



WAPCOS

TENDER DOCUMENT FOR

Construction of Tamarind Processing Unit in Rayagada, Odisha

**TENDER NO.:
WAP/INFSIV/OD/TDCCOL/2025/18
Dated 02.12.2025**

**Project Manager (Odisha)
WAPCOS Limited**

(A Govt. of India Undertaking)

Office of Project Manager (ODISHA)

**Plot No: 369/4305, 1st Floor and 2nd Floor, Ekamra Kanan Road,
Jayadev Vihar, Bhubaneswar, Odisha-751013**

Contact No.: +91-9652321429, wapcos_orissa@yahoo.co.in

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NOTICE INVITING TENDER (NIT)

NOTICE INVITING TENDER (NIT)

TENDER NO: WAP/INFSIV/OD/TDCCOL/2025/18

02.12.2025

WAPCOS Limited (A Govt. of India Undertaking), for and behalf of Odisha State TDCCOL under ST SC Department, invites “**Online Electronic Tenders**” on “**Percentage Rate Mode**” from experienced and competent bidders, meeting prescribed qualifying criteria as mentioned in tender document.

1.	Name of Work / Project	: “Construction of Tamarind Processing Unit at Rayagada District”
2.	Site / Location	: Rayagada, Odisha
3.	Website for viewing Tender, Corrigendum/Addendum, if any.	: www.etenders.gov.in/eprocure or www.wapcos.co.in
4.	Website for Registration/ uploading of Tender	: www.etenders.gov.in/eprocure
5.	Estimated Cost of Work	: ₹ 12,05,66,675/- excluding GST
6.	Cost of Tender Document	: ₹ 10,000/- (Rupees Ten Thousand) in form of a Demand Draft in favor of WAPCOS Limited payable at Gurugram
7.	Bid Security	: Bidders shall submit a ‘Bid Security’ of 2% of Estimated Cost i.e. Rs. 24,11,400/- (Rupees Twenty-Four Lakhs Eleven Thousand and Four Hundred Only) in the form of DD/BG/Insurance Surety Bonds in favour of “WAPCOS Limited” payable at Gurugram issued by a Scheduled/Nationalized bank as per FORM J. Bid Security shall be valid for 240 days. SFMS Confirmation of BG is compulsory. A copy of SFMS Confirmation delivery message must be attached along with Bank Guarantee. Below are the details for SFMS: Indian Overseas Bank, NHB Gurgaon, Branch Code-1935 IFSC code: IOBA0001935.
9.	Validity of Bid/Tender	180 Days
10.	Project Completion Period	12 Months from the date of award plus Defect Liability Period of 2 year after the completion.
11.	Pre-Bid Meeting (Online/Offline)	: The bidders who are interested in attending the pre-bid meeting may send their contact details viz. organization name, Name of the official, email address, mobile number etc. to wapcos_orissa@yahoo.co.in at least one working day prior to the pre-bid meeting. The link to attend the Pre-Bid Meeting will be communicated through email to the interested bidders. Bidder can also physically participate in pre bid meeting.

12	Date of Pre Bid Meeting	11.12.2025, 3.00 PM (After 8 Day of Tender Floating Date)
13.	Offline Submission of Technical document, Tender Fees, etc. as detail in Tender for bidders.	23.12.2025, 11.00 AM (On 21st Day) Office of Project Manager (Odisha) Plot No: 369/4305, 1st Floor and 2nd Floor, Ekamra Kanan Road, Jayadev Vihar, Bhubaneswar, Odisha-751013 Contact No.: +91-9652321429, wapcos_orissa@yahoo.co.in
14.	Last date & time for online submission of Technical & Financial Bid	: 23.12.2025, 11.30 AM (On 21st Day)
15.	Online opening of Technical Bid	: 24.12.2025, 11.30 AM (On 22nd Day)
16.	Online opening of Financial Bid	: To be intimated to Technical Qualified Bidders.
17.	WAPCOS Communication address during Tendering and execution of works	: Office of Project Manager (ODISHA) Plot No: 369/4305, 1st Floor and 2nd Floor, Ekamra Kanan Road, Jayadev Vihar, Bhubaneswar, Odisha-751013 Contact No.: +91-9652321429, wapcos_orissa@yahoo.co.in
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 purpose of this NIT is to provide interested parties 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/ 2013, Proprietorship Firm/ Partnership Firm.
- 1.2 Principal Employer/Owner/Client means of Odisha State ST & SC Development, M&BCW Department Shall include their Legal representatives, nominees, employees and Officials.
- 1.3 Employer shall mean “WAPCOS Limited”, A Government of India undertaking- Ministry of Jal Shakti, for execution of the Work / Project and WAPCOS is working as Executing agency on behalf of Principal Employer/Owner/Client
- 1.4 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.
- 1.5 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 its Bid and will not be bound to accept the lowest or any other tender.
- 1.6 No reimbursement of cost of any type or on any account will be paid to persons or entities submitting their bid.
- 1.7 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.
- 1.8 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.
- 1.9 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 19.07.2024 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%

**For and on behalf of WAPCOS LIMITED
Project Manager
ODISHA
WAPCOS Limited**

SECTION- I

INSTRUCTIONS TO BIDDER

SECTION- I

INSTRUCTIONS TO BIDDER

1.0 SPECIAL INSTRUCTIONS TO BIDDERS FOR E-TENDERING

1.1 GENERAL

Submission of Online Bids is mandatory for this tender. E-Tendering is a methodology for conducting Public Procurement in a transparent and secured manner. For conducting electronic tendering, bidders shall use the portal www.etenders.gov.in/eprocure. Tender is invited in Single Stage -Two Envelope system, one technical bid and second as financial bid. Accordingly, bidder is directed to make all formalities and registration on www.etenders.gov.in/eprocure website and submit the technical bid and financial bid.

The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submit their bids online on the CPP Portal.

More information useful for submitting online bids on the CPP Portal may be obtained at: <https://etenders.gov.in/eprocure/app>.

1.2 REGISTRATION

- 1) Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (URL: <https://etenders.gov.in/eprocure/app>) by clicking on the link “Online bidder Enrollment” on the CPP 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 CPP Portal.
- 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 into the site through the secured log-in by entering their user ID / password and the password of the DSC / e-Token.

1.3 SEARCHING FOR TENDER DOCUMENTS

- 1) There are various search options built in the CPP Portal, 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 CPP Portal.
- 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 CPP Portal 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.

1.4 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.

1.5 SUBMISSION OF BIDS

- 1) *Please uninstall any Java version if installed already. Then go to this link <https://eprocure.gov.in/cppp/jre-windows-i586.exe> and download this prescribed version of java for this portal.*
- 2) Bidder should log into the site well in advance for bid submission so that they can upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
- 3) Bidder should log into the site well in advance for bid submission so that they can upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
- 4) The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
- 5) Bidder has to select the payment option as “offline” to pay the tender fee as applicable and enter details of the instrument.
- 6) Bidder should prepare the Bid Security as per the instructions specified in the tender document. The original should be posted/couriered/given in person to the concerned official, latest by the last date of bid submission or as specified in the tender documents. The details of the DD/any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise, the uploaded bid will be rejected.
- 7) Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BoQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BoQ file, open it and complete the white coloured (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BoQ file is found to be modified by the bidder, the bid will be rejected.
- 8) The server time (which is displayed on the bidders’ dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
- 9) All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128 bit encryption technology. Data storage encryption of sensitive fields is done. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid opener’s public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 10) The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 11) Upon the successful and timely submission of bids (i.e. after Clicking “Freeze Bid Submission” in the portal), the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
- 12) The bid summary has to be printed and kept as an acknowledgement of the submission of the bid. This acknowledgement may be used as an entry pass for any bid opening meetings.

1.6 ASSISTANCE TO BIDDERS

- 1) Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.
- 2) Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk.

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

International Bidders are requested to prefix +91 as country code

E-Mail Support: For any Issues or Clarifications relating to the published tenders, bidders are requested to contact the respective Tender Inviting Authority

Technical - support-eproc@nic.in Policy Related - cppp-doe@nic.in

1.7 INSTRUCTIONS TO BIDDER

The purpose of these instructions is to serve as a guide to Bidders for preparing offer for carrying out the project in all respect.

- 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, 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 in competing 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; and

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.

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.

- c) 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.
- d) 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 Bid Security and Tender Document Fees of requisite amount in acceptable format and Bids in altered/modified formats, or in deviation with any other requirements stipulated in the tender documents are liable to be rejected.
- e) The company reserves the right to waive minor deviations if they do not materially affect the capability of the Tenderer to perform the contract
- f) 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.

2.1 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.

3.0 BID SECURITY/EMD

Bidders shall submit a 'Bid Security' Rs. 24,11,400/- (Rupees Twenty-Four Lakhs Eleven Thousand and Four Hundred Only) in the form of Insurance Surety Bonds/DD/BG in favor of "WAPCOS Limited" payable at Gurugram issued by a Scheduled/Nationalized bank as per Form J. In case, bidder fails to submit the Bid Security, the bid shall be rejected. Bid Security shall be valid for 60 (sixty) days beyond the bid validity.

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

- 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.
- If the Bidder tries to influence the evaluation process or canvassing of any kind.
- 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) **Bid Security/EMD shall not bear any interest**

4.0 COST OF BIDDING

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

5.0 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 may not be considered.

6.0 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.

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 Tenderer
Project Manager (Odisha)
WAPCOS Limited**

SECTION– II

SELECTION AND QUALIFYING CRITERIA

Section II
SELECTION AND QUALIFYING CRITERIA

1.0 SITE VISIT

Intending Bidder(s) are advised 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 (if applicable) and local conditions and other factors having a bearing on the execution of the work.

2.0 PRE-BID MEETING

A prospective Bidder requiring any clarification of the Bidding Documents may notify Engineer-in-Charge who will respond to any request for clarification, if necessary. The queries may be sent to: wapcos_orissa@yahoo.co.in.

The pre-bid meeting shall be held, as per the schedule mentioned in the NIT, through video conferencing as well as in person. The bidders who are interested in attending the pre-bid meeting may send their contact details viz. organization name, Name of the official, email address, mobile number etc. to wapcos_orissa@yahoo.co.in at least one working day prior to the pre-bid meeting. The bidder shall be shared a link of video conferencing to attend the pre-bid meeting. The bidder may attend the meeting at the time informed/notified.

If a bidder want to attend the meeting in person, they can join the meeting in office of Project Manager (Odisha).

3.0 QUALIFYING CRITERIA: ONLINE TECHNICAL BID SUBMISSION

The intending bidders must read the terms & conditions of tender documents carefully. He should only submit 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 and clearly marked page no. on each page.**

Format of Check List				
S. No	Particular of Document	Yes	No	Page Nos. (from – to)
a)	Authorization Letter to sign the Tender on bidder's original letter head or Power of attorney			
b)	Bid pbg as per Form J.			

c)	Scanned copy of Demand Draft for Tender Fees of the amount as mentioned in NIT.			
d)	Letter of Transmittal on bidder's original letter head to submit Technical Bid.			
e)	Yearly sales Turnover and Audited Balance Sheet for Last 5 (five) years ending on the financial year 2023-24. Financial information attested by the Independent Chartered Accountant (Form A). The 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 2023-24 duly audited 			
	<ul style="list-style-type: none"> Turnover: Average annual financial turnover of Construction works should be at least 30% of the estimated cost of work during the immediate last 3 consecutive financial years ending 2023-24. This should be duly audited by the Chartered Accountant doing Statutory Audit. 			
	<ul style="list-style-type: none"> Full Balance Sheet and Profit & loss Statement of Bidder should be verified by Chartered Accountant. 			
	<ul style="list-style-type: none"> The contractor should also have satisfactorily completed the similar types of works as mentioned below during the last seven years ending previous day of last date of submission of tender. <ul style="list-style-type: none"> I. One similar completed work costing not less than 80% of the estimated cost of work. 			
	<p style="text-align: center;">Or</p> <ul style="list-style-type: none"> II. Two similar completed works of order value each not less than 50% of the estimated cost of work. <p style="text-align: center;">Or</p> <ul style="list-style-type: none"> III. Three similar completed works of order value not less than 40% of the estimated cost of work. <p>NOTE:</p> <p>“Similar work” refers to Construction of Processing Unit/Processing Plant for any fruit/vegetable/animal product, etc. for any Central Government / State Government/PSU/ Department or State Public Sector Undertakings/Private firm during the last 7 years.</p> <p>In case of the owner of the work being private sector, a satisfactory completed work certificate must be supported by TDS certificate in form of 26 AS duly</p>			

	<p>authenticated by Chartered Accountant.</p> <ul style="list-style-type: none"> • The bidders shall submit copy/ copies of Completion Certificate(s) mentioning name, nature of work(s), value(s) of the job(s), date(s) of commencement, stipulated date(s) of completion and actual date(s) of completion along-with with Letter of Intent (s)/ Work Order (s) / Contract Agreement (s) from respective Owner(s)/ Client(s). <u>The value of the work</u> given in NIT is without GST / Taxes; hence the value of work declared in completion certificate is to be without GST/taxes. • For the works, where the Taxes or GST is not clearly defined, the value of works shall be considered as including GST. <p>For the works completed prior to 01.01.2022, a GST @12% shall be deducted to establish the value of work done and for the works completed on and after 01.01.2022, @18% shall be deducted to establish the value of work done.</p> <ul style="list-style-type: none"> • The value of executed works shall be brought to the current level by enhancing the actual value of work done at a simple rate of 7% per annum, calculated from the date of completion of last day of the month previous to the one in which applications are invited. • The copy/ copies of Completion Certificate(s) shall be verified from the issuing authority/organizations prior to award of works. In case the work / certificates are not verified by the issuing authority, WAPCOS reserve the right to not consider the award of work. 		
f)	<p>The bidder should not be insolvent, in receivership, bankrupt or being wound up, not have had their business activities suspended.</p> <p>Bidder shall submit Solvency certificate in original with details of Financial Status i.e., Name of the Banker & Current Solvency from a Nationalized Bank / Scheduled bank for a sum of at least 40% of the estimated cost of work in Original. (Form H)</p>		

	<p>IMPORTANT NOTE:</p> <ul style="list-style-type: none"> • The solvency certificate must be issued after the date of publication of NIT & be addressed to the tendering authority quoting the name of the work. • The solvency certificate should not be dated beyond the last date of submission of bid. • The certificate should carry the name, designation & power of attorney number of the bank official. <p>Or</p> <p><u>Bidder shall submit Net worth certificate of minimum 10% of the estimated cost put to tender issued by certified Chartered Accountant with UDIN. (Form H)</u></p> <ul style="list-style-type: none"> • <u>Scanned copy of original to be uploaded</u> • Date in net worth certificate should be after the date of publication of NIT 		
g)	Name, Address, details of the Organization, Name(s) of the Owner/Partners/Promoters and Directors of the firm / company. (Form B) .		
h)	Copy of P.F and PAN Number.		
i)	Goods and Service Tax (GST): Bidders are advised to get themselves registered for GST 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. norms before submission of bills.		
j)	<p>The bidder should be an Indian Registered Company under Companies Act 1956/ Proprietorship Firm/ Partnership Firm. Joint Ventures are not accepted. Copy of Certificate of Incorporation/ Registration/ Partnership Deed Registration or any other relevant document, as applicable, should be submitted along with a copy of address proof.</p> <p>NOTE: Proprietor firms shall submit registration details or shall submit the copy of relevant page of Pass book for the Current Account in the name of Proprietor Firm.</p>		
k)	The Blacklisting Policy of the company is available on official website of WAPCOS Limited. The		

	<p>bidder/tenderer/ consultant/contractors have to mandatorily furnish an undertaking addressing the same to Engineer-in-Charge in the form of certificate to abide the contents of Blacklisting Policy. The format of undertaking is provided at Form C. 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. Further, the bidder must not have been blacklisted/ de-registered/ debarred by any government department/ public Sector undertaking/ private Sector/ or any other agency for which the bidder has executed/ undertaken the works/ services during the last 5 years. (Form C).</p>		
l)	Letter of understanding the project site on bidder letter Head (Form D) .		
m)	'No Deviation Certificate' in prescribed format in Bidder's Letter Head (Form E) .		
n)	Consent Letter to execute the Integrity Pact (Form F) .		
o)	Bidder shall submit Information on litigation history, liquidated damages, disqualification etc. in bidder Letter Head (Form G) .		
p)	Details of Similar Works Completed (Form I)		
q)	Undertaking-(Rule 144 (xi) in the General Financial Rules (GFRs), 2017) (Form K)		
r)	<p>Preference to Make in India</p> <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>		

4.0 OFFLINE SUBMISSIONS OF DOCUMENTS

The Bidder shall submit following documents offline also.

1. All the documents in ORIGINAL, mentioned in "Section-II: Selection and Qualifying Criteria" in Para 3: Qualifying Criteria for Technical Bid i.e., at Sr. No. (a) to (r) along with checklist & page numbering in separate sealed envelope clearly labeled 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. Each page of submitted offline bid shall be signed ~~Page~~ stamped by ~~Page~~ authorized Signatory of bidder

2. **Original Tender submission fee in the form of Demand Draft** in a separate sealed envelope clearly labeled as “TENDER FEE” for the work (Write Name of Work/Project as mentioned in NIT) along with Details of Bidders Address, Phone, E-mail on Envelope.
3. **Original Bid Security in the form of DD/BG/Insurance Surety Bonds** in a separate sealed envelope clearly labeled as “BID SECURITY/EARNEST MONEY DEPOSIT” for the work (Write Name of Work/Project as mentioned in NIT) along with Details of Bidders Address, Phone, E-mail on Envelope

NOTE: All above three envelopes shall be submitted in one single envelope clearly labeled as “Documents for Offline Submission” for the Work (Write Name of Work/Project as mentioned in NIT) along with Details of Bidders Address, Phone, E-mail on Envelope.

IMPORTANT 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 will be rejected.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 OSOR 2022 with applicable cost index and non-OSOR items on market rate plus cost index at state of Odisha. hence bidder may quote the rate/ cost accordingly after due consideration of prevailing market rates.

The quoted rates/cost by bidders, should include all associated costs with the project including any out of pocket / mobilization expenses/ Custom duty (if any), Buildings and other construction workers welfare cess, TDS, taxes (**except GST**) if any applicable as per Govt. terms, shall be paid by the Contractor. **The Goods and Services Tax (GST) shall be paid extra over quoted cost.**

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 be reimbursed to the Agency only after uploading of bills by Contractor on GST Portal “to avail Input benefit of GST” and submission of the proof of payment to WAPCOS.

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 in force on the date of submission of bid or to be newly / amended introduced during the execution of the Contract.

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

6.0 OPENING OF FINANCIAL BID

The financial bids of the technically qualified bidders shall be opened at the notified date & time mentioned in NIT. Final selection of the bidder will be made based on the least cost method.

7.0 AWARD CRITERIA

After closing of Technical & Financial Bid process, WAPCOS Limited will award, the contract to the bidder, whose tender has been determined to be substantially responsive, complete and in accordance with the tender document, and whose total evaluation price for the undertaking the project as detailed in the scope of work is the lowest.

