P as required as EIC..(Make: Digisol/Ruijie/CISCO) (Make: Digisol/Ruijie/CISCO)	2	No.	48500.00	97,000.00
b		Supply and Installation of 24portt 10/100/1000Mbps Managed Switch with Two Combo ports including 3years product warranty including the cost of labor & material T & P as required as EIC..(Make: Digisol/Ruijie/CISCO) (Make: Digisol/Ruijie/CISCO)	1	No.	38100.00	38,100.00
308		Supply and Installation of Dual band 802.11ac Wave2 2x2 MU-MIMO indoor WiFi-6 AP with inbuilt Mobility Express image for adopting 100 AP as centralised Wireless Controller without any extra licence and hardware supporting Gigabit 802.11 af n at PoE interface and console port including the cost of labor & material T & P as required as EIC. (Make: Digisol/Ruijie/CISCO)	0	No.	17000.00	0.00
309		Termination & link testing of LAN cable at both the end including the cost of labor & material T & P as required as EIC.	100	No.	100.00	10,000.00
310		Supply and Installation of Indoor Dome IR Network Camera (1/2.7" CMOS sensor, Mini. Pixel of 2560*1920 or higher video quality, frame rate of Up To 25fps @ 4MP, H.265, H.264 & MJPEg video compression, 2.8mm Fixed lens, physical ICR filter of both day and night, 30mtr IR Distance,120dB WDR ,3Streams Supported, WDR , 3D-DNR for noise reduction, BLC, ICR, EXIR, Audio In and Out, Alarm in and Out. IPv4/IPv6 network supported, IP67, IK10 rated for weatherproofing, ONVIF ver 2.2 or higher, PoE IEEE 802.3af (UL, FCC, CE, BIS certified.) including the cost of labor & material T & P as required as EIC. (Make- Honeywell/UNV/Milesight)	24	No	10500.00	252,000.00

Sl. No.		Description	Qty	Unit	Rate	Amount
311		Supply and Installation of Indoor Bullet IR Network Camera (1/2.7" CMOS sensor, Mini. Pixel of 2560*1920 or higher video quality, frame rate of Up To 25fps @ 4MP, H.265, H.264 & MJPEG video compression, 2.8mm Fixed lens, physical ICR filter of both day and night, 30mtr IR Distance, 120dB WDR, 3Streams Supported, WDR, 3D-DNR for noise reduction, BLC, ICR, EXIR, Audio In and Out, Alarm in and Out. IPv4/IPv6 network supported, IP67, IK10 rated for weatherproofing, ONVIF ver 2.2 or higher, PoE IEEE 802.3af (UL, FCC, CE, BIS certified.) including the cost of labor & material T & P as required as EIC. Make- (Make- Honeywell/UNV/Milesight)	1	No	10500.00	10,500.00
312		Supply and Installation of 32CH 4 SATA NVR Support 12MP/8MP / 5MP / 4MP / 3MP / 1080P / 960P IP Adopt standard H.265 high profile compression format, With 4k Video Output, Compression Standard H.265, Network Access Bandwidth 320Mbps, HDD SATA × 8(Upto 10TB Supported), 1- e-SATA And 2-way Audio RCA × 1, Local Output RCA × 1, USB 2.0 × 2 (one in the front panel and the other in the rear panel), USB 3.0 × 1 (rear panel) (UL, FCC, CE, BIS certified) including the cost of labor & material T & P as required as EIC. Make- Honeywell/UNV/Hikvision	1	Sets	57500.00	57,500.00
313		SITC of 4 TB Storage Capacity, including the cost of labor & material T & P as required as EIC. Make: Segate/WD	4	Sets	12400.00	49,600.00
314		Supply and Installation of 45" UHD (3,840 x 2,160) TV with 300 nits brightness, 10W+10W Audio Output, Crestron Connected®, NTP sync timer, BEACON, Embedded CM (contents manager), Soft AP, WiFi, Screen Share (Miracast), DIAL, Bluetooth Audio Playback, Hotel Mode, Welcome Screen (Splash Image), Insert Image, One Channel Map, IP Channel Manager, External Speaker Out, Remote jack pack, Moving Picture Playback, Auto Off / Sleep Timer, Smart Energy Saving, Motion Eye Care, USB Cloning, WOL, Interface: Set Side - HDMI In 3, USB 1, CI Slot, RF In, Digital Audio Out (Optical), RS-232C, RJ45, External Speaker Out, Power Consumption(Typ.)-145 W, with 3years Warranty including the cost of labor & material T & P as required as EIC. Make: Samsung/ LG /SONY	1	No	70000.00	70,000.00
315		SITC of IP PBX System support up to 500 users and minimum 50 concurrent calls, integrated 1 PSTN trunk FXO ports through External Gateway, 1 analog telephone FXS ports with lifeline capability and up to 50 SIP trunk accounts, Gigabit network ports with Integrates PoE, USB, SD card, Supports up to a 5-level IVR (Interactive Voice Response), Supports any SIP video endpoint that uses the H.264, H.263 or H.263+ codecs. (Make: Grandstream/NEC/Matrix)	1	NOS	46500.00	46,500.00
316		Supply & fixing of IP Based PoE Phone, 2 SIP accounts, 2 line keys, 3-way conferencing, 3 XML programmable context-sensitive soft keys, Dual-switched 10/100 mbps ports, integrated PoE, HD audio on speakerphone and handset. Make: Grandstream/NEC/Mitel	11	nos	6,200.00	68,200.00
		Sub Total Cost =				955870.00
IV		FIRE FIGHTING TERRACE PUMPS, PIPING, VALVE, & ACCESSORIES & FIRE DETECTION SYSTEM :				

Sl. No.		Description	Qty	Unit	Rate	Amount
317		Electrical Motor Driven Terrace Pump Location - Terrace:				-
		450 lpm 35 m Head				
		i) Supplying, installing, testing & commissioning of fire authority approved electrically driven Terrace pump suitable for automatic/manual operation consisting of the following:				-
		ii) Horizontal centrifugal end suction type fire pump capable of delivering 450 LPM against a total head of 35 M while running at 2900 r.p.m. complete with burdon type pressure gauge with Gun metal cocks/ valves etc. on the delivery side, including bypass arrangement. Gland arrangement shall be included.				-
		iii) Squirrel cage, TEFC induction motor suitable for 415 ± 6%V, 3 phase, 50 Hz A.C. supply of suitable H.P. for the above pump running at 2900 r.p.m. conforming to IP 55 pralecting and class 'H' insulation. The motor shall be conform to IS:325-1978 (upto date)				-
		iv) Common bed plate for mounting pump & motor of requisite strength manufactured out of M.S. channel as per manufacturer's recommendation.				-
		v) Antivibration (Cushy foot) heavy duty mounting pads as per requirement.				-
		vi) Coupling and coupling guard for direct coupling of motor and pump.				-
		vii) Terrace Fire Pump				-
		Flow rate : 450 LPM (27.00 m3/hr)				-
		Pumping Head : 35 M				-
		Motor KW : 7.5 KW (Approx) or As per manufacturer recommendation	1	Set	74,041.00	74,041.00
318		Providing, laying, testing & commissioning of 'C' class heavy duty MS pipe conforming to IS 3589/IS 1239 including Welding, fittings like elbows, tees, flanges, tapers, nuts bolts, gaskets etc. and fixing the pipe on the wall/ceiling with suitable clamp/support frame and painting with two or more coats of synthetic enamel paint of required shade complete as required :				-
a)		80 mm dia.	30	RM	1,208.00	36,240.00
b)		100 mm dia.	40	RM	1,500.00	60,000.00
C)		25 mm dia.	20	RM	485.00	9,700.00
319		Providing, fitting & fixing of following size cast iron double flanged slim seal wafer type Butterfly valves with EPDM rubber lined with lever operated as per IS-13095 with ISI mark of pressure rating PN-1.60 including fixing the same with supply of required jointing materials like rubber insertion, MS nuts & bolts, paint etc. and testing the joints with required water pressure for all floors etc. all complete as per specification & direction of E.I.C. Make-KIRLOSKAR/IVC/ZOOTO/KARTAR/HONEYWELL				-
a)		80 mm dia	5	Each	4,036.00	20,180.00
b)		100 mm dia	2	Each	2,953.00	5,906.00
320		Providing, fitting & fixing of following size cast iron double flanged Y type strainer with SS 304 perforated screen confirming to IS 1538 with ISI mark of pressure rating PN-1.60 including fixing the same with supply of required jointing materials like rubber insertion, MS nuts & bolts, paint etc. and testing the joints with required water pressure & all complete as per specification & direction of E.I.C. Make-KIRLOSKAR/IVC/ZOOTO/VENUS/HONEYWELL				-
a)		80 mm dia	5	Each	4,500.00	22,500.00

Sl. No.		Description	Qty	Unit	Rate	Amount
321		Providing, fixing, testing & commissioning of C.I. dual plate Non-return valve [PN 1.6 Rating (10kg/cm ²) conforming to IS 778 and test pressure not less than 15 kg/cm ² , complete 2 nos. matching flanges, rubber insertion, with nuts, bolts and washers etc of following sizes as per the instruction of EIC Make- KIRLOSKAR/IVC/ZOLOTO/KARTAR/HONEYWELL				-
a)		80 mm dia	1	Each	6,576.00	6,576.00
b)		40 mm dia	1	Each	4,956.00	4,956.00
322		SITC of Gun metal chrome finished Ball valves with fittings of screwed end type.				
323		MCC Panel				
		Supply, installation, testing and commissioning of Wall mounted sectionalised, front operated top entry dust and vermin proof M.V.Panel Boards suitable for operation at 415V, 3 phase, 4 wire, 50Hz distribution system fabricated out of 2.0 mm thick CRCA sheet, insulated busbar with heat shrinkable PVC sleeve, base channel, complete with all accessories as required. Make:-LEGRAND, L&T, ABB or equivalent				
		One (1)- 63 Amp, 10 KA,4P MCB with 3 Nos Phase indicating lamps with control fuse/ MCB, Digital Voltmeter with selector switch suitable for motor duty.				
		One (1) - DOL with O/L and Single Phasing Preventor suitable for 7.5 HP motor. ON/OFF indication lamps, Auto manual switch and ON/OFF push button.				
		One (1) - Set of Auxilliary relay for automatic operation through pressure switch.				
		Panel As Above	1	Set	66,913.00	66,913.00
324		Supply, laying, connecting, testing & commissioning of following size of 1.1 kv grade multicore aluminium/ copper conductor XLPE insulated PVC sheathed armoured cable as per IS: 7098:1988 (Part-I) with upto date amendments etc. complete as required. Tagging on both the ends will be done with aluminium tags etc. complete as required.(Quantities as per site requirement shall be finally estimated & executed accordingly with prior approval.)				
a)		3 core x 25 sqmm Al. Ar. XLPE Cable (Fire Fighting Panel to Jockey Pump Set & Terrace Pump Set)	45	RM	464.00	20,880.00
b)		4 core x 2.5 Sq mm copper conductor unarmoured/armoured control cable.	24	RM	454.00	10,896.00
325		Supplying and making indoor end termination with brass compression gland (Heavy duty) and suitable copper / aluminium lugs for following size of XLPE insulated PVC sheathed copper/ aluminium conductor armoured/ unarmoured cable of 1.1 KV grade including cost of ferrules, cable sockets, insulation tape & other accessories etc. complete as required.				-
a)		3 core x 25 sqmm Al. Lugs	4	Set	217.00	868.00
b)		3 core x 2.5 Sq mm Copper Lugs	10	Set	165.00	1,650.00
326		Providing and fixing following size of GI strips/ GI wire etc. on surface or in recess for connections, including GI clamps etc. as required.				-
a)		25 mm x 5 mm GI strip	45	RM	148.00	6,660.00
b)		6 SWG dia G.I. wire	45	RM	39.00	1,755.00

Sl. No.		Description	Qty	Unit	Rate	Amount
327		Providing, fixing, testing & commissioning of Stainless steel single headed ISI marked oblique pattern hydrant landing valves with 80mm dia flanged inlet & 63 mm dia instantaneous type female outlet complete with stainless steel cap and GI chain, twist release type plug and all accessories as per IS : 5290 -1993 (Type 'A') including fixing with anchor fasteners and flanged tapping from wet riser all complete as per specification & direction of EIC.	0	Each	5,107.00	-
328		Providing, fixing, testing & commissioning of 15 m/30 m long non-perlocating, rubber reinforced lined fire hose pipe (as per IS : 636-1979, Type A) of 63 mm dia and length as described below. The hose shall be rated for burst pressure of 35.7 Kg/sqcm. Hose shall be complete with ISI marked SS male & female coupling (IS:903) bound & rivetted to hose pipe with copper rivets & 1.5 mm copper wire as per the instruction of EIC. (Internal fire hydrant)	0	Each	3,863.00	-
329		Providing, fixing, testing & commissioning of 63 mm dia Instantaneous Pattern (male) Stainless Steel short size branch pipe with nozzle of 20 mm nominal bore outlet as per IS:903 : 1993 suitable to fit with standard instantaneous type 63mm dia coupling ISI marked (IS:903:1993) complete.	0	Each	1,421.00	-
330		Supply,Installation,Testing & Commissioning of Swinging pattern wall fixing first aid hose reel made from MS sheet ,spray painted in Post office Red, confirming IS: 884 and moving parts complete with:	5	Each	6,973.00	34,865.00
		a) MS fabricated hose reel drum to accommodate 20 mm dia 36 mtr long hose with fixing bracket.				
		b) 20 mm dia X 30 Mtr long water hose with ABS(Plastic) shut-off nozzle as per IS: 444/IS: 12585 Type-I.				
		c) 25 mm dia GM Ball Valve at inlet side of the hose reel drum as required.				
331		Providing supply & fixing of weather proof MS Hose Box for of suitable size(750X600X250mm) to accomodate 2 nos. of 15/ 1 no of 30 mtr long fire hose and a branch pipe, wall mounted type as per direction of Engineer-in-charge.	5	Each	2,644.00	13,220.00
332		Providing, fixing, testing & commissioning of ball valve with SS ball suitable for test pressure of not less than 15 kg / sq.cm of the following size with nuts, bolts, gaskets, necessary accessories, etc as required.				
a)		25 mm dia	1	Each	1,803.00	1,803.00
333		Providing level controllers, PRESURE SWITCHES , wiring, cabling from level controller / pressure switch to panel etc. complete as required to operated the system automatic/manual. Pump shall be protected against running dry. (Indfoss/Danfoss) IPS-100	2	Each	3890.00	7780.00
334		Supply,Installation,Testing & Commissioning of Pressure gauge of 0-16 Kgf/sq.cm. range with cut-off bronze ball valves below of suitable size with all accessories as per direction of Engineer-in-charge.	2	Each	1140.00	2280.00
		Sub-Total:				409,669.00

Sl. No.		Description	Qty	Unit	Rate	Amount
		Supply, Installation, Testing and Commissioning of Conventional Fire Detection and Alarm System				
		CONTROL EQUIPMENTS:				
335		S/F Fire alarm Control panel with 10 zone capacity with battery back up. The panel would be modular, decentralized, with The panel shall be consisting with LCD display andh. with 12V battery back up for 30 Minutes and battery charger in built as required . Make: Honeywell/ASES (Vds approved)	1	No.	19,800.00	19,800.00
		DETECTORS & OTHER MODULES (MAKE - Honeywell/ASES/System Sensor)				
336		Supplying and fixing conventional Manual Call Point with MS body and glass to be supplied with hammer and chain with testing and commissioning etc as reqd.	5	Nos.	415.00	2,075.00
337		Supplying, installation, testing & commissioning of smoke detector with builtin LED and mounting base complete with all connections etc. as required.	96	Nos.	1,141.00	109,536.00
338		Supplying, Installing, testing and commissioning of Horn wall mounted type rated at 82 dBA @ 3m for Audible annunciation and 75cd flashintg at 1 Hz for visual indication.	5	Nos.	690.00	3,450.00
339		Supplying and laying of 2x1.5 sq.mm. ISI marked copper armoured conductor cable with gland socket and other wiring accessories on the existing surface/tray/shaft etc as reqd	1100	Rmt.	129.00	141,900.00
340		S/F 4.5 kg CO ₂ type fire Extinguisher with maounting arrangement as reqd.	5	Nos.	7,800.00	39,000.00
341		S/F 6.0 kg ABC type fire Extinguisher with maounting arrangement as reqd.	17	Nos.	4,650.00	79,050.00
		Sub-Total:				394,811.00
		G-Total:				804,480.00
V		AIRCONDITIONING SYSTEM:-				
342		Supplying of Hi Wall type split air-conditioning units suitable for operation on 230±10% volt, 50 Hz, 1 phase power supply, with air-cooled evaporator with coil, fan, and fan motor, air-cooled condenser with hermetically sealed rotary / scroll compressor/Gas/Remote/Control Cable etc . (Make-Daikin/LG/Mitsubishi Electri/Hitachi)				
a		1.0 TR (Invereter - 5*)	1	Nos.	53325.00	53325.00
b		1.5 TR (Invereter - 5*)	1	Nos.	60480.00	60480.00
c		2.0 TR (Invereter - 5*)	0	Nos.	82080.00	0.00
343		Supply of Inverter 3-Star, 1-Ph wiring Cassette units including compressor, condenser, supports, with cordless remote controller, etc as per the specifications of the following capacities. Cassette unit shall be 4-way. Cassette units shall have supply and return air grill and have drain pump /Gas/Remote/Control Cable etc. (Make-Daikin/LG/Mitsubishi Electri/Hitachi)				
a		2.5 TR	0	Nos	122,000.00	0.00

Sl. No.		Description	Qty	Unit	Rate	Amount
		INSTALLATION ,TESTING & COMMISSIONING-:				
344		Testing,Commissioning of Hi-Wall Unit	2	Nos.	2025.00	4050.00
345		Testing and Commissioning of Cassette air conditioners	0	Nos	4,725.00	0.00
346		Supplay, Installation, Testing & Commissioning of the Copper refrigerant pipes with 13mm/9mm with nitrile rubber tube insulation & control cable for Hi-wall Unit	30	RFT	391.00	11730.00
347		SITC of Soft copper piping for Cassette ac units , clamping, fittings, etc. Both the pipelines shall be insulated with nitrile tubular insulation, shall be of Class "O". Exposed piping insulation .	0	Rmt	1,728.00	0.00
348		SITC of PVC drain pipes with 6 mm nitrile rubber insulations complete with supports as per drawings and specifications of below sizes.including all cost of labour ,material, conveyance,taxes (excluding GST) ,T & P etc. complete and as per the directions of Engineer-in-charge.				
a		25mm inner dia(for Split)	5	Rmt	391.00	1955.00
b		32mm inner dia(for Cassettet)	0	Rmt	446.00	0.00
349		Supply, Installation, Testing and Commissioning of Flexible drain pipe	20	RFT	72.00	1440.00
350		SITC of FRLS PVC insulated copper conductor, PVC sheathed Aluminum armoured control cable of 1.1 KV grade confirming to IS:7098 Part-I ISI marked. including all cost of labour ,material, conveyance,taxes (excluding GST) ,T & P etc. complete and as per the directions of Engineer-in-charge.				
		4C x 1.5 sq. mm	50.00	Rmt	244.00	12200.00
351		Making grooves in brick walls vertically and horizontally to the required depth and width for fixing of copper and drain pipes,for MS Brackets and filling the grooves with cement mortar (1:4) to bring te surface to original level including the cost of materials, curing and conveyance of materials etc all complete as per the direction of Engineer In Charge.	2	Nos.	1500.00	3000.00
352		Supply of ODU Bracket for AC, vibration pads	2.00	Nos	1,500.00	3000.00
		Sub Total =				151,180.00
VI		LIGHTNING PROTECTION-:				
353-a		SITC of Active Lightning arrestor of Class A for building protection .It shall work on early streamer Emission principle & shall be made of stain less steel with a ΔT of 60 micro sec(OPR 45)including Mounting Mast-2 MTR & 3 MTR with guywire & Base Plate with A non reset table type counter(FLASH COUNTER) shall also be supplied to count the number of lighting occurrences.including all other materials & . as directed by site-incharge.	1	Nos	165,575.00	165,575.00
b		Providing and fixing 25 mm X 6 mm CU. strip in on surface or in recess for connection etc as reqd	90	mtr	895.00	80,550.00

Sl. No.		Description	Qty	Unit	Rate	Amount
c		Chemical Earthing with the material to construct a maintenance Free Ring earth consisting of copper coated steel rods, compression couplers, RDSO approved Earth enhancing compound & Exothermic welding as per the OEM specification and providing masonry enclosure with cover plate having locking arrangement . This includes electrodes- 3nos, Couplers - 2 Nos., Earth Enhancing compound of bags - 3 Nos.including all other materials & . as directed by site-incharge.	2	Set	17,500.00	35,000.00
		Sub Total Cost =				281,125.00
VII		(SH: EXTERNAL ELECTRICAL WORK WITH FITTINGS.				
354		Supplying the following Size PVC/ XLPE insulated PVC sheathed Aluminium unarmoured cable of 1.1 kV as per IS 1554 etc as reqd.				
		a- 3 core 6 sq.mm (Post Top Lights)	650	mtr	168.00	109200.00
		b- 4 core 10 sq.mm -	5	mtr	243.00	1215.00
		b- 4 core 16 sq.mm -	40	mtr	291.00	11640.00
355		Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FR PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required				
a		2 X 1.5 sq. mm + 1 X 1.5 sq. mm earth wire for external Light connection.	20	Metre	135.00	2700.00
b		2 X 2.5 sq. mm + 1 X 1.5 sq. mm earth wire for external Light connection.	20	Metre	149.00	2980.00
356		Laying and fixing of one number .following size cable direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc as required. ISI mark Aluminum/copper conductor, XLPE insulated cable, FRLS PVC, galvanized steel flat strip armoured and overall PVC sheathed cable conforming to IS: 7098 (Part - I) with latest amendments & complete all as required				
a		Upto 25 sq. mm	670	mtr	134.00	89780.00
b		Above 25 sq. mm and upto 120 sq. mm	0	mtr	150.00	0.00
357		Laying and fixing of one number of following size of cable on wall surface as required, ISI mark Aluminum/copper conductor, XLPE insulated cable, FRLS PVC, galvanized steel flat strip armoured and overall PVC sheathed cable conforming to IS: 7098 (Part - I) with latest amendments & complete all as required				
a		25 sq. mm and upto 120 sq. mm	25	mtr	133.00	3325.00
358		Supplying and making end termination with brass compression gland and aluminium lugs/copper for following size of PVC insulated and PVC sheathed / XLPE aluminium/copper conductor cable of 1.1 KV grade as required.				
a		a- 3Cx6 & 4 core 10 sq.mm	80	nos	186.00	14880.00
b		a- 4 core 16 sq.mm	2	nos	202.00	404.00
359		Panels .				

Sl. No.		Description	Qty	Unit	Rate	Amount
		Design, supply, installation, testing and commissioning of cubicle main panel for indoor/Outdoor installation of weatherproof design as per IP 44 class, made out of 2 mm thick CRCA sheet as per the drawing with cubicle type internal arrangement of 1.6 mm thick sheet and with front & back opening system suitable for mounting following switch gears, busbars, metering unit, including painting with powder coated paint of approved colour and shed with earthing the body etc as reqd including all other materials & as directed by site-in-charge.. (drawing shall be approved by engineer -in charge)				
1.1		OUTDOOR JB (Outdoor, Floor mounted)	1	Set	25000.00	25000.00
		Incommer:- i) 01 no. 63A., 4P Isolator				
		Bus bar:- 04 nos. 100A. Al. bus bar duly sleeved.				
		Outgoing:-				
		i) 09 nos. 10/16A SP MCB, 02 nos. 32A FP MCB				
		Instrument:- 03 nos. phase indicating lamp with control fuse.(Duly factory wired)				
7-a		Providing and laying in position cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) in foundation of pump, DG set, Street Light, garden Light etc including form work etc as required.	3	cum	6,190.00	18570.00
b		Providing and laying in position cement concrete 1:3:6 (1 cement : 2 coarse sand : 6 graded stone aggregate 40 mm nominal size) in foundation of pump, DG set, Street Light, garden Light etc including form work etc as required	2	cum	5,423.00	10846.00
		EARTHING:-				
360		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.	2	Each	5241.00	10482.00
361		Supplying and laying 25 mm x 5 mm G.I earth strip ISI marked at 0.5 meter below ground level as strip earth electrode including soldering etc. as required	30	mtr	66.00	1980.00
362		Supply, delivery & installation of GI coil earthing made out of 8 swg GI wire closely wound in shape of a helical coil of 50mm diameter with 115 numbers of turns including excavation of earthen pit of size 800x 800x 1500mm in all kinds of soil, back filling the excavated pit with alternate layers of salt, charcoal around the coil with a diameter of 300mm upto 1000mm and balance by good quality soil, end termination complete as required.	8	NO	750.00	6000.00
		FITTING & FIXTURE:-				

Sl. No.		Description	Qty	Unit	Rate	Amount
363		Supply inspection testing & Commissioning Mild Steel Pole, Mild Steel Bracket, Cast Aluminum lighting fixture, Stainless screws, Corrosion & UV ray resistant coating.. Of 7000mm height with single Arm of 1000 mm with 1 no 40/45 wt Street Light along with J Bolts. The pole should have 6 Amps 10 KA SP MCB connectors suitable for 6 / 16 sqmm termination complete with DIN bar, shooting Links, end lock etc as required and 3 x 4 sqmm double PVC insulated summer sable copper conductor cable with junction box to the luminaries completely including terminations with insulated copper lug etc. (Make-Homdec Model No - HL-2843Single Arm /SS make of K-LITE-KP-7287 P1/ HALONIX /PANASONIC/K-LITE/HAVELLS/BAJAJ)	6	nos	35755.00	214530.00
364		Supply inspection testing & Commissioning Mild Steel Pole, Mild Steel Bracket, Cast Aluminum lighting fixture, Stainless screws, Corrosion & UV ray resistant coating.. Of 7000mm height with double Arm of 1000 mm in each side with 2 Nos. of 40/45 wt Street Light along with J Bolts. The pole should have 6 Amps 10 KA SP MCB connectors suitable for 6 / 16 sqmm termination complete with DIN bar, shooting Links, end lock etc as required and 3 x 4 sqmm double PVC insulated summer sable copper conductor cable with junction box to the luminaries completely including terminations with insulated copper lug etc. (Make-Homdec Model No - HL-2843Double Arm /SS make of K-LITE-KP-7287 P1 /HALONIX /PANASONIC/K-LITE/HAVELLS/BAJAJ)	2	nos	47211.00	94422.00
365		Supply, Installation, Testing & commissioning of 3W LED IP-65 outdoor Foot/Floor washer light as per EIC of approved make including with all,, materials & labour.(Make-Homdec /SS make of /HALONIX /PANASONIC/HAVELLS/K-LITE/WIPRO)	4	No.	2272.00	9088.00
366		Supply, Installation, Testing & commissioning of 16M high mast shaft in two section suitable for 39 m/sec wind speed along with head frame, luminaires carriage suitable for 08 luminaires in symmetrical arrangement and other accessories manufactured in factory with raising lowering system comprising double drum winch, 5mm diameter SS wire rope, trailing cable, connector, integral power tool motor, manual handle, junction box, lightning finial. & foundation bolts manufactured from special steel along with nuts, washers, anchor plate and common template including LED floodlight luminaires 8nos X 200 W LED with LED type single dome aviation obstruction light. Also with outdoor stand mounted feeder pillar with 32A TPN MCB incomer, single dial time switch, 25A TP contactor for the automatic switching of luminaries, power tool control with 2 no 9A contactors and raise lower push button, Incoming 35 sq. mm and out going 16 & 2.5 sq. mm terminals as per EIC of approved make including with all,, materials & labour.(Make-Homdec /SS make of /HALONIX /PANASONIC/HAVELLS/K-LITE/BAJAJ)	0	No.	402658.00	0.00