**For & on behalf of Tenderer
Project Manager (Odisha)
WAPCOS Limited**

SECTION – III

GENERAL CONDITIONS OF CONTRACT

SECTION – III
GENERAL CONDITIONS TO CONTRACT

1.0 GENERAL RULES AND DIRECTIONS

General Rules & Directions	<p>1. 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, the date for submitting and opening tenders, the time allowed for carrying out the work, the amount of earnest money to be deposited with the tender, 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.</p>
	<p>2. In the event of the tender being submitted by a Partnership 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>
	<p>3. 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>
	<p>4 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 paisa and considering more than fifty paisa as rupee one.</p> <p>In case the lowest tendered amount (worked out on the basis of quoted rate of individual items) of two or more contractors is same, then such lowest contractors may be asked to submit sealed revised online offer (through limited tender process) quoting rate/ cost of work of each item of the schedule of quantity for all sub sections/sub heads as the case may be, but the revised quoted rate of each item of schedule of quantity for all sub sections/sub heads should not be higher than their respective original rate quoted already at the time of submission of tender. The lowest tender shall be decided on the basis of revised offer.</p>

		<p>If the revised tendered amount (worked out on the basis of quoted rate of individual items) of two or more contractors received in revised offer is again found to be equal, then the lowest tender, among such contractors, shall be decided by draw of lots and the lowest contractors those have quoted equal amount of their tenders.</p> <p>In case of any such lowest contractor in his revised offer quotes rate of any item more than their respective original rate quoted already at the time of submission of tender, is higher, then that Lowest bidder will be suspended from being eligible for bidding in any contract with the WAPCOS Limited for the period of 3 years, starting on bid submission closing date and <i>tenders are to be recalled</i>.</p> <p>In case all the lowest contractors those have same tendered amount (as a result of their quoted rate of individual items), refuse to submit revised offers, then Lowest bidders will be suspended from being eligible for bidding in any contract with the WAPCOS Limited for the period of 3 years, starting on bid submission closing date and <i>tenders are to be recalled</i></p>
	4A	<p>In case of Percentage Rate Tenders, contractor shall fill up the usual printed form, stating at what percentage below/above (in figures as well as in words) the total estimated cost given in Schedule of Quantities; he will be willing to execute the work. The tender submitted shall be treated as invalid if :-</p> <ol style="list-style-type: none"> 1. The contractor does not quote percentage above/below on the total amount of tender or any section/sub head of the tender. 2. The percentage above/below is not quoted in figures & words both on the total amount of tender or any section/sub head of the tender. 3. The percentage quoted above/below is different in figures & words on the total amount of tender or any section/sub head of the tender. <p>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>
	4B	<p>In case the lowest tendered amount (estimated cost + amount worked on the basis of percentage above/below) of two or more contractors is same, such lowest contractors will be asked to submit sealed revised offer in the form of letter mentioning percentage above/ below on estimated cost of tender including all sub sections/sub heads as the case may be, but the revised percentage quoted above/below on tendered cost or on each sub section/ sub head should not be higher than the percentage quoted at the time of submission of tender. The lowest tender shall be decided on the basis of revised offers.</p>

		<p>In case any of such contractors refuses to submit revised offer, then it shall be treated as withdrawal of his tender before acceptance and 50% of earnest money shall be forfeited.</p> <p>If the revised tendered amount of two more contractors received in revised offer is again found to be equal , the lowest tender, among such contractors, shall be decided by draw of lots in the presence WAPCOS & the lowest contractors those have quoted equal amount of their tenders.</p> <p>In case all the lowest contractors those have quoted same tendered amount, refuse to submit revised offers, then tenders are to be recalled after forfeiting 50% of EMD of each contractor, whose earnest money is forfeited because of non-submission of revised offer, shall not be allowed to participate in the re-tendering process of the work.</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 memorandum of work tendered for and the schedule of materials to be supplied by the WAPCOS and their issue-rates, shall be filled and completed in the office of the officer inviting tender before the tender form is issued. If a form is issued to an intending tenderer without having been so filled in and incomplete, he shall request the officer to have this done before he completes and delivers his tender.
	9.	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.
	10.	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.
	10A	In case of Percentage Rate Tenders only percentage quoted shall be considered. Any tender containing item rates is liable to be rejected. Percentage quoted by the contractor in percentage rate tender shall be accurately filled in figures and words, so that there is no discrepancy
	11.	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.
	12.	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 'Paise' should be written at the end. Unless the rate is in whole rupees and followed by the word 'only' it should invariably be upto 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.
	12A	In Percentage Rate Tender, the tenderer shall quote percentage below/above (in figures as well as in words) at which he will be willing to execute the work. He shall also work out the total amount of his offer and the same should be written in figures as well as in words in such a way that no interpolation is possible. 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. 2.15P and in case of words, the word 'Rupees' should precede and the word 'Paisa' should be written at the end.
	13.	i. The Contractor, whose tender is accepted, will be required to furnish performance guarantee of 5% (Five Percent) of the tendered amount within the period specified in Special Conditions of Contract. 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/Nationalized Bank/Insurance Surety Bonds/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.

		<p>1,00,000/-)/Nationalized Bank or Government Securities or Fixed Deposit Receipts or Guarantee Bonds of any Scheduled Bank/Nationalized Bank or the State Bank of India in accordance with the prescribed form.</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. The Security deposit 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 cash or 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>																														
	14.	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.																														
	15.	All the taxes except GST applicable in respect of this contract shall be payable by the Contractor and WAPCOS will not entertain any claim whatsoever in respect of the same.																														
	16.	The contractor shall give a list of WAPCOS employees related to him.																														
	17.	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.																														
	18.	The tender for composite work includes, in addition to building work, all other works such as sanitary and water supply installations drainage installation, electrical work, horticulture work, roads and paths 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.																														
NOT APPLICABLE	19.	The contractor shall submit list of works which are in hand (progress) in the following form:-																														
		<table border="1"> <thead> <tr> <th>Name of Work</th> <th>Name and particulars where work is being executed</th> <th>Value of Work</th> <th>Position of works in progress</th> <th>Remarks</th> </tr> <tr> <th>(1)</th> <th>(2)</th> <th>(3)</th> <th>(4)</th> <th>(5)</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	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)																				
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(1)	(2)	(3)	(4)	(5)																												
	20.	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.
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2.0 CONDITIONS OF CONTRACT

Definitions	<p>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.</p> <p>2. 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 Work / Project as mentioned in NIT.</p> <ul style="list-style-type: none"> i. Having their Registered office at 5th floor, Kailash building, 26-Kasturba Gandhi Marg, New Delhi-110001, India & include their successors & permitted assigns as well as their authorized officer / representatives ii. The “WAPCOS Limited” shall mean WAPCOS Limited. iii. The expression works or Project 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 Bidder /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 who are participating in Bidding process and will Execution the project after award of the works as Contractor. vi. 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 vii. Accepting Authority shall mean the authority mentioned in Special Conditions of Contract. viii. Tenderer / Bidder shall mean the firm/party who intends to participate in this Notice Inviting Tender ix. Excepted Risk are risks due to riots (other than those on account of contractor's employees), war (whether declared or not) invasion, act of foreign enemies, hostilities, civil war, rebellion revolution,
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		<p>insurrection, military or usurped power, any acts of Government, damages from aircraft, acts of God, such as earthquake, lightening and unprecedeted 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>x. 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 Special Conditions of Contract to cover, all overheads and profits.</p> <p>xi. 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 Special Conditions of Contract hereunder, with the amendments thereto issued upto the date of receipt of the tender.</p> <p>xii. District Specifications means the specifications followed by the State Government in the area where the work is to be executed.</p> <p>xiii. The Contractor/Successful Bidder shall mean the firm or company whose bid has been accepted by WAPCOS.</p> <p>xiv. Consultant shall mean any consultant nominated by the 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 Special Conditions of Contract 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>
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.
NOT APPLICABLE	5.	The contractor shall be furnished, free of cost one certified copy of the contract documents except standard specifications, 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.	✓ 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 labours 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 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 special conditions 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: - <ol style="list-style-type: none"> Description of Schedule of Quantities/ Building Components. Particular Specification and Special Condition, if any. Drawings. Standard Specifications. 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 15 days from the stipulated date of start of the work , sign the contract consisting of: <ol style="list-style-type: none"> The notice inviting tender, all the documents including drawings, if any, forming the tender as issued at the time of invitation of tender and acceptance thereof together with any correspondence leading thereto. Special Conditions of Contract consisting of: <ol style="list-style-type: none"> Various standard clauses with corrections up to the date stipulated in Special Conditions of Contract along with annexures thereto. Safety Code. Model Rules for the protection of health, sanitary arrangements for workers employed WAPCOS or its contractors. Contractor's Labour Regulations. List of Acts and omissions for which fines can be imposed. 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/PERFORMANCE SECURITY

- i. The contractor shall submit an irrevocable **Performance Guarantee of 5% (Five percent) of the tendered amount** in addition to other deposits mentioned elsewhere in the contract for his proper performance of the contract agreement, (not notwithstanding and/or without prejudice to any other provisions in the contract) within period specified in Special Conditions of Contract 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 Special Conditions of Contract 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 Insurance Surety Bonds/Banker's Cheque of any scheduled bank/Nationalized Bank or Demand Draft of any scheduled bank/Nationalized Bank or Pay Order of any scheduled bank/Nationalized Bank (in case guarantee amount is less than Rs. 1,00,000/-) 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 as part of the performance guarantee 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.
- ii. Performance Security is to be furnished by a specific date and it should remain valid for a period of 60 (sixty) days beyond the date of completion of all contractual obligations i.e. Completion of Defect Liability and as per BOQ plus 1 (One) year of claim period beyond this duration.
- iii. The Engineer-in-Charge shall not make a claim under the performance guarantee except for amounts to which the WAPCOS is entitled under the contract (not notwithstanding and/or without prejudice to any other provisions in the contract agreement) in the event of:
 - (a) Failure by the contractor to extend the validity of the Performance Guarantee as described herein above, in which event the Engineer-in-Charge may claim the full amount of the Performance Guarantee.
 - (b) Failure by the contractor to pay WAPCOS any amount due, either as agreed by the contractor or determined under any of the Clauses/Conditions of the agreement, within 30 days of the service of notice to this effect by Engineer in-Charge.
- iv. 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.
- v. The performance Guarantee shall be refunded to the contractor without interest, after contractor duly performs and completes all obligations under the contract but not later than 365 days of completion of the Defect Liability Period (DLP).

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.** The

contractor may, at his option, replace the retention amount with an unconditional BG from a bank acceptable to the Procuring Entity at the following stages:

- i) After the amount reaches half the value of the limit of retention money; and
- ii) After the amount reaches the maximum limit of retention money. One-half of the retention money (or BG, which replaced retention money) shall be released on the issue of the taking-over certificate; if the Taking Over Certificates (TOCs) are issued in parts, then in such proportions as the engineer may determine, having regard to the value of such part or section. The other half of the retention money (or BG, which replaced the retention money) shall be released upon expiration of 365 days after the DLP of the works or final payment, whichever is earlier, on certification by the engineer. In the event of different defect liability periods being applicable to different sections or parts, the expiration of defect liability period shall be the latest of such periods

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 extended date of completion, he shall, without prejudice to any other right or remedy available under the purview of the Contract on account of such breach, pay as agreed compensation the amount calculated at the rates stipulated below as the authority specified in Special Conditions of Contract (whose decision in writing shall be final and binding) may decide on the amount of tendered value of the work for every completed day/month (as applicable) 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 % (Point Five percent) per week of delay to be computed on per day basis based on quantum of damage suffered due to stated delay on the part of the contractor.

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 WAPCOS 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 WAPCOS, after due consideration of justified extension. The compensation for delay, if not decided before the determination of contract, shall be decided after 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 Special Conditions of Contract, 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.

CLAUSE 2A: INCENTIVE FOR EARLY COMPLETION - NOT APPLICABLE

In case, the contractor completes the work ahead of updated stipulated date of completion considering the effect of extra work (to be calculated on pro-rata basis as cost of extra work X stipulated period/tendered cost), a bonus @ 1% (one per cent) of the tendered value per month computed on per day basis, shall be payable to the contractor, subject to a maximum limit of 5% (Five per cent) of the tendered value. The amount of bonus, if payable, shall be paid along with final bill after completion of work. Provided always that provision of the Clause 2A shall be applicable only when so provided in 'Special Conditions of Contract'.

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 unworkman 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 so that in the opinion of the Engineer-in-Charge (which shall be final and binding) he will be unable to secure completion of the work by the date for completion and continues to do so after a notice in writing of seven days from the Engineer-in-Charge.
- 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.
- 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-bona-fide 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 Government.
 - (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 - NOT APPLICABLE

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. In case contractor wants to close the contract, he shall give notice to the WAPCOS stating the failure on the part of WAPCOS. 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. 1.0 Crore	15 days
b)	If the Tendered value of work is more than Rs.1.0 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 FOR DELAY

The time allowed for execution of the Works as specified in the Special Conditions of Contract or the extended time in accordance with these conditions shall be the essence of the Contract. The execution of the works shall commence from such time period as mentioned in Special Conditions of Contract or from the date of handing over of the site whichever is later. If the Contractor commits default in commencing the execution of the work as aforesaid, WAPCOS shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the performance guarantee absolutely.

- (a) As soon as possible after the Contract is concluded, the Contractor shall submit a Time and Progress Chart for each milestone and get it approved by the WAPCOS. 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, and further to ensure good progress during the execution of the work, the contractor shall in all cases in which the time allowed for any work, exceeds one month (save for special jobs for which a separate programme has been agreed upon) complete the work as per mile stones given in Special Conditions of Contract. Project Management shall be done by using project management software for works costing more than Rs. 5 Crore.
- (b) The project management shall be done using M.S. Project software for works costing more than Rs. 5 Crore and up to Rs. 20 Crore.
- (c) For works costing more than Rs. 20 Crore, project management shall be done using Primavera Software.

5.1 PROGRAMME CHART

- (i) The Contractor shall prepare an integrated programme chart in MS Project/Primavera software for the execution of work, showing clearly all activities from the start of work to completion, with details of manpower, equipment and machinery required for the fulfillment of the programme within the stipulated period or earlier and submit the same for approval to the Engineer-in-Charge within ten days of award of the contract. A recovery of Rs. 2500/- (for works costing upto Rs. 20 Crores) / Rs. 5000/- (for works costing more than Rs. 20 Crores) shall be made on per day basis in case of delay in submission of the above programme.
- (ii) The programme chart should include the following:
 - (a) Descriptive note explaining sequence of the various activities.
 - (b) Network (PERT / CPM / BAR CHART).
 - (c) Programme for procurement of materials by the contractor.

Programme of procurement of machinery / equipment having adequate capacity, commensurate with the quantum of work to be done within the stipulated period, by the contractor. In addition to above, to achieve the progress of Work as per programme, the contractor must bring at site adequate shuttering material required for cement concrete and R.C.C. works etc. for three floors within one month from the date of start of work till the completion of RCC work as per requirement of work. The contractor shall submit shuttering schedule adequate to complete structure work within laid down physical milestone.
- (iii) If at any time, it appears to the Engineer-in-Charge that the actual progress of work does not conform to the approved programme referred above or after rescheduling of milestones, the contractor shall produce a revised programme within 7 (seven) days, showing the modifications to the approved programme to ensure timely completion of the work. The modified schedule of programme shall be approved by the Engineer in Charge. A recovery of Rs. 2500/- (for works costing upto Rs. 20 Crores) /Rs. 5000/- (for works costing more than Rs. 20 Crores) shall be made on per day basis in case of delay in submission of the modified programme.
- (iv) The submission for approval by the Engineer-in-Charge of such programme or such particulars shall not relieve the contractor of any of the duties or responsibilities under the contract. This is without prejudice to the right of Engineer-in-Charge to take action against the contractor as per terms and conditions of the agreement.

(v) The contractor shall submit the progress report using MS Project/Primavera software with base line programme referred above along with photographs of the work done during previous month to the Engineer-in-charge on or before 5th day of each month failing which a recovery Rs. 2500/- (for works costing upto Rs. 20 Crores) / Rs. 5000/- (for works costing more than Rs. 20 Crores) shall be made on per day basis in case of delay in submission of the monthly progress report (minimum- 3 sets).

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 Special Conditions of Contract 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.

5.3 Request for rescheduling of Mile stones and extension of time, to be eligible for consideration, shall be made by the Contractor in writing within fourteen days of the happening of the event causing delay on the prescribed form to the authority as indicated in Special Conditions of Contract. The Contractor may also, if practicable, indicate in such a request the period for which extension is desired.

5.4 In any such case the authority as indicated in Special Conditions of Contract may give a fair and reasonable extension of time and reschedule the mile stones for completion of work. Such extension or rescheduling of the milestones shall be communicated to the Contractor by the authority as indicated in Special Conditions of Contract in writing, within 3 months or 4 weeks of the date of receipt of such request respectively. Non application by the contractor for extension of time/ rescheduling of the milestones shall not be a bar for giving a fair and reasonable extension/ rescheduling of the milestones by the authority as indicated in Special Conditions of Contract and this shall be binding on the contractor.

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, 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 defect's liability period.

CLAUSE 6A: 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. 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 Engineer-in-Charge

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 CERTIFICATE

- The Contractor shall submit to the Engineer-in-Charge statements of the value of the work completed.
- The Engineer-in-Charge shall check the Contractor's statement within 14 days and certify the amount to be paid to the Contractor as per contract payment schedule after taking into account any credit or debit for the month.
- The value of work executed shall be determined by the Engineer-in-Charge.
- The value of work executed shall comprise the value of the milestone achieved and work programme attached to the contract.
- The value of work executed shall include the valuation of Change in Scope (Variation), if any.
- The Engineer-in-Charge may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.

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 plan as required vide General Specifications for Electrical works (Part-I internal) 2005 and (Part-II External) 1994 as applicable within thirty days of the

completion of the work.

In case, the contractor fails to submit the completion plan as aforesaid, he shall be liable to pay a sum equivalent to 0.1% of the value of the work which shall be final and binding on the contractor. The contractor shall submit completion plan for water, sewerage and drainage line plan within thirty days of the completion of the work.

In case, the contractor fails to submit the completion plan as aforesaid, the WAPCOS will get it done through other agency at his cost and actual expenses incurred plus 1.0% of the value of the work for the same shall be recovered from 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 one month of the date of the final certificate of completion furnished by the Engineer-in-Charge. 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 herein 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 up to Rs. 1.0 Crore	2 months
b) If the Tendered value of work is more than Rs. 1.0 Crore and up to Rs. 10.0 Crore	3 months
c) If the Tendered value of work exceeds Rs. 10.0 Crore	6 months

CLAUSE 9A: 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, co-operative 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

Materials which WAPCOS will supply are shown in Special Conditions of Contract (SCC) which also stipulates quantum, place of issue and rate(s) to be charged in respect thereof. The contractor shall be bound to procure them from the Engineer-in-Charge.

As soon as the work is awarded, the contractor shall finalise the programme for the completion of work as per clause 5 of this contract and shall give his estimates of materials required on the basis of drawings/or schedule of quantities of the work. The Contractor shall give in writing his

requirement to the Engineer-in-Charge which shall be issued to him keeping in view the progress of work as assessed by the Engineer-in-Charge, in accordance with the agreed phased programme of work indicating monthly requirements of various materials. The contractor shall place his indent in writing for issue of such materials at least 7 days in advance of his requirement.

Such materials shall be supplied for the purpose of the contract only and the value of the materials so supplied at the rates specified in the aforesaid schedule shall be set off or deducted, as and when materials are consumed in items of work (including normal wastage) for which payment is being made to the contractor, from any sum then due or which may therefore become due to the contractor under the contract or otherwise or from the security deposit. At the time of submission of bills, the contractor shall certify that balance of materials supplied is available at site in original good condition.

The contractor shall submit along with every running bill (on account or interim bill) material wise reconciliation statements supported by complete calculations reconciling total issue, total consumption and certified balance (diameter/section-wise in the case of steel) and resulting variations and reasons therefore. Engineer-in-Charge shall (whose decision shall be final and binding on the contractor) be within his rights to follow the procedure of recovery in clause 42 at any stage of the work if reconciliation is not found to be satisfactory.

The contractor shall bear the cost of getting the material issued, loading, transporting to site, unloading, storing under cover as required, cutting assembling and joining the several parts together as necessary. Notwithstanding anything to the contrary contained in any other clause of the contract and (or the CPWA Code) all stores/materials so supplied to the contractor or procured with the assistance of the WAPCOS shall remain the absolute property of WAPCOS and the contractor shall be the trustee of the stores/materials, and the said stores/materials shall not be removed/disposed off from the site of the work on any account and shall be at all times open to inspection by the Engineer-in-Charge or his authorized agent. Any such stores/materials remaining unused shall be returned to the Engineer-in-Charge in as good a condition in which they were originally supplied at a place directed by him, at a place of issue or any other place specified by him as he shall require, but in case it is decided not to take back the stores/materials the contractor shall have no claim for compensation on any account of such stores/materials so supplied to him as aforesaid and not used by him or for any wastage in or damage to in such stores/materials.

On being required to return the stores/materials, the contractor shall hand over the stores/materials on being paid or credited such price as the Engineer-in-Charge shall determine, having due regard to the condition of the stores/materials. The price allowed for credit to the contractor, however, shall be at the prevailing market rate not exceeding the amount charged to him, excluding the storage charge, if any. The decision of the Engineer-in-Charge shall be final and conclusive. In the event of breach of the aforesaid condition, the contractor shall in addition to throwing himself open to account for contravention of the terms of the licenses or permit and/or for criminal breach of trust, be liable to WAPCOS for all advantages or profits resulting or which in the usual course would have resulted to him by reason of such breach. Provided that the contractor shall in no case be entitled to any compensation or damages on account of any delay in supply or non-supply thereof all or any such materials and stores provided further that the contractor shall be bound to execute the entire work if the materials are supplied by the WAPCOS within the original scheduled time for completion of the work plus 50% thereof or schedule time plus 6 months whichever is more if the time of completion of work exceeds 12 months, but if a part of the materials only has been supplied within the aforesaid period, then the contractor shall be bound to do so much of the work as may be possible with the materials and stores supplied in the aforesaid period. For the completion of the rest of the work, the contractor shall be entitled to such extension of time as may be determined by the Engineer-in-Charge whose decision in this regard shall be final and binding on the contractor.

The contractor shall see that only the required quantities of materials are got issued. Any such material remaining unused and in perfectly original condition at the time of completion or

determination of the contract shall be returned to the Engineer-in-Charge at the stores from which it was issued or at a place directed by him by a notice in writing. The contractor shall not be entitled for loading, transporting, unloading and stacking of such unused material except for the extra lead, if any involved, beyond the original place of issue.

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 or nearby vicinity for conducting routine field tests. The lab shall be equipped at least with the testing equipment as specified in Special Conditions of Contract.

Minimum 01 year warranty for Mechanical & Electrical Equipment and other bought out items, at the discretion of WAPCOS Limited, if supplied directly by the contractor. The standard warranty period offered by the Manufacturer shall be retained, in case the original warranty period is more than one year.

CLAUSE 10B:**(i) SECURED ADVANCE ON NON-PERISHABLE MATERIALS – NOT APPLICABLE**

The contractor, on signing an indenture in the form 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 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.

(ii) MOBILISATION ADVANCE

Mobilization advance not exceeding 10% of the tendered value may be given, if requested by the contractor in writing within one month of the order to commence the work. Such advance shall be in two or more installments to be determined by the Engineer-in-Charge at his sole discretion. The first installment of such advance shall be released by the Engineer-in-charge to the contractor on a request made by the contractor to the Engineer-in-Charge in this behalf. The second and subsequent installments shall be released by the Engineer-in-Charge only after the contractor furnishes a proof of the satisfactory utilization of the earlier installment to the entire satisfaction of the Engineer-in-Charge.

Before any installment of advance is released, the contractor shall execute a Bank Guarantee Bond from Scheduled Bank /Nationalized Bank for the amount equal to 110% of the amount of advance and valid for the contract period. This (Bank Guarantee from Scheduled Bank/Nationalized Bank for the amount equal to 110% of the balance amount of advance) shall be kept renewed from time to time to cover the balance amount and likely period of complete recovery.

(iii) PLANT MACHINERY & SHUTTERING MATERIAL ADVANCE- NOT APPLICABLE

An advance for plant, machinery & shuttering material required for the work and brought to site by the Contractor may be given if requested by the contractor in writing within one month of bringing such plant and machinery to site. Such advance shall be given on such plant and machinery which in the opinion of the Engineer-in-charge will add to the expeditious execution of work and improve the quality of work. The amount of advance shall be restricted to 5% percent of the tender value. In the case of new plant and equipment to be purchased for the work, the advance shall be restricted to 90% of the price of such new plant and equipment paid by the contractor for which the contractor shall produce evidence satisfactory to the Engineer-in-Charge. In the case of second hand and used plants and equipment, the amount of such advance shall be limited to 50% of the depreciated value of plant and equipment as may be decided by the Engineer-in-Charge. The contractor shall, if so required by the Engineer-in-Charge, submit the statement of value of such old plant and equipment duly approved by a Registered Valuer recognized by the Central Board of Direct Taxes under the Income- Tax Act, 1961. No such advance shall be paid on any plant and

equipment of perishable nature and on any plant and equipment of a value less than Rs. 50,000/- Seventy five per cent of such amount of advance shall be paid after the plant & equipment is brought to site and balance twenty five percent on successfully commissioning the same.

Leasing of equipment shall be considered at par with purchase of equipment and shall be covered by tripartite agreement with the following:

1. Leasing company which gives certificate of agreeing to lease equipment to the contractor.
2. Engineer in Charge, and
3. The contractor.

This advance shall further be subject to the condition that such plant and equipment (a) are considered by the Engineer-in-Charge to be necessary for the works; (b) and are in working order and are maintained in working order; (c) hypothecated to the WAPCOS as specified by the Engineer-in-Charge before the payment of advance is released. The contractor shall not be permitted to remove from the site such hypothecated plant and equipment without the prior written permission of the Engineer-in-Charge. The contractor shall be responsible for maintaining such plant and equipment in good working order during the entire period of hypothecation failing which such advance shall be entirely recovered in lump sum. For this purpose, steel scaffolding and form work shall be treated as plant and equipment.

The contractor shall insure the Plant and Machinery for which mobilization advance is sought and given, for a sum sufficient to provide for their replacement at site. Any amounts not recovered from the insurer will be borne by the contractor.

(iv) INTEREST & RECOVERY

The mobilization advance in (i) above bear simple interest at the rate of 10 per cent per annum and shall be calculated from the date of payment to the date of recovery, both days inclusive, on the outstanding amount of advance. Recovery of such sums advanced shall be made by the deduction from the contractors bills commencing after first 10% of the gross value of the work is executed and paid, on pro-rata percentage basis to the gross value of the work billed beyond 10% in such a way that the entire advance is recovered by the time 80% of the gross value of the contract is executed and paid, together with interest due on the entire outstanding amount up to the date of recovery of the installment.

CLAUSE 10C: PAYMENT ON ACCOUNT OF INCREASE IN PRICE/WAGES DUE TO STATUTORY ORDER - NOT APPLICABLE

If after submission of the tender, the price of any material incorporated in the works (excluding the materials covered under Clause 10CA and not being a material supplied from the Engineer-in-Charge's stores in accordance with Clause 10 thereof) 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 changes of rate in sales tax/VAT, Central/State Excise/Custom Duty) 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 and provided further that any such increase shall be limited to the price/wages prevailing at the time of updated stipulated date of completion considering effect of extra work (extra time to be calculated on pro-rata basis only as cost of extra work x stipulated period/tendered amount).

If after submission of the tender, the price of any material incorporated in the works (excluding the materials covered under Clause 10CA and not being a material supplied from the Engineer-in-Charge's stores in accordance with Clause 10 thereof) 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 not being material supplied from the Engineer-in-Charge's stores in accordance with Clause 10 hereof) 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 may 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 the work executed during period under consideration shall be the percentage as specified in Special Conditions of Contract, of the value of work done during that period and the increase/decrease in labour shall be considered on the minimum daily wages in rupees of any unskilled adult male mazdoor, fixed under any law, statutory rule or order.

CLAUSE 10CA: PAYMENT DUE TO VARIATION IN PRICES OF MATERIALS AFTER RECEIPT OF TENDER- NOT APPLICABLE

If after submission of the tender, the price of materials specified in Special Conditions of Contract increases/ decreases beyond the base price(s) as indicated in Special Conditions of Contract 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).

The increase/decrease in prices of cement, steel reinforcement, structural steel and POL shall be determined by the Price indices Economic Advisor to Government of India, Ministry of Commerce and Industry. For other items provided in the Special Conditions of Contract, 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 by the state / Central Govt. from time to time. 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 Special Conditions of Contract 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 Clause 10CA of General Conditions of Contract.

CLAUSE 10CC: PAYMENT DUE TO INCREASE/DECREASE IN PRICES/WAGES (EXCLUDING MATERIALS COVERED UNDER CLAUSE 10 CA) AFTER RECEIPT OF TENDER FOR WORKS - NOT APPLICABLE

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. However, for the work done during the justified period extended as above, the compensation as detailed below will be limited to prices/wages 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). 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 Special Conditions of Contract. Such compensation for escalation in the prices of materials and labour, when due, shall be worked out based on the provisions mentioned in the Clause 10CC of General Conditions of Contract.

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 off 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 Special Conditions of Contract 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(a) 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) claim rates, supported by proper analysis, for the work 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.

12.2(b) DEVIATIONS, 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).

12.2(c) DEVIATIONS, DEVIATED QUANTITIES, PRICING

In the case of contract items, substituted items, contract cum substituted items, which exceed the limits laid down in Special Conditions of Contract, 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 and the contractor shall be paid in accordance with the rates so determined.

a) Tendered value of work is up to Rs. 45 lac	30 days
b) If the Tendered value of work is more than Rs. 45 lac and up to Rs. 2.5 Crore	45 days
c) If the Tendered value of work exceeds Rs. 2.5 Crore :	60 days

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 Special Conditions of Contract, and the Engineer-in-Charge shall give 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 Special Conditions of Contract, 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 metres 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 metres above the ground level.
- (iv) For reservoirs/tanks (other than overhead reservoirs/tanks): All works up to 1.2 metres 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 filing 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, Engineer-in-charge shall decide to abandon or reduce the scope of the works for any reason whatsoever and hence not require the whole or any part of the works to be carried out, the Engineer-in-Charge shall give notice in writing to that effect to the contractor 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) WAPCOS shall have the option to take over contractor's materials or any part thereof either brought to site or of which the contractor is legally bound to accept delivery from suppliers (for incorporation in or incidental to the work). For materials taken over or to be taken over by WAPCOS, cost of such materials as detailed by Engineer-in- Charge shall be paid. The cost shall, however, take into account purchase price, cost of transportation and deterioration or damage which may have been caused to materials whilst in the custody of

the contractor.

- (iii) If any materials supplied by WAPCOS are rendered surplus, the same except normal wastage shall be returned by the contractor to WAPCOS at rates not exceeding those at which these were originally issued, less allowance for any deterioration or damage which may have been caused whilst the materials were in the custody of the contractor. In addition, cost of transporting such materials from site to WAPCOS stores, if so required by WAPCOS, shall be paid.
- (iv) 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.

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.

A compensation for such eventuality, on account of damages etc. shall be payable @ 0.5% of cost of work remaining incomplete on date of closure i.e. total stipulated cost of the work less the cost of work actually executed under the contract shall be payable.

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 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 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:

- (a) Take possession of the site and any materials, constructional plant, implements, stores, etc., thereon; and/or
- (b) 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;
 - (b) for proper execution of the works or part thereof for reasons other than the default of the contractor; or
 - (c) 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 15A: COMPENSATION IN CASE DELAY OF SUPPLY OF MATERIAL - NOT APPLICABLE

The contractor shall not be entitled to claim any compensation from WAPCOS for the loss suffered by him on account of delay by WAPCOS in the supply of materials in Special Conditions of Contract where such delay is covered by the difficulties relating to the supply of wagons, force majeure or any reasonable cause beyond the control of the WAPCOS. This clause 15 A will not be applicable for works where no material is stipulated.

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 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 Special Conditions of Contract 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 lacs 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.

The defects liability period will be one year from the date of completion of development and construction works. 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 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 Special Conditions of Contract. 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 portion 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 abide by the provisions of the Child Labour (Prohibition and Regulation) Act, 1986.

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

- 5.1 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.
- 5.2 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.
- 5.3 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 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 unauthorisedly made, maintenance of wage books or wage slips, publication of scale of wages 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.
- 5.4
 - (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-fulfilment 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.
- 5.5 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.
- 5.6 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.
- 5.7 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.
- 5.8 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.

5.9 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 of Rs.200/- 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 yours,
- (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 not exceeding Rs.200/- 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 not exceeding Rs.200/- 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 Rs.200/- per day for each day of default subject to a maximum of 5 per cent 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 19 H

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 gobri on both sides. The floor may be kutcha but plastered with mud gobri 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 19 I

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 labourers, whether temporary or permanent and he shall be responsible for any untoward action on the part of such labour. AE/JE will display a list of contractors working in the colony/Blocks on the notice board in the colony and also at the service center, 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 unauthorisedly 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 the WAPCOS whose decision shall be final both with regard to the justification and quantum and be binding on the contractor.

However, 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 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 number of 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, its 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 of Rs. 100 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.

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 thereunder and other labour laws affecting contract labour that may be brought into force from time to time.

CLAUSE 21: WORK NOT TO BE SUBLT. 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 a Proprietor Firm, 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

All works to be executed under the contract shall be executed under the direction and subject to the approval in all respects of the Engineer-in-Charge who shall be entitled to direct at what point or points and in what manner they are to be commenced, and from time to time carried on.

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.

Clause 25.1:

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].

Clause 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 GURGAON

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.

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 therefrom, provided that the contractor shall not be liable to indemnify the 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: LUMPSUM PROVISIONS IN TENDER - NOT APPLICABLE

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 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

- a) 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 the 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 the 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 the 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.

b) 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 overpayment 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 Government 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 - NOT APPLICABLE

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.

Explanation: Controlled Area means the following areas:

Districts of Dhanbad, Hazaribagh, Jamtara - a Sub-Division under Santhal Pargana Commissionery, Districts of Bankuara, Birbhum, Burdwan, District of Bilaspur.

Any other area which may be declared a Controlled Area by or with the approval of the Central Government.

CLAUSE 30: WATER FOR WORKS

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: WATER SUPPLY, IF AVAILABLE

Water if available may be supplied to the contractor by the WAPCOS subject to the following conditions:-

- (i) The water charges @ 1 % shall be recovered on gross amount of the work done.
- (ii) The contractor(s) shall make his/their own arrangement of water connection and laying of pipelines from existing main of source of supply.
- (iii) The WAPCOS do not guarantee to maintain uninterrupted supply of water and it will be incumbent on the contractor(s) to make alternative arrangements for water at his/ their own cost in the event of any temporary break down in the water main so that the progress of his/their work is not held up for want of water. No claim of damage or refund of water charges will be entertained on account of such break down.

CLAUSE 30B: ALTERNATE WATER ARRANGEMENTS - NOT APPLICABLE

- (i) Where there is no piped water supply arrangement and the water is taken by the contractor from the wells or hand pump constructed by the Government, no charge shall be recovered from the contractor on that account. The contractor shall, however, draw water at such hours of the day that it does not interfere with the normal use for which the hand pumps and wells are intended. He will also be responsible for all damage and abnormal repairs arising out of his use, the cost of which shall be recoverable from him. The Engineer-in-Charge shall be the final authority to determine the cost recoverable from the contractor on this account and his decision shall be binding on the contractor.
- (ii) 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: 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. Even of the contractor (or partner(s) in case of firm/ company) is himself / herself an Engineers, it is necessary on the part of the contractor to Employ principal technical representative / technical representative (s).

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/theirelves, 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 so 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 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 33: 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 Government shall not entertain any claim whatsoever in this respect except as provided under Clause 34.
- ii. The contractor shall deposit royalty and obtain necessary permit for supply of the red bajri, stone, kankar, etc. from local authorities.

If pursuant to or under any law, notification or order any royalty, cess or the like becomes payable by the Government of India 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 the Government of India 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 34: CONDITIONS FOR REIMBURSEMENT OF LEVY/TAXES IF LEVIED AFTER RECEIPT OF TENDERS

- (i) All tendered cost shall be inclusive of all taxes and levies (except 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 attributable to delay in execution of work within the control of the contractor.

However, effect of variation in rates of GST or Building and Other Construction Workers Welfare Cess or imposition or repeal of any other tax, levy or cess applicable on output of the works contract shall be adjusted on side, increase or decrease.

Provided further that for Building and Other Construction Workers Welfare Cess or any tax (other than GST), levy or cess varied or imposed after the last date of receipt of tender including extension if any, any increase shall be reimbursed to the contractor only if the contractor necessarily and properly pays such increased amount of taxes/levies/cess.

Provided further that such increase including GST shall not be made in the extended period of contract for which the contractor alone is responsible for delay as determined by WAPCOS for extension of time.

- (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 Government 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 35: 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 36: 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 debarred from tendering in WAPCOS 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 37: 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 38: THEORETICAL CONSUMPTION OF MATERIAL - NOT APPLICABLE

- (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 Special Conditions of Contract. 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) Theoretical quantity of steel reinforcement or structural steel sections shall be taken as the quantity required as per design or as authorized by Engineer-in-Charge, including authorized lappages, chairs etc. plus 3% wastage due to cutting into pieces, such theoretical quantity being determined and compared with the actual issues each diameter wise, section wise and category wise separately.
- (c) Theoretical quantity of G.I. & C.I. or other pipes, conduits, wires and cables, pig lead and G.I./M.S. sheets shall be taken as quantity actually required and measured plus 5% for wastage due to cutting into pieces (except in the case of G.I./M.S. sheets it shall be 10%), such determination & comparison being made diameter wise & category wise.
- (d) For any other material as per actual requirements.

Over the theoretical quantities of materials so computed a variation shall be allowed as specified in Special Conditions of Contract. 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

- (ii) 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 39: COMPENSATION DURING WARLIKE SITUATION - NOT APPLICABLE

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. 5,000/- 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. 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 40: 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 thereunder 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 41: 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 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 42: INSURANCE

1. Requirements

Before commencing execution of works, unless stated otherwise in the special conditions of contract, 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 special conditions of contract.

2. Policy in Joint Names of Contractor and Employer

The policy referred to under sub-clause 46(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.

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

3. 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 46(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 43: CONDITIONS SPECIFIC TO GREEN BUILDINGS PRACTICESCLAUSE

The contractor shall strictly adhere to the following conditions as part of his contractual obligations:

1. SITE

- 1.1 The contractor shall ensure that adequate measures are taken for the prevention of erosion of the top soil during the construction phase. The contractor shall implement the Erosion and Sedimentation Control Plan (ESCP) provided to him by the Engineer-in-charge as part of the larger Construction Management Plan (CMP). The contractor shall obtain the Erosion and Sedimentation Control Plan (ESCP) Guidelines from the Engineer-in-charge and then prepare “working plan” for the following month’s activities as a CAD drawing showing the construction management, staging & ESCP. At no time soil should be allowed to erode away from the site and sediments should be trapped where necessary.
- 1.2 The contractor shall ensure that all the top soil excavated during construction works is neatly stacked and is not mixed with other excavated earth. The contractors shall take the clearance of the architects / Engineer-in-charge before any excavation. Top soil should be stripped to a depth of 20 cm (centimeters) from the areas to be disturbed, for example proposed area for buildings, roads, paved areas, external services and area required for construction activities etc. It shall be stockpiled to a maximum height of 40 cm in designated areas, covered or stabilized with temporary seeding for erosion prevention and shall be reapplied to site during plantation of the proposed vegetation. Top soil shall be separated from subsoil, debris and stones larger than 50 mm (millimeter) diameter. The stored top soil may be used as finished grade for planting areas.
- 1.3 The contractor shall carry out the recommendations of the soil test report for improving the soil under the guidance of the Engineer-in-charge who would also advise on the timing of application of fertilizers and warn about excessive nutrient levels.
- 1.4 The contractor shall carry out post-construction placement of topsoil or other suitable plant material over disturbed lands to provide suitable soil medium for vegetative growth. Prior to spreading the topsoil, the sub-grade shall be loosened to a depth of 50mm to permit bonding. Topsoil shall be spread uniformly at a minimum compacted depth of 50mm on grade 1:3 or steeper slopes, a minimum depth of 100mm on shallower slopes. A depth of 300mm is preferred on relatively flatter land.
- 1.5 The Contractor should follow the construction plan as proposed by the Engineer-in-charge to minimize the site disturbance such as soil pollution due to spilling. Use staging and spill prevention and control plan to restrict the spilling of the contaminating material on site. Protect top soil from erosion by collection storage and reapplication of top soil, constructing sediment basin, contour trenching, mulching etc.
- 1.6 No excavated earth shall be removed from the campus unless suggested otherwise by Engineer-in-charge. All subsoil shall be reused in backfilling/landscape, etc as per the instructions of the Engineer-in-charge
- 1.7 The contractor shall not change the natural gradient of the ground unless specifically instructed by the architects / landscape consultant. This shall cover all natural features like water bodies, drainage gullies, slopes, mounds, depressions, rocky outcrops, etc. Existing drainage patterns through or into any preservation area shall not be modified unless specifically directed by the Engineer-in-charge.
- 1.8 The contractor shall not carry out any work which results in the blockage of natural drainage.
- 1.9 The contractor shall ensure that existing grades of soil shall be maintained around existing vegetation and lowering or raising the levels around the vegetation is not allowed unless specifically directed by the Engineer-in-charge
- 1.10 Contractor shall reduce pollution and land development impacts from automobiles use during construction.
- 1.11 Overloading of trucks is unlawful and creates and erosion and sedimentation problems,

especially when loose materials like stone dust, excavated earth, sand etc. are moved. Proper covering must take place. No overloading shall be permitted.

2. CONSTRUCTION PHASE AND WORKER FACILITIES

2.1 The contractor shall specify and limit construction activity in preplanned/ designated areas and shall start construction work after securing the approval for the same from the Engineer-in-charge. This shall include areas of construction, storage of materials, and material and personnel movement.

2.2 Preserve and Protect Landscape during Construction

- The contractor shall ensure that no trees, existing or otherwise, shall be harmed and damage to roots should be prevented during trenching, placing backfill, driving or parking heavy equipment, dumping of trash, oil, paint, and other materials detrimental to plant health. These activities should be restricted to the areas outside of the canopy of the tree, or, from a safe distance from the tree/plant by means of barricading. Trees will not be used for support; their trunks shall not be damaged by cutting and carving or by nailing posters, advertisements or other material. Lighting of fires or carrying out heat or gas emitting construction activity within the ground, covered by canopy of the tree is not to be permitted.
- The contractor shall take steps to protect trees or saplings identified for preservation within the construction site using tree guards of approved specification.
- The contractor shall conserve existing natural areas and restore damaged areas to provide habitat and promote biodiversity. Contractor should limit all construction activity within the specified area as per the Construction Management Plan (CMP) proposed by the Engineer-in-charge. All the existing trees should be preserved, if not possible then compensate the loss by re-planting trees in the proportion of 1:3.
- The contractor shall avoid cut and fill in the root zones, through delineating and fencing the drip line (the spread limit of a canopy projected on the ground) of all the trees or group of trees. Separate the zones of movement of heavy equipment, parking, or excessive foot traffic from the fenced plant protection zones.
- The contractor shall ensure that maintenance activities shall be performed as needed to ensure that the vegetation remains healthy. The preserved vegetated area shall be inspected by the Engineer-in-charge at regular intervals so that they remain undisturbed. The date of inspection, type of maintenance or restorative action followed shall be recorded in the logbook.

2.3 Contractor shall be required to develop and implement a waste management plan, quantifying material diversion goals. He shall establish goals for diversion from disposal in landfills and incinerators and adopt a construction waste management plan to achieve these goals. A project-vide policy of "Nothing leaves the Site" should be followed. In such a case when strictly followed, care would automatically be taken in ordering and timing of materials such that excess doesn't become "waste". The Contractor's ingenuity is especially called towards meeting this prerequisite/ credit (GRIHA). Consider recycling cardboard, metal, brick, acoustical tile, concrete, plastic, clean wood, glass, gypsum wallboard, carpet and insulation. Designate a specific area(s) on the construction site for segregated or commingled collection of recyclable material, and track recycling efforts throughout the construction process. Identify construction haulers and recyclers to handle the designated materials. Note that diversion may include donation of materials to charitable organizations and salvage of materials on-site.

2.4 Contractor shall collect all construction waste generated on site. Segregate these wastes based on their utility and examine means of sending such waste to manufacturing units

which use them as raw material or other site which require it for specific purpose. Typical construction debris could be broken bricks, steel bars, broken tiles, spilled concrete and mortar etc.