Sl. No.		Description	Qty	Unit	Rate	Amount
367		Supply, Installation, Testing & commissioning of Flood light with aluminium die cast housing luminaire with unique lens system for uniform illumination and toughened glass with silicon gasket for IP-66 including 150 watt LED luminaires as per EIC of approved make including with all,, materials & labour.. (Make WIPRO-Model-LF20-192-060-57-G2//SS make of Jaquar-LFDSLM150XC /HALONIX /PANASONIC/HAVELLS/K-LITE/WIPRO)	0	No.	17826.00	0.00
368		Supply, Installation, Testing & commissioning of Post Top light with Mild steel Base Plate & pole ,Cast Aluminium Embellishment ,Stainless steel and Aluminium Lighting fixture, Silicon & EPDM rubber gasket, stainless steel screw, PMMA diffuser, corrosion and U.V ray resistant coating. Height 4075 mm IP-66 including 30 watt LED bulb as per EIC of approved make including with all,, materials & labour.. (Make-Homdec -HLMSP-268-2387 /SS make of K-LITES -KP-4327 P11/HAVELLS/PANASONIC/WIPRO)	8	No.	42281.00	338248.00
369		SITC of 2'-0" height designed Bollard light with 8W LED lamp of (reputed make) with holder ,240V Single phase AC complete with Lamp,RCC Base & all other levies etc. as required as per EIC. (Make JAQUAR/ Philips /CG/ Wipro/ HAVELLS/K-LITE)	8	No.	6500.00	52000.00
370		Supply, Installation, Testing & commissioning of IP-65, LED Garden Spike Light including 1 no. of 6 watt LED luminaires & Base with Brick Masonry work(200x200x200)mm for the above fitting as per EIC of approved make including with all,, materials & labour.. (Make JAQUAR/ Philips /CG/ Wipro/ HAVELLS/K-LITE)	10	No.	5734.00	57340
371		Supply, Installation, Testing & commissioning of elegant look 40 W AIO Solar street lights having 100 Wp highly efficient Monocrystalline PV module for faster charging of battery in adverse weather condition & 36 Ah LiFePo4 Battery (Lithium Ferrophosphate) Battery (BIS approved) which will be kept inside the luminaire house (Theft retardant type), MPPT charge controller & PIR Sensor. The initial lumen output of AIO street light is 6400 lumen in CCT 6500K (+/- 500K) as per LM 79 report of third party NABL lab . The LED chip will be of OSRAM/NISCHIA/CREE only .The complete system & BMS has been designed in such a way to provide 2 days (24 Hrs) back up with dimming mode by activating PIR sensor and battery is completely theft retardant and maintenance free . The luminaire is having IP 65 protection for critical component like (LED compartment, Driver compartment & Battery) and is as per IP test report of third party NABL lab . The AIO street light is having IK 07 (as per the test report of third party NABL lab). The luminaire is having the provision the tiltable/ adjustable mounting bracket to mount it on the top of the octagonal pole directly. (Warranty on the complete AIO street lights will be 5 years .) INCULDING 7 mtr octagonal pole having bottom dia of 130 mm A/F and top dia of 70 mm A/F. made up from 4 mm thick sheet and Base plate . The octagonal pole will be supplied along with 4 nos. J type foundation bolts. The Octagonal pole shall have no door opening including with all,, materials & labour.(Make-PANASONIC /SS make of /HALONIX /SURYA/HAVELLS/WIPRO) .	0	No.	79673.00	0

Sl. No.		Description	Qty	Unit	Rate	Amount
		Sub Total Cost =				1074630.00
VIII		(SH: TRANSFORMER ,DP & DG.				
372		Supply, installtion, testing, commissioning of the following capacity 11 /0.433 KV, 50 Hz, 3phase, Oil cooled transformer suitable for out door type installation on plinth, with first filling of oil and with LV cable end box, fitted with off load tap changer, HV indoor type isolator/ load break switch, HT fuse, HV link Chamber, provision for LT MCCB with IP54 class enclosure and as per detailed specification attached as per IS 1180-2011				
		a) 63kVA, 11/0.433 KV, Copper Wound Level-II (+5% to -10%) with off load tap changer	1	nos	135,700.00	135700.00
373		SITC of 2P structure with RS joist pole 11 mtr length & all other accessories as required for installation of 1nos 63KVA Transformer including 1 Sets of 200A AB Switch,HG Fuse,LA(5KA),Insulators (Disc/Pin)as required,earthings(Neutral with copper Plate & Body , with GI plate)with chamber,danger Board,Fire Bucket,Hand Gloves, fencing as per approve drawing with 6' gate,spreading 40mm gravells upto 100mmm height,Isolator Panel including all civil works as required size ,including Liosioning & inspection for both HT & LT side as per EIC & all other materials & labour as required AS per EIC or TPCODL).	1	job	450000.00	450000.00
374		Construction of OH line of using 70mm2 AAAC conductor including all other materials & labour as required as per EIC.(1SPAN 50MTR MAX)	8	span	75000.00	600000.00
375		Supply ,Installation ,Testing & commionsiong of ,62.5KVA, 415V, 50Hz DG Set with Alternator, mounted on a common base frame, with Digital Controller , Sub-base Fuel Tank, inbuilt Anti-Vibration mounts, Circuit Breaker & CPCB II approved Acoustic Enclosure ,control cable,DG Base with inbuilt or separate auto start & stop Panel as per company specified switchgears. MAKE	1	set	785000.00	785000.00
		Sub Total Cost =				1970700.00

SECTION-II :- CONSTRUCTION OF 200 BEDDED HOSTEL (100 BOYS & 100 GIRLS) FOR BLIND STUDENTS AT, UNIT-III, BHUBANESWAR-BLOCK-B													
GROUND Floor		Length		Width		Height		Rate		Amount			
Sl. No	Description of the work	Nos		In Mtr.	In Mtr.	In Mtr.	Quantity	Unit	In Rs.	In Rs.			
376	Earthwork in excavation in all types of soil for site leveling, foundation, pits, trenches and other civil works upto and including 1.5metre depth and stacking the soil upto a lead of 100 metre and including dewatering, removing slush, shoring and strutting (as required), complete as per specification and as directed by the Engineer-In-Charge.												
	Raft Foundation	1	X	27.500	X	37.600	X	1.500	=	0.000			
							Total	=	0.000	Cum	232.30		0.00
377	Extra earth excavation in lift or 1.5m or part there of over the initial lift of 1.5m in all kinds of embankments and road works and ordinary earth work in general.												
	Raft Foundation	1	X	27.500	X	37.600	X	0.500	=	0.000			
		2	X	2.900	X	2.300	X	0.500	=	0.000			
							Total	=	0.000	Cum	249.06		0.00
378	Filling at all depth with available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 15cm in depth: consolidating each deposited layer by ramming and watering complete (lead upto 100m) as directed by the Engineer-In-charge.												
		1	X	0.000	X	vol.	X	0.670	=	0.000			
							Total	=	0.000	Cum	129.07		0.00
379	Supplying and filling sand in foundation and over areas including watering, ramming, consolidating and dressing, labours, tools, taxes etc. all complete as per the specification and direction of Engineer-In-charge.												
	Raft Foundation	1	X	27.500	X	37.600	X	0.300	=	0.000			
	Plinth inside	1	X	892.000	X	area	X	0.600	=	535.200			
							Total	=	535.200	Cum	1439.58		770461.89
380	Diluting and injecting chemical emulsion (to be supplied free of cost at site of work) for PRE CONSTRUCTIONAL Anti-termite treatment and creating a continuous chemical barrier under and all-round the column pits, wall trenches, basement excavation, top perimeter of building, expansion joints, over the top surface of consolidated earth on which apron is to be laid, surroundings of pipes and conduits etc. complete as per specifications (plinth area of the building at ground floor only shall be measured for payment).												
		1		892.000	X	area	X		=	892.000			
							Total	=	892.000	Sqm	104.50		93214.00
381	Providing and laying plain cement concrete 1:3:6 (1 cement : 3 sand : 6 stone aggregate 40mm nominal size) as levelling course in foundation and plinth etc. including tempering, curing, shuttering etc. complete all depth and height.												
	Raft Foundation	1	X	27.500	X	37.600	X	0.300	=	0.000			
	Floor P.C.C.	1	X	892.000	X	1.000	X	0.150	=	133.800			
							Total	=	133.800	Cum	6514.53		871644.11
382	First class Fly ash Brick masonry using bricks of size 25cm. x 12 cm. x 8 cm. having crushing strength not less than 75 kg. Per. Sqr. Cm. in cement mortar of mix (1:6) with ordinary Portland slag cement(PSC) and screened & washed sand for mortar after immersing the bricks for 6 (Six) hours in water before use in Foundation & Plinth including splays cutting, circular moulding, corbelling, chamfering and similar such type of works, watering and curing etc. including cost, conveyance, loading, unloading, royalties and taxes of all materials, cost of all labour, scaffolding, sundries, T&P required for the works etc. complete in all respect as directed by the Engineer-In-Charge.												
	Peripheral wall	1	X	120.000	X	0.500	X	0.300	=	18.000			
		1	X	120.000	X	0.375	X	0.500	=	22.500			
		1	X	120.000	X	0.250	X	0.750	=	22.500			
							Total	=	63.000	Cum	5981.19		376814.90
383	First class Fly ash Brick masonry using bricks of size 25cm. x 12 cm. x 8 cm. having crushing strength not less than 75 kg. Per. Sqr. Cm. in cement mortar of mix (1:6) with ordinary Portland slag cement(PSC) and screened & washed sand for mortar after immersing the bricks for 6 (Six) hours in water before use in Super structure including splays cutting, circular moulding, corbelling, chamfering and similar such type of works, watering and curing etc. including cost, conveyance, loading, unloading, royalties and taxes of all materials, cost of all labour, scaffolding, sundries, T&P required for the works etc. complete in all respect as directed by the Engineer-In-Charge.												
	X-AXIS	3	X	25.200	X	0.250	X	2.700	=	51.030			
		4	X	4.500	X	0.250	X	2.700	=	12.150			
		2	X	1.600	X	0.250	X	2.700	=	2.160			
	y-AXIS	4	X	32.500	X	0.250	X	2.700	=	87.750			
		4	X	13.150	X	0.250	X	2.700	=	35.505			
		4	X	6.000	X	0.250	X	2.700	=	16.200			
	Deduction :-	-1	X	1.800	X	0.250	X	2.100	=	-0.945			
		-3	X	1.500	X	0.250	X	2.100	=	-2.363			
		-2	X	1.200	X	0.250	X	2.100	=	-1.260			
		-14	X	1.800	X	0.250	X	1.350	=	-8.505			
		-1	X	7.000	X	0.250	X	1.350	=	-2.363			
		-1	X	2.450	X	0.250	X	1.350	=	-0.827			
							Total	=	188.533	Cum	6015.72		1134162.49
384	First class Fly ash Brick masonry using bricks of size 23cm. x 12 cm. x 8 cm. having crushing strength not less than 75 kg. Per. Sqr. Cm. in cement mortar of mix (1:4) with ordinary Portland slag cement(PSC) and screened & washed sand for mortar after immersing the bricks for 6 (Six) hours in water before use in Super structure including splays cutting, circular moulding, corbelling, chamfering and similar such type of works, watering and curing etc. including cost, conveyance, loading, unloading, royalties and taxes of all materials, cost of all labour, scaffolding, sundries, T&P required for the works etc. complete in all respect as directed by the Engineer-In-Charge.												
		4	X	4.500	X	0.125	X	2.100	=	4.725			
		4	X	2.000	X	0.125	X	2.100	=	2.100			
		2	X	2.000	X	0.125	X	2.100	=	1.050			
		-4	X	0.750	X	0.125	X	2.100	=	-0.788			
							Total	=	7.088	Cum	6298.34		44639.51

GROUND Floor				Length		Width		Height				Rate		Amount	
Sl. No	Description of the work	Nos		In Mtr.		In Mtr.		In Mtr.		Quantity	Unit	In Rs.		In Rs.	
385	Providing, lifting, hoisting and laying Reinforced cement concrete of M-25 grade as per approved designs and drawings having a minimum compressive strength (in work test) 25 Kg. / Square cm. in 15 cm. cubes at 28 days after mixing and test conducted in accordance with I.S. 516 using 12 mm. to 20 mm. size black hard crushed broken granite stone chips and screened and washed sharp sand for mortar of approved quality from approved quarry, washed and cleaned (20mm. size chips not to exceeds 25 %) to be mixed in concrete mixture with Portland slag cement (PSC) including hoisting, lowering, laying and compaction concrete by using vibrators, watering and curing for 28 days, centering and shuttering then after dismantling and removing debris from the work site and finishing the exposed surface smooth providing grooves or beads wherever necessary including cost, conveyance, loading, unloading, royalties and taxes of all materials and cost of all labours, sundries, T & P required of the work etc. complete in all respect as directed by the Engineer-in-Charge. But excluding cost and conveyance of M.S. rods or Tor steel and binding wires and labour charges for straightening, cutting, bending etc. of M.S. rods or tor steel tying the grills and placing in proper position.														
	a) Footing														
	Raft Foundation	1	X	27.200	X	37.300	X	1.500	=	0.000					
								Total	=	0.000	Cum	8010.26		0.00	
	b) Columns.														
	Col up to PL Lvl.														
	C1	34	X	0.300	X	0.750	X	2.000	=	15.300					
	C2	0	X	0.300	X	0.500	X	2.000	=	0.000					
	Lift	4	X	3.000	X	0.250	X	2.000	=	6.000					
		4	X	2.300	X	0.250	X	2.000	=	4.600					
	Col up to Top Lvl.														
	C1	34	X	0.300	X	7.500	X	3.150	=	240.975					
	C2	0	X	0.300	X	0.500	X	3.150	=	0.000					
	Lift	4	X	3.000	X	0.250	X	3.150	=	9.450					
		4	X	2.300	X	0.250	X	3.150	=	7.245					
								Total	=	283.570	Cum	15856.57		4496446.41	
	c) Plinth Beams														
	X-AXIS	8	X	25.200	X	0.250	X	0.500	=	25.200					
		4	X	4.500	X	0.250	X	0.500	=	2.250					
		4	X	1.600	X	0.250	X	0.500	=	0.800					
	y-AXIS	8	X	32.500	X	0.250	X	0.500	=	32.500					
		2	X	13.150	X	0.250	X	0.500	=	3.288					
		4	X	6.000	X	0.250	X	0.500	=	3.000					
								Total	=	67.038	Cum	8835.00		592276.44	
	d) Lintel beam .														
	X-AXIS	3	X	25.200	X	0.250	X	0.150	=	2.835					
		4	X	4.500	X	0.250	X	0.150	=	0.675					
		2	X	1.600	X	0.250	X	0.150	=	0.120					
	y-AXIS	4	X	32.500	X	0.250	X	0.150	=	4.875					
		4	X	13.150	X	0.250	X	0.150	=	1.973					
		4	X	6.000	X	0.250	X	0.150	=	0.900					
		4	X	4.500	X	0.125	X	0.150	=	0.338					
		4	X	2.000	X	0.125	X	0.150	=	0.150					
		2	X	2.000	X	0.125	X	0.150	=	0.075					
		4	X	0.750	X	0.125	X	0.150	=	0.056					
								Total	=	11.996	Cum	15102.15		181169.12	
	e) Roof Beams.														
	X-AXIS	8	X	25.200	X	0.250	X	0.600	=	30.240					
		4	X	4.500	X	0.250	X	0.600	=	2.700					
		4	X	1.600	X	0.250	X	0.600	=	0.960					
	y-AXIS	8	X	32.500	X	0.250	X	0.600	=	39.000					
		2	X	13.150	X	0.250	X	0.600	=	3.945					
		4	X	6.000	X	0.250	X	0.600	=	3.600					
								Total	=	80.445	Cum	15856.57		1275581.45	
	f) RCC Slab .														
	Slab area	1	X	892.000	X	area	X	0.150	=	133.800					
								Total	=	133.800	Cum	14461.02		1934884.60	
	g) Staircase														
	Landing	2	X	1.500	X	2.850	X	0.150	=	1.283					
	Waste Slab	2	X	6.500	X	1.250	X	0.150	=	2.438					
	Beam	2	X	2.850	X	0.250	X	0.450	=	0.641					
	Steps	40	X	1.250	X	0.300	X	0.150	=	2.250					
								Total	=	6.611	Cum	15799.22		104452.57	
	TOTAL R.C.C QNTY.									583.460	Cum				
386	Supplying, straightening, cutting, bending, placing in position and binding reinforcement steel work in RCC/reinforced brick works as per drawing and specification including preparation of respective bar bending schedule and binding (Binding wire to be used as per the IS code) etc. all complete as per direction of Engineer-in-charge Cold Twisted bars, Thermo-Mechanically-treated bars.														
	a) Footing & Pedestal	1	x	0.000	x	Kg/Cum			=	0.000					
	b) Column	1	x	283.570	x	176.000			=	49908.320					
	c) Plinth Beam	1	x	67.038	x	150.000			=	10055.625					
	d) Lintel	1	x	11.996	x	123.000			=	1475.539					
	e) Roof beam	1	x	80.445	x	176.000			=	14158.320					
	f) Roof Slab	1	x	133.800	x	180.000			=	24084.000					
	g)Staircase	1	x	6.611	x	150.000			=	991.688					
								Total	=	100673.491	Kg				
								Total	=	1006.735	Qntl.	9743.85		9809469.62	
387	12mm cement plaster on external RCC/brick surfaces in cement plaster 1:6 (1 cement : 6 coarse sand) including necessary scaffolding, curing etc. all complete at all floors and all heights.														

[illegible]

GROUND Floor				Length		Width		Height		Quantity	Unit	Rate In Rs.	Amount In Rs.
Sl. No	Description of the work	Nos		In Mtr.		In Mtr.		In Mtr.					
		1	X	150.000	X	1.000	X		=	150.000			
								Total	=	150.000	Sqm	1353.37	203004.97
394	Providing and fixing 1st quality Ceramic glazed wall tiles conforming to IS : 15622 (thickness to be specified by the manufacturer) minimum thickness 5mm of NITCO, SOMANY, ASIAN, KAJARIA or equivalent approved make in all colours, shades except burgundy, bottle green, black of size 300x600 in skirting and dados over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3 kg per sqm including pointing in white cement mixed with pigment of matching shade complete as per direction of Engineer-In-Charge. In all floors and all heights.												
		1	X	200.000	X	1.500	X		=	300.000			
		4	X	19.500	X	2.100	X		=	163.800			
								Total	=	463.800	Sqm	1017.02	471695.34
395	Providing and fixing of factory made Fenesta or equivalent UPVC sliding Window/Ventilator (colour or approved) complete with U value=1.9-1.3 W/m 2k, flame resistance, self extinguishing, lead free comprising UPVC multi chambered frame having in built UPVC roller track on top and UPVC sash with wall thickness of 2.3mm duly reinforced with G.I section 2.6 mm where ever required. All corners of frame and sash will be fusion welded. After placing 12.5mm laminate glass (6mm clear toughened +1.5 pvg laminate+5mm clear glass) Annealed glass in the sash, with support of hurricane bar for high wind support. uPVC glazing bead, interlock, EPDM gasket brush shall be provided including multi lock and rollers & proper drainage system shall be provided. window frame will be fixed to the wall with 100mm long and 8mm dia. Fasteners and after fixing the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of required size, of approved quality complete in all respect as per approved drawing & direction of the Engineer -In-Charge. Note:- Profile Manufacturer & window manufacturer, installation of windows must be done through Manufacturing company, and then only Manufacturer warranty is acceptable)												
		20	X	1.800	X		X	1.350	=	48.600			
		2	X	7.000	X		X	1.350	=	18.900			
		2	X	2.450	X		X	1.350	=	6.615			
								Total	=	74.115	Sqm	8500.00	629977.50
396	Providing and fixing of factory made Fenesta or equivalent UPVC sliding Door (colour or approved) complete with U value=1.9-1.3 W/m 2k, flame resistance, self extinguishing, lead free comprising UPVC multi chambered frame having in built UPVC roller track on top and UPVC sash with wall thickness of 2.3mm duly reinforced with G.I section 2.6 mm where ever required. All corners of frame and sash will be fusion welded. After placing 12.5mm laminate glass (6mm clear toughened +1.5 pvg laminate+5mm clear glass) Annealed glass in the sash, with support of hurricane bar for high wind support. uPVC glazing bead, interlock, EPDM gasket brush shall be provided including multi lock and rollers & proper drainage system shall be provided. window frame will be fixed to the wall with 100mm long and 8mm dia. Fasteners and after fixing the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of required size, of approved quality complete in all respect as per approved drawing & direction of the Engineer -In-Charge. Note:- Profile Manufacturer &												
		2	X	1.800	X	2.100	X		=	7.560			
								Total	=	7.560	Sqm	10500.00	79380.00
397	Providing and fixing seasoned sal wood work in frames at any locations including doors, windows, cupboard, clerestory and other frames fixing in position including cost of hinges, M.S. flat (30mm x 6mm) hold fasts lugs or dash fasteners of required dia and length as per drawing / specification, at all floors and all heights.												
		6	X	5.400	X	0.125	X	0.075	=	0.304			
		2	X	5.700	X	0.125	X	0.075	=	0.107			
								Total	=	0.411	Cum	100794.60	41388.78
398	Providing, fitting and fixing of approved make 32mm thick (laminate finished thickness of the door) factory made flush doors of the followings size, outside finished with 1mm thk. laminate of approved colour & shade and inside of the Room finished with 4mm thick veneer with melamine polish of approved make, colour & shade fixed to the teak wood bidding, complete in all respect bidding/lipping as per drawing/design. The door will be provided with all necessary fittings & fixtures, i.e. hinges, door stopper, door buffer etc. of Godrej or equivalent approved make with all materials, labour, T&P, taxes etc. as per direction of Architect/Engineer-in-Charge at all floors and all heights.												
		6	X	1.500	X		X	2.100	=	18.900			
		4	X	1.200	X		X	2.100	=	10.080			
								Total	=	28.980	Sqm	10668.61	309176.32
399	Providing and fixing M.S grill of required patterns for windows/verandahs etc. with M.S flats, square or round bars etc. including applying a coat of approved steel primer and two or more coats of synthetic enamel paint of approved make & shade, all complete as per drawing & specification. (All steel sections contractor's own supply).												
		28	X	1.800	X	27.000	X	1.350	=	1837.080			
		2	X	7.000	X	27.000	X	1.350	=	510.300			
		2	X	2.450	X	27.000	X	1.350	=	178.605			
								Total	=	2525.985	Kg.	68.73	173609.83
400	Providing & Applying priming one coat with Cement primer of approved brand and manufacture on plaster surface as per the instruction of Engineer-In-Charge at all elevations including all material & labour complete.												
	External area	1	X	1094.693	X	area			=	1094.693			
	Internal area	1	X	1004.693	X	area			=	1004.693			
	Ceilling area	1	X	82.900	X	area			=	82.900			
								Total	=	2182.285	Sqm	68.53	149551.97
401	Providing and applying to outside walls with two or more coats of Anti-Fungal Weather coat water proofing paint including scaffolding and cleaning the surface before application of approved colour and manufacture as per specification, instruction of Engineer-In-charge at all elevations including all material labour complete.												
	External area	1	X	1094.693	X	area			=	1094.693			
								Total	=	1094.693	Sqm	82.02	89785.00
402	Preparing surface and painting at all height with two or more coats of interior Plastic Emulsion "Royale Shyne" of Asian Paints or equivalent of approved shade as per the instructions of the manufacturers; giving uniform shade etc in all heights of walls etc. including interior wall primer & providing scaffolding, cleaning, curing and supply of all materials and labour complete as per drawing, design and direction of Architect/Engineer-In-Charge.												
	Internal area	1	X	1004.693	X	area			=	1004.693			
	Ceilling area	1	X	82.900	X	area			=	82.900			
								Total	=	1087.592	Sqm	93.90	102124.90