- 2.5 The contractor shall provide clean drinking water for all workers
- 2.6 The contractor shall provide the minimum level of sanitation and safety facilities for the workers at site. The contractor shall ensure cleanliness of workplace with regard to the disposal of waste and effluent; provide clean drinking water and latrines and urinals as per applicable standard. Adequate toilet facilities shall be provided for the workman within easy access of their place of work. The total no. to be provided shall not be less than 1 per 30 employs in any one shift. Toilet facilities shall be provided from the start of building operations, connection to a sewer shall be made as soon as practicable. Every toilet shall be so constructed that the occupant is sheltered from view and protected from the weather and falling objects. Toilet facilities shall be maintained in a sanitary condition. A sufficient quantity of disinfectant shall be provided. Natural or artificial illumination shall be provided.
- 2.7 The contractor shall ensure that air pollution due to dust/generators is kept to a minimum, preventing any adverse effects on the workers and other people in and around the site. The contractor shall ensure proper screening, covering stockpiles, covering brick and loads of dusty materials, wheel-washing facility, gravel pit, and water spraying. Contractor shall ensure the following activities to prevent air pollution during construction:
 - Clear vegetation only from areas where work will start right away
 - Vegetate / mulch areas where vehicles do not ply.
 - Apply gravel / landscaping rock to the areas where mulching / paving is impractical
 - Identify roads on-site that would be used for vehicular traffic. Upgrade vehicular roads (if these are unpaved) by increasing the surface strength by improving particle size, shape and mineral types that make up the surface & base. Add surface gravel to reduce source of dust emission. Limit amount of fine particles (smaller than 0.075mm) to 10 – 20%
 - Water spray, through a simple hose for small projects, to keep dust under control. Fine mists should be used to control fine particulate. However, this should be done with care so as not to waste water. Heavy watering can also create mud, which when tracked onto paved public roadways, must be promptly removed. Also, there must be an adequate supply of clean water nearby to ensure that spray nozzles don't get plugged. Water spraying can be done on:
 - Any dusty materials before transferring, loading and unloading
 - Area where demolition work is being carried out
 - Any un-paved main haul road
 - Areas where excavation or earth moving activities are to be carried out
 - The contractor shall ensure that the speed of vehicles within the site is limited to 10 km/hr.
 - All material storages should be adequately covered and contained so that they are not exposed to situations where winds on site could lead to dust / particulate emissions.
 - Spills of dirt or dusty materials will be cleaned up promptly so the spilled material does not become a source of fugitive dust and also to prevent of seepage of pollutant laden water into the ground aquifers. When cleaning up the spill, ensure that the clean-up process does not generate additional dust. Similarly, spilled concrete slurries or liquid wastes should be contained / cleaned up immediately before they can

infiltrate into the soil / ground or runoff in nearby areas

- Provide hoardings of not less than 3m high along the site boundary, next to a road or other public area
- Provide dust screens, sheeting or netting to scaffold along the perimeter of the building Cover stockpiles of dusty material with impervious sheeting
- Cover dusty load on vehicles by impervious sheeting before they leave the site

2.8 Contractor shall be required to provide an easily accessible area that serves the entire building and is dedicated to the separation, collection and storage of materials for recycling including (at a minimum) paper, corrugated cardboard, glass, plastics, and metals. He shall coordinate the size and functionality of the recycling areas with the anticipated collections services for glass, plastic, office paper, newspaper, cardboard, and organic wastes to maximize the effectiveness of the dedicated areas. Consider employing cardboard balers, aluminum can crushers, recycling chutes, and collection bins at individual workstations to further enhance the recycling program.

2.9 The contractor shall ensure that no construction leachate (Ex: cement slurry), is allowed to percolate into the ground. Adequate precautions are to be taken to safeguard against this including, reduction of wasteful curing processes, collection, basic filtering and reuse. The contractor shall follow requisite measures for collecting drainage water run-off from construction areas and material storage sites and diverting water flow away from such polluted areas. Temporary drainage channels, perimeter dike/swale, etc. shall be constructed to carry the pollutant-laden water directly to the treatment device or facility (municipal sewer line).

2.10 Staging (dividing a construction area into two or more areas to minimize the area of soil that will be exposed at any given time) should be done to separate undisturbed land from land disturbed by construction activity and material storage.

2.11 The contractor shall Comply with the safety procedures, norms and guidelines (as applicable) as outlined in the document Part 7 _Constructional practices and safety, 2005, National Building code of India, Bureau of Indian Standards. A copy of all pertinent regulations and notices concerning accidents, injury and first-aid shall be prominently exhibited at the work site. Depending upon the scope & nature of work, a person qualified in first-aid shall be available at work site to render and direct first-aid to causalities. A telephone may be provided to first-aid assistant with telephone numbers of the hospitals displayed. Complete reports of all accidents and action taken thereon shall be forwarded to the competent authorities.

2.12 The contractor shall ensure the following activities for construction workers safety, among other measures:

- Guarding all parts of dangerous machinery.
- Precautionary signs for working on machinery
- Maintaining hoists and lifts, lifting machines, chains, ropes, and other lifting tackles in good condition.
- Durable and reusable formwork systems to replace timber formwork and ensure that formwork where used is properly maintained.
- Ensuring that walking surfaces or boards at height are of sound construction and are provided with safety rails or belts.
- Provide protective equipment; helmets etc.
- Provide measures to prevent fires. Fire extinguishers and buckets of sand to be provided in the fire-prone area and elsewhere.
- Provide sufficient and suitable light for working during night time.

2.13 Adopt additional best practices, ~~Page 7 of 281~~ in construction industry.

2.14 The storage of material shall be as per standard good practices as specified in Part 7, Section 2 – Storage, Stacking and Handling practices, NBC 2005 and shall be to the satisfaction of the Engineer-in-charge to ensure minimum wastage and to prevent any misuse, damage, inconvenience or accident. Watch and ward of the Contractor's materials shall be his own responsibility. There should be a proper planning of the layout for stacking and storage of different materials, components and equipment with proper access and proper maneuverability of the vehicles carrying the materials. While planning the layout, the requirements of various materials, components and equipment at different stages of construction shall be considered. The Owner shall not take any responsibility on any account.

2.15 The contractor shall provide for adequate number of garbage bins around the construction site and the workers facilities and will be responsible for the proper utilization of these bins for any solid waste generated during the construction. The contractor shall ensure that the site and the workers facilities are kept litter free. Separate bins should be provided for plastic, glass, metal, biological and paper waste and labelled in both Hindi and English.

2.16 The contractor shall prepare and submit 'Spill prevention and control plans' before the start of construction, clearly stating measures to stop the source of the spill, to contain the spill, to dispose the contaminated material and hazardous wastes, and stating designation of personnel trained to prevent and control spills. Hazardous wastes include pesticides, paints, cleaners, and petroleum products.

2.17 Contractor shall collect the relevant material certificates for materials with high recycled (both post-industrial and post-consumer) content, including materials for structural use like TMT steel rolled with high percentage of recycled steel, and RMC mix with fly-ash etc. (see appendix)

2.18 Contractor shall collect the relevant material certificates for rapidly renewable materials such as bamboo, wool, cotton insulation, agrifiber, linoleum, wheat board, strawboard and cork.

2.19 Contractor shall adopt an IAQ (Indoor Air Quality) management plan to protect the system during construction, control pollutant sources, and interrupt pathways for contamination. He shall sequence installation of materials to avoid contamination of absorptive materials such as insulation, carpeting, ceiling tile, and gypsum wallboard. He shall also protect stored on-site or installed absorptive materials from moisture damage.

2.20 The contractor shall ensure that a flush out of all internal spaces is conducted prior to and over. This shall comprise an opening of all doors and windows for 14 days to vent out any toxic fumes due to paints, varnishes, polishes, etc.

2.21 Contractor shall make efforts to reduce the quantity of indoor air contaminants that are dorous or potentially irritating harmful to the comfort and well-being of installer and building occupants. Contractor shall ensure that the VOC (Volatile Organic Compounds) content of paints, coatings and primers used must not exceed the VOC content limits mentioned below:

Paints

Non-flat - 150 g/L

Flat (Mat) - 50 g/L

Anti corrosive/ anti rust - 250 g/L

Coatings

Clear wood finishes

Varnish - 350 g/L

Lacquer - 550 g/L

Floor coatings - 100 g/L

Stains - 250 g/L

Sealers

Waterproofing sealer - 250 g/L

Sanding sealer - 275 g/L

Other sealers - 200 g/L

The VOC (Volatile Organic Compounds) content of adhesives and sealants used must be less than VOC content limits mentioned:

Architectural Applications VOC Limit (g/l less water)

Indoor Carpet adhesives - 50

Carpet Pad Adhesives - 50

Wood Flooring Adhesive - 100

Rubber Floor Adhesives - 60

Sub Floor Adhesives - 50

Ceramic Tile Adhesives - 65

VCT and Asphalt Tile adhesives - 50

Dry Wall and Panel Adhesives - 50

Structural Glazing Adhesives - 100

Multipurpose Construction Adhesives - 70

Substrate Specific Application VOC Limit (g/l less water)

Metal to Metal - 30

Plastic Foams - 50

Porous material (except wood) - 50

Wood - 30

Fiber Glass – 80

2.22 Wherever required, Contractor shall meet and carry out documentation of all activities on site, supplementation of information, and submittals in accordance with GRIHA program standards and guidelines. Towards meeting the aforementioned building environmental rating standard(s) expert assistance shall be provided to him up on request.

2.23 Water Use during Construction

Contractor should spray curing water on concrete structure and shall not allow free flow of water. After liberal curing on the first day, all the verticals surfaces of concrete structures should be painted with curing chemical to save water nothing extra shall be paid. Concrete structures should be kept covered with thick cloth/gunny bags and water should be sprayed on them. Contractor shall do water ponding on all sunken slabs using cement and sand mortar.

2.24 The Contractor shall remove from site all rubbish and debris generated by the Works and keep Works clean and tidy throughout the Contract Period. All the serviceable and non-service able (malba) material shall be segregated and stored separately. The malba obtained during construction shall be collected in well-formed heaps at properly selected places, keeping in a view safe condition for workmen in the area. Materials which are likely to cause dust nuisance or undue environmental pollution in any other way, shall be removed from the site at the earliest and till then they shall be suitable covered. Glass & steel should be dumped or buried separately to prevent injury. The work of removal of debris should be carried out during day. In case of poor visibility artificial light may be provided.

2.25 MATERIALS & FIXTURES FOR THE PROJECT

2.26 The contractor shall endeavor to source most of the materials for construction at this project within a distance of 800 km radius from the project site. Contractor shall collect the relevant material certificates to prove the same

- h) Any material that is to be sourced from outside the prescribed radius shall be done after securing the necessary approval from the Engineer-in-charge.
- i) All cement used at site for reinforced concrete, precast members, mortar, plaster, building blocks, etc shall be PPC (Ordinary Portland Cement). The PPC must meet the requirements of IS 1489: 1991. (Minimum 25% replacement of cement with fly ash in PPC (Portland Pozzolona Cement) by weight of the cement used in the overall RC for meeting the equivalent strength requirements).
- j) As a measure to reduce wastage and water consumption during construction, the contractor shall source or set up the infrastructure for a small scale ready mix concrete, all concreting works at site shall utilize only batch mix concrete.
- k) The contractor has to comply as per MoEF issued notification 8.0.763(E) dated 14th Sept.1999 containing directive for greater fly ash utilization, where it stipulates that ii. Every construction agency engaged in the construction of buildings within a radius of 50 km radius of a Thermal Power Plant, have to use of 100% fly ash based bricks/blocks in their construction. Any brick/block containing more than 25% fly ash is designated as fly ash brick/block. As per GRIHA credits, bricks / blocks should contain more than 40% fly ash.
- l) The contractor shall ensure that sand from approved source is used in place of sand in all concreting works unless specifically instructed otherwise by the Engineer-in-charge.
- m) Timber and aluminum use should be minimized in the project. If used, timber shall constitute of reclaimed timber and aluminum shall constitute recycled content. The source of such reclaimed timber shall be approved by the Engineer-in-charge.
- n) The contractor shall ensure that nontoxic anti-termite and other pest control is strictly used.
- o) The contractor shall ensure that all paints, polishes, adhesives and sealants used both internally and externally, on any surface, shall be Low VOC products. The contractor shall get prior approval from the Engineer-in-charge before the application of any such material.
- p) All plumbing and sanitary fixtures installed shall be as per the requirement of the of the GRIHA and shall adhere to the minimum LPM and LPF mentioned.
- q) The contractor shall employ 100% zero ODP (ozone depletion potential) insulation; HCFC hydro-chlorofluorocarbon)/ and CFC (chlorofluorocarbon) free HVAC and refrigeration equipment's and/halon-free fire suppression and fire extinguishing systems.
- r) The contractor shall ensure that all composite wood products/agro-fibre products used for cabinet work, etc. do not contain any added urea formaldehyde resin.

2.28 CONSTRUCTION WASTE

- a) Contractor shall ensure that wastage of construction material is kept to a maximum of 3%.
- b) All construction debris generated during construction shall be carefully segregated and stored in a demarcated waste yard. Clear, identifiable areas shall be provided for each waste type. Employ measures to segregate the waste on site into inert, chemical, or hazardous wastes.
- c) All construction debris shall be used for road preparation, back filling, etc, as per the instructions of the Engineer-in-charge, with necessary activities of sorting, crushing, etc.
- d) No construction debris shall be taken away from the site, without the prior approval of the Engineer-in-charge.
- e) The contractor shall recycle the unused chemical/hazardous wastes such as oil, paint, batteries, and asbestos
- f) If and when construction debris is taken out of the site, after prior permissions from the Project Manager, then the contractor shall ensure the safe disposal of all wastes and will only dispose of any such construction waste in approved dumping sites.
- g) Inert waste to be disposed off by Municipal Corporation/ local bodies at landfill sites.

2.29 Documentation

- a) The contractor shall, during the entire tenure of the construction phase, submit the following records to the Engineer-in-charge on a monthly basis:
 - i) Water consumption in litres
 - ii) Electricity consumption in 'kwh' units
 - iii) Diesel consumption in litres
 - iv) Quantum of waste generated at site and the segregated waste types divided into inert, chemical and hazardous wastes.
 - v) Digital photo documentation to demonstrate compliance of safety guidelines as specified here.
- b) The contractor shall, during the entire tenure of the construction phase, submit the following records to the Engineer-in-charge on a weekly basis:
 - i) Quantities of material brought into the site, including the material issued to the contractor.
 - ii) Quantities of construction debris (if at all) taken out of the site
 - iii) Digital photographs of the works at site, the workers facilities, the waste and other material storage yards, pre-fabrication and block making works, etc as guided by the Engineer-in-charge.
- c) The contractor shall submit one document after construction of the buildings, a brief description along with photographic records to show that other areas have not been disrupted during construction. The document should also include brief explanation and photographic records to show erosion and sedimentation control measures adopted. (Document CAD drawing showing site plan details of existing vegetation, existing buildings, existing slopes and site drainage pattern, staging and spill prevention measures, erosion and sedimentation control measures and measures adopted for top soil preservation during construction
- d) The contractor shall submit to the Engineer-in-charge after construction of the buildings, a detailed as built quantification of the following:
 - i) Total materials used,
 - ii) Total top soil stacked and total reused
 - iii) Total earth excavated,
 - iv) Total waste generated,
 - v) Total waste reused,
 - vi) Total water used,
 - vii) Total electricity, and
 - viii) Total diesel consumed.
- e) The contractor shall submit to the Engineer-in-charge, before the start of construction, a site plan along with a narrative to demarcate areas on site from which top soil has to be gathered, designate area where it will be stored, measures adopted for top soil preservation and indicate areas where it will be reapplied after construction is complete.
- f) The contractor shall submit to the Engineer-in-charge, a detailed narrative (not more than 250 words) on provision for safe drinking water and sanitation facility for construction workers and site personnel.
- g) Provide supporting document from the manufacturer of the cement specifying the fly-ash content in PPC used in reinforced concrete.
- h) Provide supporting document from the manufacturer of the pre-cast building blocks specifying the fly ash content of the blocks used in an infill wall system.
- i) The contractor shall, at the end of construction of the buildings, submit to the Engineer-in-charge, submit following information, for all material brought to site for construction purposes, including manufacturer's certifications, verifying information, and test data, where Specifications sections require data relating to environmental issues including but not limited to:

Source of products: Supplier details and location of the supplier and brand name.

- ii) Project Recyclability: Submit information to assist Owner and WAPCOS in recycling materials involved in shipping, handling, and delivery, and for temporary materials necessary for installation of products.
- iii) Recycled Content: Submit information regarding product postindustrial recycled and post-consumer recycled content. Use the "Recycled Content Certification Form", to be provided by the Commissioning Authority appointed for the Project.
- iv) Product Recyclability: Submit information regarding product and product's component's recyclability including potential sources accepting recyclable materials.
- v) Clean tech: Provide pollution clearance certificates from all manufacturers of materials
- vi) Indoor Air quality and Environmental Issues: Submit following certificates:
 - a) Certifications from manufacturers of Low VOC paints, adhesives, sealant and polishes used at this particular project site.
 - b) Certification from manufacturers of composite wood products/agro fibre products on the absence of added urea formaldehyde resin in the products supplied to them to this particular site.
 - c) Submit environmental and pollution clearance certificates for all diesel generators installed as part of this project.
- j) Provide total support to the Engineer-in-charge appointed by the WAPCOS in completing all Green Building Rating related formalities, including signing of forms, providing signed letters in the contractor's letterhead.

2.30 EQUIPMENT

- a) To ensure energy efficiency during and post construction all pumps, motors and engines used during construction or installed, shall be subject to approval and as per the specifications of the architects.
- b) All lighting installed by the contractor around the site and at the labour quarters during construction shall be CFL/LED bulbs of the appropriate illumination levels. This condition is a must, unless specifically prescribed.

The contractor is expected to go through all other conditions of the GRIHA rating stipulations, which can be provided to him by the architects.

Failure to adhere to any of the above-mentioned items, without necessary clearances from the architects and the Engineer-in-charge, shall be deemed as a violation of contract and the contractor shall be held liable for penalty as determined by the architects.

CLAUSE 44: PAYMENT

1. Payment Schedule

The Payment Schedule includes a schedule setting out each Milestone Event to be achieved in a month for the Works.

2. Contractor's Application for Payment

From the date of issue of the Notice to Proceed, on the 5th (fifth) Business Day of any month, the Contractor may submit a Request for Payment, to WAPCOS Limited Representative in respect of the preceding month.

Within each Request for Payment the Contractor shall show separately:

- (i) the amounts which the Contractor claims to be payable as the cost of the Works completed during that month; and
- (ii) the cumulative amount of all prior payments made by WAPCOS Limited; and
- (iii) any amounts to which the Contractor considers are due and payable to it in accordance with the provisions of the Contract.

3. The Contractor's Request for Payment shall:

- (i) be prepared on forms in the form and in a number advised by WAPCOS Limited Representative; and
- (ii) contain confirmation of the relevant Milestone Events which, in the opinion of the Contractor have been achieved in that month which applies to each such Milestone Event; and
- (iii) be accompanied by:
 - (a) Copy of relevant records of measurement of works, jointly taken and signed by both the parties;
 - (b) A status report describing in such detail as may reasonably request, the percentage of any uncompleted Milestone Event for the month in question and the work to be undertaken by the Contractor prior to the next Request for Payment;
 - (c) Certification by WAPCOS Limited Representative confirming that the Milestone Events referred to in the Request for Payment have been achieved.
 - (d) Confirmation by the Contractor of any amounts due and owing from the Contractor to WAPCOS Limited pursuant to the Contract;
 - (e) The Contractor's certification that the quality of all completed Works accords with the requirements of the Contract;
 - (f) The Contractor's certification that each obligation, item of cost or expense mentioned in that Request for Payment has not been the basis of any previous payment.
 - (g) The Contractor's certification that it has reviewed all financial and budget data contained in the Request for Payment;
 - (h) The Contractor's certification that the quality of all completed Works accords with the requirements of the Contract;
 - (i) The Contractor's certification that each obligation, item of cost or expense mentioned in that Request for Payment has not been the basis of any previous payment; and
 - (j) The Contractor's certification that each Subcontractor who performed part of the Works which was included in the immediately preceding Certificates of Payment was paid all amounts then due to it for such Works
 - (k) The Contractor providing evidence of the validity of the Contractor's Insurances.

CLAUSE 45: PREFERENCE TO MAKE IN INDIA

- 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
 - i. 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.
- ii. 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

- i. 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.
- ii. "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.
- iii. "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
- iv. The beneficial owner for the purpose of 1.4.2.(iii) above will be as under:
 1. 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-

2. "Controlling ownership interest" means ownership of or entitlement to more than twenty- five per cent. Of shares or capital or profits of the company;
3. "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;
4. 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;
5. 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 of or entitlement to more than fifteen percent of the property or capital or profit of such association or body of individuals;
6. 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;
7. 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.

- v. An Agent is a person employed to do any act for another, or to represent another in dealings with third person.
- vi. 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.

CLAUSE 47: FACILITIES TO BE PROVIDED BY CONTRACTORS TO WAPCOS LIMITED

- i. 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.
- ii. 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. The contractor shall facilitate the Pre-Shipment Inspection and bear the associated expenses.