ESTIMATE FOR THE WORK :- CONSTRUCTION OF 200 BEDDED HOSTEL (100 BOYS & 100 GIRLS) FOR BLIND STUDENTS AT, UNIT-III, BHUBANESWAR-BLOCK-B												
FIRST Floor			Length		Width		Height		Rate	Amount	Unit	
Sl. No	Description of the work	Nos	In Mtr.	In Mtr.	In Mtr.	In Mtr.	In Mtr.	In Mtr.	In Rs.	In Rs.		
410	First class Fly ash Brick masonry using bricks of size 25cm. x 12 cm. x 8 cm. having crushing strength not less than 75 kg. Per. Sqr. Cm. in cement mortar of mix (1:6) with ordinary Portland slag cement(PSC) and screened & washed sand for mortar after immersing the bricks for 6 (Six) hours in water before use in Super structure including splays cutting, circular moulding, corbelling, chamfering and similar such type of works, watering and curing etc. including cost, conveyance, loading, unloading, royalties and taxes of all materials, cost of all labour, scaffolding, sundries, T&P required for the works etc. complete in all respect as directed by the Engineer-In-Charge.											
	X-AXIS	3	X	25.200	X	0.250	X	2.700	=	51.030		
		4	X	4.500	X	0.250	X	2.700	=	12.150		
		2	X	1.600	X	0.250	X	2.700	=	2.160		
	y-AXIS	4	X	32.500	X	0.250	X	2.700	=	87.750		
		4	X	13.150	X	0.250	X	2.700	=	35.505		
		4	X	6.000	X	0.250	X	2.700	=	16.200		
	Deduction :-	-20	X	0.900	X	0.250	X	2.100	=	-9.450		
		-20	X	1.800	X	0.250	X	1.350	=	-12.150		
		-1	X	7.000	X	0.250	X	1.350	=	-2.363		
								Total	=	180.833	Cum	6308.70
												1140817.99
411	First class Fly ash Brick masonry using bricks of size 23cm. x 12 cm. x 8 cm. having crushing strength not less than 75 kg. Per. Sqr. Cm. in cement mortar of mix (1:4) with ordinary Portland slag cement(PSC) and screened & washed sand for mortar after immersing the bricks for 6 (Six) hours in water before use in Super structure including splays cutting, circular moulding, corbelling, chamfering and similar such type of works, watering and curing etc. including cost, conveyance, loading, unloading, royalties and taxes of all materials, cost of all labour, scaffolding, sundries, T&P required for the works etc. complete in all respect as directed by the Engineer-In-Charge.											
		2	X	4.500	X	0.125	X	2.700	=	3.038		
								Total	=	3.038	Cum	6591.34
												20021.20
412	Providing, lifting, hoisting and laying Reinforced cement concrete of M-25 grade as per approved designs and drawings having a minimum compressive strength (in work test) 25 Kg. / Square cm. in 15 cm. cubes at 28 days after mixing and test conducted in accordance with I.S. 516 using 12 mm. to 20 mm. size black hard crushed broken granite stone chips and screened and washed sharp sand for mortar of approved quality from approved quarry, washed and cleaned (20mm. size chips not to exceeds 25 %) to be mixed in concrete mixture with Portland slag cement (PSC) including hoisting, lowering, laying and compaction concrete by using vibrators, watering and curing for 28 days, centering and shuttering then after dismantling and removing debris from the work site and finishing the exposed surface smooth providing grooves or beads wherever necessary including cost, conveyance, loading, unloading, royalties and taxes of all materials and cost of all labours, sundries, T & P required of the work etc. complete in all respect as directed by the Engineer-in-Charge. But excluding cost and conveyance of M.S. rods or Tor steel and binding wires and labour charges for straightening, cutting, bending etc. of M.S. rods or tor steel tying the grills and placing in proper position.											
	b) Columns.											
	Col up to Top Lvl.											
	C1	34	X	0.300	X	0.750	X	3.150	=	24.098		
	C2	0	X	0.300	X	0.000	X	3.150	=	0.000		
	Lift	4	X	3.000	X	0.250	X	3.150	=	9.450		
		4	X	2.300	X	0.250	X	3.150	=	7.245		
								Total	=	40.793	Cum	17590.19
												717547.91
	d) Lintel beam .											
		3	X	25.200	X	0.250	X	0.150	=	2.835		
		6	X	4.500	X	0.250	X	0.150	=	1.013		
		2	X	1.600	X	0.250	X	0.150	=	0.120		
		4	X	32.500	X	0.250	X	0.150	=	4.875		
		4	X	13.150	X	0.250	X	0.150	=	1.973		
		4	X	6.000	X	0.250	X	0.150	=	0.900		
								Total	=	11.715	Cum	16684.60
												195460.12
	e) Roof Beams.											
	X-AXIS	8	X	25.200	X	0.250	X	0.600	=	30.240		
		4	X	4.500	X	0.250	X	0.600	=	2.700		
		4	X	1.600	X	0.250	X	0.600	=	0.960		
	y-AXIS	8	X	32.500	X	0.250	X	0.600	=	39.000		
		2	X	13.150	X	0.250	X	0.600	=	3.945		
		4	X	6.000	X	0.250	X	0.600	=	3.600		
								Total	=	80.445	Cum	17590.19
												1415042.99
	f) RCC Slab .											
	Slab area	1	X	892.000	X	area	X	0.150	=	133.800		
								Total	=	133.800	Cum	15915.25
												2129460.44
	g) Staircase											
	Landing	2	X	1.500	X	2.850	X	0.150	=	1.283		
	Waste Slab	2	X	6.500	X	1.250	X	0.150	=	2.438		
	Beam	2	X	2.850	X	0.250	X	0.450	=	0.641		
	Steps	40	X	1.250	X	0.300	X	0.150	=	2.250		
								Total	=	6.611	Cum	17521.08
												115836.27
	TOTAL R.C.C QNTY.									273.364	Cum	

FIRST Floor				Length		Width		Height		Rate		Amount	
Sl. No	Description of the work	Nos		In Mtr.		In Mtr.		In Mtr.	Quantity	Unit	In Rs.		In Rs.
413	Supplying, straightening, cutting, bending, placing in position and binding reinforcement steel work in RCC/reinforced brick works as per drawing and specification including preparation of respective bar bending schedule and binding (Binding wire to be used as per the IS code) etc. all complete as per direction of Engineer-in-charge Cold Twisted bars, Thermo-Mechanically-treated bars.												
						Kg/Cum							
	b) Column	1	x	40.793	x	176.000		=	7179.480				
	d) Lintel	1	x	11.715	x	123.000		=	1440.945				
	e) Roof beam	1	x	80.445	x	176.000		=	14158.320				
	f) Roof Slab	1	x	133.800	x	180.000		=	24084.000				
	g)Staircase	1	x	6.611	x	150.000		=	991.688				
							Total	=	47854.433	Kg			
							Total	=	478.544	Qntl.	9769.95		4675352.87
414	12mm cement plaster on external RCC/brick surfaces in cement plaster 1:6 (1 cement : 6 coarse sand) including necessary scaffolding, curing etc. all complete at all floors and all heights.												
	External wall												
	X-AXIS	3	X	25.200	X		X	3.150	=	14.175			
		4	X	4.500	X		X	3.150	=	14.175			
		2	X	1.600	X		X	3.150	=	14.175			
	y-AXIS	4	X	32.500	X		X	3.150	=	14.175			
		4	X	13.150	X		X	3.150	=	14.175			
		4	X	6.000	X		X	3.150	=	14.175			
	Deduction :-	-10	X	0.900	X		X	2.100	=	4.050			
		-10	X	1.800	X		X	1.350	=	-0.945			
		-0.5	X	7.000	X		X	1.350	=	-2.363			
		9	X	4.500	X		X	3.150	=	-2.363			
							Total	=	83.430	Sqm	178.92		14927.03
415	16mm cement plaster on internal smooth side of RCC/brick surfaces with cement mortar of mix 1:6 (1 cement : 6 fine sand) including necessary scaffolding, curing etc. all complete at all floors and all heights.												
	Internal wall												
	X-AXIS	3	X	25.200	X		X	3.000	=	14.175			
		4	X	4.500	X		X	3.000	=	14.175			
		2	X	1.600	X		X	3.000	=	14.175			
	y-AXIS	4	X	32.500	X		X	3.000	=	14.175			
		4	X	13.150	X		X	3.000	=	14.175			
		4	X	6.000	X		X	3.000	=	14.175			
	Deduction :-	-10	X	0.900	X		X	2.100	=	4.050			
		-10	X	1.800	X		X	1.350	=	-0.945			
		-0.5	X	7.000	X		X	1.350	=	-2.363			
		9	X	4.500	X		X	3.000	=	-2.363			
							Total	=	83.430	Sqm	248.03		20693.21
416	6 mm cement plaster on RCC surfaces at ceiling/slab soffit and other locations with cement mortar of mix 1:4 (1 cement : 4 fine sand) including necessary scaffolding, curing etc. all complete at all floors and all heights.												
	Slab area	1	X	892.000	X	area	X		=	892.000			
							Total	=	82.900	Sqm	188.31		15610.61
417	Providing and fixing 20mm thick Granite stone flooring (sample of Granite stone should be approved by Engineer-In-Charge) for stair case trade, riser and similar locations where ever required in horizontal/vertical surfaces of required size of approved shade, colour and texture, with moulding edge & approved groove pattern etc. laid over 20mm thick bed of cement mortar 1:4 (1 cement: 4 coarse sand) with joints treated with white cement mixed with matching pigment, epoxy touch ups including rubbing, curing, moulding and polishing to give high gloss finish etc. complete as per direction of Engineer-in-charge. In all floors and all heights.												
	Lift Front	2	X	2.500	X	3.000	X		=	15.000			
	Tread	38	X	1.250	X	0.300	X		=	14.250			
		42	X	1.250	X	0.150	X		=	7.875			
	wash	4	X	10.000	X	0.750	X		=	30.000			
							Total	=	67.125	Sqm	2858.70		191890.24
418	Providing and laying Vitrified floor tiles 600x600 mm (thickness to be specified by the manufacturer) 1st quality conforming to IS: 15622 of NITCO, SOMANY, ASIAN, KAJARIA or equivalent approved make, colours & shades, except white, ivory, grey, fume red brown, laid on 20 mm thick cement mortar 1:4 (1cement: 4coarse sand) including pointing the joints with white cement and matching pigments, etc. complete as per direction of EIC at all floors and all heights.												
	Room	2	X	10.600	X	18.050	X		=	382.660			
	Corridor	2	X	135.000	X	1.000	X		=	270.000			
							Total	=	652.660	Sqm	1364.08		890279.92
419	Providing and laying Vitrified skirting tiles 600x600 mm (thickness to be specified by the manufacturer) 1st quality conforming to IS: 15622 of NITCO, SOMANY, ASIAN, KAJARIA or equivalent approved make, colours & shades, except white, ivory, grey, fume red brown, laid on 12 mm thick cement mortar 1:3 (1cement: 3coarse sand) including pointing the joints with white cement and matching pigments, etc. complete as per direction of EIC at all floors and all heights.												
	Room	2	X	57.300	X	0.150	X		=	17.190			
	Corridor	1	X	30.000	X	0.150	X		=	4.500			
		1	X	70.000	X	0.150	X		=	10.500			
							Total	=	32.190	Sqm	1285.42		41377.60
420	Providing and laying Matte Finish Vitrified floor tiles 300x300/450x450 mm (thickness to be specified by the manufacturer) 1st quality conforming to IS: 15622 of NITCO, SOMANY, ASIAN, KAJARIA or equivalent approved make, colours & shades, except white, ivory, grey, fume red brown, laid on 20 mm thick cement mortar 1:4 (1cement:4coarse sand) including pointing the joints with white cement and matching pigments, etc. complete as per direction of Engineer-In-Charge at all floors and all heights.												

FIRST Floor				Length		Width		Height			Rate		Amount
Sl. No	Description of the work	Nos		In Mtr.		In Mtr.		In Mtr.	Quantity	Unit	In Rs.	In Rs.	
	Toilet	4	X	4.500	X	2.500	X		= 45.000				
								Total	= 4.182	Sqm	1364.08	5704.79	
421	Providing and fixing 1st quality Ceramic glazed wall tiles conforming to IS : 15622 (thickness to be specified by the manufacturer) minimum thickness 5mm of NITCO, SOMANY, ASIAN, KAJARIA or equivalent approved make in all colours, shades except burgundy, bottle green, black of size 300x600 in skirting and dados over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3 kg per sqm including pointing in white cement mixed with pigment of matching shade complete as per direction of Engineer-In-Charge. In all floors and all heights.												
	Room	2	X	13.480	X	1.500	X		= 40.440				
	Corridor	1	X	60.000	X	1.500	X		= 90.000				
		1	X	30.000	X	1.500	X		= 45.000				
	Toilet	4	X	4.300	X	2.100	X		= 36.120				
	E.Room	4	X	13.000	X	2.100	X		= 109.200				
								Total	= 320.760	Sqm	1033.14	331390.59	
422	Providing and fixing of factory made Fenesta or equivalent UPVC sliding Window/Ventilator (colour or approved) complete with U value=1.9-1.3 W/m 2k, flame resistance, self extinguishing, lead free comprising UPVC multi chambered frame having in built UPVC roller track on top and UPVC sash with wall thickness of 2.3mm duly reinforced with G.I section 2.6 mm where ever required. All corners of frame and sash will be fusion welded. After placing12.5mm laminate glass (6mm clear toughtened +1.5 pvg laminate+5mm clear glass) Annealed glass in the sash, with support of hurricane bar for high wind support. uPVC glazing bead, interlock, EPDM gasket brush shall be provided including multi lock and rollers & proper drainage system shall be provided. window frame will be fixed to the wall with 100mm long and 8mm dia.Fasteners and after fixing the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of required size, of approved quality complete in all respect as per approved drawing & direction of the Engineer -In-Charge. Note:- Profile Manufacturer & window manufacturer, installation of windows must be done through Manufacturing company, and then only Manufacturer warranty is acceptable)												
		38	X	1.800	X		X	1.350	= 92.340				
		2	X	7.000	X		X	1.350	= 18.900				
								Total	= 111.240	Sqm	8500.00	945540.00	
423	Providing and fixing seasoned sal wood work in frames at any locations including doors, windows, cupboard, clerestory and other frames fixing in position including cost of hinges, M.S. flat (30mm x 6mm) hold fasts lugs or dash fasteners of required dia and length as per drawing / specification, at all floors and all heights.												
		6	X	5.100	X	0.125	X	0.075	= 0.287				
								Total	= 0.287	Cum	100794.60	28915.45	
424	Providing, fitting and fixing of approved make 32mm thick (laminate finished thickness of the door) factory made flush doors of the followings size, outside finished with 1mm thk. laminate of approved colour & shade and inside of the Room finished with 4mm thick veneer with melamine polish of approved make, colour & shade fixed to the teak wood bidding, complete in all respect bidding/lipping as per drawing/design. The door will be provided with all necessary fittings & fixtures, i.e. hinges, door stopper, door buffer etc. of Godrej of equivalent approved make with all materials, labour, T&P, taxes etc. as per direction of Architect/Engineer-in-Charge at all floors and all heights.												
		6	X	0.900	X		X	2.100	= 11.340				
								Total	= 11.340	Sqm	10668.61	120982.04	
425	Providing and fixing M.S grill of required patterns for windows/verandahs etc. with M.S flats, square or round bars etc. including applying a coat of approved steel primer and two or more coats of synthetic enamel paint of approved make & shade, all complete as per drawing & specification. (All steel sections contractor's own supply).												
		38	X	1.800	X	27.000	X	1.350	= 2493.180				
		2	X	7.000	X	27.000	X	1.350	= 510.300				
								Total	= 3003.480	Kg.	68.73	206427.85	
426	Providing & Applying priming one coat with Cement primer of approved brand and manufacture on plaster surface as per the instruction of Engineer-In-Charge at all elevations including all material & labour complete.												
	External area	1	X	83.430	X	area			= 83.430				
	Internal area	1	X	83.430	X	area			= 83.430				
	Ceilling area	1	X	82.900	X	area			= 82.900				
								Total	= 249.760	Sqm	70.13	17515.61	
427	Providing and applying to outside walls with two or more coats of Anti-Fungal Weather coat water proofing paint including scaffolding and cleaning the surface before application of approved colour and manufacture as per specification, instruction of Engineer-In-charge at all elevations including all material labour complete.												
	External area	1	X	83.430	X	area			= 83.430				
								Total	= 83.430	Sqm	84.90	7083.30	
428	Preparing surface and painting at all height with two or more coats of interior Plastic Emulsion "Royale Shyne" of Asian Paints or equivalent of approved shade as per the instructions of the manufacturers; giving uniform shade etc in all heights of walls etc. including interior wall primer & providing scaffolding, cleaning, curing and supply of all materials and labour complete as per drawing, design and direction of Architect/Engineer-In-Charge.												
	Internal area	1	X	83.430	X	area			= 83.430				
	Ceilling area	1	X	82.900	X	area			= 82.900				
								Total	= 166.330	Sqm	95.60	15901.11	
429	Providing and applying white cement based putty of average thickness 1 mm of approved brand and manufacturer, over the plastered wall surfaces to prepare the surface even and smooth as per the instruction of Engineer-In-Charge at all elevations including all material & labour complete.												
	External area	1	X	83.430	X	area			= 83.430				
	Internal area	1	X	83.430	X	area			= 83.430				
	Ceilling area	1	X	82.900	X	area			= 82.900				
								Total	= 249.760	Sqm	72.39	18079.90	

ESTIMATE FOR THE WORK :- CONSTRUCTION OF 200 BEDDED HOSTEL (100 BOYS & 100 GIRLS) FOR BLIND STUDENTS AT, UNIT-III, BHUBANESWAR-BLOCK-B												
SECOND Floor												
Sl. No	Description of the work	Nos		Length In Mtr.		Width In Mtr.		Height In Mtr.		Quantity	Unit	Rate In Rs.
												Amount In Rs.
436	First class Fly ash Brick masonry using bricks of size 25cm. x 12 cm. x 8 cm. having crushing strength not less than 75 kg. Per. Sqr. Cm. in cement mortar of mix (1:6) with ordinary Portland slag cement(PSC) and screened & washed sand for mortar after immersing the bricks for 6 (Six) hours in water before use in Super structure including splays cutting, circular moulding, corbelling, chamfering and similar such type of works, watering and curing etc. including cost, conveyance, loading, unloading, royalties and taxes of all materials, cost of all labour, scaffolding, sundries, T&P required for the works etc. complete in all respect as directed by the Engineer-In-Charge.											
	X-AXIS	12	X	9.000	X	0.250	X	2.700	=	72.900		
		9	X	4.500	X	0.250	X	2.700	=	27.338		
		2	X	1.600	X	0.250	X	2.700	=	2.160		
	y-AXIS	4	X	32.500	X	0.250	X	2.700	=	87.750		
		3	X	4.350	X	0.250	X	2.700	=	8.809		
	Deduction :-	-20	X	0.900	X	0.250	X	2.100	=	-9.450		
		-20	X	1.800	X	0.250	X	1.350	=	-12.150		
		-1	X	7.000	X	0.250	X	1.350	=	-2.363		
								Total	=	174.994	Cum	6645.60
												1162938.47
437	First class Fly ash Brick masonry using bricks of size 23cm. x 12 cm. x 8 cm. having crushing strength not less than 75 kg. Per. Sqr. Cm. in cement mortar of mix (1:4) with ordinary Portland slag cement(PSC) and screened & washed sand for mortar after immersing the bricks for 6 (Six) hours in water before use in Super structure including splays cutting, circular moulding, corbelling, chamfering and similar such type of works, watering and curing etc. including cost, conveyance, loading, unloading, royalties and taxes of all materials, cost of all labour, scaffolding, sundries, T&P required for the works etc. complete in all respect as directed by the Engineer-In-Charge.											
		18	X	4.500	X	0.125	X	2.700	=	27.338		
								Total	=	27.338	Cum	6928.29
												189402.10
438	Providing, lifting, hoisting and laying Reinforced cement concrete of M-25 grade as per approved designs and drawings having a minimum compressive strength (in work test) 25 Kg. / Square cm. in 15 cm. cubes at 28 days after mixing and test conducted in accordance with I.S. 516 using 12 mm. to 20 mm. size black hard crushed broken granite stone chips and screened and washed sharp sand for mortar of approved quality from approved quarry, washed and cleaned (20mm. size chips not to exceeds 25 %) to be mixed in concrete mixture with Portland slag cement (PSC) including hoisting, lowering, laying and compaction concrete by using vibrators, watering and curing for 28 days, centering and shuttering then after dismantling and removing debris from the work site and finishing the exposed surface smooth providing grooves or beads wherever necessary including cost, conveyance, loading, unloading, royalties and taxes of all materials and cost of all labours, sundries, T & P required of the work etc. complete in all respect as directed by the Engineer-in-Charge. But excluding cost and conveyance of M.S. rods or Tor steel and binding wires and labour charges for straightening, cutting, bending etc. of M.S. rods or tor steel tying the grills and placing in proper position.											
	b) Columns.											
	Col up to Top Lvl.											
	C1	34	X	0.300	X	0.750	X	3.150	=	24.098		
	C2	0	X	0.000	X	0.000	X	3.150	=	0.000		
	Lift	4	X	3.000	X	0.250	X	3.150	=	9.450		
		4	X	2.300	X	0.250	X	3.150	=	7.245		
								Total	=	40.793	Cum	19665.59
												802208.41
	d) Lintel beam .											
		12	X	9.000	X	0.250	X	0.150	=	4.050		
		9	X	4.500	X	0.250	X	0.150	=	1.519		
		2	X	1.600	X	0.250	X	0.150	=	0.120		
		4	X	32.500	X	0.250	X	0.150	=	4.875		
		3	X	4.350	X	0.250	X	0.150	=	0.489		
		9	X	4.500	X	0.125	X	0.150	=	0.759		
								Total	=	11.813	Cum	18578.88
												219463.04
	e) Roof Beams.											
	X-AXIS	8	X	25.200	X	0.250	X	0.600	=	30.240		
		4	X	4.500	X	0.250	X	0.600	=	2.700		
		4	X	1.600	X	0.250	X	0.600	=	0.960		
	y-AXIS	8	X	32.500	X	0.250	X	0.600	=	39.000		
		2	X	13.150	X	0.250	X	0.600	=	3.945		
		4	X	6.000	X	0.250	X	0.600	=	3.600		
								Total	=	80.445	Cum	19665.59
												1581998.05
	f) RCC Slab .											
	Slab area	1	X	892.000	X	area	X	0.150	=	133.800		
								Total	=	133.800	Cum	17655.66
												2362326.70
	g) Staircase											
	Landing	2	X	1.500	X	2.850	X	0.150	=	1.283		
	Waste Slab	2	X	6.500	X	1.250	X	0.150	=	2.438		
	Beam	2	X	2.850	X	0.250	X	0.450	=	0.641		
	Steps	40	X	1.250	X	0.300	X	0.150	=	2.250		
								Total	=	6.611	Cum	19582.66
												129465.84
	TOTAL R.C.C QNTY.									273.461	Cum	

SECOND Floor				Length	Width	Height	Quantity	Unit	Rate	Amount
Sl. No	Description of the work	Nos		In Mtr.	In Mtr.	In Mtr.			In Rs.	In Rs.
439	Supplying, straightening, cutting, bending, placing in position and binding reinforcement steel work in RCC/reinforced brick works as per drawing and specification including preparation of respective bar bending schedule and binding (Binding wire to be used as per the IS code) etc. all complete as per direction of Engineer-in-charge Cold Twisted bars, Thermo-Mechanically-treated bars.									
						Kg/Cum				
	b) Column	1	x	40.793	x	176.000	=	7179.480		
	d) Lintel	1	x	11.813	x	123.000	=	1452.938		
	e) Roof beam	1	x	80.445	x	176.000	=	14158.320		
	f) Roof Slab	1	x	133.800	x	180.000	=	24084.000		
	g)Staircase	1	x	6.611	x	150.000	=	991.688		
						Total	=	47866.425	Kg	
						Total	=	478.664	Qntl.	9797.35
										4689643.17
440	12mm cement plaster on external RCC/brick surfaces in cement plaster 1:6 (1 cement : 6 coarse sand) including necessary scaffolding, curing etc. all complete at all floors and all heights.									
	External wall									
	X-AXIS	12	X	9.000	X	3.150	=	14.175		
		9	X	4.500	X	3.150	=	12.150		
		2	X	1.600	X	3.150	=	2.160		
	y-AXIS	4	X	32.500	X	3.150	=	43.875		
		3	X	4.350	X	3.150	=	17.753		
	Deduction :-	-10	X	0.900	X	2.100	=	4.050		
		-10	X	1.800	X	1.350	=	-0.945		
		-0.5	X	7.000	X	1.350	=	-2.363		
		18	X	4.500	X	3.150	=	-2.363		
						Total	=	88.493	Sqm	185.27
										16394.64
441	16mm cement plaster on internal smooth side of RCC/brick surfaces with cement mortar of mix 1:6 (1 cement : 6 fine sand) including necessary scaffolding, curing etc. all complete at all floors and all heights.									
	Internal wall									
	X-AXIS	12	X	9.000	X	3.000	=	14.175		
		9	X	4.500	X	3.000	=	12.150		
		2	X	1.600	X	3.000	=	2.160		
	y-AXIS	4	X	32.500	X	3.000	=	43.875		
		3	X	4.350	X	3.000	=	17.753		
	Deduction :-	-10	X	0.900	X	2.100	=	4.050		
		-10	X	1.800	X	1.350	=	-0.945		
		-0.5	X	7.000	X	1.350	=	-2.363		
		18	X	4.500	X	3.000	=	-2.363		
						Total	=	88.493	Sqm	253.60
										22441.79
442	6 mm cement plaster on RCC surfaces at ceiling/slab soffit and other locations with cement mortar of mix 1:4 (1 cement : 4 fine sand) including necessary scaffolding, curing etc. all complete at all floors and all heights.									
	Slab area	1	X	892.000	X	area	=	892.000		
						Total	=	82.900	Sqm	192.68
										15972.76
443	Providing and fixing 20mm thick Granite stone flooring (sample of Granite stone should be approved by Engineer-In-Charge) for stair case trade, riser and similar locations where ever required in horizontal/vertical surfaces of required size of approved shade, colour and texture, with moulding edge & approved groove pattern etc. laid over 20mm thick bed of cement mortar 1:4 (1 cement: 4 coarse sand) with joints treated with white cement mixed with matching pigment, epoxy touch ups including rubbing, curing, moulding and polishing to give high gloss finish etc. complete as per direction of Engineer-in-charge. In all floors and all heights.									
	Lift Front	2	X	2.500	X	3.000	=	15.000		
	Tread	38	X	1.250	X	0.300	=	14.250		
		42	X	1.250	X	0.150	=	7.875		
	wash	4	X	10.000	X	0.750	=	30.000		
						Total	=	67.125	Sqm	2869.80
										192635.33
444	Providing and laying Vitrified floor tiles 600x600 mm (thickness to be specified by the manufacturer) 1st quality conforming to IS: 15622 of NITCO, SOMANY, ASIAN, KAJARIA or equivalent approved make, colours & shades, except white, ivory, grey, fume red brown, laid on 20 mm thick cement mortar 1:4 (1cement: 4coarse sand) including pointing the joints with white cement and matching pigments, etc. complete as per direction of EIC at all floors and all heights.									
	Room	10	X	4.300	X	4.880	=	209.840		
	Corridor	2	X	29.000	X	1.500	=	87.000		
	rOOM	1	X	138.000	X	1.000	=	138.000		
						Total	=	434.840	Sqm	1625.28
										706737.79
445	Providing and laying Vitrified skirting tiles 600x600 mm (thickness to be specified by the manufacturer) 1st quality conforming to IS: 15622 of NITCO, SOMANY, ASIAN, KAJARIA or equivalent approved make, colours & shades, except white, ivory, grey, fume red brown, laid on 12 mm thick cement mortar 1:3 (1cement: 3coarse sand) including pointing the joints with white cement and matching pigments, etc. complete as per direction of EIC at all floors and all heights.									
	Room	10	X	18.360	X	0.150	=	27.540		
	Corridor	1	X	61.000	X	0.150	=	9.150		
		1	X	63.000	X	0.150	=	9.450		
						Total	=	46.140	Sqm	1302.34
										60090.08
446	Providing and laying Matte Finish Vitrified floor tiles 300x300/450x450 mm (thickness to be specified by the manufacturer) 1st quality conforming to IS: 15622 of NITCO, SOMANY, ASIAN, KAJARIA or equivalent approved make, colours & shades, except white, ivory, grey, fume red brown, laid on 20 mm thick cement mortar 1:4 (1cement:4coarse sand) including pointing the joints with white cement and matching pigments, etc. complete as per direction of Engineer-In-Charge at all floors and all heights.									
	Toilet	2	X	4.500	X	13.500	=	121.500		

SECOND Floor				Length		Width		Height		Quantity	Unit	Rate In Rs.	Amount In Rs.
Sl. No	Description of the work	Nos		In Mtr.		In Mtr.		In Mtr.					
								Total	=	11.292	Sqm	1375.33	15529.95
447	Providing and fixing 1st quality Ceramic glazed wall tiles conforming to IS : 15622 (thickness to be specified by the manufacturer) minimum thickness 5mm of NITCO, SOMANY, ASIAN, KAJARIA or equivalent approved make in all colours, shades except burgundy, bottle green, black of size 300x600 in skirting and dados over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3 kg per sqm including pointing in white cement mixed with pigment of matching shade complete as per direction of Engineer-In-Charge. In all floors and all heights.												
	Room	40	X	13.480	X	1.500	X		=	808.800			
	Corridor	2	X	65.000	X	1.500	X		=	195.000			
		1	X	63.000	X	1.500	X		=	94.500			
	Toilet	4	X	4.500	X	2.100	X		=	37.800			
	E.Room	4	X	13.500	X	2.100	X		=	113.400			
								Total	=	1249.500	Sqm	1050.07	1312058.13
448	Providing and fixing of factory made Fenesta or equivalent UPVC sliding Window/Ventilator (colour or approved) complete with U value=1.9-1.3 W/m 2k, flame resistance, self extinguishing, lead free comprising UPVC multi chambered frame having in built UPVC roller track on top and UPVC sash with wall thickness of 2.3mm duly reinforced with G.I section 2.6 mm where ever required. All corners of frame and sash will be fusion welded. After placing 12.5mm laminate glass (6mm clear toughened +1.5 pvg laminate+5mm clear glass) Annealed glass in the sash, with support of hurricane bar for high wind support. uPVC glazing bead, interlock, EPDM gasket brush shall be provided including multi lock and rollers & proper drainage system shall be provided. window frame will be fixed to the wall with 100mm long and 8mm dia. Fasteners and after fixing the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of required size, of approved quality complete in all respect as per approved drawing & direction of the Engineer -In-Charge. Note:- Profile Manufacturer & window manufacturer, installation of windows must be done through Manufacturing company, and then only Manufacturer warranty is acceptable)												
		38	X	1.800	X		X	1.350	=	92.340			
		2	X	7.000	X		X	1.350	=	18.900			
								Total	=	111.240	Sqm	8500.00	945540.00
449	Providing and fixing seasoned sal wood work in frames at any locations including doors, windows, cupboard, clerestory and other frames fixing in position including cost of hinges, M.S. flat (30mm x 6mm) hold fasts lugs or dash fasteners of required dia and length as per drawing / specification, at all floors and all heights.												
		12	X	5.100	X	0.125	X	0.075	=	0.574			
								Total	=	0.574	Cum	100794.60	57830.90
450	Providing, fitting and fixing of approved make 32mm thick (laminate finished thickness of the door) factory made flush doors of the followings size, outside finished with 1mm thk. laminate of approved colour & shade and inside of the Room finished with 4mm thick veneer with melamine polish of approved make, colour & shade fixed to the teak wood bidding, complete in all respect bidding/lipping as per drawing/design. The door will be provided with all necessary fittings & fixtures, i.e. hinges, door stopper, door buffer etc. of Godrej of equivalent approved make with all materials, labour, T&P, taxes etc. as per direction of Architect/Engineer-in-Charge at all floors and all heights.												
		12	X	0.900	X		X	2.100	=	22.680			
								Total	=	22.680	Sqm	10668.61	241964.07
451	Providing and fixing M.S grill of required patterns for windows/verandahs etc. with M.S flats, square or round bars etc. including applying a coat of approved steel primer and two or more coats of synthetic enamel paint of approved make & shade, all complete as per drawing & specification. (All steel sections contractor's own supply).												
		38	X	1.800	X	27.000	X	1.350	=	2493.180			
		2	X	7.000	X	27.000	X	1.350	=	510.300			
								Total	=	3003.480	Kg.	68.73	206427.85
452	Providing & Applying priming one coat with Cement primer of approved brand and manufacture on plaster surface as per the instruction of Engineer-In-Charge at all elevations including all material & labour complete.												
	External area	1	X	88.493	X	area			=	88.493			
	Internal area	1	X	88.493	X	area			=	88.493			
	Ceiling area	1	X	82.900	X	area			=	82.900			
								Total	=	259.885	Sqm	71.78	18653.93
453	Providing and applying to outside walls with two or more coats of Anti-Fungal Weather coat water proofing paint including scaffolding and cleaning the surface before application of approved colour and manufacture as per specification, instruction of Engineer-In-charge at all elevations including all material labour complete.												
	External area	1	X	88.493	X	area			=	88.493			
								Total	=	88.493	Sqm	87.93	7780.95
454	Preparing surface and painting at all height with two or more coats of interior Plastic Emulsion "Royale Shyne" of Asian Paints or equivalent of approved shade as per the instructions of the manufacturers; giving uniform shade etc in all heights of walls etc. including interior wall primer & providing scaffolding, cleaning, curing and supply of all materials and labour complete as per drawing, design and direction of Architect/Engineer-In-Charge.												
	Internal area	1	X	88.493	X	area			=	88.493			
	Ceiling area	1	X	82.900	X	area			=	82.900			
								Total	=	171.392	Sqm	97.38	16690.41
455	Providing and applying white cement based putty of average thickness 1 mm of approved brand and manufacturer, over the plastered wall surfaces to prepare the surface even and smooth as per the instruction of Engineer-In-Charge at all elevations including all material & labour complete.												
	External area	1	X	88.493	X	area			=	88.493			
	Internal area	1	X	88.493	X	area			=	88.493			
	Ceiling area	1	X	82.900	X	area			=	82.900			
								Total	=	259.885	Sqm	73.90	19206.12

ESTIMATE FOR THE WORK :- CONSTRUCTION OF 200 BEDDED HOSTEL (100 BOYS & 100 GIRLS) FOR BLIND STUDENTS AT, UNIT-III, BHUBANESWAR-BLOCK-B													
	THIRD Floor			Length		Width		Height				Rate	Amount
Sl. No	Description of the work	Nos		In Mtr.		In Mtr.		In Mtr.		Quantity	Unit	In Rs.	In Rs.
462	First class Fly ash Brick masonry using bricks of size 25cm. x 12 cm. x 8 cm. having crushing strength not less than 75 kg. Per. Sqr. Cm. in cement mortar of mix (1:6) with ordinary Portland slag cement(PSC) and screened & washed sand for mortar after immersing the bricks for 6 (Six) hours in water before use in Super structure including splays cutting, circular moulding, corbelling, chamfering and similar such type of works, watering and curing etc. including cost, conveyance, loading, unloading, royalties and taxes of all materials, cost of all labour, scaffolding, sundries, T&P required for the works etc. complete in all respect as directed by the Engineer-In-Charge.												
	X-AXIS	20	X	9.000	X	0.250	X	2.700	=	121.500			
		9	X	4.500	X	0.250	X	2.700	=	27.338			
		4	X	1.600	X	0.250	X	2.700	=	4.320			
	y-AXIS	4	X	32.500	X	0.250	X	2.700	=	87.750			
		3	X	4.350	X	0.250	X	2.700	=	8.809			
	Deduction :-	-20	X	0.900	X	0.250	X	2.100	=	-9.450			
		-20	X	1.800	X	0.250	X	1.350	=	-12.150			
		-1	X	7.000	X	0.250	X	1.350	=	-2.363			
								Total	=	225.754	Cum	7033.10	1587748.70
463	First class Fly ash Brick masonry using bricks of size 23cm. x 12 cm. x 8 cm. having crushing strength not less than 75 kg. Per. Sqr. Cm. in cement mortar of mix (1:4) with ordinary Portland slag cement(PSC) and screened & washed sand for mortar after immersing the bricks for 6 (Six) hours in water before use in Super structure including splays cutting, circular moulding, chamfering, and similar such type of works, watering and curing etc. including cost, conveyance, loading, unloading, royalties and taxes of all materials, cost of all labour, scaffolding, sundries, T&P required for the works etc. complete in all respect as directed by the Engineer-In-Charge.												
		16	X	4.500	X	0.125	X	2.700	=	24.300			
								Total	=	24.300	Cum	7315.78	177773.41
464	Providing, lifting, hoisting and laying Reinforced cement concrete of M-25 grade as per approved designs and drawings having a minimum compressive strength (in work test) 25 Kg. / Square cm. in 15 cm. cubes at 28 days after mixing and test conducted in accordance with I.S. 516 using 12 mm. to 20 mm. size black hard crushed broken granite stone chips and screened and washed sharp sand for mortar of approved quality from approved quarry, washed and cleaned (20mm. size chips not to exceeds 25 %) to be mixed in concrete mixture with Portland slag cement (PSC) including hoisting, lowering, laying and compaction concrete by using vibrators, watering and curing for 28 days, centering and shuttering then after dismantling and removing debris from the work site and finishing the exposed surface smooth providing grooves or beads wherever necessary including cost, conveyance, loading, unloading, royalties and taxes of all materials and cost of all labours, sundries, T & P required of the work etc. complete in all respect as directed by the Engineer-in-Charge. But excluding cost and conveyance of M.S. rods or Tor steel and binding wires and labour charges for straightening, cutting, bending etc. of M.S. rods or tor steel tying the grills and placing in proper position.												
	b) Columns.												
	Col up to Top Lvl.												
	C1	34	X	0.300	X	0.750	X	3.150	=	24.098			
	C2	0	X	0.300	X	0.000	X	3.150	=	0.000			
	Lift	4	X	3.000	X	0.250	X	3.150	=	9.450			
		4	X	2.300	X	0.250	X	3.150	=	7.245			
								Total	=	40.793	Cum	22150.69	903581.97
	d) Lintel beam .												
		20	X	10.500	X	0.250	X	0.150	=	7.875			
		9	X	4.500	X	0.250	X	0.150	=	1.519			
		4	X	1.600	X	0.250	X	0.150	=	0.240			
		4	X	32.500	X	0.250	X	0.150	=	4.875			
		3	X	4.350	X	0.250	X	0.150	=	0.489			
		16	X	4.500	X	0.125	X	0.150	=	1.350			
								Total	=	16.348	Cum	20846.65	340803.59
	e) Roof Beams.												
	X-AXIS	8	X	25.200	X	0.250	X	0.600	=	30.240			
		4	X	4.500	X	0.250	X	0.600	=	2.700			
		4	X	1.600	X	0.250	X	0.600	=	0.960			
	y-AXIS	8	X	32.500	X	0.250	X	0.600	=	39.000			
		2	X	13.150	X	0.250	X	0.600	=	3.945			
		4	X	6.000	X	0.250	X	0.600	=	3.600			
								Total	=	80.445	Cum	22150.69	1781912.16
	f) RCC Slab .												
	Slab area	1	X	892.000	X	area	X	0.150	=	133.800			
								Total	=	133.800	Cum	19738.77	2641047.74
	g) Staircase												
	Landing	2	X	1.500	X	2.850	X	0.150	=	1.283			
	Waste Slab	2	X	6.500	X	1.250	X	0.150	=	2.438			
	Beam	2	X	2.850	X	0.250	X	0.450	=	0.641			
	Steps	40	X	1.250	X	0.300	X	0.150	=	2.250			
								Total	=	6.611	Cum	22051.17	145785.82
	TOTAL R.C.C QNTY.									277.997	Cum		
465	Supplying, straightening, cutting, bending, placing in position and binding reinforcement steel work in RCC/reinforced brick works as per drawing and specification including preparation of respective bar bending schedule and binding (Binding wire to be used as per the IS code) etc. all complete as per direction of Engineer-in-charge Cold Twisted bars, Thermo-Mechanically-treated bars.												
						Kg/Cum							
	b) Column	1	x	40.793	x	176.000			=	7179.480			

THIRD Floor				Length		Width		Height		Quantity	Unit	Rate In Rs.	Amount In Rs.
Sl. No	Description of the work	Nos		In Mtr.		In Mtr.		In Mtr.					
	d) Lintel	1	x	16.348	x	123.000			=	2010.819			
	e) Roof beam	1	x	80.445	x	176.000			=	14158.320			
	f) Roof Slab	1	x	133.800	x	180.000			=	24084.000			
	g) Staircase	1	x	6.611	x	150.000			=	991.688			
								Total	=	48424.307	Kg		
								Total	=	484.243	Qntl.	9826.13	4758235.96
466	12mm cement plaster on external RCC/brick surfaces in cement plaster 1:6 (1 cement : 6 coarse sand) including necessary scaffolding, curing etc. all complete at all floors and all heights.												
	External wall												
	X-AXIS	20	X	10.500	X		X	3.150	=	14.175			
		9	X	4.500	X		X	3.150	=	12.150			
		4	X	1.600	X		X	3.150	=	2.160			
	y-AXIS	4	X	32.500	X		X	3.150	=	43.875			
		3	X	4.350	X		X	3.150	=	17.753			
	Deduction :-	-10	X	0.900	X		X	2.100	=	4.050			
		-10	X	1.800	X		X	1.350	=	-0.945			
		-0.5	X	7.000	X		X	1.350	=	-2.363			
		9	X	4.500	X		X	3.150	=	-2.363			
								Total	=	88.493	Sqm	191.93	16984.58
467	16mm cement plaster on internal smooth side of RCC/brick surfaces with cement mortar of mix 1:6 (1 cement : 6 fine sand) including necessary scaffolding, curing etc. all complete at all floors and all heights.												
	Internal wall												
	X-AXIS	20	X	10.500	X		X	3.000	=	14.175			
		9	X	4.500	X		X	3.000	=	12.150			
		4	X	1.600	X		X	3.000	=	2.160			
	y-AXIS	4	X	32.500	X		X	3.000	=	43.875			
		3	X	4.350	X		X	3.000	=	17.753			
	Deduction :-	-10	X	0.900	X		X	2.100	=	4.050			
		-10	X	1.800	X		X	1.350	=	-0.945			
		-0.5	X	7.000	X		X	1.350	=	-2.363			
		9	X	4.500	X		X	3.000	=	-2.363			
								Total	=	88.493	Sqm	259.34	22949.50
468	6 mm cement plaster on RCC surfaces at ceiling/slab soffit and other locations with cement mortar of mix 1:4 (1 cement : 4 fine sand) including necessary scaffolding, curing etc. all complete at all floors and all heights.												
	Slab area	1	X	892.000	X	area	X		=	892.000			
								Total	=	82.900	Sqm	197.18	16345.78
469	Providing and fixing 20mm thick Granite stone flooring (sample of Granite stone should be approved by Engineer-In-Charge) for stair case trade, riser and similar locations where ever required in horizontal/vertical surfaces of required size of approved shade, colour and texture, with moulding edge & approved groove pattern etc. laid over 20mm thick bed of cement mortar 1:4 (1 cement: 4 coarse sand) with joints treated with white cement mixed with matching pigment, epoxy touch ups including rubbing, curing, moulding and polishing to give high gloss finish etc. complete as per direction of Engineer-in-charge. In all floors and all heights.												
	Lift Front	2	X	2.500	X	3.000	X		=	15.000			
	Tread	38	X	1.250	X	0.300	X		=	14.250			
		42	X	1.250	X	0.150	X		=	7.875			
	wash	4	X	10.000	X	0.750	X		=	30.000			
								Total	=	67.125	Sqm	2881.50	193420.69
470	Providing and laying Vitrified floor tiles 600x600 mm (thickness to be specified by the manufacturer) 1st quality conforming to IS: 15622 of NITCO, SOMANY, ASIAN, KAJARIA or equivalent approved make, colours & shades, except white, ivory, grey, fume red brown, laid on 20 mm thick cement mortar 1:4 (1cement: 4coarse sand) including pointing the joints with white cement and matching pigments, etc. complete as per direction of EIC at all floors and all heights.												
	Room	20	X	4.300	X	4.880	X		=	419.680			
	Corridor	2	X	35.000	X	1.500	X		=	105.000			
		1	X	10.000	X	1.500	X		=	15.000			
								Total	=	539.680	Sqm	1387.14	748610.84
471	Providing and laying Vitrified skirting tiles 600x600 mm (thickness to be specified by the manufacturer) 1st quality conforming to IS: 15622 of NITCO, SOMANY, ASIAN, KAJARIA or equivalent approved make, colours & shades, except white, ivory, grey, fume red brown, laid on 12 mm thick cement mortar 1:3 (1cement: 3coarse sand) including pointing the joints with white cement and matching pigments, etc. complete as per direction of EIC at all floors and all heights.												
	Room	20	X	18.360	X	0.150	X		=	55.080			
	Corridor	2	X	35.000	X	0.150	X		=	10.500			
		1	X	23.000	X	0.150	X		=	3.450			
								Total	=	69.030	Sqm	1320.11	91127.43
472	Providing and laying Matte Finish Vitrified floor tiles 300x300/450x450 mm (thickness to be specified by the manufacturer) 1st quality conforming to IS: 15622 of NITCO, SOMANY, ASIAN, KAJARIA or equivalent approved make, colours & shades, except white, ivory, grey, fume red brown, laid on 20 mm thick cement mortar 1:4 (1cement:4coarse sand) including pointing the joints with white cement and matching pigments, etc. complete as per direction of Engineer-In-Charge at all floors and all heights.												
	Toilet	2	X	4.500	X	13.500	X		=	121.500			
								Total	=	11.292	Sqm	1387.14	15663.32

	THIRD Floor			Length		Width		Height				Rate	Amount
Sl. No	Description of the work	Nos		In Mtr.		In Mtr.		In Mtr.		Quantity	Unit	In Rs.	In Rs.
		19	X	1.800	X	0.500	X	1.350	=	23.085			

ESTIMATE FOR THE WORK :- CONSTRUCTION OF 200 BEDDED HOSTEL (100 BOYS & 100 GIRLS) FOR BLIND STUDENTS AT, UNIT-III, BHUBANESWAR-BLOCK-B												
FORTH Floor			Length		Width		Height		Rate		Amount	
Sl. No	Description of the work	Nos	In Mtr.	In Mtr.	In Mtr.	In Mtr.	Quantity	Unit	In Rs.		In Rs.	
498	First class Fly ash Brick masonry using bricks of size 25cm. x 12 cm. x 8 cm. having crushing strength not less than 75 kg. Per. Sqr. Cm. in cement mortar of mix (1:6) with ordinary Portland slag cement(PSC) and screened & washed sand for mortar after immersing the bricks for 6 (Six) hours in water before use in Super structure including splays cutting, circular moulding, corbelling, chamfering and similar such type of works, watering and curing etc. including cost, conveyance, loading, unloading, royalties and taxes of all materials, cost of all labour, scaffolding, sundries, T&P required for the works etc. complete in all respect as directed by the Engineer-In-Charge.											
	X-AXIS	20	X	9.000	X	0.250	X	2.700	=	121.500		
		9	X	4.500	X	0.250	X	2.700	=	27.338		
		4	X	1.600	X	0.250	X	2.700	=	4.320		
	y-AXIS	4	X	32.500	X	0.250	X	2.700	=	87.750		
		3	X	4.350	X	0.250	X	2.700	=	8.809		
	Deduction :-	-20	X	0.900	X	0.250	X	2.100	=	-9.450		
		-20	X	1.800	X	0.250	X	1.350	=	-12.150		
		-1	X	7.000	X	0.250	X	1.350	=	-2.363		
								Total	=	225.754	Cum	7478.70
												1688344.57
499	First class Fly ash Brick masonry using bricks of size 23cm. x 12 cm. x 8 cm. having crushing strength not less than 75 kg. Per. Sqr. Cm. in cement mortar of mix (1:4) with ordinary Portland slag cement(PSC) and screened & washed sand for mortar after immersing the bricks for 6 (Six) hours in water before use in Super structure including splays cutting, circular moulding, corbelling, chamfering and similar such type of works, watering and curing etc. including cost, conveyance, loading, unloading, royalties and taxes of all materials, cost of all labour, scaffolding, sundries, T&P required for the works etc. complete in all respect as directed by the Engineer-In-Charge.											
		16	X	4.500	X	0.125	X	2.700	=	24.300		
								Total	=	24.300	Cum	7761.39
												188601.80
500	Providing, lifting, hoisting and laying Reinforced cement concrete of M-25 grade as per approved designs and drawings having a minimum compressive strength (in work test) 25 Kg. / Square cm. in 15 cm. cubes at 28 days after mixing and test conducted in accordance with I.S. 516 using 12 mm. to 20 mm. size black hard crushed broken granite stone chips and screened and washed sharp sand for mortar of approved quality from approved quarry, washed and cleaned (20mm. size chips not to exceeds 25 %) to be mixed in concrete mixture with Portland slag cement (PSC) including hoisting, lowering, laying and compaction concrete by using vibrators, watering and curing for 28 days, centering and shuttering then after dismantling and removing debris from the work site and finishing the exposed surface smooth providing grooves or beads wherever necessary including cost, conveyance, loading, unloading, royalties and taxes of all materials and cost of all labours, sundries, T & P required of the work etc. complete in all respect as directed by the Engineer-in-Charge. But excluding cost and conveyance of M.S. rods or Tor steel and binding wires and labour charges for straightening, cutting, bending etc. of M.S. rods or tor steel tying the grills and placing in proper position.											
	b) Columns.											
	Col up to Top Lvl.											
	C1	34	X	0.300	X	0.750	X	3.150	=	24.098		
	C2	0	X	0.300	X	0.000	X	3.150	=	0.000		
	Lift	4	X	3.000	X	0.250	X	3.150	=	9.450		
		4	X	2.300	X	0.250	X	3.150	=	7.245		
								Total	=	40.793	Cum	25124.91
												1024907.93
	d) Lintel beam .											
		20	X	10.500	X	0.250	X	0.150	=	7.875		
		9	X	4.500	X	0.250	X	0.150	=	1.519		
		4	X	1.600	X	0.250	X	0.150	=	0.240		
		4	X	32.500	X	0.250	X	0.150	=	4.875		
		3	X	4.350	X	0.250	X	0.150	=	0.489		
		16	X	4.500	X	0.125	X	0.150	=	1.350		
								Total	=	16.348	Cum	23560.38
												385168.10
	e) Roof Beams.											
	X-AXIS	8	X	25.200	X	0.250	X	0.600	=	30.240		
		4	X	4.500	X	0.250	X	0.600	=	2.700		
		4	X	1.600	X	0.250	X	0.600	=	0.960		
	y-AXIS	8	X	32.500	X	0.250	X	0.600	=	39.000		
		2	X	13.150	X	0.250	X	0.600	=	3.945		
		4	X	6.000	X	0.250	X	0.600	=	3.600		
								Total	=	80.445	Cum	25124.91
												2021173.47
	f) RCC Slab .											
	Slab area	1	X	892.000	X	area	X	0.150	=	133.800		
								Total	=	133.800	Cum	22230.93
												2974498.60
	g) Staircase											
	Landing	2	X	1.500	X	2.850	X	0.150	=	1.283		
	Waste Slab	2	X	6.500	X	1.250	X	0.150	=	2.438		
	Beam	2	X	2.850	X	0.250	X	0.450	=	0.641		
	Steps	40	X	1.250	X	0.300	X	0.150	=	2.250		
								Total	=	6.611	Cum	25005.81
												165319.68
	TOTAL R.C.C QNTY.									277.997	Cum	

FORTH Floor				Length		Width		Height		Rate		Amount	
Sl. No	Description of the work	Nos		In Mtr.		In Mtr.		In Mtr.		Quantity	Unit	In Rs.	In Rs.
501	Supplying, straightening, cutting, bending, placing in position and binding reinforcement steel work in RCC/reinforced brick works as per drawing and specification including preparation of respective bar bending schedule and binding (Binding wire to be used as per the IS code) etc. all complete as per direction of Engineer-in-charge Cold Twisted bars, Thermo-Mechanically-treated bars.												
						Kg/Cum							
	b) Column	1	x	40.793	x	176.000		=	7179.480				
	d) Lintel	1	x	16.348	x	123.000		=	2010.819				
	e) Roof beam	1	x	80.445	x	176.000		=	14158.320				
	f) Roof Slab	1	x	133.800	x	180.000		=	24084.000				
	g)Staircase	1	x	6.611	x	150.000		=	991.688				
							Total	=	48424.307	Kg			
							Total	=	484.243	Qntl.	9856.35		4772867.83
502	12mm cement plaster on external RCC/brick surfaces in cement plaster 1:6 (1 cement : 6 coarse sand) including necessary scaffolding, curing etc. all complete at all floors and all heights.												
	External wall												
	X-AXIS	20	X	10.500	X		X	3.150	=	14.175			
		9	X	4.500	X		X	3.150	=	12.150			
		4	X	1.600	X		X	3.150	=	2.160			
	y-AXIS	4	X	32.500	X		X	3.150	=	43.875			
		3	X	4.350	X		X	3.150	=	17.753			
	Deduction :-	-10	X	0.900	X		X	2.100	=	4.050			
		-10	X	1.800	X		X	1.350	=	-0.945			
		-0.5	X	7.000	X		X	1.350	=	-2.363			
		9	X	4.500	X		X	3.150	=	-2.363			
							Total	=	88.493	Sqm	198.93		17604.02
503	16mm cement plaster on internal smooth side of RCC/brick surfaces with cement mortar of mix 1:6 (1 cement : 6 fine sand) including necessary scaffolding, curing etc. all complete at all floors and all heights.												
	Internal wall												
	X-AXIS	20	X	10.500	X		X	3.000	=	14.175			
		9	X	4.500	X		X	3.000	=	12.150			
		4	X	1.600	X		X	3.000	=	2.160			
	y-AXIS	4	X	32.500	X		X	3.000	=	43.875			
		3	X	4.350	X		X	3.000	=	17.753			
	Deduction :-	-10	X	0.900	X		X	2.100	=	4.050			
		-10	X	1.800	X		X	1.350	=	-0.945			
		-0.5	X	7.000	X		X	1.350	=	-2.363			
		9	X	4.500	X		X	3.000	=	-2.363			
							Total	=	88.493	Sqm	265.25		23472.43
504	6 mm cement plaster on RCC surfaces at ceiling/slab soffit and other locations with cement mortar of mix 1:4 (1 cement : 4 fine sand) including necessary scaffolding, curing etc. all complete at all floors and all heights.												
	Slab area	1	X	892.000	X	area	X		=	892.000			
							Total	=	82.900	Sqm	201.81		16729.98
505	Providing and fixing 20mm thick Granite stone flooring (sample of Granite stone should be approved by Engineer-In-Charge) for stair case trade, riser and similar locations where ever required in horizontal/vertical surfaces of required size of approved shade, colour and texture, with moulding edge & approved groove pattern etc. laid over 20mm thick bed of cement mortar 1:4 (1 cement: 4 coarse sand) with joints treated with white cement mixed with matching pigment, epoxy touch ups including rubbing, curing, moulding and polishing to give high gloss finish etc. complete as per direction of Engineer-in-charge. In all floors and all heights.												
	Lift Front	2	X	2.500	X	3.000	X		=	15.000			
	Tread	38	X	1.250	X	0.300	X		=	14.250			
		42	X	1.250	X	0.150	X		=	7.875			
	wash	4	X	10.000	X	0.750	X		=	30.000			
							Total	=	67.125	Sqm	2893.80		194246.33
506	Providing and laying Vitrified floor tiles 600x600 mm (thickness to be specified by the manufacturer) 1st quality conforming to IS: 15622 of NITCO, SOMANY, ASIAN, KAJARIA or equivalent approved make, colours & shades, except white, ivory, grey, fume red brown, laid on 20 mm thick cement mortar 1:4 (1cement: 4coarse sand) including pointing the joints with white cement and matching pigments, etc. complete as per direction of EIC at all floors and all heights.												
	Room	20	X	4.300	X	4.880	X		=	419.680			
	Corridor	2	X	35.000	X	1.500	X		=	105.000			
		1	X	10.000	X	1.500	X		=	15.000			
							Total	=	539.680	Sqm	1399.54		755303.60
507	Providing and laying Vitrified skirting tiles 600x600 mm (thickness to be specified by the manufacturer) 1st quality conforming to IS: 15622 of NITCO, SOMANY, ASIAN, KAJARIA or equivalent approved make, colours & shades, except white, ivory, grey, fume red brown, laid on 12 mm thick cement mortar 1:3 (1cement: 3coarse sand) including pointing the joints with white cement and matching pigments, etc. complete as per direction of EIC at all floors and all heights.												
	Room	20	X	18.360	X	0.150	X		=	55.080			
	Corridor	2	X	35.000	X	0.150	X		=	10.500			
		1	X	23.000	X	0.150	X		=	3.450			
							Total	=	69.030	Sqm	1338.77		92415.49
508	Providing and laying Matte Finish Vitrified floor tiles 300x300/450x450 mm (thickness to be specified by the manufacturer) 1st quality conforming to IS: 15622 of NITCO, SOMANY, ASIAN, KAJARIA or equivalent approved make, colours & shades, except white, ivory, grey, fume red brown, laid on 20 mm thick cement mortar 1:4 (1cement:4coarse sand) including pointing the joints with white cement and matching pigments, etc. complete as per direction of Engineer-In-Charge at all floors and all heights.												
	Toilet	2	X	4.500	X	13.500	X		=	121.500			