CLAUSE 48: BLACKLISTING POLICY

The Blacklisting Policy of the company is available on official website of WAPCOS Limited. The bidder/tenderer/consultant/contractors have to mandatorily furnish an undertaking addressing the same to Engineer-in-Charge in the form of certificate to abide the contents of Blacklisting Policy as per FORM-C. 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- IV

SPECIAL CONDITIONS OF CONTRACT

SECTION-IV
SPECIAL CONDITIONS OF CONTRACT

1.0 SPECIAL CONDITIONS OF CONTRACT

The Special Condition of Contract (SCC) shall be followed by the Contractor in addition to the General Condition of Contract (GCC) of tender document. The following General Condition of Contract of this tender are modified/added as detailed below. In case of any discrepancy between GCC and SCC, the SCC will succeed over GCC.

CLAU SE NO.	DESCRIPTION	APPLICABILITY/MODIFIED/ ADDED
GENERAL RULES AND DIRECTIONS		
4A & 4B	4A & 4B	Applicable
8	Schedule of Materials to be issued to the Contractor	Not Applicable
10	In the case ----executed accordingly	Not Applicable
11	In the case-----disqualified and rejected	Not Applicable
19	List of works from	Not Applicable
DEFINITIONS		
Add d	Principal Employer/ Owner/Client means Odisha State ST & SC Development, M&BCW Department Shall Include their Legal representatives, nominees, employees and Officials.	
2(iii)	Work / Project Means: As Mentioned in NIT	
2(iv)	Site / Location Means As Mentioned in NIT	
2 (vi & vii)	Engineer-In-Charge & Accepting Authority Will be intimated to the successful Bidder at the time of issue of Notice to Proceed the works.	
2 (x)	Market Rate Percentage on cost of materials and labour to cover all overheads and profits	15%
2(xi)	Standard Schedule of Rates for works	Work will be executed as per the provision in the OSOR 2022 and Market rate items
2(xvi)	Date of Commencement of work	5 days after date of award of Work
CLAUSES OF CONTRACT		
Claus e 1	Performance Guarantee	Applicable
	a) Performance Guarantee.	5% of Tendered Value
	b) Time allowed for submission of Performance Guarantee from the date of issue of letter of acceptance.	20 Days
	c) Validity of Performance Guarantee	Performance Security is to be furnished by a specific date

CLAUSE NO.	DESCRIPTION	APPLICABILITY/MODIFIED/ADDED
		and it should remain valid for a period of 60 (sixty) days beyond the date of completion of all contractual obligations including DLP and as per BOQ plus 1 (One) year of claim period beyond this duration.
	d) Release of Performance Guarantee	As per Clause no 1, Sr. No iii
Clause 1A	Security Deposit	Applicable 2.5% of Tendered Value
	Release of security Deposit	Applicable as per Clause 1 A
Clause 2	Compensation for Delay	Applicable 0.5% of the awarded cost of work per week. (Maximum up to 10% of the actual cost of work which includes awarded cost of work, cost of extra items/ substituted items and cost of deviation, if any.)
Clause 2A	Incentive for Early Completion	Not Applicable
Clause 3A	Start of Work	Not Applicable
Clause 5	Time and Extension for Delay	Applicable
	Number of days from the date of issue of letter of acceptance for reckoning date of start	5 days
	Stipulated time of completion of project	As Mentioned in NIT
Clause 7	Payment on Intermediate Certificate to be Regarded as advance	Not Applicable
New Clause 7A (Added)	Payment	The agency acknowledges that under the present Contract, WAPCOS is only working as intermediary between Principal Employer/Owner/Client being Principal Employer/owner and the contractor thus the contractor acknowledges that the payments under the present Contract shall be made proportionately by WAPCOS only on back-to-back basis i.e. after 21 days subject to receipt of payment from Principal

CLAUSE NO.	DESCRIPTION	APPLICABILITY/MODIFIED/ADDED
		Employer/Owner/Client being Principal Employer/Owner. The Contractor also unconditionally agree that in the event of payment or part thereof, under the present contract is not received from Principal Employer/Owner/Client then WAPCOS &/or any of its Employee/Officer shall not be responsible to pay any amount to the Contractor. The said condition shall supersede any and all other conditions of contract between the parties.
Clause 10	Materials Supplied by WAPCOS	Not Applicable
Clause 10A	<p>Materials to be Provided by Contractor</p> <p>List of Testing Equipment to be provided by the Contractor</p> <ol style="list-style-type: none"> 1. Cube Testing Machine along with sufficient numbers of cube moulds 2. Set of Sieves for testing of coarse & fine aggregate alongwith shaker 3. Slump Cone 4. Vernier Caliper, Screw Gauge, Wire gauge 5. Weighing Balance with weights 6. Rebound Hammer 7. For testing of Design Mix Concrete at site, necessary testing equipment and facility (as per BIS) shall be made available by Contractor as and when required by Engineer-In-Charge or his authorized representative and nothing extra shall be paid on account of this. <p>(Note: The listed equipment / instruments will be installed at his own cost by Contractor in laboratory room which to be constructed by the Contractor at his own cost).</p>	Applicable
Clause 10 B(i)	Secured Advance on Non-Perishable Materials	Not Applicable

CLAUSE NO.	DESCRIPTION	APPLICABILITY/MODIFIED/ADDED
Clause 10B (ii)	Mobilization Advance	<p>Applicable</p> <p>10% of the tendered value on submission of Bank Guarantee Bond from Scheduled Bank/Nationalized Bank for the amount equal to 110% of the amount of advance and valid for the contract period. The mobilization advance bears simple interest at the rate of 10 per cent per annum and shall be calculated from the date of payment to the date of recovery. (It will be provided to the contractor if the same is provided by Principal Employer/Owner/Client to WAPCOS</p>
Clause 10B (iii)	Plant Machinery & Shuttering Material Advance	Not Applicable
Clause 10 B(iv)	Recovery of Mobilization advance	Added - 14.75% interest per annum for the period in case of non-return of mobilization advance after stipulated due date.
Clause 10C	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 12	Deviations / Variations Extent and Pricing	
	Clause 12.1	Not applicable
	Clause 12.2(a)	<ul style="list-style-type: none"> Modified as "In the case of extra item(s) (items that are completely new and non-scheduled item in accordance with the OSOR, the contractor shall submit proper analysis on the

CLAUSE NO.	DESCRIPTION	APPLICABILITY/MODIFIED/ADDED
		<p>basis of the market rates and as per the provision in OSOR and shall be paid in accordance with rate approved by WAPCOS.</p> <ul style="list-style-type: none"> • In case the extra item being the Scheduled Item in accordance with OSOR, these shall be paid as per the provision in the OSOR. The final rate achieved in this case will be increased or decreased on same percentage as per the percentage of total cost quoted above or below by Contractor in respect of NIT cost, during tendering process.
	Clause 12.2(b)	<ul style="list-style-type: none"> • Modified as "The specification mentioned in Tender may be substituted as per the requirement of Owner/ WAPCOS. • In this case of substituted item(s) (scheduled item in accordance with the OSOR, these shall be paid as per the provision in the OSOR. The final rate achieved in this case will be increased or decreased on same percentage as per the percentage of total cost quoted

CLAUSE NO.	DESCRIPTION	APPLICABILITY/MODIFIED/ADDED
		<p>above or below by Contractor in respect of NIT cost, during tendering process.</p> <ul style="list-style-type: none"> In this case of substituted item(s) (that are completely new and non-scheduled item in accordance with the OSOR, the contractor shall submit proper analysis on the basis of the market rates and as per the provision in the OSOR and shall be paid in accordance with rate approved by WAPCOS.
	<p>Clause 12.2 (c) Deviation Limit beyond which clauses 12.2 shall apply for all items other than foundation work (except earthwork) as mentioned in clause 12.5</p>	<p>Project & Original Works 40%</p>
	<p>a) deviation limit beyond which clause 12.2 shall apply for foundation work (except earth work)</p>	<p>40%</p>
	<p>b) deviation limit for items in 100% earth work as per the provision in OSOR.</p>	<p>100%</p> <p>Modified as "In the case of deviated item(s) beyond the % mentioned above (non-scheduled as per the provision in the OSOR, the contractor may within fifteen days of receipt of order shall submit proper analysis on the basis of the market rates and as per the provision in OSOR and shall be paid in accordance with rate approved by WAPCOS In case the deviated item, beyond the % mentioned above, being the Scheduled Item (scheduled item in</p>

CLAUSE NO.	DESCRIPTION	APPLICABILITY/MODIFIED/ADDED
		accordance with the OSOR, these shall be paid as per the provision in the OSOR. The final rate achieved in this case will be increased or decreased on same percentage as per the percentage of total cost quoted above or below by Contractor in respect of NIT cost, during tendering process.
Clause 15A	Compensation	Not Applicable
Clause 17	Contractor liable for Damages, Defects during Defect Liability Period Defect Liability Period	<p>Applicable</p> <p>Added/Modified: Two (2) year from the date of successful completion of the project and handing over to Odisha State ST & SC Development with all satisfaction & acceptance along with submission of all the required documents i.e. As-built drawings, Inventory list, guarantee / warranty bonds, certificates, lock and key of each room and NoC's from various Departments</p>
Clause 25	Settlement of Disputes and Arbitration	<p>Modified as:</p> <p>Any dispute, controversy or claims arising out of or relating to this Contract Agreement (Agreement that will be signed between WAPCOS and Bidder, if work is awarded to bidder), or the breach termination or invalidity thereof shall be settled through following mechanism:</p> <p>a) Firstly, the aggrieved party shall write a letter to the other party detailing its</p>

CLAUSE NO.	DESCRIPTION	APPLICABILITY/MODIFIED/ADDED
		<p>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).</p> <p>b) In the event the parties are unable to reach on any settlement in the said meeting(s), then the aggrieved party shall mandatorily resort to pre-litigation mediation mechanism with Delhi High Court Mediation Cell, New Delhi.</p> <p>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</p>

CLAUSE NO.	DESCRIPTION	APPLICABILITY/MODIFIED/ADDED
		<p>of Sole Arbitrator is CMD, WAPCOS Limited, to which neither of the parties have any objection nor they shall ever object.</p> <p>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).</p> <p>e) It is also acknowledged and accepted that WAPCOS is only working as Intermediary between the Bidder (Contractor) and Odisha State ST & SC Development being Principal Employer, thus in the event, any dispute arises under the Contract Agreement (Agreement that will be signed, if work is awarded to bidder) and referred to Arbitration for adjudication, then subject to corresponding clause in the Memorandum of Agreement between Odisha State ST & SC Development and WAPCOS, Odisha State ST & SC Development shall</p>

CLAUSE NO.	DESCRIPTION	APPLICABILITY/MODIFIED/ADDED
		<p>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 Odisha State ST & SC Development. The said clause if found inapplicable, even then the other terms of the Arbitration Clause shall survive and shall be acted upon.</p> <p>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 purposes between the parties to be made, in Delhi. The arbitral 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.</p> <p>g) The Contract and any dispute or claim arising out of or in connection with it or its subject matter or formation (including</p>

CLAUSE NO.	DESCRIPTION	APPLICABILITY/MODIFIED/ADDED
		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 27	Lumpsum Provisions in Tender	Not Applicable
Clause 29B	Employment of coal mining or controlled area labour not permissible	Not Applicable
Clause 30B	Alternate water arrangements	Not Applicable
Clause 30	Return of surplus material	Not Applicable
Clause 39	Compensation During War Like Situation	Not Applicable
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>

CLAUSE NO.	DESCRIPTION	APPLICABILITY/MODIFIED/ADDED
		The Contractor shall submit a certificate/Undertaking accordingly.
Clause 46	RULE 144 (xi) IN GENERAL FINANCIAL RULES (GFRs) 2017	Undertaking as per Form K
Clause 47	Facilities to be Provided by Contractors to WAPCOS Limited	Applicable
Clause 48	Blacklisting Policy	The Blacklisting Policy of the company is available on official website of WAPCOS Limited. The bidder/tenderer/consultant/contractors have to mandatorily furnish an undertaking addressing the same to Engineer-in-Charge in the form of certificate to abide the contents of Blacklisting Policy as per FORM-C. 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

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 Committee constituted by the Principal Employer/Owner/Client or construction site visiting team of Principal Employer/Owner/Client 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 and modifications as suggested by the above teams/group/ individual. Rectification of defective works or replacement of sub- standard materials or articles or modifications, as pointed out by the Chief Technical Cell, Central Vigilance Commission, committee constituted by Principal Employer/Owner/Client , construction site visiting team of Principal Employer/Owner/Client , Building Works Committee or authorized representative of WAPCOS or third party authorized by WAPCOS/ Principal Employer/Owner/Client or any Statuary Committee, will be carried out or replaced/ modified by the Contractor at his own risk and cost.
2. **Contractor has to make his own arrangement for water for construction purpose and nothing shall be payable extra on this account and deemed to be included in the quoted price.** The contractor shall get the water, tested periodically from outside approved laboratory (within 2 months or early) and daily in site laboratory 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. The suitable water for construction shall be arranged by Contractor at his own cost and nothing extra shall be paid to the contractor on this account.

3. If any official of contractor is not following the directions Principal Employer/Owner/Client in the best interest of work in that case, Principal Employer/Owner/Client / WAPCOS has full authority to get replaced that official from site of work with prior notice.
4. Contractor shall arrange pre shipment inspection of all the equipment's for the contract to be undertaken by the officials of Employer. All the travelling and lodging expenses for such visit shall be borne by the contractor.
5. Contractor will ensure that work will be executed at site as per the rules and regulations of GRIHA council and maintain all rules and safety, environmental protocols, so that GRIHA 3 Star norms shall be achieved for the work
6. Handing Over of the Project: Contractor will hand over the project to Owner /Client after successful completion of each component of the project along with submission of all the required documents i.e. As- built drawings, Inventory list, guarantee / warranty bonds, certificates & invoices of equipment, lock and key of each room and NoCs from various Departments with complete satisfaction and acceptance by Principal Employer/Owner/Client . Contractor shall provide necessary Completion Certificate/NOC from all local Government/ Statuary Authorities including Fire, Forest, Electrical, Environment, Lift, DG Set, Complete inventory list, duly signed as-build drawings, required before handing over the project to the client. The partial handing over of works components shall not be considered. Defect Liability period of two (2) year from the date of successful completion of each component of the project and handing over to Principal Employer/Owner/Client with all satisfaction & acceptance along with submission of all the required documents i.e. As- built drawings, Inventory list, guarantee / warranty bonds, certificates, lock and key of each room and NoCs from various Departments
7. All the modifications and any additional works (basic requirement after use of premises by user) suggested by client at the time of handing over of the project and after occupancy of premises by client during Defect Liability Period must be taken up by contractor without any disputes.
8. The contractor shall deploy the resources at site to start the construction after clearance from the Owner of the project and subsequent written approval from WAPCOS. No claim shall be entertained for idle labour, idle machinery, idle technical / non-technical staff, idle T&P if any, due to delay in start of the works.
9. Contractor shall deploy adequate technical manpower / expert of each relevant fields as per the scope and requirement of work during execution of work at site which are mandatory as per the standard guidelines.
10. If any dispute/ hindrance may arise during construction due to any reason whatsoever, the contractor is not liable for any financial claim or damages due to such circumstances.
11. All Reinforced Cement Concrete work shall be design mix concrete of specified grade and initial design mix shall be carried out from the Govt. approved Laboratory/NABL accredited lab/ NIT/IIT. In case, cement content of design mix is more than the specified in concrete item of Bill of Quantities (BoQ), nothing extra will be paid for extra cement to be consumed. In case, cement content of the design mix is less than the specified in concrete item of BoQ, then less cement used as per design mix is recoverable separately as per base rates.

NOTE: This clause of cement content in concrete will supersede all the related clauses of cement content mentioned in Phigroaderfd28dment

12. The Contractor shall render all help and assistance in documenting the total sequence of this project by way of photography, slides, etc. nothing extra shall be payable to the agency on this account.
13. Quoted amount 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.
14. The contractor shall make his own arrangements for obtaining electric connection and water Connection/arrangement. The water charges and electricity charges as charged by Principal Employer/Owner/Client and Local Authorities will be paid by the Contractor. No dispute in this regard shall be entertained.
15. The contractor shall deploy the resources at site to start the construction after clearance from the Owner of the project and subsequent written approval from WAPCOS. No claim shall be entertained for idle labour, idle machinery, idle technical / non-technical staff, idle T&P if any, due to delay in start of the works.
16. All the rules and regulations about the Labour working at site and mandatory as per the State Government and Central Government departments will be followed by the contractor. If any issue arises in this regard will be resolved by the contractor. Contractor is liable to extend the benefits as provided under the various statutory and labour laws and other relevant applicable laws to its workforce. EPF/ESI and other labour laws being followed by State/Central Government norms and further amendments time to time would be followed by contractor. WAPCOS will not be a party for the issues related to EPF/ESI. If any type of the miss-happening during the execution of the project (i.e. Injury/Mobilization/Loss/Theft etc.) & the responsibility of skilled and un-skilled labor or any legal matter involved in this matter in the concerned jurisdiction will be borne by Contractor only.
17. The Contractor shall dispose of all the dismantled materials, debris, garbage, waste outside of the campus of the works at his own cost and provide clear and clean site at the time of handing over the works
18. 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.
19. The contractor shall be entirely and exclusively responsible for the horizontal, vertical and other alignment, the level and correctness of every part of the work and shall rectify effectively any errors or imperfections therein. Such rectifications shall be carried out by the contractor at his own cost to the instructions and satisfaction of the Engineer-in-Charge.
20. The cost/rates quoted by the contractor are deemed to be inclusive of site clearance, setting out work, profile, establishment of reference bench mark, spot levels, construction of all safety and protection devices, barriers, earth embankments, preparatory works, all testing of materials working during monsoon, working at all depths, height and locations etc. unless specified in the schedule of quantities.
21. Royalty at the prevailing rates wherever payable shall have to be paid by the contractor on the boulders, metal, shingle, sand and bajri etc. Or any other material collected by him for the work direct to revenue authorities and nothing extra shall be paid by the department for the same.
22. The contractor shall provide at his own cost suitable weighing, surveying and leveling and measuring arrangements as may be necessary at site for checking. All such equipment shall be got calibrated in advance from laboratory, approved by the Engineer-in-Charge. Nothing extra shall be payable on this account.
23. 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.

24. 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.
25. 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.
26. 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.
27. The contractor shall have to make approaches road 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.
28. No payment shall be made for any damage caused by rain, snowfall, flood or any other natural calamity, whatsoever during the execution of the work. The contractor shall be fully responsible for any damage to the govt. property and work for which the payment has been advanced to him under the contract and he shall make good the same at his risk and cost. The contractor shall be fully responsible for safety and security of his material, T&P, Machinery brought to the site by him.
29. 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.
30. 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.
31. 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.
32. The gradation of fine sand to be used in plaster work, shall be strictly as per standard specification. The plastered surface shall be fairly smooth without any undulation of any kind for applying paint/white wash.
33. No chase cutting/dismantling of plaster/RCC/CC shall be allowed, so contractor has to execute the electrical work accordingly.
34. The contractor shall invariably prepare the samples of finishing items i.e. flooring of different types, external & internal finishing i/c colour scheme of paint, tiles in dado, flooring in platforms & staircase, water supply & sanitary fittings and any other item 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.
35. The contractor shall establish a fully equipped site laboratory and shall provide electrically operated cube crushing and testing machine appliance at site, such as weighing, scale,

graduated cylinder, standard sieves, thermometer, slump cones etc. 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.

36. 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.
37. The material shall conform to the quality and make as per attached list. 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. 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. Notwithstanding the case of materials of "Preferred Make" as given 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 confirm to standard 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.

40. Special conditions for Cement

The contractor shall procure 43 grade Ordinary Portland Cement (conforming to IS : 8112), Portland Pozzolana Cement (confirming to IS : 1489 : Part –I) as required in the work, from reputed manufacturers of cement as per the list of approved makes or from any other reputed cement manufacturer, having a production capacity not less than one million tones 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.

41. Special Conditions for Steel

The contractor shall procure TMT bars of Fe500/Fe500D/Fe550/Fe550D grade (the grade to procured is to be specified) from primary steel producers as per the list of approved makes 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 tonnes per annum and above.

42. **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.

43. In case of works where a ready mix concrete (RMC) is stipulated to be used from an approved source/manufacturer, cement register need not be maintained. However, the computerized dispatch slips that are sent with each dispatch of RMC shall be kept as record.

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 hand over the warranty of the specialized items to the WAPCOS.

46. Contractor shall submit all the Guarantee/ Warranty bond for the water proofing for 10 years of service warranty and Anti- Termite Treatment works for 5 years of service warranty.

47. 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.

48. 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.

49. In case of any inconsistency between clauses, the clause favorable/ beneficiary to the project will prevail which will be decided by the owner and WAPCOS

SECTION – V

ANNEXURES

- ANNEXURE - I: FORMAT FOR PERFORMANCE SECURITY
- ANNEXURE - II: FORMAT FOR ADVANCE PAYMENT BANK GUARANTEE
- ANNEXURE - III: FORMAT FOR INDENTURE FOR SECURED ADVANCES
- ANNEXURE - IV: FORMAT FOR SEEKING EXTENSION OF TIME
- ANNEXURE - V: FORMAT FOR GUARANTEE BONDS / AFFIDAVIT FOR WORK
- ANNEXURE - VI: FORMAT FOR GUARANTEE BOND FOR WATER PROOFING TREATMENT
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- ANNEXURE - VIII: SAFETY CODES
- ANNEXURE - IX: MODEL RULES FOR THE PROTECTION OF HEALTH AND SANITARY ARRANGEMENTS
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- ANNEXURE XI: AGREEMENT

ANNEXURE – I
FORM OF PERFORMANCE GUARANTEE

WAPCOS Limited,
76-C, Sector 18, Institutional Area
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) (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 _____ (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) (5 % 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 or court. 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 banks 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 any deduction, reduction on account of any reasons including any and all present and future taxes, levies, charges or 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 month after validity of Guarantee**)

Dated this _____ day of _____ at New Delhi.