FORTH Floor				Length		Width		Height		Quantity	Unit	Rate In Rs.	Amount In Rs.
Sl. No	Description of the work	Nos		In Mtr.		In Mtr.		In Mtr.					
								Total	=	11.292	Sqm	1399.54	15803.35
509	Providing and fixing 1st quality Ceramic glazed wall tiles conforming to IS : 15622 (thickness to be specified by the manufacturer) minimum thickness 5mm of NITCO, SOMANY, ASIAN, KAJARIA or equivalent approved make in all colours, shades except burgundy, bottle green, black of size 300x600 in skirting and dados over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3 kg per sqm including pointing in white cement mixed with pigment of matching shade complete as per direction of Engineer-In-Charge. In all floors and all heights.												
	Room	40	X	13.480	X	1.500	X		=	808.800			
	Corridor	2	X	65.000	X	1.500	X		=	195.000			
		1	X	63.000	X	1.500	X		=	94.500			
	Toilet	4	X	4.500	X	2.100	X		=	37.800			
	E.Room	4	X	13.500	X	2.100	X		=	113.400			
								Total	=	1249.500	Sqm	1086.50	1357577.80
510	Providing and fixing of factory made Fenesta or equivalent UPVC sliding Window/Ventilator (colour or approved) complete with U value=1.9-1.3 W/m 2k, flame resistance, self extinguishing, lead free comprising UPVC multi chambered frame having in built UPVC roller track on top and UPVC sash with wall thickness of 2.3mm duly reinforced with G.I section 2.6 mm where ever required. All corners of frame and sash will be fusion welded. After placing 12.5mm laminate glass (6mm clear toughened +1.5 pvg laminate+5mm clear glass) Annealed glass in the sash, with support of hurricane bar for high wind support. uPVC glazing bead, interlock, EPDM gasket brush shall be provided including multi lock and rollers & proper drainage system shall be provided. window frame will be fixed to the wall with 100mm long and 8mm dia. Fasteners and after fixing the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of required size, of approved quality complete in all respect as per approved drawing & direction of the Engineer -In-Charge. Note:- Profile Manufacturer & window manufacturer, installation of windows must be done through Manufacturing company, and then only Manufacturer warranty is acceptable)												
		38	X	1.800	X		X	1.350	=	92.340			
		2	X	7.000	X		X	1.350	=	18.900			
								Total	=	111.240	Sqm	8500.00	945540.00
511	Providing and fixing seasoned sal wood work in frames at any locations including doors, windows, cupboard, clerestory and other frames fixing in position including cost of hinges, M.S. flat (30mm x 6mm) hold fasts lugs or dash fasteners of required dia and length as per drawing / specification, at all floors and all heights.												
		22	X	5.100	X	0.125	X	0.075	=	1.052			
								Total	=	1.052	Cum	100794.60	106023.32
512	Providing, fitting and fixing of approved make 32mm thick (laminated finished thickness of the door) factory made flush doors of the followings size, outside finished with 1mm thk. laminate of approved colour & shade and inside of the Room finished with 4mm thick veneer with melamine polish of approved make, colour & shade fixed to the teak wood bidding, complete in all respect bidding/lipping as per drawing/design. The door will be provided with all necessary fittings & fixtures, i.e. hinges, door stopper, door buffer etc. of Godrej of equivalent approved make with all materials, labour, T&P, taxes etc. as per direction of Architect/Engineer-in-Charge at all floors and all heights.												
		22	X	0.900	X		X	2.100	=	41.580			
								Total	=	41.580	Sqm	10668.61	443600.80
513	Providing and fixing M.S grill of required patterns for windows/verandahs etc. with M.S flats, square or round bars etc. including applying a coat of approved steel primer and two or more coats of synthetic enamel paint of approved make & shade, all complete as per drawing & specification. (All steel sections contractor's own supply).												
		38	X	1.800	X	27.000	X	1.350	=	2493.180			
		2	X	7.000	X	27.000	X	1.350	=	510.300			
								Total	=	3003.480	Kg.	68.73	206427.85
514	Providing & Applying priming one coat with Cement primer of approved brand and manufacture on plaster surface as per the instruction of Engineer-In-Charge at all elevations including all material & labour complete.												
	External area	1	X	88.493	X	area			=	88.493			
	Internal area	1	X	88.493	X	area			=	88.493			
	Ceiling area	1	X	82.900	X	area			=	82.900			
								Total	=	259.885	Sqm	75.22	19549.37
515	Providing and applying to outside walls with two or more coats of Anti-Fungal Weather coat water proofing paint including scaffolding and cleaning the surface before application of approved colour and manufacture as per specification, instruction of Engineer-In-charge at all elevations including all material labour complete.												
	External area	1	X	88.493	X	area			=	88.493			
								Total	=	88.493	Sqm	94.44	8357.49
516	Preparing surface and painting at all height with two or more coats of interior Plastic Emulsion "Royale Shyne" of Asian Paints or equivalent of approved shade as per the instructions of the manufacturers; giving uniform shade etc in all heights of walls etc. including interior wall primer & providing scaffolding, cleaning, curing and supply of all materials and labour complete as per drawing, design and direction of Architect/Engineer-In-Charge.												
	Internal area	1	X	88.493	X	area			=	88.493			
	Ceiling area	1	X	82.900	X	area			=	82.900			
								Total	=	171.392	Sqm	101.11	17328.82
517	Providing and applying white cement based putty of average thickness 1 mm of approved brand and manufacturer, over the plastered wall surfaces to prepare the surface even and smooth as per the instruction of Engineer-In-Charge at all elevations including all material & labour complete.												
	External area	1	X	88.493	X	area			=	88.493			
	Internal area	1	X	88.493	X	area			=	88.493			
	Ceiling area	1	X	82.900	X	area			=	82.900			
								Total	=	259.885	Sqm	77.07	20028.43

[illegible]

TERRACE Floor				Length		Width		Height		Quantity	Unit	Rate	Amount
Sl. No	Description of the work	Nos		In Mtr.		In Mtr.		In Mtr.				In Rs.	In Rs.
528	16mm cement plaster on internal smooth side of RCC/brick surfaces with cement mortar of mix 1:6 (1 cement : 6 fine sand) including necessary scaffolding, curing etc. all complete at all floors and all heights.												
	Internal wall												
		4	X	11.000	X		X	2.400	=	105.600			
		4	X	5.500	X		X	2.400	=	52.800			
		2	X	1.800	X		X	2.400	=	8.640			
		-2	X	1.200	X		X	2.100	=	-5.040			
	Parapet	1	X	120.000	X		X	1.200	=	144.000			
								Total	=	306.000	Sqm	271.33	83028.33
529	6 mm cement plaster on RCC surfaces at ceiling/slab soffit and other locations with cement mortar of mix 1:4 (1 cement : 4 fine sand) including necessary scaffolding, curing etc. all complete at all floors and all heights.												
	Slab area	2	X	11.500	X	5.500	X		=	126.500			
								Total	=	126.500	Sqm	206.58	26132.85
530	Providing and fixing of factory made Fenesta or equivalent UPVC sliding Window/Ventilator (colour or approved) complete with U value=1.9-1.3 W/m 2k, flame resistance, self extinguishing, lead free comprising UPVC multi chambered frame having in built UPVC roller track on top and UPVC sash with wall thickness of 2.3mm duly reinforced with G.I section 2.6 mm where ever required. All corners of frame and sash will be fusion welded. After placing 12.5mm laminate glass (6mm clear toughened +1.5 pvg laminate+5mm clear glass) Annealed glass in the sash, with support of hurricane bar for high wind support. uPVC glazing bead, interlock, EPDM gasket brush shall be provided including multi lock and rollers & proper drainage system shall be provided. window frame will be fixed to the wall with 100mm long and 8mm dia. Fasteners and after fixing the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of required size, of approved quality complete in all respect as per approved drawing & direction of the Engineer -In-Charge. Note:- Profile Manufacturer & window manufacturer, installation of windows must be done through Manufacturing company, and then only Manufacturer warranty is acceptable)												
	W2	2	X	1.800	X	1.350	X		=	4.860			
								Total	=	4.860	Sqm	8500.00	41310.00
531	Providing and fixing M.S grill of required patterns for windows/verandahs etc. with M.S flats, square or round bars etc. including applying a coat of approved steel primer and two or more coats of synthetic enamel paint of approved make & shade, all complete as per drawing & specification. (All steel sections contractor's own supply).												
	W2	2	X	1.800	X	27.000	X	1.350	=	131.220			
		4	X	1.200	X	30.000	X	2.100	=	302.400			
								Total	=	433.620	Kg.	68.73	29802.51
532	Providing & Applying priming one coat with Cement primer of approved brand and manufacture on plaster surface as per the instruction of Engineer-In-Charge at all elevations including all material & labour complete.												
	External area	1	X	306.000	X	area			=	306.000			
	Internal area	1	X	306.000	X	area			=	306.000			
	Ceiling area	1	X	126.500	X	area			=	126.500			
								Total	=	738.500	Sqm	77.02	56882.18
533	Providing and applying to outside walls with two or more coats of Anti-Fungal Weather coat water proofing paint including scaffolding and cleaning the surface before application of approved colour and manufacture as per specification, instruction of Engineer-In-charge at all elevations including all material labour complete.												
	External area	1	X	306.000	X	area			=	306.000			
								Total	=	306.000	Sqm	97.95	29971.69
534	Preparing surface and painting at all height with two or more coats of interior Plastic Emulsion "Royale Shyne" of Asian Paints or equivalent of approved shade as per the instructions of the manufacturers; giving uniform shade etc in all heights of walls etc. including interior wall primer & providing scaffolding, cleaning, curing and supply of all materials and labour complete as per drawing, design and direction of Architect/Engineer-In-Charge.												
	Internal area	1	X	306.000	X	area			=	306.000			
	Ceiling area	1	X	126.500	X	area			=	126.500			
								Total	=	432.500	Sqm	103.05	44570.40
535	Providing and applying white cement based putty of average thickness 1 mm of approved brand and manufacturer, over the plastered wall surfaces to prepare the surface even and smooth as per the instruction of Engineer-In-Charge at all elevations including all material & labour complete.												
	External area	1	X	306.000	X	area			=	306.000			
	Internal area	1	X	306.000	X	area			=	306.000			
	Ceiling area	1	X	126.500	X	area			=	126.500			
								Total	=	738.500	Sqm	78.72	58134.87
536	Providing & Painting with synthetic enamel paint of approved brand and manufacture to give an even shade as per the instruction of Engineer-In-Charge at all floors and all heights including all material & labour complete.												
		2	X	1.800	X	0.500	X	1.350	=	2.430			
		4	X	1.200	X	0.500	X	2.100	=	5.040			

**ESTIMATE FOR THE WORK :- CONSTRUCTION OF 200 BEDDED HOSTEL (100 BOYS & 100 GIRLS) FOR
BLIND STUDENTS AT, UNIT-III, BHUBANESWAR-BLOCK-B**

COMPOUND WALL					Length		Width		Height				Rate		Amount	
Sl. No	Description of the work	Nos		In Mtr.		In Mtr.		In Mtr.	Quantity	Unit	In Rs.		In Rs.			
	Total lenth of Boundary wall = 615mtr															
538	Earthwork in excavation in all types of soil for site leveling, foundation, pits, trenches and other civil works upto and including 1.5metre depth and stacking the soil upto a lead of 100 metre and including dewatering, removing slush, shoring and strutting (as required), complete as per specification and as directed by the Engineer-In-Charge.															
	Footing	43	x	1.200	x	1.200	x	1.200	=	74.057						
										74.057	Cum	232.30	17,203.474			
539	Supplying and filling sand in foundation and over areas including watering, ramming, consolidating and dressing, labours, tools, taxes etc. all complete as per the specification and direction of Engineer-In-charge.															
	Footing	43	x	1.200	x	1.200	x	0.150	=	9.257						
										9.257	Cum	1,439.58	13,326.375			
540	Providing and laying plain cement concrete 1:4:8 (1 cement : 4 sand : 8 stone agregate 40mm nominal size) as levelling course in foundation and plinth etc. including tempering, curring, shuttering etc. complete all depth and height.															
	Footing	43	x	1.200	x	1.200	x	0.150	=	9.257						
										9.257	Cum	6,011.89	55,652.925			
541	Providing, lifting, hoisting and laying Reinforced cement concrete of M-25 grade as per approved designs and drawings having a minimum compressive strength (in work test) 25 Kg. / Square cm. in 15 cm. cubes at 28 days after mixing and test conducted in accordance with I.S. 516 using 12 mm. to 20 mm. size black hard crushed broken granite stone chips and screened and washed sharp sand for mortar of approved quality from approved quarry, washed and cleaned (20mm. size chips not to exceeds 25 %) to be mixed in concrete mixture with Portland slag cement (PSC) including hoisting, lowering, laying and compaction concrete by using vibrators, watering and curing for 28 days, centering and shuttering then after dismantling and removing debris from the work site and finishing the exposed surface smooth providing grooves or beads wherever necessary including cost, conveyance, loading, unloading, royalties and taxes of all materials and cost of all labours, sundries, T & P required of the work etc. complete in all respect as directed by the Engineer-in-Charge. But excluding cost and conveyance of M.S. rods or Tor steel and binding wires and labour charges for															
i)	Footing	43	x	1.200	x	1.200	x	0.500	=	30.857						
										30.857	Cum	8,010.26	247,173.883			
ii)	Tie Beam	1	x	150.000	x	0.250	x	0.300	=	11.250						
	Tie beam over brick work.	1	x	150.000	x	0.250	x	0.150	=	5.625						
										16.875	Cum	8,835.00	149,090.657			
iii)	Column up to Top Lvl.	43	X	0.300	X	0.300	X	3.000	=	11.571						
										11.571	Cum	15,856.57	183,483.120			
542	Supplying, straightening, cutting, bending, placing in position and binding reinforcement steel work in RCC/reinforced brick works as per drawing and specification including preparation of respective bar bending schedule and binding (Binding wire to be used as per the IS code) etc. all complete as per direction of Engineer-in-charge Cold Twisted bars, Thermo-Mechanically-treated bars complete at all floors and all heights.															
i)	Footing			30.857	@	106.000	Kg/Cum	=	3270.857							
ii)	Tie Beam			16.875	@	150.000	Kg/Cum	=	2531.250							
iii)	Column			11.571	@	176.000	Kg/Cum	=	2036.571							
									7838.679	Kg						
									78.387	Qntl	9,743.85	763,788.743				
543	First class Fly ash Brick masonry using bricks of size 25cm. x 12 cm. x 8 cm. having crushing strength not less than 75 kg. Per. Sqr. Cm. in cement mortar of mix(1:6) with ordinary Portland slag cement(PSC) and screened & washed sand for mortar after immersing the bricks for 6 (Six) hours in water before use in Super structure including splays cutting, circular moulding, corbelling, chamfering and similar such type of works, watering and curing etc. including cost, conveyance, loading, unloading, royalties and taxes of all materials, cost of all labour, scaffolding, sundries, T&P required for the works etc. complete in all respect as directed by the															
		1	X	150.000	X	0.250	X	2.400	=	90.000						
	Column Deduction :-	-43	X	0.300	X	0.300	X	2.400	=	-9.257						
										80.743	Cum	6,015.72	485,726.421			
544	16mm cement plaster on external smooth side of RCC/brick surfaces with cement mortar of mix 1:6 (1 cement : 6 fine sand) including necessary scaffolding, curing etc. all complete at all floors and all heights as direction of the Engineer-In-Charge.															
		1	X	150.000	X		X	2.850	=	427.500						
									=	427.500	Sqm	242.62	103,721.286			
545	12mm cement plaster on internal smooth side of RCC/brick surfaces with cement mortar of mix 1:6 (1 cement : 6 fine sand) including necessary scaffolding, curing etc. all complete at all floors and all heights as direction of the Engineer-In-Charge.															
		1	X	150.000	X		X	2.850	=	427.500						

Sl. No	COMPOUND WALL	Nos		Length		Width		Height		Quantity	Unit	Rate	Amount
	Description of the work			In Mtr.		In Mtr.		In Mtr.				In Rs.	In Rs.
										427.500	Sqm	172.87	73,901.925
546	Providing and fixing M.S grill of required patterns for windows/verandahs etc. with M.S flats, square or round bars etc. including applying a coat of approved steel primer paint of approved make & shade, all complete as per drawing & specification. (All steel sections contractor's own supply) at all floors and all heights.												
		1	X	150.000	X	27.000	X	0.600	=	2430.000			
									=	2430.000	Kg.	68.73	167,012.820
547	Providing and applying to outside walls with one coat wall Primer, two or more coats of Anti-Fungal Weather coat water proofing paint make & shade manufactured by reputed manufacturer like NEROLAC / ASIAN / BERGER / DULOX or equivalent including scaffolding and cleaning the surface before application of approved colour and manufacture as per specification, instruction of Engineer-In-charge at all elevations including all material labour complete at all floors and all heights.												
		1	x	427.500	x	area			=	427.500			
		1	x	427.500	x	area			=	427.500			
									=	855.000	Sqm	150.55	128,718.94
548	Providing & Painting with 2 coats with any synthetic enamel paint on new iron work including cost of paint in all heights with all scaffolding and staging charges including cost, conveyance, taxes of all materials, cost of all labour, etc. complete as per specification and direction of Engineer-in-Charge.												
		1	X	150.000	X	0.500	X	0.600	=	45.000			
										45.000	Sqm	129.06	5,807.882
													=====
												Total Rs.	2,394,608.45
												Say Rs.	2,394,608.00

ESTIMATE FOR THE WORK :- CONSTRUCTION OF 200 BEDDED HOSTEL (100 BOYS & 100 GIRLS) FOR BLIND STUDENTS AT, UNIT-III, BHUBANESWAR-BLOCK-B													
DRAINAGE SYSTEM													
Sl. No	Description of the work	Nos		Length		Width		Height		Quantity	Unit	Rate	Amount
				In Mtr.	In Mtr.	In Mtr.	In Mtr.	In Rs.	In Rs.				
	Main Drain of Lnt 650mtr of size-(600x600)mm & Peripheral Drain-300 mtr of Size-(450x450)mm.												
558	Earthwork in excavation in all types of soil for site leveling, foundation, pits, trenches and other civil works upto and including 1.5metre depth and stacking the soil upto a lead of 100 metre and including dewatering, removing slush, shoring and strutting (as required), complete as per specification and as directed by the Engineer-In-Charge.												
	600x600	1	x	150.000	x	0.900	x	0.900	=	121.500			
	450x450	1	x	120.000	x	0.750	x	0.750	=	67.500			
										189.000	Cum	232.30	43,904.700
559	Supplying and filling in foundation trenches and plinth, ditches with sand well-watered and rammed in layers not exceeding 23 cm. in depth with all lead and lift including cost, conveyance, loading, unloading, royalties, cost of all labour, sundries, T&P required for the work etc. complete in all respect as per specification and direction of Engineer-in-charge. (Measurement will be taken on finished compacted section only).												
	600x600	1	x	150.000	x	0.900	x	0.150	=	20.250			
	450x450	1	x	120.000	x	0.750	x	0.150	=	13.500			
										33.750	Cum	1,439.58	48,585.741
560	Providing and lying plain cement concrete of proportion (1:4:8) in foundation and floors using 4 cm. Size black hard crusher broken granite stone metal and screened and washed sharp sand for mortar of approved quality from approved quarry, washed and cleaned including hoisting, lowering, laying concrete, ramming, watering and curing etc. complete to required levels laid in layers not exceeding 15 cm thick in each layer including cost, conveyance, loading, unloading, royalties, cost all labours, sundries, T & P required for the work including shoring, shuttering and dewatering if required including hire & running charges of water pump complete as per specification and direction of Engineer-in-charge.												
	600x600	1	x	150.000	x	0.900	x	0.100	=	13.500			
	450x450	1	x	120.000	x	0.750	x	0.100	=	9.000			
										22.500	Cum	6,011.89	135,267.525
561	Providing, lifting, hoisting and laying Reinforced cement concrete of M-25 grade as per approved designs and drawings, to be mixed in concrete mixture including hoisting, lowering, laying and compaction concrete by using vibrators, watering and curing for 28 days, and finishing the exposed surface smooth providing grooves or beads wherever necessary including cost, conveyance, loading, unloading, royalties and cost of all labours, sundries, T & P required of the work etc. complete in all respect.												
	600x600 :- Base	1	x	150.000	x	0.900	x	0.150	=	20.250			
	Wall	2	x	150.000	x	0.600	x	0.150	=	27.000			
	Cover	1	x	150.000	x	0.900	x	0.150	=	20.250			
	450x450 :- Base	1	x	120.000	x	0.750	x	0.150	=	13.500			
	Wall	2	x	120.000	x	0.450	x	0.150	=	16.200			
	Cover	1	x	120.000	x	0.750	x	0.150	=	13.500			
										110.700	Cum	8,010.26	886,736.306
562	Providing, fixing and placing of Tor steel (HYSD) Fe-500 IS 1786-2008 for RCC work in all floors of required diameter of approved quality with straightening, Cutting, bending, binding welding or jointing if necessary, bending, binding, tying the grills as required for R.C.C. works, providing fan hooks where necessary and hoisting, lowering and placing in proper position according to approved designs and drawings including cost, conveyance, loading, unloading, taxes of M.S. rods or Tor steel and binding wires of 18 to 20 gauge required for the work and cost of all labour, sundries, T & P and scaffolding complete in all respect as directed by the Engineer-in-Charge (payment will be made according to the actual weight of M.S rod /Tor steel consumed in the work and Each Each No separate payment will be made towards weight of binding wires which is to be borne by the contractor at his own cost.												
	Drain	1	X	110.700	@	55.000		Kg/Cum	=	6088.500			
										6088.500	Kg		
										60.885	Qntl	9,743.85	593,254.044
563	12mm thick cement plaster (1:6) on brick work with screened and washed sharp sand for mortar and finished smooth to the rough surface of brick masonry walls after racking out joints including watering and curing rounding of corners etc. complete with cost, conveyance, loading, unloading, royalties, cost of all labour, T&P, sundries and scaffolding required for the work etc. with providing grooves as directed by the Engineer-in-Charge.												
	600x600	1	X	150.000	X		X	0.600	=	90.000			
		2	x	150.000	x		x	0.750	=	225.000			
	450x450	1	X	120.000	X		X	0.450	=	54.000			
		2	x	120.000	x		x	0.600	=	144.000			
										513.000	Sqm	172.87	88,682.310
													=====
												Total Rs.	1,796,430.63
												Sav Rs.	1,796,431.00

ESTIMATE FOR THE WORK :- CONSTRUCTION OF 200 BEDDED HOSTEL (100 BOYS & 100 GIRLS) FOR BLIND STUDENTS AT, UNIT-III, BHUBANESWAR-BLOCK-B

SITE DEVELOPMENT												
Sl. No	Description of the work	Nos		Length	Width		Height		Quantity	Unit	Rate	Amount
				In Mtr.	In Mtr.	In Mtr.	In Rs.	In Rs.				
564	Supplying and filling in Site fillup, foundation trenches and plinth, ditches with sand well-watered and rammed in layers not exceeding 23 cm. in depth with all lead and lift including cost, conveyance, loading, unloading, royalties, cost of all labour, sundries, T&P required for the work etc. complete in all respect as per specification and direction of Engineer-in-charge. (Measurement will be taken on finished compacted section only).											
	600x600	1	x	850.000	x	area	x	0.600	=	510.000		
										510.000	Cum	1,439.58
												734,184.537
565	Supply, Filling, Spreading of Good Filling earth, including cost of material, carriage, labour and cost of application.											
		1	x	850.000	x	area	x	0.600	=	510.000		
										510.000	Cum	550.00
												280,500.000
											Total Rs.	1,014,684.54
											Say Rs.	1,014,685.00

ESTIMATE FOR THE WORK :- CONSTRUCTION OF 200 BEDDED HOSTEL (100 BOYS & 100 GIRLS) FOR BLIND STUDENTS AT, UNIT-III, BHUBANESWAR-BLOCK-B									
GARDEN & PLANTATION									
Sl.No.	Description of work	No	Length	Breadth	Height	Quantity	Unit	Rate	Amount (In Rs.)
566	EXCAVATION OF PITS								
a	Earth work in Stoney earth for small trees with initial lead and lift including rough dressing in layers not exceeding 0.3m in depth of size 0.2x0.2x0.2 m. @ 138.71/cum and the Earth transported by transport vehicles as directed by the Engineer-in-charge.	570					Nos	2.49	1419.07
b	Earth work in Ordinary soil for big trees with initial lead and lift including rough dressing in layers not exceeding 1m in depth of size 0.60mx0.60mx0.75 m. @ 138.71/cum and the Earth transported by transport vehicles as directed by the Engineer-in-charge.	340					Nos	84.02	28568.16
567	Filling pits with fertile soil/ silt including carriage up to each pit by tractor/ truck up to site and by head load up to pit.								
a	Pit size 0.2x0.2x0.2 m	570					Nos	3.85	2194.36
b	Pit size 0.60mx0.60mx0.75 m	340					Nos	129.93	44175.86
568	Application of organic manure (FYM/cimpost/sludge) Including carriage upto pit								
	By tractor/truck upto site and by head load upto pit								
a	Pit size 0.2x0.2x0.2 m	570					Nos	5.00	2850.00
b	Pit size 0.60mx0.60mx0.75 m	340					Nos	22.00	7480.00
569	Application of chemical fertilisers npk and insecticited/termicide including cost of materials/carriage and cost of application.								
a	Pit size 0.20mtx 0.20mtx0.20mt @ 50gm of NPK and 10gm of termicides	570					Nos	1.50	855.00
b	Pit size 1.00mtx 0.60X0.60X0.75 cum @ 50gm of NPK and 10gm of termicides	340					Nos	5.00	1700.00
570	Cost of planting including mixing of manure, fertilizer, pesticides and initial watering.								
	For shrub category	570					Nos	2.00	1140.00
	For tree category	340					Nos	8.00	2720.00
571	Supporting plants with stakes including cost of stakes								
	For shrub category	570					Nos	3.00	1710.00
	For tree category	340					Nos	20.00	6800.00
572	Replanting of Trees of by Uprooting and Digging Pits								
	For shrub category	6					Nos	20.00	120.00
	For tree category	7					Nos	100.00	700.00
573	Supply, Filling, Spreading of Good earth, Garden Soil including cost of material, carriage, labour and cost of application.								
	Lawn area	1	500		0.600	300	Cum		
						300	Cum	550.00	165000.00
574	Contingent expenditure including cost of ropes, implement,baskets, drums etc.	910					Nos	2.00	1820.00
575	Cost of planting trees & palm including transportation upto site (including Providing, Laying,loading, unloading, transportation, royalties, cost of all materials, labour, sundries, T&P, scaffolding, watering and curing etc. complete in all respect as per specification and direction of Engineer-in-charge.)								
	Trees								
	Hibiscus tiliaceus variegated				8-10'	20	Nos	700.00	14000.00
	Bauhinia blackae				8-10'	20	Nos	700.00	14000.00

GARDEN & PLANTATION									
Sl.No.	Description of work	No	Length	Breath	Height	Quantity	Unit	Rate	Amount (In Rs.)
	Azadirachta indica				8-10'	20	Nos	700.00	14000.00
	Melia azadirach				8-10'	20	Nos	490.00	9800.00
	Podocarpus macrophyllus				8-10'	20	Nos	700.00	14000.00
	Plumeria alba				8-10'	20	Nos	315.00	6300.00
	Plumeria Thai varieties				8-10'	20	Nos	700.00	14000.00
	Michelia champaca				8-10'	20	Nos	700.00	14000.00
	Albizia lebbeck				8-10'	20	Nos	91.00	1820.00
	Arecanut palm				5-6'	20	Nos	700.00	14000.00
	Raphis palm				3-4'	20	Nos	700.00	14000.00
	Foxtail Palm				8-10'	20	Nos	700.00	14000.00
	Arenga palm				8-10'	20	Nos	525.00	10500.00
	Bottle palm				8-10'	20	Nos	91.00	1820.00
	Veitchia golden				5-6'	20	Nos	560.00	11200.00
	Kentia palm				8-10'	20	Nos	560.00	11200.00
576	Cost of planting shrubs including transportation upto site (including Providing, Laying,loading, unloading, transportation, royalties, cost of all materials, labour, sundries, T&P, scaffolding, watering and curing etc. complete in all respect as per specification and direction of Engineer-in-charge)								
	Small Palms								
	Murraya exotica				3-4'	30	Nos	35.00	1050.00
	Sanchezia nobilis				3-4'	30	Nos	70.00	2100.00
	Eugenia myrtifolia				3-4'	30	Nos	35.00	1050.00
	Nicodivia spp				3-4'	30	Nos	70.00	2100.00
	Jatropha panduraefolia green				3-4'	30	Nos	70.00	2100.00
	Jatropha panduraefolia variegated				3-4'	30	Nos	140.00	4200.00
	Cerbera odollam				3-4'	30	Nos	140.00	4200.00
	Alpinia zerumbet				1-2'	30	Nos	35.00	1050.00
	Malphigia golden				1-2'	30	Nos	140.00	4200.00
	Malphigia green				1-2'	30	Nos	70.00	2100.00
	Mini tagar variegated				1-2'	30	Nos	70.00	2100.00
	Areca Palm				1-2'	30	Nos	45.92	1377.60
	Allamanda dwarf				1-2'	30	Nos	56.00	1680.00
	Graptophyllum spp				1-2'	30	Nos	28.00	840.00
	Eranthemum tricolor				1-2'	30	Nos	28.00	840.00
	Justicia variegated				1-2'	30	Nos	28.00	840.00
	Barleria cristata				1-2'	30	Nos	56.00	1680.00
	Verbena perennial				1-2'	30	Nos	56.00	1680.00
	Abelia variegated				1-2'	30	Nos	252.00	7560.00
577	Development of lawn								
a	Clearance of site, excavation of around upto a depth of 30cm, removal of excavated materials to outside for dumping at suitable places.								
						500	Sqm	20.00	10000.00
b	Providing and laying Neelgiri /Mexican grass turf with earth 50mm to 60mm thickness of existing ground prepared with proper level and ramming with tools wooden (Dhurmos) and than rolling the surface with light roller make the surface smoothen and light watering with sprinkler and maintenance for 30 days or more till the grass establish properly, as per direction of officer-in-charge. Mexican grass					250	Sqm	214.40	53600.00
c	Providing and laying Bermuda grass with earth 50mm to 60mm thickness of existing ground prepared with proper level and ramming with tools wooden (Dhurmos) and than rolling the surface with light roller make the surface smoothen and light watering with sprinkler and maintenance for 30 days or more till the grass establish properly, as per direction of officer-in-charge.					250	Sqm	120.00	30000.00
								Total Rs.	920240.05
								SAY Rs.	920240.00

ESTIMATE FOR THE WORK :- CONSTRUCTION OF 200 BEDDED HOSTEL (100 BOYS & 100 GIRLS) FOR BLIND STUDENTS AT, UNIT-III, BHUBANESWAR-BLOCK-B					
Sl. No.	Description of items	Quantity	Unit	Rate	Amount(Rs.)
A	INTERNAL WATER SUPPLY & SANITATION WORKS				
578	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes conforming to IS:15778, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer-in-Charge				
i	50 mm dia	110.00	Mtr	1207.32	132,805.71
ii	40 mm dia	18.00	Mtr	796.07	14,329.34
iii	32 mm dia	24.00	Mtr	592.82	14,227.74
iv	25 mm dia	334.00	Mtr	413.59	138,138.81
v	20 mm dia	266.00	Mtr	312.11	83,020.06
579	Providing and fixing to wall or ceiling and floor pvc pipes class conforming to ASTM-D1785/89 (Sch-80) and pipe fittings of the following nominal bore with clamps including making good the wall, ceiling and floor all complete as per specification complete.	120.00	Mtr	1151.51	138,181.33
i	65mm cpvc sch -80 pipe				
580	Supplying all materials, Labour, T & P & fitting and fixing of following different water supply fitting as per ASTMD-2846 with supply of all necessary joint materials etc all complete as per direction of engineer-in-charge				
i	65mm dia CPVC ball valve	2.00	Each	2644.95	5,289.90
ii	50mm dia CPVC ball valve	12.00	Each	2645.00	31,740.00
iii	40mm dia CPVC ball valve	6.00	Each	1656.00	9,936.00
iv	32mm dia CPVC ball valve	4.00	Each	1183.00	4,732.00
v	25mm dia CPVC ball valve	4.00	Each	648.00	2,592.00
581	Cutting grooves in pucca floors and walls for taking GI/PVC pipes and making good the damages as per specification complete				
	15mm to 32mm dia pipe	600.00	Mtr	214.00	128,400.00
582	Cutting holes through existing brick work including making good the same in cement mortar (1:4) for taking GI/PVC pipes and fittings etc all complete as per specification.				
	In all Floor				
	20mm to 50mm PVC to pass in 125 mm to 250mm thick Brick/stone wall	78.00	Each	72.00	5,616.00
583	Cutting hole in R.C.C floors and roofs upto 19 cm thick for passing G.I / P.V.C pipes and fittings etc and repairing the holes after insertion of pipes etc with cement concrete (1:2:4) including finishing complete so as to make it leak proof.				
	20mm to 50mm PVC to pass in 125 mm to 250mm thk RCC	78.00	Each	286.00	22,308.00
584	Providing & Fixing Wash Down Water Closet (European type W.C pan) with integral 'S' or 'P' trap conforming to IS 2556 : Part 8-2004, to the floor with wooden plug and chromium plated screws including jointing the trap with soil pipe in cement mortar (1:1) etc all complete as per specification.				
i	Water Closet Complete set -WC (Wall mounted Water Closet-JAQUAR FLS-WHT-5953)PPSM/Equivalent), Single Piece Slim Concealed Cistren with Floor Mounting Frame,installation Kit and S Type Drain Pipe Connection set For wall hung WC (Without Flush control plate) - JAQUAR JCS-WHT- 2400FS /Equivalent , FLUSH PLATE- JAQUAR JCP-CHR- 852415/ Equivalent	8.00	Each	25805.90	206,447.20

585	Providing and fixing of Disabled Accessible toilet set consisting of washbasin,EWC ,cistern complete with fittings & seat cover,Grab bar etc,including all cost of labour, material, conveyance, loading, unloading, T&P etc. all complete as per the direction of Engineer-in-charge.				
i	Rimless Bowl For Coupled WC with UF Soft Close Seat Cover, Hinges, Fixing Accessories, Size:- 390x610 x800mm- JAQUAR DIS-WHT-93753P180UF.	2.00	Set	24,214.00	48,428.00
ii	Wash basin (JAQUAR DIS-WHT-93801), Bottle trap JAQUAR ALD-769L300X190/Equivalent, ,JAQUAR ALD-709/Equivalent.	2.00	Set	14,255.00	28,510.00
iii	Grab Bar Vertical swing,white (JAQUAR -WAC-WHT-860800/Equivalent)	2.00	Set	10,044.00	20,088.00
iv	Grab Bar 692 mm long,white (JAQUAR -WAC-WHT-BR0600/Equivalent)	6.00	Set	4,974.00	29,844.00
586	Providing & Fixing Wash Down Water Closet (European type W.C pan) with integral 'S' or 'P' trap conforming to IS 2556 : Part 8-2004, to the floor with wooden plug and chromium plated screws including jointing the trap with soil pipe in cement mortar (1:1) etc all complete as per specification				
	European Water Closet -WC	66.00	Each	4788.00	316,008.00
587	Providing and fixing P.V.C. low level flushing cistern with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete.	66.00	Each	1405.40	92,756.40
588	Providing and Fixing wash basins with hole for pillar taps conforming to IS 2556 Part 4-2004 with cast iron or M.S brackets painted white including cutting holes in walls and making good the damages etc all complete as per specification				
	Wash Basin	66.00	Each	2744.00	181,104.00
589	Providing and Fixing PVC waste pipe with fittings of following nominal diameter for wash basin or sink including brass check nut complete as per specification	66.00	Each	125.00	8,250.00
590	Providing and Fixing Chromium Plated brass waste coupling of the following nominal diameter for wash basin and sink as per specification	66.00	Each	381.00	25,146.00
591	Wall Hung Half pedestal wash basin Complete set Wash basin (JAQUAR -FNS-WHT-40801 /Equivalent), Half Pedestal (Jaquar -FNS-WHT-40305/Equivalent) Bottle trap JAQUAR ALD-769L300X190/Equivalent, ,JAQUAR ALD-CHR-709/Equivalent.	8.00	Set	9,555.00	76,440.00
592	Providing and fixing Stainless Steel A ISI 304 (18/8) kitchen sink as per IS:13983 with C.I. brackets and stainless steel plug 40 mm, including painting of fittings and brackets, cutting and making good the walls wherever required : Kitchen sink with drain board 510x1040 mm bowl depth 250 mm	6.00	Each	6982.00	41,892.00
593	Providing and Fixing bowl pattern urinal conforming to IS 2556 : Part 6-1996 including connecting the urinal of 430x260x350 mm sizes respectively with waste pipe by means of white lead mixed with chopped hemp etc all complete as per specification. including of flush cock complete set	6.00	Each	11000.00	66,000.00
594	Providing& fixing 8mm thick frosted glass partition for urinal with patch fitting, clams etc including cost of all labour,material, sundries and all chrome hardware fitting etc all complete as per the direction of Engineer-in-charge	6.00	Each	6250.00	37,500.00

595	Supplying all materials, labour, taxes,T&P for fitting & fixing of different water supply CP, Brass or GM concealed fitting and fixtures of ISI approved make of following sizes and specification with leak proof threaded joints tightened with spun yam and white zinc or any other method as required and directed including testing and rectification of defects after testing,including cost of all labours,materials,conveyance,loading and unloading,all taxes and rovalies, sundries and T&P etc all				
i	Pillar Cock	76.00	Nos	1,635.00	124,260.00
ii	2 in 1 Bib cock	76.00	Nos	1,943.00	147,668.00
iii	Angular stop cock	164.00	Nos	1,166.00	191,224.00
iv	CP Health Faucet with 1.01 RM PVC tube	76.00	Nos	1,169.00	88,844.00
v	Soap Dish	76.00	Nos	782.00	59,432.00
vi	Towel Ring	76.00	Nos	1,034.00	78,584.00
vii	TOWEL RAIL	76.00	Nos	1,322.00	100,472.00
viii	GLASS SHELF	78.00	Nos	1,349.00	105,222.00
ix	Sink Cock	6.00	Nos	3,078.00	18,468.00
x	Bathroom mirror 600x600 mm	78.00	Nos	2,000.00	156,000.00
xi	SHOWER ARM	60.00	Nos	1,733.00	103,980.00
xii	OVERHEAD SHOWER	60.00	Nos	2,582.00	154,920.00
xiii	Longbody Bibcock	60.00	Nos	1,600.00	96,000.00
xiv	Concealed stop cock	60.00	Nos	2,762.00	165,720.00
xv	CP Flange small	366.00	Nos	40.00	14,640.00
xvi	110mm dia pvc floor trap with jally	218.00	Nos	450.00	98,100.00
xvii	CP extension piece	442.00	Nos	120.00	53,040.00
xviii	CP Grating	218.00	Nos	50.00	10,900.00
xix	Toilet roll holder	78.00	Nos	1,150.00	89,700.00
596	Making khurras 45x45 cm with average minimum thickness of 5 cm cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate of 20 mm nominal size) over P.V.C. sheet 1 m x1 m x 400 micron, finished with 12 mm cement plaster 1:3 (1 cement : 3 coarse sand) and a coat of neat cement, rounding the edges and making and finishing the outlet complete.	16.00	Nos	239.00	3,824.00
597	Providing and fixing on wall face unplasticised Rigid PVC rain water pipes conforming to IS: 13592 Type A, including jointing with seal ring conforming to IS: 5382, leaving 10 mm gap for thermal expansion,(i) Single socketed pipes.				
	110MM OD P.V.C SWR S/S PIPE (ISI TYPEA)	384.00	Mtr	412.38	158,354.26
598	Supply all material, labour ,T&P ,fitting and fixing UPVC SWR Type B pipes & fitting of approved make conforming to IS-13592 including jointing of approved solvent cement non-heat application method including testing of as per stanard specification, both below & above ground level/floor & on walls including supply of bobbins,nains,screws,wooden cleant,pipe clamps as per requirement including cutting walls & floor & making good the damages with cement concrete (1:2:4) with hard granite chips, including scaffolding wherever necessary all complete with requisite testing as per direction of the EIC				
i	75mm dia OD PVC SWR S/S PIPE (ISI TYPE-B)	210.00	Mtr	374.96	78,741.45
ii	110mm dia OD PVC SWR S/S PIPE (ISI TYPE-B)	539.00	Mtr	555.58	299,455.80
iii	110mm p.v.c s/j with door	78.00	Nos	228.77	17,844.06
iv	110mm p.v.c swr plain bend 87.5	78.00	Nos	140.03	10,922.34
v	110mm pipe clip	898.33	Nos	24.93	22,395.45
vi	110mm dia p.v.c vent cowl	4.00	Nos	34.45	137.80
vii	110mm dia p.v.c swr coupler	107.00	Nos	91.87	9,830.09
viii	110mm dia p.v.c Y with door	78.00	Nos	412.64	32,185.92
ix	110x110x110 mm dia pvc swr Tee	78.00	Nos	196.66	15,339.48

599	Providing and fixing pvc gully trap compete with grating brick masonry chamber with water tight SFRC cover with frame of 300*300 mm size(inside)the weight of cover to be notless than 4.50kg and frame to be not less than 2.70kg as per standard design:100*100 mm size P type .including cost of all labours,material,conveyance,loading and unloading,all taxes and royalties,sundries and T&P etc all complete as per direction of the Engineer-in-charge				-
	With flyash bricks of minimum compressive strength 75 kg/sqcm (Size 300 x 300 x 300 mm)	4.00	Nos	2,949.20	11,796.80
600	Constructing brick masonry road gully chamber 45x45x77.5cm with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) with precast R.C.C. vertical grating complete as per standard design Including all cost of labour, material, T&P etc. all complete as per the direction of Engineer-in-charge.	16.00	Nos	5,503.20	88,051.20
601	Constructing brick masonry chamber for underground SFRC inspection chamber and bends with brick in cement mortar 1:4 (1 cement :4 coarse sand)SFRC cover with frame 455*610mm internal dimensions ,total weight of cover with frame be not less than 38kg (weight of cover 23kg and weight of frame 15 kg), R.C.C TOP SLAB WITH 1:2:4mix(1 cement:2 coarse sad:4 graded stone aggregate 20mm nominal size),foundation concrete 1:5:10(1 cement :5 fine sand :10 graded stone aggregate 40mm nominal size)insideplastering 12mm thick with cement mortar 1:3(i cement:3 coarse sand),finished smooth with a floating coat of neat cement on walls and bed concrete etc.compete as per standard design Including all cost of labour,material,T&P etc.all complete as per the engineer-in-charge.				
	Inside dimensions 600*850mm and 45cm deep for pipe line with three or more inlets.	4.00	Nos	6,422.20	25,688.80
602	Fixing of Gun Metal Non-return Valve Class - I conforming to IS : 5312 (Part-I) 2004 of the following nominal bore as per specification complete				
	25mm dia Non-return Valve	78.00	Nos	1,475.08	115,056.38
603	Supplying all materials,labour,T&P and fixing PVC water storage tanks of as required capacity confirming to IS:12701-1996 including cutting holes through the tank and fixing pvc pipe and fittings and providing extre sockets and jam nuts,fixing ball valve etc,including conveyance of all materials to work site etc all complete as per specification and direction of Engineer-in-charge (Sintex/Equivalent)	60000.00	Ltrs	15.00	900,000.00
	10000 Ltr Capacity-6Nos				
604	Supplying and fixing Aquaguard Storage Cooler#Cum-Purifier (80 Ltr. Capacity) with all cost complete.	20.00	Nos	95,528.73	1,910,574.58
605	Supplying and installation of rest room cubicles of following types of specification etc. including cost of all labour,material,conveyance , loading and unloading etc all complete as per the direction of Architect/Engineer-in-charge.	130.00	Nos	45,752.00	5,947,760.00
	Thickness of Compact Laminate : 12 mm				
	Colour of HPL Boards: Single Colour				
	Size of Cubicle : 1200mm (W) X 1500mm (D) X 2100mm (H)				
	Door Size : 1925mm (H) x 600mm (W)				
	Divider Size : 1945mm (H)				
	Overall Height Of Cubicle : 2100mm (Including bottom Gap of 100mm)				
	Accessories: Standard - Stainless Steel - 304 Grade accessories]				
	a) SS "U" Channel				
	b) SS "F" channel (Only Corner Unit)				
	c) SS Door Stopper Channel				

	c) SS Top Rail				
	d) SS Coat Hook				
	e) SS Privacy Thumb turn c/w Occupancy Indicator				
	f) SS Door Knob				
	g) SS Hinges with Cover				
	h) SS Shoe Box Leg 12mm - 316 Grade				
	i) Rubber Lining for Groove				
	j) S.S.Screws 304 G & P.V.C Wall Plugs				
	SPECIAL NOTE - Warpage Criteria is 3.0 mm/1000mm for MRS panels as per EN standard- 438.				
	TOTAL				13,414,862.92

ESTIMATE FOR THE WORK :- CONSTRUCTION OF 200 BEDDED HOSTEL (100 BOYS & 100 GIRLS) FOR BLIND STUDENTS AT, UNIT-III, BHUBANESWAR-BLOCK-B							
(SH: INTERNAL ELECTRICAL WORK WITH FITTINGS, DATA, CCTV, FIRE FIGHTING, LA, AIRCONDITION SYSTEM, TRANSFORMER, DG & LANDSCAPE LIGHTING WORK.							
Sl. No.			Description	Qty	Unit	Rate	Amount
I			WIRING:-				
A							
606			Recess Wiring for light point/ fan point/ exhaust fan/wall 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 1way modular switch, modular plate, suitable GI box including supplying the same and earthing the point with 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable etc as required including the cost of labor & material T & P as required as EIC.				
			First Point				
a	sch	1.1.1	Group A	341	point	537.00	183117.00
b		1.1.2	Group B	172	point	782.00	134504.00
c	sch	1.1.3	Group C	126	Point	1091.00	137466.00
e			Looping Point .(Looping Point)				
	Non-Sch		(Controlled by same switch-with Gr.A wire quantity Only)	330	point	405.00	133650.00
607	sch	1.8	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 including the cost of labor & material T & P				
a	sch	1.8.1	2 X 1.5 sq. mm + 1 X 1.5 sq. mm earth wire for 6A PP looping & UPS lighting	3480	Metre	135.00	469800.00
b	sch	1.8.2	2 X 2.5 sq. mm + 1 X 1.5 sq. mm earth wire for 15A PP & Switch Boards & Computer points	4950	Metre	149.00	737550.00
c	sch	1.8.3	2 X 4.0 sq. mm + 1 X 2.5 sq. mm earth wire for AC & Geyser Point.	360	Metre	174.00	62640.00
d	sch	1.8.4	2 X 6.0 sq. mm + 1 X 4 sq. mm earth wire for Room AC & from Main DB to Room DB	5	Metre	205.00	1025.00
e	sch	1.8.9	4 X 4 sq. mm + 2 X 2.5 sq. mm earth wire for L .DB	5	Metre	249.00	1245.00
f	sch	1.8.10	4 X 6 sq. mm + 2 X 4 sq. mm earth wire for P.BDB	500	Metre	313.00	156500.00
g	sch	1.8.11	4 X 10 sq. mm + 2 X 6 sq. mm earth wire for P.BDB,	500	Metre	445.00	222500.00
h	sch	1.8.12	4 X 16 sq. mm + 2 X 10 sq. mm earth wire for P.BDB	200	Metre	631.00	126200.00
i	sch	1.8.5	2 X 10.0 sq. mm + 1 X 6.0 sq. mm earth wire .	5	Metre	270.00	1350.00
608	sch		Supplying and drawing following pair 0.5 sq mm FRLS PVC insulated annealed copper conductor, unarmored telephone cable in the existing surface/ recessed steel/ PVC conduit as				
	sch	1.20.2	2 Pair	5	Metre	43.00	215.00
609	sch	1.21	Supplying and drawing co-axial TV cable RG-6 grade, 0.7 mm solid copper conductor PE insulated, shielded with fine tinned copper braid and protected with PVC sheath in the existing surface/ recessed steel/ PVC conduit as required including the cost of labor & material T & P as required as EIC.	250	Metre	44.00	11000.00
610	sch	1.22.2	Supplying and fixing of following sizes of steel conduit along with accessories in surface/recess including painting in case of surface conduit, or cutting the wall and making good the same in case of recessed conduit as required including the cost of labor & material T & P as required as EIC.				
a	sch	1.20.2	25 mm	30	Metre	144.00	4320.00
611	sch	1.23	Supplying and fixing of following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required including the cost of labor & material T & P as required as EIC.				
a	sch	1.23.1	20 mm	200	Metre	102.00	20400.00

Sl. No.			Description	Qty	Unit	Rate	Amount
b	sch	1.23.2	25 mm	300	Metre	104.00	31200.00
c	sch	1.23.3	32 mm	100	Metre	112.00	11200.00
612	sch	1.24	Supplying and fixing metal box of 1.63 mm thick following sizes (nominal size) on surface or in recess without cover including cutting the wall and making good the same in case of recessed conduit ,also including painting etc as required including the cost of labor & material T & P as required as EIC.				
a	sch	1.24.1	75 mm X 75 mm X 60 mm deep	60	Each	119.00	7140.00
b	sch	1.24.2	100 mm X 100 mm X 60 mm deep	40	Each	130.00	5200.00
c	sch	1.24.3	150 mm X 75 mm X 60 mm deep	30	Each	136.00	4080.00
d	sch	1.24.6	200 mm X 125 mm X 60 mm deep	15	Each	176.00	2640.00
e	sch	1.24.13	250 mm X 300 mm X 60 mm deep	15	Each	295.00	4425.00
613-a	sch	1.31	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 3 pin 5/6 amps modular socket outlet and 5/6 amps modular switch, connection etc. as required including the cost of labor & material T & P as required as EIC.	367	Each	500.00	183500.00
b	sch	1.31	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 3nos 3 pin 5/6 amps modular socket outlet with 2nos 5/6 amps modular switch, connection etc. as required including the cost of labor & material T & P as required as EIC.	7	Each	1160.00	8120.00
c	sch	1.31	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 2nos 3 pin 5/6 amps modular socket outlet with 2nos 5/6 amps modular switch, connection etc. as required.	9	Each	879.00	7911.00
614	sch	1.32	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 6 pin 5/6 & 15/16 amps modular socket outlet and 15/16 amps modular switch, connection etc. as required.	61	Each	633.00	38613.00
615-a	Non sch		Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 25 amps modular switch, connection etc. as required including the cost of labor & material T & P as required as EIC.	8	Each	502.00	4016.00
b	Non sch		Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 25 amps modular Socket , connection etc. as required including the cost of labor & material T & P as required as EIC.	8	Each	629.00	5032.00
616	sch	1.25.6	Supplying and fixing of Telephone socket out let with suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing , connection etc. as required including the cost of labor & material T & P as required as EIC.	1	Each	263.00	263.00
617	sch	1.25.6	Supplying and fixing of TV antenna socket out let with suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing , connection etc. as required including the cost of labor & material T & P as required as EIC.	8	Each	263.00	2104.00