Note:

The bank guarantee should carry the name, designation & power of attorney number of the bank official.

ANNEXURE – II
FORM OF ADVANCE PAYMENT GUARANTEE

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

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 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 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 any 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

- 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 the validity of the guarantee**).

Dated this _____ day of _____ at New Delhi.

WITNESS

(Signature)

(Signature)

(Name)

(Name)

(Official address)

(Designation with bank stamp)

(Signature)

Attorney as Power of Attorney

(Name)

No. _____ dt. _____

ANNEXURE-III

FORMAT FOR INDENTURE FOR SECURED ADVANCES

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 (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 onand 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 Rupeeson or before the execution of these presents paid to the Contractor by the 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 Rupees so 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 all 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 Divisional Officer Division (hereinafter called the Divisional Officer) 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 authorised 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 Divisional Officer.
- (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 Divisional Officer or an officer authorised by him on that behalf.
- (6) That the advances shall be repayable in full when or before the Contractor receives payment from the 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 the 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

.....
Signature

Witness Name.....

Address

Signed by.....

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

Witness Name.....

Address

Signed by.....

ANNEXURE-IV
FORMAT 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 already given

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

- 9.** Reasons for which extension have been previously given
- 10.** Period for which extension if applied for
- 11.** Hindrances on account of which extension is applied for with dates on which hindrances occurred.

Signature of Contractor

Dated

ANNEXURE – V
FORMAT FOR GUARANTEE BONDS / AFFIDAVIT FOR WORK
(On Rs. 100 non- Judicial Stamp Paper)

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

The agreement made this _____ day of _____ 20 _____ between (Name of Contractor Firm) _____ (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, 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, for the minimum life of ten years, to be reckoned from the date of start of Defect Liability 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 GUARANTOR _____ on behalf of (Name of Contractor Firm) and _____ by for and on behalf of the WAPCOS LIMITED on the day, month and year first above written.

Signed sealed and delivered by GUARANTOR in presence of :

1. _____
2. _____

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

1. _____
2. _____

ANNEXURE – VI
FORMAT FOR GUARANTE BONDS FOR WATER PROOFING
(On Rs. 100 non- Judicial Stamp Paper)

**GUARANTEE BOND TO BE EXECUTED BY THE CONTRACTOR FOR WATER PROOFING TREATMENT
FOR BASEMENT / TERRACE / TOILETS**

The agreement made this _____ day of _____ 20 _____ between (Name of Contractor Firm) _____ (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 of start of Defect Liability 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 GUARANTOR _____ on behalf of (Name of Contractor Firm) and _____ by for and on behalf of the WAPCOS LIMITED on the day, month and year first above written.

Signed sealed and delivered by GUARANTOR in presence of :

1. _____
2. _____

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

1. _____
2. _____

ANNEXURE – VII

FORMAT FOR GUARANTEE BONDS FOR ANTI-TERMITE TREATMENT

(On Rs. 100 non- Judicial Stamp Paper)

GUARANTEE BOND TO BE EXECUTED BY THE CONTRACTOR FOR ANTI-TERMITE TREATMENT

The agreement made this _____ day of _____ 20 _____ between (Name of Contractor Firm) _____ (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, undertook to render the wooden work in the said contract recited completely Termite proof.

THE GUARANTOR hereby guarantee that the anti-termite treatment given by him will render the wooden works completely Termite proof and the minimum life of such Anti-Termite treatment shall be five years to be reckoned from the date completion of work as period prescribed in the contract.

During the period of guarantee the guarantor shall make good all defects and in case of any defects being found render the wooden works termite 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 Anti-termite works, 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 WITNESSE WHEREOF those presents have been executed by the GUARANTOR _____ on behalf of (Name of Contractor Firm) and _____ by for and on behalf of the WAPCOS LIMITED on the day, month and year first above written.

Signed sealed and delivered by GUARANTOR in presence of:

1. _____
2. _____

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

1. _____
2. _____

ANNEXURE – VIII

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. (11 $\frac{1}{2}$ "") for ladder upto 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 defence 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. (100ft.) 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 borewell, 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 borewell, the contractor should cap the bore well 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 borewell 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 vapour proof and of totally enclosed type. Non sparking gas engines also could be used but they should be placed at least 2 metres 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 working 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.

The Contractor shall not employ men and women below the age of 18 years on the work of painting with products containing lead in any form. Wherever men above the age of 18 are employed on the work of lead painting, the following precaution should be taken:-

- (a) No paint containing lead or lead products shall be used except in the form of paste or readymade paint.
- (b) Suitable face masks should be supplied for use by the workers when paint is applied in

the form of spray or a surface having lead paint is dry rubbed and scrapped.

(c) Overalls shall be supplied by the contractors to the workmen and adequate facilities shall be provided to enable the working painters to wash during and on the cessation of work.

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 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.

ANNEXURE – IX
MODEL RULES FOR THE PROTECTION OF HEALTH AND SANITARY ARRANGEMENTS
FOR WORKERS EMPLOYED 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 background 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 :-
 - 1) 6 small sterilised dressings.
 - 2) 3 medium size sterilised dressings.
 - 3) 3 large size sterilised dressings.
 - 4) 3 large sterilised burn dressings.
 - 5) 1 (30 ml.) bottle containing a two per cent alcoholic solution of iodine.
 - 6) 1 (30 ml.) bottle containing salvolatile 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.
 - 1) 12 small sterilised dressings.
 - 2) 6 medium size sterilised dressings.
 - 3) 6 large size sterilised dressings.

- 4) 6 large size sterilised burn dressings.
- 5) 6 (15 gms.) packets sterilised cotton wool.
- 6) 6.1 (60 ml.) bottle containing a two per cent alcoholic solution iodine.
- 7) 1 (60 ml.) bottle containing salvolatile 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) Construction of latrines: 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 upto 50 and one for female workers upto 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 upto 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 sqft) 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 creche 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 creches 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 walls shall be lime washed or colour washed at least once in each year.
Provided that the inside walls of the kitchen shall be lime-washed every four months.
- (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 sqft) 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.
 - (b) 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 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.
- (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 notices 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.

ANNEXURE-X
Contractor's Labour Regulations

1. SHORT TITLE

These regulations may be called the C.P.W.D./PWD (DA) Contractors Labour Regulations.

2. DEFINITIONS

- (i) Workman means any person employed by C.P.W.D./PWD (DA) or its contractor directly or indirectly through a subcontractor with or without the knowledge of the Central Public Works Department/PWD (DA) 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 some other premises, not being premises under the control and management of the principal employer.

No person below the age of 14 years shall be employed to act as a workman.

- (ii) Fair Wages means wages whether for time or piece work fixed and notified under the provisions 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
- (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 provisions of the Minimum Wages (Central) Rules 1960 as amended from time to time irrespective of whether such worker is governed by the Minimum Wages Act or not.
- (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 ~~Page 10 of 28~~ immediately before or after the normal

weekly holiday and pay wages to such worker for the work performed on the normal weekly holiday at 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 the local Indian languages spoken by the majority of the workers giving the minimum rates of wages fixed under Minimum Wages Act, the actual wages being paid, the hours of work for which such wage 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 by contractor through Bank or ECS or online transfer to his bank account.
- (vii) All wages shall be paid through Bank or ECS or online transfer.
- (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 acknowledgment.
- (x) It shall be the duty of the contractor to ensure the disbursement of wages through bank account of labour.
- (xi) The contractor shall obtain from the Junior Engineer or any other authorised representative of the Engineer-in-Charge as the case may be, a certificate under his signature at the end of the entries in the "Register of Wages" or the "Wage-cum-Muster Roll" as the case may be in the following form:-
- (xii) "Certified that the amount shown in column No has been paid to the workman concerned through bank account of labour 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) Deduction for damage to or loss of goods expressly entrusted to the employed person for custody or for loss of money or any other deduction which he is required to account, where such damage or loss is directly attributable to his neglect or default.
- (d) Deduction for recovery of advances or for adjustment of overpayment of wages, advances granted shall be entered in a register.
- (e) Any other deduction which the Central Government may from time to time allow.

- (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 Omissions for which fines can be imposed is enclosed at Appendix-X

- (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 installment, 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 form as may be convenient at the work place but the same shall include the following particulars:
 - (a) Full particulars of the labourers who met with accident.
 - (b) Rate of Wages.
 - (c) Sex
 - (d) Age
 - (e) Nature of accident and cause of accident.
 - (f) Time and date of accident.
 - (g) Date and time when 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 omissions 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 himself.

9. EMPLOYMENT CARD

The contractor shall issue an Employment Card in Form XIV of the 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 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 Ministry of Urban Development in this behalf.

12. POWER OF LABOUR OFFICER TO MAKE INVESTIGATIONS OR ENQUIRY

The Labour Officer or any person authorized by Central Government on their behalf shall have power to make enquires with a view to ascertaining and enforcing due and proper observance of Fair Wage Clauses and the 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 Executive Engineer 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 under Clause 13 of these regulations, actual payment to labourers will be made by the Executive Engineer after the Superintending Engineer has given his decision on such appeal.

- (i) The Executive Engineer shall arrange payments to the labour concerned within 45 days from the receipt of the report from the Labour Officer or the Superintending Engineer 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 Superintending Engineer concerned within 30 days from the date of decision, forwarding simultaneously a copy of his appeal to the Executive Engineer 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 employers 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.
- (iii) No party shall be entitled to be represented by a legal practitioner in any investigation or enquiry 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. SUBMISSIONS OF RETURNS

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

18. AMENDMENTS

The Central Government 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 Superintending Engineer concerned shall be final.

NOTE: Appendix & others mentioned in above labour regulation from I to XIV will be as per the General Conditions of Contract-2020 – Construction works of CPWD.

ANNEXURE-XI
AGREEMENT

THIS AGREEMENT IS MADE on this _____ day of _____ 20__ BETWEEN WAPCOS Limited, A Government of India Undertaking, having its corporate office at 76-C, Sector-18, Gurgaon, Haryana - 122015, represented by its Name, Designation (hereinafter referred to as the 'WAPCOS' or 'Client' which expression shall, unless repugnant to the context or meaning thereof, includes its successors and assigns) of one part and M/s _____ (Name of contractor), _____, having its registered office at _____ represented by Name _____ (Designation) (hereinafter referred to as 'Agency' which expression shall, unless repugnant to the context or meaning thereof, includes its successors, administrators, liquidators and assigns or legal representatives) of the other part.

WHEREAS the Client invited NIT for " _____" vide NIT No. _____ dated _____ and the Agency submitted a bid for the same giving rates/amounts accepting the terms and conditions of the NIT document.

AND WHEREAS the said bid submitted by the Agency has been accepted and the Client has awarded the work of " _____" vide work order/LoA No: _____ dated _____ and the Agency submitted a signed copy of the work order as a token of acceptance of the same, giving rates/amounts accepting the terms and conditions as stipulated in the work order.

NOW THIS AGREEMENT WITNESSETH as follows:

In this Agreement, words and expression shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to, and they shall be deemed to form and be read and construed as part of this Agreement.

In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy any defects therein in conformity in all aspects with the provisions of the Contract.

The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying the defects wherein the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

The following documents shall be deemed to form and be read and construed as part of this Agreement, viz.:

- a) Tender Document
- b) Bidder's Bid
- c) Work Order/Letter of Award (LoA)
- d) Acceptance of LoA

In witness where of the parties thereto have caused this Agreement to be executed the day and year first before written at _____.

Signature of the Employer
(with the seal of company and
address)

Signature of the Contractor
(with the seal of company and
address)

In the presence of:

Witness

- 1.
- 2.

SECTION – VI

FORMS

LETTER OF TRANSMITTAL

FORM-A: FINANCIAL INFORMATION

FORM-B: STRUCTURE & ORGANISATION

FORM C: UNDERTAKING REGARDING BLACKLISTING / NON-DEBARMENT

FORM D: UNDERSTANDING THE PROJECT SITE

FORM E: NO DEVIATION CERTIFICATE

FORM F: INTEGRITY PACT WITH INTEGRITY AGREEMENT

FORM G: FORMAT FOR LITIGATION HISTORY, LIQUIDATED DAMAGES,
DISQUALIFICATION

FORM H: FORMAT FOR SOLVENCY/NET WORTH CERTIFICATE

FORM I: DETAILS OF SIMILAR WORKS COMPLETED DURING LAST 7 YEARS

FORM J: FORMAT OF BID SECURITY

FORM K: UNDERTAKING-(RULE 144 (XI) IN THE GENERAL FINANCIAL RULES (GFRs), 2017)

LETTER OF TRANSMITTAL
(on Bidder Original Letter Head)

To
The Project Manager (Odisha)
WAPCOS Limited

Subject: Submission of bids for (Name of the Work/ Project)

Sir,

Having examined the details given in tender 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 "Forms" enclosed with the tender and accompanying statement are true and correct.
2. I/we have furnished all information and details necessary for eligibility and have no further pertinent information to supply.
3. I/we submit the requisite certified solvency/Net Worth certificate and authorize the WAPCOS Ltd. to approach the Bank issuing the solvency/Net Worth certificate to confirm the correctness thereof. I/we also authorize WAPCOS Ltd. to approach individuals, employers, firms and corporation to verify our competence and general reputation.
4. I/we submit the following certificates in support of our suitability, technical knowledge and capability for having successfully completed the following eligible similar works:

Name of work	Certificate from

Certificate:

It is certified that the information given in the enclosed eligibility 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).

FORM A
FINANCIAL INFORMATION

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

Years	Gross Annual turnover on construction works	Profit/Loss(After Tax)
2019-2020		
2020-2021		
2021-2022		
2022-2023		
2023-2024		

Signature of Chartered Accountant
(with Seal & UDIN number)

Signature of Bidder(s)
(With Seal)

FORM B 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) A proprietary firm (b) A partnership firm (c) A limited company or Corporation (d)A Company registered under company's Act 1956/2013	
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 Civil Engineering construction, the bidder has specialization and interest?	
9.	Any other information considered necessary but not included above.	

Signature of Bidder(s)

FORM C
FORMAT FOR UNDERTAKING REGARDING BLACKLISTING / NON-DEBARMENT
[To be submitted on Bidder's Original Letter Head]

Name of work:

Ref.: Tender No..... dated.....

To,
Engineer In charge of Project,
WAPCOS Limited,
76 C, Industrial Area,
Gurgaon, Haryana

This is to certify that we have taken the cognizance of Blacklisting Policy of WAPCOS Ltd. 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 -----

Authorised Signatory

Date:

Place:

FORM D (Deleted)
FORMAT FOR UNDERSTANDING THE PROJECT SITE
[To be submitted on Bidder's Original Letter Head]

To
The Project Manager
Odisha
WAPCOS Limited

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 site and accessibility to the site.
- Ground Water Level at construction site.
- Quality of ground water and availability of water surrounding to the Project.
- Termite effects at construction site & measures taken during construction of proposed site.
- Site clearance and location of matured trees.
- Topography and contouring of the land where the project is to be executed.
- Nature of the ground & sub-soil of the site as pile foundation is to be constructed
- Safety of Surrounding structures during excavation and during execution of work
- Hindrances, if any, which may arise during the execution of work
- I / We hereby submit our BID considering above all facts gathered during site visit and each & every aspect have been considered in the Quoted Rates.

Yours faithfully,

Date:

(Signature, name and designation
of the Authorized signatory)

Place:

Name and seal of Bidder

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

To
The Project Manager
Odisha
WAPCOS Limited

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.

Yours faithfully,

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

Place: **Name and seal of Bidder**

FORM F
FORMAT FOR INTEGRITY PACT
[To be submitted on Bidder's Original Letter Head]

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

Sub: Integrity Pact for ----- (Name of Work / Project)

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 at **Enclosure-I**.

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,

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

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

Enclosure-I

INTEGRITY AGREEMENT

[To be submitted on Stamp paper of At least Rs.100]

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

BETWEEN

WAPCOS Limited, New Delhi (Hereinafter referred as the '**EMPLOYER**', 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 Employer has floated the Tender (NIT No)(hereinafter 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 Employer 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 Employer

- (1) The employer commits itself to take all measures necessary to prevent corruption and to observe the following principles:
 - (a) No employee of the Employer, 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 Employer will, during the Tender process, treat all Bidder(s) with equity and reason. The Employer will, in particular, before and during the Tender process, provide to all

Bidder(s) the same information and will not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the Tender process or the Contract execution.

- (c) The Employer shall endeavour to exclude from the Tender process any person, whose conduct in the past has been of biased nature.
- (2) If the Employer 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 Employer 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 Employer'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)/ Contract(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 Employer 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 Employer under law or the Contract or its established policies and laid down procedures, the Employer 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 Employer'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 Employer 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 Employer. Such exclusion may be forever or for a limited period as decided by the Employer.
- (2) Forfeiture of Performance Guarantee/Security Deposit: If the Employer 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 Employer apart from exercising any legal rights that may have accrued to the Employer, 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 Employer 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 Employer has substantive suspicion in this regard, the Employer 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 Employer.
- (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 Employer 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 Employer will enter into Pacts on identical terms as this one with all Bidders and Contractors.
- (3) The Employer will disqualify Bidders, who do not submit, the duly signed Pact between the Employer 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

- (1) 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.
- (2) If any claim is made/lodged during the time, the same shall be binding and continue to be valid despite the lapse of this Pact as specified above, unless it is discharged/determined by 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 Employer, 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 Employer in accordance with this Integrity Agreement/ Pact or interpretation thereof shall not be subject to arbitration.

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 Employer)

.....

(For and on behalf of Bidder/Contractor)

WITNESSES:

1.

(signature, name and address)

2.

(signature, name and address)

Place:

Dated :

FORM G
FORMAT FOR LITIGATION HISTORY, LIQUIDATED DAMAGES, DISQUALIFICATION
[To be submitted on Bidder's Original Letter Head]

To
The Project Manager
(Odisha)
WAPCOS Limited

Subject: Litigation History, Liquidated Damages, Disqualification for ----- (Name of Work /Project)

It is hereby declared that our firm (Name of firm with address) neither disqualified, nor has any Litigation history and no Liquidated Damage imposed on the firm by any Department. It is also declared that our firm do not have any ligations with Principal Employer/Owner/Client for any workof Principal Employer/Owner/Client in present as well as in past.

Yours faithfully,

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

Place: **Name and seal of Bidder**

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

SOLVENCY CERTIFICATE

To,
The Project Manager
Odisha
WAPCOS Limited

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:

- Solvency Certificate should be on letter head of the Bank
- 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 "H"
FORM FOR CERTIFICATE OF NET WORTH FROM CHARTERED ACCOUNTANT

"It is to certify that as per the audited balance sheet and profit & loss account during the financial year (*Last Financial Year for which audit has been conducted*), the Net Worth of M/s (Name & Registered Address of individual/firm/ company), as on (*the date must be after the floating date of NIT*) is Rs. after considering all liabilities. It is further certified that the Net Worth of the company has not eroded by more than 30 % in the last three years ending on (*Last Financial Year for which audit has been conducted*)."

Unique Document Identification Number (UDIN)

Signature of Chartered Accountant

Name of Chartered Accountant

Membership No. of ICAI Date and Seal

Note:

This certificate should be issued after date of floating the NIT.

FORM I
DETAILS OF SIMILAR WORKS COMPLETED DURING LAST 7 YEARS

S. No	Name of work and its location	Name of Client	Complete Postal Address of Client	Email of client (only official domain ID - Mandatory)	Date of Start	Date of Completion as per Contract	Date of Actual Completion	Project Cost of the Work on Completion (INR)	Project Cost of the Work on Current Cost Level (INR)	Reference and Page No. of Documentary Proof
1										
2										
3										
4										
5										
6										
7										

Definition of Similar Works:

1. "Similar work" Construction of Residential /Non-Residential building having RCC framed structure for any Central Government / State Government/PSU/ Department or State Public Sector Undertakings during the last 7 years
2. Certified that the Completion Certificates of above works are enclosed with the Tender Documents.
3. Details mentioned in the above Form are as per Completion Certificates and have not been presumed.
4. If any detail is not mentioned in the Work Completion Certificate, documentary proof of detail is to be submitted with the Completion Certificate

Signature of the Bidder with Seal

Note:

- Email address of the client/certificate issuing authority of each work should be clearly mentioned in the above table so that genuineness of the same can be established via email.
- Work certificates without any email address in the above table may not be considered for evaluation.

FORM J
BID SECURITY

[To be submitted on Non-Judicial Stamp paper of minimum Rs. 100]

To,
WAPCOS Limited, 76-C,
Sector – 18, Institutional Area, Gurugram,
Haryana – 122015

WHEREAS, M/s _____ having their Registered/Head Office at _____ (hereinafter 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 _____ (hereinafter 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 _____ 20__.

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 _____ having to substantiate his demand, provided that in his demand the _____ 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 of twelve months after the validity period).**

DATE

SIGNATURE.....

.....
(Signature of Witness)

SEAL.....