Sl. No.			Description	Qty	Unit	Rate	Amount
618	Non-sch		Installation, testing and commissioning of wall bracket /ceiling fittings /Hanging/Linear Hanging/LED down light/Occupancy sensor of all sizes and shapes containing upto two GLS lamps per fitting, complete with all accessories including connection etc. as required including the cost of labor & material T & P as required as EIC.	48	each	98.00	4704.00
619	sch	1.29	Supplying and fixing brass decorative angle / Batten Holder fitting including connection etc. as required including the cost of labor & material T & P as required as EIC.	57	Each	63.00	3591.00
620	sch	1.30	Supplying and fixing call bell/ buzzer suitable for single phase, 230 volts, complete as required.	2	Each	125.00	250.00
621	sch	1.33	Installation, testing and commissioning of pre-wired, fluorescent fitting / compact fluorescent fitting of all types, complete with all accessories and tube etc. directly on ceiling/ wall, including connection with 1.5 sq. mm FR PVC insulated, copper conductor, single core cable and earthing etc. as required including the cost of labor & material T & P as required as EIC.	666	Each	130.00	86580.00
622	sch	1.36	Installation, testing and commissioning of ceiling fan on down rod or wall fan on the existing ceiling /surface, including wiring the down rods of standard length (upto 30 cm) with 1.5 sq. mm FR PVC insulated, copper conductor, single core cable etc. as required including the cost of labor & material T & P as required as EIC.	126	Each	134.00	16884.00
623	sch	1.50	Installation of exhaust fan with shutters/louvers in the existing opening, including making good the damage, connection, testing, commissioning etc. as required including the cost of labor & material T & P as required as EIC.				
	sch	1.43	Upto 450 mm sweep	72	Each	669.00	48168.00
624		1.38	Installation, Testing and Commissioning of resistance type ceiling fan regulator, in existing box including connection with 1.5 sq.mm FR PVC insulated single core multistrand copper conductor, earthing the regulator as required including the cost of labor & material T & P as required as EIC.	1	Each	75.00	75.00
625	Non-Sch		Supplying and fixing of support arrangement for fixing of cable tray, light fittings ,Panel Board etc with MS angles / flats / rods /anchor flashner/extra rod for fan & Lights including jointing the steel sections of the support arrangement with nuts & bolts / welding / Febicating complete as required including the cost of labor & material T & P as required as EIC.	150	kg	127.00	19050.00
B			SDB'S, MCB, ISOLATOR,CABLE,PANELS:-				
626	sch	2.5	Supplying and fixing following way, horizontal type three pole and neutral, sheet steel, MCB distribution board, 415 volts, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required including the cost of labor & material T & P as required as EIC. (But without MCB/RCCB/Isolator)				
a	sch	2.5.5	4 way (4 + 12), Double door	20	Each	2176.00	43520.00
b	sch	2.5.6	6 way (4 + 18), Double door	9	Each	2519.00	22671.00
c	sch	2.5.7	8 way (4 + 24), Double door	0	Each	2711.00	0.00

Sl. No.			Description	Qty	Unit	Rate	Amount
627	sch	2.3	Supplying and fixing following way, single pole and neutral, sheet steel, MCB distribution board, 240 V, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required including the cost of labor & material T & P as required as EIC. (But without MCB/RCCB/Isolator)(But without MCB/RCCB/Isolator)				
a		2.3.6	8 way (2 + 6), Double door	1	Each	1642.00	1642.00
b			FP MCCB Metal one way enlouser upto200A	0	Each	3730.00	0.00
628			Supplying and fixing following way, Vertical type three pole and neutral, sheet steel, MCB distribution board, 415 volts, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required including the cost of labor & material T & P as required as EIC. (But without MCB/RCCB/Isolator)(But without MCB/RCCB/Isolator)				
a			4 way (4 + 12), Double door	0	Each	12387.00	0.00
b			6 way (4 + 18), Double door	0	Each	14076.00	0.00
629	sch	2.7	Supplying and fixing 5 amps to 32 amps rating, 240/415 volts, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required including the cost of labor & material T & P as required as EIC. (But without MCB/RCCB/Isolator)				
a	sch	2.7.1	Single pole	394	Each	134.00	52796.00
b	sch	2.7.2	Single pole & Neutral	4	Each	335.00	1340.00
c	sch	2.7.4	Triple pole & Neutral	2	Each	881.00	1762.00
630	sch	2.9	Supplying and fixing following rating, Four pole, 440 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
a	sch	2.9.1	40 amps	2	Each	575.00	1150.00
631	sch	2.11	Supplying and fixing following rating, four pole, (three phase and neutral), 415 volts, residual current circuit breaker (RCCB), having a sensitivity current upto 300 milliamperes in the existing MCB DB complete with connections, testing and commissioning etc. as required including the cost of labor & material T & P as required as EIC.				
a	sch	2.11.1	25 amps	1	Each	2244.00	2244.00
b	sch	2.11.2	40/63amps	29	Each	2648.00	76792.00
C	sch	2.10	Supplying and fixing following rating, double pole, (single phase and neutral), 240 V, residual current circuit breaker (RCCB), having a sensitivity current 300 mA in the existing MCB DB complete with connections, testing and commissioning etc. as required including the cost of labor & material T & P as required as EIC.				
a	sch	2.10.1	25 amps	1	Each	1692.00	1692.00
b	sch	2.10.1	40 amps	1	Each	1929.00	1929.00
632			Supplying and fixing following rating, four pole, neutral), 415 volts, Module case circuit Breaker (MCCB), having breaking capacity of 16KA in the existing MCCB DB / Panel Board complete with connections, testing and commissioning etc. as required including the cost of labor & material T & P as required as EIC.				
a	sch	2.2.3	100/125 A, 16 KA MCCB	0	Each	3250.00	0.00
b	sch	2.2.4	160 A, 16 KA MCCB	0	Each	5283.00	0.00

Sl. No.			Description	Qty	Unit	Rate	Amount
633			Supplying the following Size ISI mark Aluminum conductor, XLPE insulated cable, FRLS PVC, galvanized steel flat strip armoured and overall PVC sheathed cable conforming to IS: 7098 (Part - I) with latest amendments & complete all as required including the cost of material T & P as required as EIC.				
a	Non-Sch		4 core 10 sq.mm-	5	mtr	243.00	1215.00
b	Non-Sch		4 core 16 sq.mm-	30	mtr	291.00	8730.00
c	Non-Sch		3 1/2 core 25 sq.mm	70	mtr	336.00	23520.00
d	Non-Sch		3 1/2 core 35 sq.mm	40	mtr	405.00	16200.00
e	Non-Sch		3 1/2 core 50 sq.mm	60	mtr	545.00	32700.00
f	Non-Sch		3 1/2 core 70 sq.mm-	5	mtr	727.00	3635.00
g	no sch		3 1/2 core 150 sq.mm-	70	mtr	1334.00	93380.00
h	no sch		3 1/2 core 185 sq.mm-	90	mtr	1712.00	154080.00
634	sch	5.5	Laying and fixing of one number of following size of cable on wall surface as required, ISI mark Aluminum/copper conductor, XLPE insulated cable, FRLS PVC, galvanized steel flat strip armoured and overall PVC sheathed cable conforming to IS: 7098 (Part - I) with latest amendments & complete all as required				
a	sch	5.5.2	Above 25 sq. mm and upto 120 sq. mm	100	mtr	133.00	13300.00
635	sch	5.1	Laying and fixing of one number .following size cable direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc as required. ISI mark Aluminum/copper conductor, XLPE insulated cable, FRLS PVC, galvanized steel flat strip armoured and overall PVC sheathed cable conforming to IS: 7098 (Part - I) with latest amendments & complete all as required				
a	sch	5.1.1	upto 25 sq. mm	35	20	134.00	4690.00
b	sch	5.1.2	Above 25 sq. mm and upto 120 sq. mm	105	mtr	150.00	15750.00
c	sch	5.1.3	Above 120 sq. mm and upto 400 sq. mm	130	mtr	166.00	21580.00
636	sch	5.8	Supplying and making end termination with brass compression gland and aluminium lugs/copper for following size of PVC insulated and PVC sheathed / XLPE aluminium/copper conductor cable of 1.1 KV grade as required.				
a	sch	5.8.32	a- 4 core 10 sq.mm	2	nos	186.00	372.00
a	sch	5.8.32	a- 4 core 16 sq.mm	2	nos	202.00	404.00
b	sch	5.8.20	a- 3 1/2 core 25 sq.mm	4	nos	338.00	1352.00
c	sch	5.8.21	a- 3 1/2 core 35 sq.mm	2	nos	342.00	684.00
d	sch	5.8.22	a- 3 1/2 core 50 sq.mm	4	nos	356.00	1424.00
e	sch	5.8.23	a- 3 1/2 core 70 sq.mm	2	nos	407.00	814.00
f	sch	5.8.24	4 1/2 core 150 sq.mm-	2	nos	535.00	1070.00
g	sch	5.8.25	5 1/2 core 185 sq.mm-	4	nos	596.00	2384.00
637			Panels .				

Sl. No.			Description	Qty	Unit	Rate	Amount
	Non Sch		Design, supply, installation, testing and commissioning of cubicle main panel for indoor/Outdoor installation of wether proof design as per IP 44 class, made out of 2 mm thick CRCA sheet as per the drawing with cubicle type internal arrangement of 1.6 mm thick sheet and with front & back opening system suitable for mounting following switch gears, busbars, metering unit, including painting with powder coated paint of approved colour and shed with earthing the body etc as reqd including the cost of material ,labor T & P as required as EIC. (drawing shall be approved by engineer -in charge)				
1.1			Main Panel Board = (Indoor floor mounted type)				
			1no 65KA FP VSD with 32A FP MCB				
			Incommer-1:- 01 no. 250A., 25KA FP MCCB with OI,SC,EL protection .				
			Incommer-2:- 01 no. 200A., 25KA FP MCCB with OI,SC,EL protection .with 1nos 200A FP On load Change Over switch, 2 sets 200A FP AC duty contactor,relay for auto manual operation, AM selection switch				
			Busbar-1:- 04 nos. 300A. Al. bus bar duly sleeved.with Locking arrangement.				
			Busbar-2:- 04 nos. 250A. Al. bus bar duly sleeved.with Locking arrangement.				
			Outgoing:-i)				
			ii) 02 no. 100A. , 25KA FP MCCB, 02 no. 125A. , 25KA FP MCCB, 2 no. 63A. , 25KA FP MCCB				
			14-nos 32A, 10kA FP MCB & 3-nos 32A, 10kA DP MCB, 23-nos 40/ 63A, 10kA FP MCB				
			Instrument:- i) 06 nos. phase indicating lamp with toggle switch & control fuse.				
			ii) 01 Set of Digital.MFM with CT & PT				
			(Duly factory wired)	1	Set	284000.00	284000.00
1.1			100KVAR APFC Panel Board = (Indoor floor mounted type)	1	Set	265000.00	265000.00
638	DSR	4.1	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 including the cost of material ,labor T & P as required as EIC.				
a	sch	4.1.1	100 mm width X 50 mm depth X 1.6 mm thickness	100	mtr	490.00	49000.00
b	sch	4.1.3	200mm width X 50 mm depth X 1.6 mm thickness	100	mtr	689.00	68900.00
c	sch	4.1.4	300mm width X 50 mm depth X 1.6 mm thickness	150	mtr	777.00	116550.00
639	DSR	4.2	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 including the cost of material ,labor T & P as required as EIC.				
a	sch	4.2.1	100 mm width X 50 mm depth X 1.6 mm thickness	12	Each	815.00	9780.00
b	sch	4.2.3	200mm width X 50 mm depth X 1.6 mm thickness	12	mtr	1227.00	14724.00
c	sch	4.2.4	300mm width X 50 mm depth X 1.6 mm thickness	15	mtr	1438.00	21570.00
640	DSR	4.4	Supplying and installing following size of perforated pre-painted M.S. cable trays Tee's 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.				
a	sch	4.3.1	100 mm width X 50 mm depth X 1.6 mm thickness	6	Each	745.00	4470.00
b	sch	4.3.3	225mm width X 50 mm depth X 1.6 mm thickness	6	mtr	1074.00	6444.00

Sl. No.			Description	Qty	Unit	Rate	Amount
c	sch	4.3.4	300mm width X 50 mm depth X 1.6 mm thickness	8	mtr	1270.00	10160.00
641	sch	ref-2.12	Supplying and fixing 30 A, 415 V, TPN Industrial type socket outlet, with 4 pole and earth, metal enclosed plug top alongwith 30 A, "C" curve, TPMCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required including the cost of material ,labor T & P as required as EIC.	2	Each	1774.00	3548.00
C			Earthing				
642	Sch	3.4+3.6	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 including the cost of material ,labor T & P as required as EIC.	12	set	5241.00	62892.00
643	Sch	3.5+3.6	Earthing with CU earth plate 600 mm X 600 mm X 3 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 including the cost of material ,labor T & P as required as EIC.	6	set	7532.00	45192.00
644	Sch	3.10	Supplying and laying 25 mm x 5 mm CU earth strip ISI marked at 0.5 meter below ground level as strip earth electrode including soldering etc. as required including the cost of material ,labor T & P as required as EIC.	120	mtr	464.00	55680.00
645	Sch	3.9	Supplying and laying 25 mm x 5 mm G.I earth strip ISI marked at 0.5 meter below ground level as strip earth electrode including soldering etc. as required including the cost of material ,labor T & P as required as EIC.	240	mtr	66.00	15840.00
			Sub Total Cost =				4536800.00
II			FITTING & FIXTURE:-				
646	Non Sch		Supply, Installation, Testing, and commissioning of Exhaust fan of following size (dia) suitable to work on 230/250 volts, 50HZ complete with mounting frame and louvers in the existing opening, making good the damage, connections, etc as required. (Make-Usha/Havells/RR/Hallonix)				
			a) 250mm Dia PVC	60	nos	1,700.00	102,000.00
			b) 300 mm Dia Metal Industrial	12	nos	2,500.00	30,000.00
647	DSR-Sch	19.1	Supplying of 1200 mm sweep ceiling fan ,BEE 5star Rated, Brush Less direct current (BLDC) motor, class of Insulation: B , 3nos Blade, 30cm long Rod, 2nos canopies, shakel kit, safety rope, copper winding, Power factor not less than 0.9, service value (CMM/W) minimum 6.85 ,Air deliver minimum 215 CMM ,350 RPM (tolerance as per IS-2019). THD not less than 10% with Remote for speed control remaining all other accessories like safety pin, nut bolts, washer, temperature rise 75 degree C. max, insulation resistance more than 2-Megaohm suitable for single phase 230v, 50Hz AC supply ,earthing as per EIC of approved make including the cost of material ,labor T & P as required as EIC.	126	each	3000.00	378000.00

Sl. No.			Description	Qty	Unit	Rate	Amount
648	Non-Sch		Supply, Installation, Testing, and commissioning of 400mm sweep energy efficient Wall mounted fan complete with 1.5 sq.mm PVC insulated, copper conductor, single core cable etc including the cost of material, labor T & P as required as EIC.	1	each	2500.00	2500.00
649			Supply, Testing & commissioning of 1 no of 10 watt LED Lamp(White) as per EIC of approved make including the cost of material, labor T & P as required as EIC.	57	No.	210.00	11970.00
650	Non Sch		Supply, Testing & commissioning of Surface or wall mounting 1 x 20W LED tube light fitting (5700K) including 1 no. of 20watt LED luminaires as per EIC of approved make including the cost of material, labor T & P as required as EIC.	352	Each	730.00	256960.00
651	Non Sch		Supply, Testing & commissioning of Surface or wall mounting 1 x 10W LED tube light fitting (5700K) including 1 no. of 10watt LED luminaires as per EIC of approved make including the cost of material, labor T & P as required as EIC. .	274	Each	420.00	115080.00
652	Non Sch		Supply, Testing & commissioning of Surface or wall mounting 1 x 36W LED tube light fitting (5700K) including 1 no. of 36watt LED luminaires as per EIC of approved make including the cost of material, labor T & P as required as EIC. .	40	No.	1700.00	68,000.00
653	Non Sch		Supplying of surface mounted round/square White LED downlighter with pressure die cast aluminium housing & PMMA diffuser suitable for 12W LED fitting (4000K) included luminaires of approved make including the cost of material, labor T & P as required as EIC..	18	No.	1350.00	24,300.00
654			Supply of Recess mounted maximum 36 W 600mmX600mm high efficient LED luminaire with white powder coated rough aluminium extruded housing with polycarbonate diffuser for Uniform illumination and wider light distribution. Minimum 93 Lumens/Watt system efficacy; 36 W providing minimum 3065 lm system output. LED chip life of 50,000 burning hours at L70. IP 20, CCT 5700K, CRI> 80. Luminaire driver should be Isolated and multistage constant current constant voltage APFC type. Driver should be BIS registered with Input voltage range of 150V to 270V (nominal rated voltage – 240V) with minimum 4 KV surge protection, PF >0.95, THD <10% including with all, materials as required.	8	No.	4700.00	37,600.00
655			Supply, Testing & commissioning of Recess mounted LED Luminare including 36W LED(4'x1') fitting including the cost of labor & material T & P as required as EIC.	1	No.	3120.00	3120.00
656	Non Sch		Supply of Recess mounted Round LED Downlight with pressure die cast Aluminium housing and high transmissive PS diffuser with power consumption Maximum upto 12 W having system lumen output of Minimum 1200 Lumen. LED chip life of 50,000 burning hours at L70. The LED used shall have CCT of 5700K, CRI of 80 Ra. Luminaire driver should be Isolated and multistage constant current APFC type. Driver should be BIS registered with Input voltage range of 90V to 265V (nominal rated voltage – 240V) with minimum 2 KV surge protection, PF >0.90, THD <10%; IP 40; including with all, materials as required.	8	No.	1225.00	9,800.00

Sl. No.		Description	Qty	Unit	Rate	Amount
657	Non Sch	Supply, Testing & commissioning of wall mounting 1 x 10W LED wall mounted IP-65 bulk head / Outdoor wall light fitting including 10watt LED luminaires (5700K) as per EIC of approved make including the cost of material ,labor T & P as required as EIC..(Make- Wipro/Philips/Trilux/LT/Jaquar/Havells)	18	No.	1282.00	23076.00
		Sub Total Cost =				1062406.00
III		Data Networking,WIFI,CCTV,IP-PBX System				
658		Supply and laying of Cat6 4-pair 23AWG UTP Cable in the existing ISI marked PVC conduits for data and voiceincluding the cost of labor & material T & P as required as EIC.(Make: Tyco/ Legrand/ Digisol)	4,000	Mtr.	72.00	288,000.00
659		Supply, installation and commissioning of RJ-45Jack of Category 6 with Single-port British-style Face plate 86x86 mm with Curvature and Wall Mout Box I(G.I/PVC) , to be fixed in concealed manner in partition/wall by necessary bolts & nuts including the cost of labor & material T & P as required as EIC.(Make: Tyco/ Legrand/ Digisol)	40	No.	570.00	22,800.00
660		Supply and Installation of Cat6 24-port loaded, Modular Jack Panel having 24-port individually replaceable module including the cost of labor & material T & P as required as EIC.. (Make: Tyco/ Legrand/ Digisol)	4	No.	7860.00	31,440.00
661		Supply, installation of Cat6 UTP 24AWG LSZH Patch Cord as required including the cost of labor & material T & P as required as EIC.. (Make: Tyco-AMP/ Legrand/ Digisol)				
		For 1 mtr. Long	100	No.	245.00	24,500.00
		For 2 mtr. Long	100	No.	270.00	27,000.00
662		SITC of 27U 600/650D UL Listed Floor mount Rack with Front glass door with Cam lock, Rear mesh door with Cam lock and 3inch Castor Wheel included with 2 no 6/16 Amp Indian-Standard - 06 Socket - Single Pole / Screw Mountable / 16 Amp MCB / Alternating Current - 16 Amp 3 Pin Plug with Power Cable 2.5 sq.mm 3 meter Length, 4nos 1U Metal Cable manager with Plastic cable loops, 2nos CFM FAN set, 1no Monitor Tray - Ventilation - 495W - 375D and H/W screw920sets). Make: Valrack/Rittal/ APW	1	Nos	40000.00	40000.00
663-a		Supply and Installation of 24portt PoE 10/100/1000Mbps Managed Switch with Two Combo ports and minimum PoE power budget of 370W, Support IPv6 management, CLI/ WEB/ SNMP Management including 3years product warranty including the cost of labor & material T & P as required as EIC..(Make: Digisol/Ruijie/CISCO)(Make: Digisol/Ruijie/CISCO)	3	No.	48500.00	145,500.00
b		Supply and Installation of 24portt 10/100/1000Mbps Managed Switch with Two Combo ports including 3years product warranty including the cost of labor & material T & P as required as EIC..(Make: Digisol/Ruijie/CISCO)(Make: Digisol/Ruijie/CISCO)	2	No.	38100.00	76,200.00

Sl. No.			Description	Qty	Unit	Rate	Amount
664			Supply and Installation of Dual band 802.11ac Wave2 2x2 MU-MIMO indoor WiFi-6 AP with inbuilt Mobility Express image for adopting 100 AP as centralised Wireless Controller without any extra licence and hardware supporting Gigabit 802.11 af n at PoE interface and console port including the cost of labor & material T & P as required as EIC. (Make: Digisol/Ruijie/CISCO)	0	No.	17000.00	0.00
665			Termination & link testing of LAN cable at both the end including the cost of labor & material T & P as required as EIC.	200	No.	100.00	20,000.00
666			Supply and Installation of Indoor Dome IR Network Camera (1/2.7" CMOS sensor, Mini. Pixel of 2560*1920 or higher video quality, frame rate of Up To 25fps @ 4MP, H.265, H.264 & MJPEG video compression, 2.8mm Fixed lens, physical ICR filter of both day and night, 30mtr IR Distance, 120dB WDR, 3Streams Supported, WDR, 3D-DNR for noise reduction, BLC, ICR, EXIR, Audio In and Out, Alarm in and Out. IPv4/IPv6 network supported, IP67, IK10 rated for weatherproofing, ONVIF ver 2.2 or higher, PoE IEEE 802.3af (UL, FCC, CE, BIS certified.) including the cost of labor & material T & P as required as EIC. (Make- Honeywell/UNV/Milesight)	52	No	10500.00	546,000.00
667			Supply and Installation of Indoor Bullet IR Network Camera (1/2.7" CMOS sensor, Mini. Pixel of 2560*1920 or higher video quality, frame rate of Up To 25fps @ 4MP, H.265, H.264 & MJPEG video compression, 2.8mm Fixed lens, physical ICR filter of both day and night, 30mtr IR Distance, 120dB WDR, 3Streams Supported, WDR, 3D-DNR for noise reduction, BLC, ICR, EXIR, Audio In and Out, Alarm in and Out. IPv4/IPv6 network supported, IP67, IK10 rated for weatherproofing, ONVIF ver 2.2 or higher, PoE IEEE 802.3af (UL, FCC, CE, BIS certified.) including the cost of labor & material T & P as required as EIC. (Make- Honeywell/UNV/Milesight)	1	No	10500.00	10,500.00
668			Supply and Installation of 64CH 4 SATA NVR Support 12MP/8MP / 5MP / 4MP / 3MP / 1080P / 960P IP Adopt standard H.265 high profile compression format, With 4k Video Output, Compression Standard H.265, Network Access Bandwidth 320Mbps, HDD SATA × 8 (Upto 10TB Supported), 1-e-SATA And 2-way Audio RCA × 1, Local Output RCA × 1, USB 2.0 × 2 (one in the front panel and the other in the rear panel), USB 3.0 × 1 (rear panel) (UL, FCC, CE, BIS certified) including the cost of labor & material T & P as required as EIC. (Make- Honeywell/UNV/Hikvision)	1	Sets	107500.00	107,500.00
669			SITC of 4 TB Storage Capacity, including the cost of labor & material T & P as required as EIC. (Make: Segate/WD)	6	Sets	12400.00	74,400.00

Sl. No.		Description	Qty	Unit	Rate	Amount
670		Supply and Installation of 45" UHD (3,840 x 2,160) TV with 300 nits brightness,10W+10W Audio Output,Creston Connected®, NTP sync timer, BEACON, Embedded CM (contents manager), Soft AP, WiFi , Screen Share (Miracast), DIAL, Bluetooth Audio Playback,Hotel Mode , Welcome Screen (Splash Image), Insert Image, One Channel Map, IP Channel Manager, External Speaker Out , Remote jack pack, Moving Picture Playback, Auto Off / Sleep Timer,Smart Energy Saving, Motion Eye Care,USB Cloning, WOL, Interface : Set Side - HDMI In 3, USB 1, CI Slot, RF In, Digital Audio Out (Optical), RS-232C, RJ45 , External Speaker Out,Power Consumption(Typ.)-145 W, with 3years Warranty including the cost of labor & material T & P as required as EIC. Make: Samsung/ LG /SONY	1	No	70000.00	70,000.00
671		SITC of IP PBX System support up to 500 users and minimum 50 concurrent calls, integrated 1 PSTN trunk FXO ports through External Gateway, 1 analog telephone FXS ports with lifeline capability and up to 50 SIP trunk accounts, Gigabit network ports with Integrates PoE, USB, SD card, Supports up to a 5-level IVR (Interactive Voice Response), Supports any SIP video endpoint that uses the H.264, H.263 or H.263+ codecs. (Make: Grandstream/NEC/Matrix)	1	NOS	46500.00	46,500.00
672		Supply & fixing of IP Based PoE Phone, 2 SIP accounts, 2 line keys, 3-way conferencing, 3 XML programmable context-sensitive soft keys, Dual-switched 10/100 mbps ports, integrated PoE, HD audio on speakerphone and handset. Make: Grandstream/NEC/Mitel	18	nos	6,200.00	111,600.00
		Sub Total Cost =				1641940.00
IV		FIRE FIGHTING TERRACE PUMPS, PIPING, VALVE, & ACCESSORIES & FIRE DETECTION SYSTEM :				
673		Electrical Motor Driven Terrace Pump Location - Terrace:				-
		450 lpm 35 m Head				
		i) Supplying, installing, testing & commissioning of fire authority approved electrically driven Terrace pump suitable for automatic/manual operation consisting of the following:				-
		ii) Horizontal centrifugal end suction type fire pump capable of delivering 450 LPM against a total head of 35 M while running at 2900 r.p.m. complete with burdon type pressure gauge with Gun metal cocks/ valves etc. on the delivery side, including bypass arrangement. Gland arrangement shall be included.				-
		iii) Squirrel cage, TEFC induction motor suitable for 415 ± 6%V, 3 phase, 50 Hz A.C. supply of suitable H.P. for the above pump running at 2900 r.p.m. conforming to IP 55 pralecting and class 'H' insulation. The motor shall be conform to IS:325-1978 (upto date)				-
		iv) Common bed plate for mounting pump & motor of requisite strength manufactured out of M.S. channel as per manufacturer's recommendation.				-
		v) Antivibration (Cushy foot) heavy duty mounting pads as per requirement.				-
		vi) Coupling and coupling guard for direct coupling of motor and pump.				-
		vii) Terrace Fire Pump				-
		Flow rate : 450 LPM (27.00 m3/hr)				-
		Pumping Head : 35 M				-
		Motor KW : 7.5 KW (Approx) or As per manufacturer recommendation	1	Set	74,041.00	74,041.00