FORM K
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

SCOPE OF WORK & TECHNICAL SPECIFICATIONS

SECTION-VII

SCOPE OF WORK

1.0 BRIEF SCOPE OF WORK

The scope of work covered in this tender shall be as per the Schedule / Bill of Quantities, specifications, tender drawings, instructions, orders issued to the Contractor from time to time during the entire period of execution and DLP till handing over of the project.

- The construction 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 submit monthly physical and financial progress report to the Employer.
- The contractor before commencement of work will conduct confirmatory 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, [as mentioned in NIT] Odisha.
- 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 aspects 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.

A. DESIGN AND DRAWINGS OF PROJECT / WORKS

The drawings are given in the tender document to understand the detailed scope of the work. Tender drawings will be revised/modified as per the site conditions, technical requirements as per the Indian Standard of Codes, as per client requirements, and due to unforeseen conditions and as per the decision by Engineer In-charge.

All the Good for Construction (GFC) Drawings required for the execution of work as per the scope of work will be provided by WAPCOS. If Contractor found any discrepancy in the issued GFC drawings, he may bring same to the notice of WAPCOS before execution, as safety and stability of the structure is also the responsibility of the Contractor

The Contractor will submit the detailed PERT/CPM chart to WAPCOS after award of the work so that planning of release of stage-wise drawings may be ensured. Accordingly, stage-wise GFC drawings will be released as per the progress of the works achieved by the Contractor. The GFC drawings will be issued after scrutiny of the drawings by WAPCOS and proper approvals from Client. No advance drawings shall be issued to the Contractor. The Contractor may make advance planning to the drawings attached with the

Tender document as the drawings are detailed and comprehensive

B. NOC'S / APPROVALS/ CLEARANCE OF PROJECT FROM LOCAL BODIES/ AUTHORITIES

The Contractor will take necessary Statuary Approval/ NoCs/ Clearance from all concern Local Authorities / Departments (DHVBN/ State Electricity board etc./ Electrical inspectorate/ pollution department/ forest department etc.), if any, required before start of the work / during the work / after execution of work & before handing over the Project.

The fee for getting these approvals, shall be deposited by the Contractor to the concerned Department / Authorities and will be reimbursable to the Contractor on producing of original receipt of deposited fee and no extra cost for the same shall be claimed by the contractor.

The contractor shall mobilize the resources at site after getting approval / NoC's/ 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.

The report of the same may be referred in WAPCOS office during working hours to understand the Soil Properties, Soil Bearing Capacity (SBC) and other parameters before quoting the rates.

C. TOPOGRAPHICAL SURVEY

The detail Topographical Survey work of entire site has already been carried out. However, Contractor/Bidder shall do site detail survey at his own cost to verify the survey data and demarcation of site as provided in the tender. The Contractor shall do the site survey as per the approved Master Layout Plan(MLP), Drawings and scope of work to ensure the proper demarcation of the land before start of the execution & related activities in consultation with state officials. In case, any deviation in the approved area/boundary line, the approval of revised MLP with reference to actual available land area/boundary shall be obtained by WAPCOS / Principal Employer/Owner/Client. In any case, WAPCOS shall be informed regarding final position of buildings at site including site development plan, contour level, etc. before commencement of building works. No claim of Contractor in respect of discrepancy in topographical survey /levels shall be entertained.

2.0 WORKS OF THE PROJECT

3.0 The works of the project shall be executed as per Architectural, Approved Structural & Services Drawings, Bill of Quantity, list of Preferred makes of works, General Technical specifications of works and other conditions mentioned in the tender document. Contractor will finalize the brand of material in consultation with Principal Employer/Owner/Client before execution of work from the following list of preferred makes which are applicable for this work.

4.0 CIVIL WORKS

4.1 General Technical Specifications

The General Technical Specification of Civil Works will be as per the Bill of Quantities, provision within OSOR 2022 (Civil and Plumbing Works Electrical & Fire Fighting Works), IS Codes, CPWD specification, Orissa PWD Specification, Building Codes, approved drawings, Standard Norms and standard specifications of particular works.

SL. NO.	ITEMS	PREFERRED MAKE
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4.2 List of Preferred Makes of Civil Works

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. Preferred makes of materials to be used in the work are enclosed. In case, the preferred make is not available, or the contractor wishes to use some other make, same can be used after the approval of Engineer- in-charge. In this case, the material should be BIS approved and manufactured by ISO certified company conforming to the Technical Specifications as per Section-VII. Non BIS marked materials may be permitted by the Engineer- in- charge only when BIS marked materials are not manufactured.

SL. NO.	ITEMS	PREFERRED MAKE
1.	GREY CEMENT	ACC, J.K, BIRLA, ULTRA TECH, JAYPEE, SHREE, AMBUJA, DALMIA or equivalent
2.	WHITE CEMENT	JK, BIRLA WHITE or equivalent
3.	WALL PUTTY	BIRLA, J.K SRIRAM, JOHNSON or equivalent
4.	REINFORCEMENT/STRUCTURAL STEEL	SAIL, TATA, RATHI, JINDAL, BHUSHAN, SRMB or equivalent
5.	ANTI-TERMITE TREATMENT	PEST CONTROL INDIA LTD, PEST CONTROL INCORPORATED, VAM ORGANIC/ HINDUSTAN or equivalent INSECTICIDE/BAYER/ICI or equivalent
6.	CONCRETE ADDITIVE	Sika, PIDILITE, FOSROC, BASF or equivalent
7.	PRELAMINATED FLUSH DOORS/ SHUTTERS	GREEN CLUB, DURIAN, CENTURY, AMULYA, LEGEND, ARCHIDPLY, GREEN PLY or equivalent
8.	FLUSH DOORS / SHUTTERS	GREEN, DURIAN, CENTURY, AMULYA, LEGEND, ARCHIDPLY, GREEN PLY or equivalent
9.	PLYWOOD / BLOCK BOARD / SOFT BOARD	GREEN CLUB, CENTURY ARCHITECT PLY, DURO, DURIAN SUMO, AMULYA, LEGEND, ARCHIDPLY, GREENPLY, KANCHAN PLY or equivalent
10.	PRELAMINATED PARTICLE BOARD	NOVAPAN, GREEN LAM, MERINO, AUSTIN, ARCHID, AMULYA or equivalent
11.	LAMINATES	CENTURY, DURIAN, GREEN, ROYAL TECH, MERINO, ARCHID, AMULYA or equivalent
12.	MDF BOARD	DURO, MERINO, GREENLAM, CENTURY, KITPLY, ARCHID, AMULYA or equivalent
13.	ADHESIVE FOR WOOD WORK	DUNLOP, FEVICOL, PIDILITE. or equivalent
14.	POLYRETHANE SEALANT	KRYTON, PIDLITE, FAREMATE, or equivalent
15.	POLYETHYLENE BOARD/ BACK UP ROD	SUPREME INDUSTRIES, FINOLEX or equivalent
16.	ALUMINIUM SECTIONS	JINDAL, HINDALCO, OASIS or equivalent
17.	STAINLESS STEEL	JINDAL OR EQUIVALENT or equivalent
18.	STAINLESS STEEL RAILING	OZONE, DORMA, KITCH, VISTA or equivalent
19.	EXPANSION/ FASTNERS	FISHER, HILTI, KLIMAS or equivalent
20.	FLOAT GLASS / TOUGHENED GLASS	SAINT GOBAIN, MODIGUARD, ASAHI or equivalent
21.	CERAMIC TILES	KAJARIA, HR JOHNSON, ORIENTBELL, SOMANY or equivalent
22.	VITRIFIED TILES	KAJARIA, ORIENT BELL, RAK, SOMANY, VARMORA or equivalent
23.	EXTERIOR WALL TILES	BELL, UNISTONE, HR JOHNSON or equivalent
24.	SYNTHETIC ENAMEL PAINTS	BERGER (LUXOL GOLD), ASIAN (APCOLITE), ICI DULUX (GLOSS), SHALIMAR, JSW Paints or equivalent

SL. NO.	ITEMS	PREFERRED MAKE
25.	OIL BOUND DISTEMPER	SHALIMAR, ASIAN PAINT, BERGER (BISON), NEROLAC, JSW paints or equivalent
26.	CEMENT BASED PAINT	SHALIMAR, SNOWCEM PLUS, BERGER (DUROCEM EXTRA), ASIAN, NEROLAC, JSW Paints or equivalent
27.	PLASTIC EMULSION PAINT/ INTERIOR PAINT	OIKOS, SKK, UNISTONE, BERGER, ICI, NEROLAC, ULTRATECH, Asian, JSW paints, Dulux or equivalent
28.	OTHER PAINTS / PRIMERS	ICI DULUX, ASIAN, BERGER, NEROLAC, JSW paints, Dulux or equivalent
29.	PAINTS	BERGER, ASIAN PAINTS, ICI, NEROLAC, Asian, JSW paints, Dulux or equivalent
30.	SURFACE TEXTURE PAINT(EXTERIOR)	OIKOS, SKK, UNISTONE, ULTRATECH or equivalent
31.	SURFACE TEXTURE PAINT(INTERIOR)	OIKOS, SKK, UNISTONE, ULTRATECH or equivalent
32.	DOOR / WINDOWS PATCH FITTINGS	DORMA, HETTICH, DOORSET, HAFALE or equivalent
33.	LOCKS	DOORSET, DORMA, HETTICH, HAFALE or equivalent
34.	WARDROBE/ CUBBOARDS HANDELS	HETTICH, DORMA, HAFALE, DOORSET or equivalent
35.	MS PIPE	JINDAL (HISAR), PRAKASH, SURYA, TATA, SAIL, APL Apollo or equivalent
36.	S.S. HINGES	DORMA, HETTICH, HAFALE or equivalent
37.	M.S. HINGES	GARG, ISI MARK ANY APPROVED MAKE. or equivalent
38.	DOOR CLOSER	DORMA, DOORSET, HAFALE, HETTICH or equivalent
39.	METAL FALSE CEILING (ANTIBACTERIAL / ANTI FUNGAL)	ARMSTONG, CREDENCE, HUNTER DOUGLAS, ANUTONE or equivalent
40.	SILICON SEALANT	DOW CORNING, GE BAYER, WACKER, DOCONY or equivalent
41.	PAD LOCKS	HARRISON, LINK, DOORSET or equivalent
42.	FIRE DOORS	GODREJ, GLOBLE FIRE PROTECTION COMPANY, RADIENT STAFF FIRE DOORS, KITPLY or equivalent
43.	POLYCARBONATE ROOF SHEETING	GE PLASTIC, DANPALON, POLYGAL, SABIC or equivalent
44.	FLOOR SPRING	DORMA, HAFALE, HETTICH or equivalent
45.	CLOUD/SOUNDSCAPE	ARMSTRONG, CREDENCE, DECOSONIC, ANUTONE, WONDERCEIL or equivalent
46.	ALLUMINIUM COMPOSITE PANEL	ALUCOBOND, ALSTONE, ALSTRONG or equivalent
47.	ASPHALT EMULSION	STP / KARNAK, CHEMICAL CORPORATION or equivalent
48.	TILE JOINT FILLER	DURACREATE, ROFF RAINBOW TILE MATE, WINSIL 20 / SILICON SEALANT OF GE BAYER SILICON or equivalent
49.	RUBBER GASKET	BIS APPROVED QUALITY or equivalent

SL. NO.	ITEMS	PREFERRED MAKE
50.	POLYURETHANE PAINT	MRF OR EQUIVALENT APPROVED MAKE
51.	WAX POLISH	MENSSION, (RECKITT & COLMAN) or equivalent
52.	MELAMINE	ICI DULUX, ASIAN, MRF or equivalent
53.	SILICON WATER REPELLENT SOLUTION	GE BAYER, REMMERS, DUPONT or equivalent
54.	GYPSUM BOARD FALSE CEILING	INDIA GYPSUM, LAFARGE, GYPROC, USG BORAL, AEROLITE or equivalent
55.	MINERAL FIBRE TILES CEILING	ARMSTRONG, CREDENCE, HUNTER DOUGLAS, LAFARGE or equivalent
56.	LAMINATED WOODEN FLOORING	PERGO, PARKETT, ARMSTRONG or equivalent
57.	VENETIAN BLINDS	VISTA, MAC, HUNTER DOUGLAS or equivalent
58.	PVC FLOORING	ARMSTRONG, FORBO, PARKETT or equivalent
59.	EXTERIOR WOOD HIGH PRESSURE LAMINATE WALL CLADDING	FUNDERMAX, PRODEMA, REZNOCLAD or equivalent
60.	WOODEN PANELLING/ACOUSTIC PANELLING	ARMSTRONG, CREDENCE, ANUTONE or equivalent
61.	CARPET	TUNTEX, ROCKWORTH, INTERFACE or equivalent
62.	MODULAR FURNITURE	DURIAN, HERMAN MILLER, GODREJ, HNI or equivalent
63.	GLASS MOSAIC TILES	CORAL, BISAZZA, PAVIT or equivalent
64.	ACOUSTICAL WALL PANELLING	ARMSTRONG, CREDENCE, ANUTONE or equivalent
65.	FIRE RATED STEEL DOORS	KUTTY'S, GMP TECHNICAL SOLUTIONS, SHAKTI HORMANN PVT LTD or equivalent
66.	STRETCH CEILING	NEWMAT, BARRISOL, WONDERCEIL or equivalent
67.	ALL GRC ITEMS	DALAL TILES, SENEISHA, BIRLA, EVEREST, UNISTONE or equivalent
68.	ANY OTHER ITEMS	ON APPROVAL OF ARCHITECT / CONSULTANT OR ENGINEER-IN-CHARGE or equivalent
69.	GREY CEMENT	ACC, J.K, BIRLA; ULTRA TECH, AMBUJA, JAYPEE or equivalent
70.	WHITE CEMENT	JK, BIRLA WHITE or equivalent
71.	WALL PUTTY	BIRLA, J.K SRIRAM or equivalent
72.	REINFORCEMENT/STRUCTURAL STEEL	SAIL, TATA, JINDAL, BHUSHAN SRMB or equivalent
73.	ANTI-TERMITE TREATMENT	PEST CONTROL INDIA LTD, PEST CON INDIA, PEST CONTROL INCORPORATED or equivalent
74.	CONCRETE ADDITIVE	Sika, PIDILITE, FOSROC, BASF or equivalent
75.	PRELAMINATED FLUSH DOORS/ SHUTTERS	GREEN, DURIAN, CENTURY, AMULYA or equivalent
76.	FLUSH DOORS / SHUTTERS	GREEN CLUB, DURIAN, CENTURY, AMULYA or equivalent

SL. NO.	ITEMS	PREFERRED MAKE
77.	PLYWOOD / BLOCK BOARD / SOFT BOARD	GREEN CLUB, CENTURY ARCHITECT PLY, DURO, DURIAN SUMO, AMULYA or equivalent
78.	PRELAMINATED PARTICLE BOARD	NOVAPAN, GREEN LAM, MERINO, AUSTIN, ARCHID, AMULYA or equivalent
79.	LAMINATES	CENTURY, DURIAN, GREEN, ROYAL TECH, MERINO, ARCHID, AMULYA or equivalent

Note: for any item not covered in above list, the contractor shall get the make approved from the engineer before item is produced/ fabricated.

Engineer-in-Charge reserve the right to select the any of the brand out of the Brands listed in list of preferred makes. Contractor to obtain written approval of Brand and model prior to procurement of material.

5.0 ELECTRICAL WORKS

5.1 GENERAL TECHNICAL SPECIFICATION

The General Technical Specification of Electrical Works will be as per the Bill of Quantities, provision within OSOR (*Civil and Plumbing Works – OSOR 2022, Electrical & Fire Fighting Works – OSOR 2022*), IS Codes, Building Codes, approved drawings, Standard Norms and standard specifications of particular works.

5.2 LIST OF PREFERRED MAKES FOR ELECTRICAL

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. Preferred makes of materials to be used in the work are enclosed. In case, the preferred make is not available, or the contractor wishes to use some other make, same can be used after the approval of Engineer-in-charge. In this case, the material should be BIS approved and manufactured by ISO certified company conforming to the Technical Specifications as per Section-VII. None BIS marked materials may be permitted by the Engineer-in-charge only when BIS marked materials are not manufactured.

SL. NO.	ITEMS	PREFERRED MAKE
1.	GI PIPES	JINDAL HISSAR, SURYA, PRAKASH, ATUL, APL Apollo or equivalent
2.	MS PIPE	TATA, JINDAL, SURYA, PRAKASH, ATUL, APL Apollo or equivalent
3.	PVC PIPES/CONDUITS	BEC, AKG, ATUL or equivalent
4.	COPPER CONDUCTOR PVC INSULATED WIRES	RPG, SKYTONE, HAVELLS, PRIMECAB, FINOLEX or equivalent
5.	MINIATURE CIRCUIT BREAKERS (C-CURVE) (ISI MARK)	LEGRAND, SIEMENS, HAGER, ABB or equivalent
6.	EARTH LEAKAGE CIRCUIT BREAKERS	LEGRAND, SIEMENS, HAGER, ABB or equivalent
7.	MOLDED CASE CIRCUIT BREAKER (WITH ROTARY HANDLE)	L&T (D SINE), SCHNEIDER ELECTRIC (NSX), LEGRAND (DPX), SIEMENS (3VL), ABB, GE or equivalent

SL. NO.	ITEMS	PREFERRED MAKE
8.	MCB DISTRIBUTION BOARDS	LEGRAND, SIEMENS ELECTRIC (MG), HAVELLS, ABB or equivalent
9.	HRC FUSES	L&T, SIEMENS, LEGRAND, ABB or equivalent
10.	AIR CIRCUIT BREAKERS	L&T, SIEMENS ELECTRIC (3WA), ABB (E MAX2), LEGRAND (DMX3), Schneider (MTZ) or equivalent
11.	PROTECTIVE RELAYS/IDMT RELAYS	ALSTOM, ABB, SIEMENS or equivalent
12.	ON - LOAD SWITCH ISOLATOR	ABB, L&T, SIEMENS or equivalent
13.	APFC RELAYS (MICROPROCESSOR)	L&T, SCHNEIDER, SIEMENS, NEPTUNE-DUCATI, ABB or equivalent
14.	MV SWITCHBOARDS A) MAIN LT PANELS & HT PANELS	ABB, L&T, SCHNEIDER, Siemens or equivalent
15.	MV CONTACTORS, TIMER (SOLID STAT)	L&T, SIEMENS, ABB, or equivalent
16.	1100 VOLTS GRADE CABLES/XLPE CABLE	LAPP, RPG, FINOLEX, PRIMECAB or equivalent
17.	1100 VOLTS GRADE PVC CONTROL CABLES/XLPE CABLE	LAPP, RPG, FINOLEX, PRIMECAB or equivalent
18.	CABLE LUGS (TINNED COPPER)	DOWELLS, JAINSON, PRIMECAB or equivalent
19.	CABLE COMPRESSION GLANDS	PEECO, COMET, TRINITY TOUCH or equivalent
20.	11KV XLPE CABLES	LAPP, FINOLEX, PRIMECAB or equivalent
21.	11 KV CABLE JOINTS (HEAT SHRINKABLE)	DENSON, RAYCHEM or equivalent
22.	11 KV VACUUM CIRCUIT BREAKERS	SIEMENS, L&T, SCHINDER, ABB or equivalent
23.	HT RELAYS	SIEMENS, ALSTOM, L&T, ABB or equivalent
24.	KV RING MAIN UNIT	SIEMENS, L&T, SCHINDER, ABB or equivalent
25.	CAPACITOR	L&T, SIEMENS, SCHINDER, Havells, ABB or equivalent
26.	CAST RESIN CURRENT TRANSFORMER	AE, KAPPA, GILBERT, MAXWELL or equivalent
27.	METERS DIGITAL	RISHAB, AE, SIEMENS,C&S, CONZERV, TRINITY,ABB or equivalent
28.	TRIVECTOR METER	L&T, Secure or equivalent
29.	HT-CT, PT, METER	AE, KAPPA, SIEMENS, or equivalent
30.	SELECTOR SWITCHES	KAYCEE, L&T SAZLER,ABB or equivalent
31.	INDICATION LAMP (LED TYPE)	L&T, SIEMENS, ABB or equivalent
32.	CABLE TRAY	SLOTCO, PILCO, RICCO, PRECISION SYSTEM CONTROL or equivalent
33.	GANG OPERATED AIR BREAKER SWITCH UNIT	PACTIL, MEI or equivalent
34.	SINGLE POLE DROP OUT FUSES	PACTIL, MEI or equivalent
35.	11 KV PALLET TYPE LIGHTING ACCESSORIES	WSI, OVALUM, ELPRO, BHEL or equivalent
36.	11 KV INSULATOR	MSI, OVALUM, ELPRO, BHEL or equivalent

SL. NO.	ITEMS	PREFERRED MAKE
		equivalent
37.	TIME SWITCHES	L&T, SIEMENS, ABB, Schneider or equivalent
38.	CABLE JOINT	RAYCHEM, DENSON or equivalent
39.	INDOOR TYPE ON LOAD AIR BREAK SWITCH	MEI, ISOTECH INDIA PVT LTD (GURGAON), HPL, ABB or equivalent
40.	RUBBER FLOOR MAT 11 KV (ISI) (ELASTOMETRIC)	SUNTAX, TYCOON or equivalent
41.	SYNTHETIC MAT CONFIRMING TO IS: 15652 (2MM,2.5MM&3.0MM THICK ISI MARKED TYPE TEST APPROVAL FROM ERDA)	ELECTROMAT, TYCON, SAVEBOTT or equivalent
42.	CHANGEOVER SWITCH	L&T, SCHNEIDER, ABB or equivalent
43.	AUTO TRANSFER SWITCH	GE, EMERSON, ABB or equivalent
44.	SANDWITCH BUS DUCT	L&T, ZUCCHINI (LEGRAND), CONTROL & SWITCHGEAR or equivalent
45.	AIR INSULATED BUS DUCT	ZUKINI – LEGRAND, SIEMENS – SIVACON, or equivalent
46.	HDPE PIPE	DURA-LINE, RELIANCE or equivalent
47.	EXTERNAL LIGHTING POLES	BAJAJ, HI-LITE or equivalent
48.	EXTERNAL LIGHTING FIXTURE	WIPRO, PHILIPS, BAJAJ, Havells or equivalent