Sl. No.		Description	Qty	Unit	Rate	Amount
674		Providing, laying, testing & commissioning of 'C' class heavy duty MS pipe conforming to IS 3589/IS 1239 including Welding, fittings like elbows, tees, flanges, tapers, nuts bolts, gaskets etc. and fixing the pipe on the wall/ceiling with suitable clamp/support frame and painting with two or more coats of synthetic enamel paint of required shade complete as required :				-
a)		80 mm dia.	50	RM	1,208.00	60,400.00
b)		100 mm dia.	60	RM	1,500.00	90,000.00
c)		25 mm dia.	20	RM	485.00	9,700.00
675		Providing, fitting & fixing of following size cast iron double flanged slim seal wafer type Butterfly valves with EPDM rubber lined with lever operated as per IS-13095 with ISI mark of pressure rating PN-1.60 including fixing the same with supply of required jointing materials like rubber insertion, MS nuts & bolts, paint etc. and testing the joints with required water pressure for all floors etc. all complete as per specification & direction of E.I.C. Make-KIRLOSKAR/IVC/ZOLOTO/KARTAR/HONEYWELL				-
a)		80 mm dia	10	Each	4,036.00	40,360.00
b)		100 mm dia	2	Each	2,953.00	5,906.00
676		Providing, fitting & fixing of following size cast iron double flanged Y type strainer with SS 304 perforated screen confirming to IS 1538 with ISI mark of pressure rating PN-1.60 including fixing the same with supply of required jointing materials like rubber insertion, MS nuts & bolts, paint etc. and testing the joints with required water pressure & all complete as per specification & direction of E.I.C. Make-KIRLOSKAR/IVC/ZOLOTO/VENUS/HONEYWELL				-
a)		80 mm dia	10	Each	4,500.00	45,000.00
677		Providing, fixing, testing & commissioning of C.I. dual plate Non-return valve [PN 1.6 Rating (10kg/cm ²) conforming to IS 778 and test pressure not less than 15 kg/cm ² , complete 2 nos. matching flanges, rubber insertion, with nuts, bolts and washers etc of following sizes as per the instruction of EIC . Make-KIRLOSKAR/IVC/ZOLOTO/KARTAR/HONEYWELL				-
a)		80 mm dia	2	Each	6,576.00	13,152.00
b)		40 mm dia	2	Each	4,956.00	9,912.00
678		SITC of Gun metal chrome finished Ball valves with fittings of screwed end type.				
679		MCC Panel				
		Supply, installation, testing and commissioning of Wall mounted sectionalised, front operated top entry dust and vermin proof M.V. Panel Boards suitable for operation at 415V, 3 phase, 4 wire, 50Hz distribution system fabricated out of 2.0 mm thick CRCA sheet, insulated busbar with heat shrinkable PVC sleeve, base channel, complete with all accessories as required. Make:-LEGRAND, L&T, ABB or equivalent				
		One (1)- 63 Amp, 10 KA,4P MCB with 3 Nos Phase indicating lamps with control fuse/ MCB, Digital Voltmeter with selector switch suitable for motor duty.				
		One (1) - DOL with O/L and Single Phasing Preventor suitable for 7.5 HP motor. ON/OFF indication lamps, Auto manual switch and ON/OFF push button.				
		One (1) - Set of Auxilliary relay for automatic operation through pressure switch.				
		Panel As Above	1	Set	66,913.00	66,913.00

Sl. No.		Description	Qty	Unit	Rate	Amount
680		Supply, laying, connecting, testing & commissioning of following size of 1.1 kv grade multicore aluminium/ copper conductor XLPE insulated PVC sheathed armoured cable as per IS: 7098:1988 (Part-I) with upto date amendments etc. complete as required. Tagging on both the ends will be done with aluminium tags etc. complete as required.(Quantities as per site requirement shall be finally estimated & executed accordingly with prior approval.)				
a)		3 core x 25 sqmm Al. Ar. XLPE Cable (Fire Fighting Panel to Jocky Pump Set & Terrace Pump Set)	45	RM	464.00	20,880.00
b)		4 core x 2.5 Sq mm copper conductor unarmoured/armoured control cable.	24	RM	454.00	10,896.00
681		Supplying and making indoor end termination with brass compression gland (Heavy duty) and suitable copper / aluminium lugs for following size of XLPE insulated PVC sheathed copper/ aluminium conductor armoured/ unarmoured cable of 1.1 KV grade including cost of ferrules, cable sockets, insulation tape & other accessories etc. complete as required.				-
a)		3 core x 25 sqmm Al. Lugs	4	Set	217.00	868.00
b)		3 core x 2.5 Sq mm Copper Lugs	10	Set	165.00	1,650.00
682		Providing and fixing following size of GI strips/ GI wire etc. on surface or in recess for connections, including GI clamps etc. as required.				-
a)		25 mm x 5 mm GI strip	45	RM	148.00	6,660.00
b)		6 SWG dia G.I. wire	45	RM	39.00	1,755.00
683		Providing, fixing, testing & commissioning of Stainless steel single headed ISI marked oblique pattern hydrant landing valves with 80mm dia flanged inlet & 63 mm dia instantaneous type female outlet complete with stainless steel cap and GI chain, twist release type plug and all accessories as per IS : 5290 -1993 (Type 'A') including fixing with anchor fasteners and flanged tapping from wet riser all complete as per specification & direction of EIC.	0	Each	5,107.00	-
684		Providing, fixing, testing & commissioning of 15 m/30 m long non-perlocating, rubber reinforced lined fire hose pipe (as per IS : 636-1979, Type A) of 63 mm dia and length as described below. The hose shall be rated for burst pressure of 35.7 Kg/sqcm. Hose shall be complete with ISI marked SS male & female coupling (IS:903) bound & rivetted to hose pipe with copper rivets & 1.5 mm copper wire as per the instruction of EIC. (Internal fire hydrant)	0	Each	3,863.00	-
685		Providing, fixing, testing & commissioning of 63 mm dia Instantaneous Pattern (male) Stainless Steel short size branch pipe with nozzle of 20 mm nominal bore outlet as per IS:903 : 1993 suitable to fit with standard instantaneous type 63mm dia coupling ISI marked (IS:903:1993) complete.	0	Each	1,421.00	-
686		Supply,Installation,Testing & Commissioning of Swinging pattern wall fixing first aid hose reel made from MS sheet ,spray painted in Post office Red, confirming IS: 884 and moving parts complete with:				
		a) MS fabricated hose reel drum to accommodate 20 mm dia 36 mtr long hose with fixing bracket.				
		b) 20 mm dia X 30 Mtr long water hose with ABS(Plastic) shut-off nozzle as per IS: 444/IS: 12585 Type-I.				
		c) 25 mm dia GM Ball Valve at inlet side of the hose reel drum as required.	10	Each	6,973.00	69,730.00

Sl. No.		Description	Qty	Unit	Rate	Amount
687		Providing supply & fixing of weather proof MS Hose Box for of suitable size(750X600X250mm) to accomodate 2 nos. of 15/ 1 no of 30 mtr long fire hose and a branch pipe, wall mounted type as per direction of Engineer-in-charge.	10	Each	2,644.00	26,440.00
688		Providing, fixing, testing & commissioning of ball valve with SS ball suitable for test pressure of not less than 15 kg / sq.cm of the following size with nuts, bolts, gaskets, necessary accessories, etc as required.				
a)		25 mm dia	2	Each	1,803.00	3,606.00
689		Providing level controllers, PRESURE SWITCHES , wiring, cabling from level controller / pressure switch to panel etc. complete as required to operated the system automatic/manual. Pump shall be protected against running dry. (Indfoss/Danfoss) IPS-100	2	Each	3890.00	7780.00
690		Supply,Installation,Testing & Commissioning of Pressure gauge of 0-16 Kg/sq.cm. range with cut-off bronze ball valves below of suitable size with all accessories as per direction of Engineer-in-charge.	2	Each	1140.00	2280.00
		Sub-Total:				567,929.00
		Supply, Installation, Testing and Commissioning of Conventional Fire Detection and Alarm System				
		CONTROL EQUIPMENTS:				
691		S/F Fire alarm Control panel with 10 zone capacity with battery back up. The panel would be modular, decentralized, with The panel shall be consisting with LCD display andh. with 12V battery back up for 30 Minutes and battery charger in built as required . Make: Honeywell/ASES (Vds approved)	1	No.	19,800.00	19,800.00
		DETECTORS & OTHER MODULES (MAKE - Honeywell/ASES/System Sensor)				
692		Supplying and fixing conventional Manual Call Point with MS body and glass to be supplied with hammer and chain with testing and commissiong etc as reqd.	10	Nos.	415.00	4,150.00
693		Supplying, installation, testing & commissioning of smoke detector with builtin LED and mounting base complete with all connections etc. as required.	106	Nos.	1,141.00	120,946.00
694		Supplying, Installing, testing and commissioning of Horn wall mounted type rated at 82 dBA @ 3m for Audible annunciation and 75cd flashintg at 1 Hz for visual indication.	10	Nos.	690.00	6,900.00
695		Supplying and laying of 2x1.5 sq.mm. ISI marked copper armoured conductor cable with gland scoket and other wiring accessories on the existing surface/tray/shaft etc as reqd	1500	Rmt.	129.00	193,500.00
696		S/F 4.5 kg CO ₂ type fire Extinguisher with maounting arrangement as reqd.	5	Nos.	7,800.00	39,000.00
697		S/F 6.0 kg ABC type fire Extinguisher with maounting arrangement as reqd.	34	Nos.	4,650.00	158,100.00

Sl. No.		Description	Qty	Unit	Rate	Amount
		Sub-Total:				542,396.00
		G-Total:				1,110,325.00
V		AIRCONDITIONING SYSTEM:-				
698		Supplying of Hi Wall type split air-conditioning units suitable for operation on 230±10% volt, 50 Hz, 1 phase power supply, with air-cooled evaporator with coil, fan, and fan motor, air-cooled condenser with hermetically sealed rotary / scroll compressor/Gas/Remote/Control Cable etc .(Make-Daikin/LG/Mitsubishi Electri/Hitachi)				
a		1.0 TR (Invereter - 5*)	6	Nos.	53325.00	319950.00
b		1.5 TR (Invereter - 5*)	2	Nos.	60480.00	120960.00
c		2.0 TR (Invereter - 5*)	3	Nos.	82080.00	246240.00
699		Supply of Inverter 3-Star, 1-Ph wiring Cassette units including compressor, condenser, supports, with cordless remote controller, etc as per the specifications of the following capacities. Cassette unit shall be 4-way. Cassette units shall have supply and return air grill and have drain pump /Gas/Remote/Control Cable etc.(Make-Daikin/LG/Mitsubishi Electri/Hitachi)				
a		2.5 TR	0	Nos	122,000.00	0.00
		INSTALLATION ,TESTING & COMMISSIONING:-				
700		Testing,Commissioning of Hi-Wall Unit	8	Nos.	2025.00	16200.00
701		Testing and Commissioning of Cassette air conditioners	0	Nos	4,725.00	0.00
702		Supplay, Installation, Testing & Commissioning of the Copper refrigerant pipes with 13mm/9mm with nitrile rubber tube insulation & control cable for Hi-wall Unit	90	RFT	391.00	35190.00
703		SITC of Soft copper piping for Cassette ac units , clamping, fittings, etc. Both the pipelines shall be insulated with nitrile tubular insulation, shall be of Class "O". Exposed piping insulation .	0	Rmt	1,728.00	0.00
704		SITC of PVC drain pipes with 6 mm nitrile rubber insulations complete with supports as per drawings and specifications of below sizes.including all cost of labour ,material, conveyance,taxes (excluding GST) ,T & P etc. complete and as per the directions of Engineer-in-charge.				
a		25mm inner dia(for Split)	15	Rmt	391.00	5865.00
b		32mm inner dia(for Cassettet)	0	Rmt	446.00	0.00
705		Supply, Installation, Testing and Commissioning of Flexible drain pipe	40	RFT	72.00	2880.00
706		SITC of FRLS PVC insulated copper conductor, PVC sheathed Aluminum armoured control cable of 1.1 KV grade confirming to IS:7098 Part-I ISI marked. including all cost of labour ,material, conveyance,taxes (excluding GST) ,T & P etc. complete and as per the directions of Engineer-in-charge.				
		4C x 1.5 sq. mm	300.00	Rmt	244.00	73200.00

Sl. No.		Description	Qty	Unit	Rate	Amount
707		Making grooves in brick walls vertically and horizontally to the required depth and width for fixing of copper and drain pipes, for MS Brackets and filling the grooves with cement mortar (1:4) to bring the surface to original level including the cost of materials, curing and conveyance of materials etc all complete as per the direction of Engineer In Charge.	6	Nos.	1500.00	9000.00
708		Supply of ODU Bracket for AC, vibration pads	6.00	Nos	1,500.00	9000.00
		Sub Total =				838,485.00
VI		LIGHTNING PROTECTION:-				
709-a		SITC of Active Lightninging arrestor of Class A for building protection .It shall work on early streamer Emission principle & shall be made of stain less steel with a ΔT of 60 micro sec(OPR 45)including Mounting Mast-2 MTR & 3 MTR with guywire & Base Plate with A non reset table type counter(FLASH COUNTER) shall also be supplied to count the number of lighting occurrences.including all other materials & . as directed by site-incharge.	1	Nos	165,575.00	165,575.00
b		Providing and fixing 25 mm X 6 mm CU. strip in on surface or in recess for connection etc as reqd	90	mtr	895.00	80,550.00
c		Chemical Earthing with the material to construct a maintenance Free Ring earth consisting of copper coated steel rods, compression couplers, RDSO approved Earth enhancing compound & Exothermic welding as per the OEM specification and providing masonry enclosure with cover plate having locking arrangement . This includes electrodes- 3nos, Couplers - 2 Nos., Earth Enhancing compound of bags - 3 Nos.including all other materials & . as directed by site-incharge	2	Set	17,500.00	35,000.00
		Sub Total Cost =				281,125.00
VII		(SH: EXTERNAL ELECTRICAL WORK WITH FITTINGS.				
710		Supplying the following Size PVC/ XLPE insulated PVC sheathed Aluminium unarmoured cable of 1.1 kV as per IS 1554 etc as reqd.				
		a- 3 core 6 sq.mm (Post Top Lights)	780	mtr	168.00	131040.00
		b- 4 core 10 sq.mm -	5	mtr	243.00	1215.00
		b- 4 core 16 sq.mm -	40	mtr	291.00	11640.00
711		Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FR PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required				
a		2 X 1.5 sq. mm + 1 X 1.5 sq. mm earth wire for external Light connection.	30	Metre	135.00	4050.00
b		2 X 2.5 sq. mm + 1 X 1.5 sq. mm earth wire for external Light connection.	30	Metre	149.00	4470.00
712		Laying and fixing of one number .following size cable direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc as required. ISI mark Aluminum/copper conductor, XLPE insulated cable, FRLS PVC, galvanized steel flat strip armoured and overall PVC sheathed cable conforming to IS: 7098 (Part - I) with latest amendments & complete all as required				
a		Upto 25 sq. mm	800	mtr	134.00	107200.00
b		Above 25 sq. mm and upto 120 sq. mm	0	mtr	150.00	0.00

Sl. No.		Description	Qty	Unit	Rate	Amount
713		Laying and fixing of one number of following size of cable on wall surface as required, ISI mark Aluminum/copper conductor, XLPE insulated cable, FRLS PVC, galvanized steel flat strip armoured and overall PVC sheathed cable conforming to IS: 7098 (Part - I) with latest amendments & complete all as required				
a		25 sq. mm and upto 120 sq. mm	25	mtr	133.00	3325.00
714		Supplying and making end termination with brass compression gland and aluminium lugs/copper for following size of PVC insulated and PVC sheathed / XLPE aluminium/copper conductor cable of 1.1 KV grade as required.				
a		a- 3Cx6 & 4 core 10 sq.mm	100	nos	186.00	18600.00
b		a- 4 core 16 sq.mm	2	nos	202.00	404.00
715		Panels . Design, supply, installation, testing and commisioning of cubicle main panel for indoor/Outdoor installation of wether prrof design as per IP 44 class, made out of 2 mm thick CRCA sheet as per the drawing with cubicle type inernal arrangement of 1.6 mm thick sheet and with front & back opening system suitable for mounting following switch gears, busbars, metering unit, including painting with powder coated paint of approved colour and shed with earthing the body etc as reqd including all other materials & . as directed by site-incharge.. (drawing shall be approved by engineer -in charge)				
1.1		<u>OUTDOOR IB (Outdoor, Floorl mounted)</u> <u>Incommer:-</u> i) 01 no. 63A., 4P Isolator <u>Bus bar:-</u> 04 nos. 100A. Al. bus bar duly sleeved. <u>Outgoing:-</u> <u>i) 09 nos. 10/16A SP MCB,02 nos. 32A FP MCB</u> <u>Instrument:-</u> 03 nos. phase indicating lamp with <u>control fuse.(Duly factory wired)</u>	1	Set	25000.00	25000.00
716-a		Providing and laying in position cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) in foundation of pump, DG set,Street Light,garden Light etc including form work etc as required.	5	cum	6,190.00	30950.00
b		Providing and laying in position cement concrete 1:3:6 (1 cement : 2 coarse sand : 6 graded stone aggregate 40 mm nominal size) in foundation of pump, DG set,Street Light,garden Light etc including form work etc as required	3	cum	5,423.00	16269.00
		<u>EARTHING:-</u>				
717		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.	2	Each	5241.00	10482.00
718		Supplying and laying 25 mm x 5 mm G.I earth strip ISI marked at 0.5 meter below grond level as strip earth electrode including soldering etc. as required	30	mtr	66.00	1980.00

Sl. No.		Description	Qty	Unit	Rate	Amount
719		Supply, delivery & installation of GI coil earthing made out of 8 swg GI wire closely wound in shape of a helical coil of 50mm diameter with 115 numbers of turns including excavation of earthpit of size 800x 800x 1500mm in all kinds of soil, back filling the excavated pit with alternate layers of salt, charcoal around the coil with a diameter of 300mm upto 1000mm and balance by good quality soil, end termination complete as required.	12	NO	750.00	9000.00
		FITTING & FIXTURE--:				
720		Supply inspection testing & Commissioning Mild Steel Pole, Mild Steel Bracket, Cast Aluminum lighting fixture, Stainless screws, Corrosion & UV ray resistant coating.. Of 7000mm height with single Arm of 1000 mm with 1 no 40/45 wt Street Light along with J Bolts. The pole should have 6 Amps 10 KA SP MCB connectors suitable for 6 / 16 sqmm termination complete with DIN bar, shooting Links, end lock etc as required and 3 x 4 sqmm double PVC insulated summer sable copper conductor cable with junction box to the luminaries completely including terminations with insulated copper lug etc. (Make-Homdec Model No - HL-2843Single Arm /SS make of K-LITE-KP-7287 P1/ HALONIX /PANASONIC/K-LITE/HAVELLS/BAJAJ)	8	nos	35755.00	286040.00
721		Supply inspection testing & Commissioning Mild Steel Pole, Mild Steel Bracket, Cast Aluminum lighting fixture, Stainless screws, Corrosion & UV ray resistant coating.. Of 7000mm height with double Arm of 1000 mm in each side with 2 Nos. of 40/45 wt Street Light along with J Bolts. The pole should have 6 Amps 10 KA SP MCB connectors suitable for 6 / 16 sqmm termination complete with DIN bar, shooting Links, end lock etc as required and 3 x 4 sqmm double PVC insulated summer sable copper conductor cable with junction box to the luminaries completely including terminations with insulated copper lug etc. (Make-Homdec Model No - HL-2843Double Arm /SS make of K-LITE-KP-7287 P1 /HALONIX /PANASONIC/K-LITE/HAVELLS/BAJAJ)	4	nos	47211.00	188844.00
722		Supply, Installation, Testing & commissioning of 3W LED IP-65 outdoor Foot/Floor washer light as per EIC of approved make including with all,, materials & labour.(Make-Homdec /SS make of /HALONIX /PANASONIC/HAVELLS/K-LITE/WIPRO)	4	No.	2272.00	9088.00

Sl. No.		Description	Qty	Unit	Rate	Amount
723		Supply, Installation, Testing & commissioning of 16M high mast shaft in two section suitable for 39 m/sec wind speed along with head frame, luminaires carriage suitable for 08 luminaires in symmetrical arrangement and other accessories manufactured in factory with raising lowering system comprising double drum winch, 5mm diameter SS wire rope, trailing cable, connector, integral power tool motor, manual handle, junction box, lightning finial. & foundation bolts manufactured from special steel along with nuts, washers, anchor plate and common template including LED floodlight luminaires 8nos X 200 W LED with LED type single dome aviation obstruction light. Also with outdoor stand mounted feeder pillar with 32A TPN MCB incomer, single dial time switch, 25A TP contactor for the automatic switching of luminaires, power tool control with 2 no 9A contactors and raise lower push button, Incoming 35 sq. mm and out going 16 & 2.5 sq. mm terminals as per EIC of approved make including with all,, materials & labour. (Make-Homdec /SS make of /HALONIX /PANASONIC/HAVELLS/K-LITE/BAJAJ)	0	No.	402658.00	0.00
724		Supply, Installation, Testing & commissioning of Flood light with aluminium die cast housing luminaire with unique lens system for uniform illumination and toughened glass with silicon gasket for IP-66 including 150 watt LED luminaires as per EIC of approved make including with all,, materials & labour.. (Make WIPRO-Model-LF20-192-060-57-G2//SS make of Jaquar-LFDLSM150XC /HALONIX /PANASONIC/HAVELLS/K-LITE/WIPRO)	0	No.	17826.00	0.00
725		Supply, Installation, Testing & commissioning of Post Top light with Mild steel Base Plate & pole, Cast Aluminium Embellishment, Stainless steel and Aluminium Lighting fixture, Silicon & EPDM rubber gasket, stainless steel screw, PMMA diffuser, corrosion and U.V ray resistant coating. Height 4075 mm IP-66 including 30 watt LED bulb as per EIC of approved make including with all,, materials & labour.. (Make-Homdec -HLMSP-268-2387 /SS make of K-LITES -KP-4327 P11/HAVELLS/PANASONIC/WIPRO)	8	No.	42281.00	338248.00
726		SITC of 2'-0" height designed Bollard light with 8W LED lamp of (reputed make) with holder, 240V Single phase AC complete with Lamp, RCC Base & all other levies etc. as required as per EIC. (Make JAQUAR/ Philips /CG/ Wipro/ HAVELLS/K-LITE)	8	No.	6500.00	52000.00
727		Supply, Installation, Testing & commissioning of IP-65, LED Garden Spike Light including 1 no. of 6 watt LED luminaires & Base with Brick Masonry work (200x200x200)mm for the above fitting as per EIC of approved make including with all,, materials & labour.. (Make JAQUAR/ Philips /CG/ Wipro/ HAVELLS/K-LITE)	15	No.	5734.00	86010

Sl. No.		Description	Qty	Unit	Rate	Amount
728		Supply, Installation, Testing & commissioning of elegant look 40 W AIO Solar street lights having 100 Wp highly efficient Monocrystalline PV module for faster charging of battery in adverse weather condition & 36 Ah LiFePo4 Battery (Lithium Ferrophosphate) Battery (BIS approved) which will be kept inside the luminaire house (Theft retardant type), MPPT charge controller & PIR Sensor. The initial lumen output of AIO street light is 6400 lumen in CCT 6500K (+/-500K) as per LM 79 report of third party NABL lab. The LED chip will be of OSRAM/NISCHIA/CREE only. The complete system & BMS has been designed in such a way to provide 2 days (24 Hrs) back up with dimming mode by activating PIR sensor and battery is completely theft retardant and maintenance free. The luminaire is having IP 65 protection for critical component like (LED compartment, Driver compartment & Battery) and is as per IP test report of third party NABL lab. The AIO street light is having IK 07 (as per the test report of third party NABL lab). The luminaire is having the provision the tiltable/ adjustable mounting bracket to mount it on the top of the octagonal pole directly. (Warranty on the complete AIO street lights will be 5 years.) INCULding 7 mtr octagonal pole having bottom dia of 130 mm A/F and top dia of 70 mm A/F. made up from 4 mm thick sheet and Base plate. The octagonal pole will be supplied along with 4 nos. J type foundation bolts. The Octagonal pole shall have no door opening including with all,, materials & labour. (Make-PANASONIC /SS make of /HALONIX /SURYA/HAVELLS/WIPRO) .	0	No.	79673.00	0
		Sub Total Cost =				1335855.00
VIII		(SH: TRANSFORMER ,DP & DG.				
729		Supply, installtion, testing, commissiiong of the following capacity 11 /0.433 KV, 50 Hz, 3phase, Oil cooled transformer suitable for out door type installation on plinth, with first filling of oil and with LV cable end box, fitted with off load tap changer, HV indoor type isolaor/ load break switch, HT fuse, HV link Chamber, provision for LT MCCB with IP54 class enclosure and as per detailed specification attached as per IS-				
		a) 100 kVA, 11/0.433 KV, Copper Wound Level-II (+5% to -10%) with off load tap changer	1	nos	365,800.00	365800.00
730		SITC of 2P structure with RS joist pole 11 mtr length & all other accessories as required for installation of 1nos 100KVA Transformer including 1 Sets of 200A AB Switch, HG Fuse, LA(5KA), Insulators (Disc/Pin) as required, earthings (Neutral with copper Plate & Body, with GI plate) with chamber, danger Board, Fire Bucket, Hand Gloves, fencing as per approve drawing with 6' gate, spreading 40mm gravells upto 100mm height, Isolator Panel including all civil works as required size ,including Liosioning & inspection for both HT & LT side as per EIC & all other materials & labour as required AS per EIC or TPCODL).	1	job	450000.00	450000.00
731		Construction of OH line of using 70mm2 AAAC conductor including all other materials & labour as required as per EIC. (1SPAN 50MTR MAX)	8	span	75000.00	600000.00
732		Supply ,Installation ,Testing & commionsiong of ,82.5KVA, 415V, 50Hz DG Set with Alternator, mounted on a common base frame, with Digital Controller , Sub-base Fuel Tank, inbuilt Anti-Vibration mounts, Circuit Breaker & CPCB II approved Acoustic Enclosure ,control cable, DG Base with inbuilt or separate auto start & stop Panel as per company specified switchgears. MAKE	1	set	950000.00	950000.00
		Sub Total Cost =				2365800.00

Sl. No.			Description	Qty	Unit	Rate	Amount
IX			SMART AUTOMATION.				13,000,000.00