SL. NO.	ITEMS	PREFERRED MAKE
A. INTERNAL ELECTRICAL WORKS		
1.	MS BLACK ENAMELED/ GALVANIZED ERW CONDUITS.	AKG, ATUL PIPE, RMCN or equivalent
2.	M. S. CONDUIT ACCESSORIES	BEC, ATUL PIPE, AKG or equivalent
3.	GI PIPES	RSCON, AKG, BEC or equivalent
4.	PVC CONDUIT & ACCESSORIES	BEC, AKG, ATUL PIPES or equivalent
5.	COPPER CONDUCTOR PVC INSULATED WIRES	LAPP, RPG, FINOLEX, PRIMECAB, KEI, ANCHOR, HAVELLS or equivalent
6.	MODULAR SWITCHES, SOCKET OUTLETS & WIRING ACCESSORIES WITH MOLDED COVER	LEGRAND, SIEMENS, HONEYWELL, ABB or equivalent
7.	HEAVY DUTY METAL CLAD SOCKET OUTLETS WITH MCB IN MS HOUSING	LEGRAND, SIEMENS, HAGER, C&S or equivalent
8.	WEATHER PROOF SOCKET OUTLETS WITH MCB	HAGER, LEGRAND, SIEMENS, ABB or equivalent
9.	MINIATURE CIRCUIT BREAKER	HAGER, LEGRAND, SIEMENS, ABB or equivalent
10.	EARTH LEAKAGE CIRCUIT BREAKER	HAGER, LEGRAND, SIEMENS, ABB or equivalent
11.	TIMERS & CONTACTORS TO BE MOUNTED IN DB	SIEMENS, HAGER, LEGRAND, ABB or equivalent
12.	MCB DISTRIBUTION BOARDS IN SHEET STEEL HOUSING (DOUBLE DOOR)	SIEMENS, HAGER, LEGRAND, ABB or equivalent
13.	HDPE CONDUITS & ACCESSORIES	DURALINE, RELIANCE or equivalent
B. DISTRIBUTION		
1.	KWH METERS (ELECTRONIC DIGITAL TYPE)	T, L&T, SECURE, ABB or equivalent
2.	SANDWITCH RISING MAIN	ZUKINI – LEGRAND, SIEMENS – SIVACON, SCHNEIDER, Havells or equivalent
3.	SINGLE PHASE PREVENTER	L&T, MINILEC, LEGRAND, ABB or equivalent
4.	MOTOR PROTECTION CIRCUIT BREAKERS	LEGRAND, SIEMENS, L&T, ABB or equivalent
C. LOW TENSION SYSTEM		
1.	TELEPHONE WIRES	FINOLEX, BELDEN, POLYCAB, PRIMECAB, HAVELLS or equivalent
2.	TELEPHONE TAG BLOCK	KRONE, POUYET, TVS or equivalent
3.	TV CO-AXIAL CABLE	LAPP, RPG, PRIMECAB, Havells or equivalent
4.	CAT 6 CABLE	BELDEN, PANDUIT, SCHENIEDER, Havells PRIMECAB or equivalent
D. CABLES & ACCESSORIES		
1.	1100 VOLTS GRADE CABLES	LAPP, RPG, Havells, PRIMECAB or equivalent
2.	CABLE LUGS	DOWELLS, JAINSON, or equivalent
3.	CABLE COMPRESSION GLANDS	PEECO, COMET, or equivalent
4.	CABLE TRAYS/ CABLE LADDERS	SLOTCO, PILCO, RICCO or equivalent
E. METERING & PROTECTION		
1.	CAST RESIN CURRENT TRANSFORMER	GILBERT MAXWELL, KAPPA, , ADVANCE or equivalent
2.	METER (ELECTRONIC DIGITAL/LCD)	L&T RISHAB, SIEMENS, Schneider , ABB or equivalent
3.	SELECTOR SWITCHES	L&T SALZER, KAYCEE, C&S, ABB or equivalent
4.	INDICATION LAMP (LED TYPE)	L&T, SIEMENS, C&S or equivalent
5.	ENERGY MONITOR/TRIVECTOR METER	NEPTUNE-DUCATI, L&T, TRINITY, ABB or equivalent

6.	VOLTMETER, AMMETER	L&T RISHAB, SIEMENS, AE, ABB or equivalent
F. LV SYSTEM		
1.	FIRE DETECTION SYSTEM (COMPLETE SYSTEM)	TYCO(SIMPLEX)/SIEMENS (CERBEROUS PRO) or equivalent
2.	PUBLIC ADDRESS SYSTEM- SPEAKER, Hooter, MIKE, AMPLIFIER, ETC.	JBL/ MARTIN AUDIO/BOSE or equivalent
3.	CCTV	AMERICAN DYNAMICS / DSC/PELCO/SIEMENS or equivalent
4.	FIRE SURVIVAL CABLES	HENLAY/ LAPP/ FINOLEX or equivalent
G. MISCELLANEOUS		
1.	INVERTOR	SU-KAM, LUMINOUS, /POWER TRON, BPE/MICROTEK or equivalent
2.	CEILING FANS	CROMPTON, HAVELS, or equivalent
3.	EXHAUST FAN	ALSTOM, CROMPTON GREAVES, HAVELS, POLY CAB or equivalent
4.	LAMPS	
	A) FLUORESCENT LAMP	WIPRO, PHILIPS, REGENT, POLY CAB, Havells or equivalent
	B) COMPACT FLUORESCENT LAMPS	REGENT, WIPRO, PHILIPS, Havells or equivalent
5.	LAMINATED SHEET	HYLAM, FORMIER or equivalent
6.	SPLITTERS FOR SMATV SYSTEM	NETGEAR, CATVISION or equivalent
7.	XLPE L.T. CABLE,1.1 KV GRADE(FRLS)	LAPP, RPG, SKYTONE, HENLAY, POLY CAB, PRIME CAB, Havells or equivalent
8.	LIGHT FIXTURES	WIPRO, POLY CAB, PHILIPS, Havells or equivalent
9.	UPS	DELTA, EMERSON, APC or equivalent
10	CVT	LOGICSTAT, BLUEBIRD, SELVON, MAX POWER or equivalent
11	AVIATION OBSTRUCTION LIGHT (LED TYPE)	PHILIPS, WIPRO or equivalent
12	EXCHANGE/CONSOLE PANEL	TATA TELECOM, PANASONIC, MATRIX or equivalent
13	HANDSET	TATA PHONE, BEETEL, PANASONIC, SIEMENS or equivalent
14	RUBBER MATS	SYNTAX, TYCOON(ISI), ELASTOMERIC OR EQUIVALENT or equivalent
15	TAPE OFF	CAT VISION, SHYAM or equivalent
16	PVC PIPE	SUPREME, FINOLEX, ATUL or equivalent
17	CHANGEOVER SWITCH	L&T, SCHNEIDER, havells or equivalent
18	SERVO	FPPL TRANSFORMERS or equivalent
19	LIFT	SCHINDLER, OTIS, KONE, MITSUBISHI, JHONSON, ThyssenKrupp or equivalent
20	DG SETS	CATEPILLAR, Mitsubishi, Yamaha, Mahindra, Honda, KIRLOSKAR, CUMMINS, STERLING or equivalent

Note: for any item not covered in above list, the contractor shall get the make approved from the engineer before item is produced/ fabricated.

Engineer-in-Charge reserve the right to select the any of the brand out of the Brands listed in list of preferred makes. Contractor to obtain written approval of Brand and model prior to procurement of material.

6.0 PHE WORKS

6.1 General Technical Specification of PHE Works

The General Technical Specification of PHE Works will be as per the Bill of Quantities, provision within OSOR (), IS Codes, Building Codes, approved drawings, Standard Norms and standard specifications of particular works.

6.2 List of Preferred makes for PHE works

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. Preferred makes of materials to be used in the work are enclosed. In case, the preferred make is not available, or the contractor wishes to use some other make, same can be used after the approval of Engineer- in-charge. In this case, the material should be BIS approved and manufactured by ISO certified company conforming to the Technical Specifications as per Section-VII. Non BIS marked materials may be permitted by the Engineer- in- charge only when BIS marked materials are not manufactured.

SL. NO.	ITEMS	MANUFACTURERS NAME
1.	VITREOUS CHINA AND FIRECLAY SANITARYWARE WITH COVER	JAQUAR ROCA / KOHLER / CERA/GROHE or equivalent
2.	STAINLESS STEEL SINKS	JAYNA/ PARRYWARE/ NEELKANTH/NIRALI/ CERA or equivalent
3.	C.P. FITTINGS & ACCESSORIES	JAQUAR/KOHLER//ROCA/ CERA/GROHE or equivalent
4.	C.P. WASTE, SPREADERS, URINAL FLUSH PIPES	JAQUAR/ ROCA / CERA/KOHLER/GROHE or equivalent
5.	SS COCKROACH TRAPS, GRATINGS FORFLOOR DRAINS, FLOOR TRAPS AND RAIN WATER GRATINGS	CHILLY/ JAYNA/ CAMRY or equivalent
6.	SOIL, WASTE & FITTINGS (a) CENTRIFUGALLY CAST SPUN CASTIRON PIPES (IS:3989)	SKF/ NECO/BIC/ PRINCE/ SUPREME/KISSAN or equivalent
7.	RCC PIPES	PRAGATI / JAIN SPUN/ ISI MARKS OF REPUTED COMPANY or equivalent
8.	PVC/ CPVC PIPES & FITTINGS	ASTRAL/ ASHIRVAD/ PRINCE/ FINOLEX /PRAKASH/ SUPREME or equivalent
9.	HAND DRIER	JAQUAR/ HINDWARE/EURONICS or equivalent
10.	BALL VALVES	ZOLOTO/ LEADER/ AIP/ SANT / NEU-G or equivalent
11.	RAIN WATER PIPES & FITTINGS UPVCPIPES AND FITTINGS	PRINCE/ SUPREME/ PRAKASH/FINOLEX/ ORI-PLAST or equivalent
12.	WAFER TYPE BUTTERFLY VALVES	ZOLOTO/ LEADER/ AIP/ DANFOSS/SANT / NEU-

SL. NO.	ITEMS	MANUFACTURERS NAME
		G or equivalent
13.	WAFER TYPE NON-RETURN VALVES	ZOLOTO/ LEADER/ AIP/ DANFOSS SANT / NEU-G or equivalent
14.	VITREOUS CHINA AND FIRECLAY SANITARYWARE WITH COVER	JAQUAR/ ROCA / KOHLER / CERA/GROHE or equivalent
15.	WATER METRES	CAPSTAN/KRANTI/KAYCEE/AQUAMET or equivalent
16.	BALL COCKS	GPA/ DRP/ SANT/ L & K or equivalent
17.	STONEWARE PIPES & GULLY TRAPS	PERFECT/ BURN/ RK/ SAURAKHI /MOU or equivalent
18.	C.I. MANHOLES COVERS AND FRAMES	NECO/ RIF/ BIC/SKF/BIC/ RPMF or equivalent
19.	RCC MANHOLE COVERS & FRAMES	KK/ PRAKASH/ JSP or equivalent
20.	FASTNERS	HILTI/INTELLOTEC/TRUCTEK/FISHER or equivalent
21.	WATER HEATER	HAVELLS/BAJAJ/CROMPTONGREAVES or equivalent
22.	HOT WATER NEOPRENE INSULATION	KAIFLEX or equivalent
23.	GATE/ FULLL WAY VALVES AND GLOBE VALVES	LEADER/ZOLOTO/SANT or equivalent
24.	AIR RELEASE VALVES	SANT/ LEADER/DANFOSS/ ZOLOTO or equivalent
25.	PIPECOAT	IWL LIMITED/ PYPKOTE or equivalent
26.	C. I. PIPE	RIF, NECO, SKF, HEPCO, BIC or equivalent
27.	G. I. PIPE	JINDAL, TATA, SWASTIK, APL APOLLO,SURYA PRAKASH or equivalent
28.	G.I. FITTINGS (MALLEABLE CAST IRON)	JINDAL / SURYA PRAKASH /DRP-M/ZOLOTO-M/ UNIK/APL Apollo or equivalent
29.	M.S. FITTINGS (FORGED)	DRP/ VS or equivalent
30.	OVERHEAD WATER TANK	SINTEX, SHEETAL, EUREWELL/APL Apollo or equivalent
31.	WATER COOLER	BLUE STAR/VOLTAS/GODREJ or equivalent
32.	R.O WATER PURIFIER	KENT/EUREKA FORBES/ IONEXCHANGE or equivalent
33.	WATER TREATMENT PLANT	ION EXCHANGE/ THERMAX/ BRISANZIA or equivalent
34.	HDPE PIPE	PRINCE/ SUPREME/ PRAKASH/ FINOLEX/ DUROLINE or equivalent
35.	DI PIPE	JINDAL/ PRINCE/ SUPREME/PRAKASH/ FINOLEX/ JAI BALAJI or equivalent
36.	DI PIPE FITTINGS	JINDAL/ PRINCE/ SUPREME/ PRAKASH/ FINOLEX/ JAI BALAJI or equivalent
37.	PPR Pipes	PRINCE/ SUPREME/ PRAKASH/ FINOLEX/ DUROLINE/VECTUS or equivalent

7.0 FIRE FIGHTING WORKS

7.1 Technical Specifications of Fire Fighting works

The General Technical Specification of Fire-fighting will be as per the Bill of Quantities, provision within OSOR, IS Codes, Building Codes, approved drawings, Standard Norms and standard specifications of particular works.

7.2 List of Preferred Makes for Fire Fighting Works

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. Preferred makes of materials to be used in the work are enclosed. In case, the preferred make is not available, or the contractor wishes to use some other make, same can be used after the approval of Engineer- in-charge. In this case, the material should be BIS approved and manufactured by ISO certified company conforming to the Technical Specifications as per Section-VII. Non BIS marked materials may be permitted by the Engineer- in- charge only when BIS marked materials are not manufactured.

SL. NO.	ITEMS	BRAND NAME
1.	M.S. PIPES	JINDAL HISSAR / PRAKASH SURYA/TATA/APL Apollo or equivalent
2.	G.I. PIPES	JINDAL HISSAR / PRAKASH SURYA/ TATA/Apl Apollo or equivalent
3.	FORGED STEEL FITTINGS	DRP / SS / VS / METLINE/TRUE FORGE or equivalent
4.	GUN METAL BALL VALVES	ZOLOTO / LEADER / AIP/SANT/CASTLE or equivalent
5.	BUTTERFLY VALVES	ZOLOTO / LEADER / AIP/KSB/SKS or equivalent
6.	NON-RETURN VALVES.	ZOLOTO / LEADER / AIP or equivalent
7.	FIRE HYDRANT LANDING VALVES, FIRE BRIGADE CONNECTION (ISI MARKED)	MINIMAX / NEWAGE / FLAME GUARD or equivalent
8.	OTHER VALVES	ZOLOTO / LEADER / AIP/ SANT/KRILOSKAR / AUDCO/ SKS or equivalent
9.	FIRE HOSE PIPES, FIRST AID HOSE REEL (ISI MARKED)	MINIMAX / NEWAGE / PADMINI / FLAME GUARD/MITRA or equivalent
10.	BRANCH PIPE, NOZZLE AND COUPLINGS	MINIMAX / NEWAGE/ FLAME GUARD or equivalent
11.	FIRE EXTINGUISHERS	MINIMAX / NEWAGE/ FLAME GUARD or equivalent
12.	PUMPS	KRILOSKAR / CROPMTON GREAVES/MATHER + PLATT/CRI/Havells or equivalent
13.	MOTORS	KRILOSKAR / SIEMENS /CROMPTON / ABB or equivalent
14.	STARTERS	GE / L & T / CONTROL & SWITCHGEAR or equivalent
15.	SINGLE PHASING PREVENTOR /OVER LOAD PROTECTION UNIT	SIEMENS / MINILEC or equivalent
16.	PRESSURE SWITCH	DANFOSS / SWIZER or equivalent

SL. NO.	ITEMS	BRAND NAME
17.	PRESSURE GAUGE	H. GURE / FIEBIG or equivalent
18.	RELAYS	L & T / SIEMENS/ABB/Schneider or equivalent
19.	CONTRACTORS	L & T / SIEMENS/ABB/Schneider or equivalent
20.	CONTROL CABLE	SKYTONE / POLY CAB / PRIME CAB / HAVELLS or equivalent
21.	ELECTRICAL PANEL	DIAMOND ELECTRICALS / SPC ELECTROTECH PVT. LTD. / NEPTUNE or equivalent
22.	MOULDED CASE CIRCUIT BREAKERS	L & T / SIEMENS / SCHNEIDER/ABB or equivalent
23.	FUSE DISCONNECTOR SWITCH /SWITCH FUSE UNITS	L & T / SIEMENS / ABB / INDO ASIAN SCHNEIDER / POLY CAB/ control & SWITCH GEAR. or equivalent
24.	HRC FUSES	L & T / SIEMENS / SCHNEIDER/ABB or equivalent
25.	AMMETER, VOLTMETER	UNIVERSAL or equivalent
26.	SELECTOR SWITCH, PUSH BUTTONSWITCH / EMERGENCY SWITCH	L & T /SIEMENS / SCHNEIDER/ABB or equivalent
27.	1.1 KV LT CABLES (ISI MARKED)	FINOLEX / POLY CAB / HAVELLS/PRIME CAB or equivalent
28.	PIPE COAT	IWL LIMITED / STP / PYPKOTE or equivalent
29.	FASTENERS	HILTI / INTELLOTECH/ FISHER/ TRUTEK or equivalent
30.	SUSPENDERS	INTELLOTECH / CAMRYO or equivalent

Note: for any item not covered in above list, the contractor shall get the make approved from the engineer before item is produced/ fabricated.

Engineer-in-Charge reserve the right to select the any of the brand out of the Brands listed in list of preferred makes. Contractor to obtain written approval of Brand and model prior to procurement of material.

TECHNICAL SPECIFICATIONS

Sl . N o.	Item Description	Specifica tion referenc e	IS Ref:	Remar ks
1.	Earth work excavation, felling tree set c	CPWD specifications 2.0 to 2.27	<ol style="list-style-type: none"> IS: 783 -1985 Code of practice for laying of concrete pipes. IS: 1200-1992 Method of Measurement of Building Works (Part I). IS: 3764-1992 Safety code for excavation work. IS: 3385 Code of practice for measurement of Civil Engineering Works. IS: 2720-1983 Method of test of soils (All parts) IS: 1498-1980 Classification and identification of soils for General Engineering purposes IS: 2809 Glossary of terms and symbols relating to Soil Engineering IS: 4081-1986 Safety code for blasting and related drilling operations 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"> IS 456 Ordinary Portland cement, 33 Grade, conforming to IS: 269-1989. Rapid Hardening Portland Cement, conforming to IS: 8041-1990 Ordinary Portland cement, 43 Grade, conforming to IS: 8112-1989. Ordinary Portland cement, 53 Grade, conforming to IS: 12269-1987. Sulphate Resistant Portland cement, conforming to IS: 12330-1988. 	
3.	RCC works	CPWD specifications sub head 5.0	<ol style="list-style-type: none"> IS: 269-1989 Specification for Ordinary, Rapid- Hardening and Low Heat Portland Cement. IS: 455-1989 Specification for Portland Blast Furnace Slag Cement. IS: 1489-1991 Specification for Portland-Pozzolana Cement. IS: 4031-1996 Methods of Physical Tests for Hydraulic Cement. IS: 650-1991 Specification for Standard Sand for Testing of Cement. IS: 383 Specifications for Coarse and Fine Aggregates from Natural Sources for Concrete. IS: 2386-1983 Methods of Test for Aggregates for Concrete. (Part I To VIII) IS: 516-1959 Method of Test for Strength of Concrete. IS: 1199-1959 Method of Sampling and Analysis of Concrete. S: 3025-1987 Method of Sampling and Test (Physical and Chemical) Water Used in Industry. S: 432-1982 Specification for Mild Steel and Medium Tensile Steel Bars and Hard Drawn Steel Wire for Concrete Reinforcement. (Part I & II) 	

Sl . N o.	Item Description	Specifica tion referenc e	IS Ref:	Remar ks
			<p>12. S: 1139-1966 Specification for Hot Rolled Mild Steel and Medium Tensile Steel Deformed Bar for Concrete Reinforcement.</p> <p>13. S: 1566-1982 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 Pre stressed Concrete.</p> <p>15. S: 1786-1985 Specification for Cold Twisted Steel Bars for Concrete Reinforcement.</p> <p>16. S: 2090 Specification for High Tensile Steel Bars Used in Pre stressed Concrete.</p> <p>17. S: 4990-2001 Specification for Plywood for Concrete Shuttering Work.</p> <p>18. S: 2645-1975 Specification for Integral Cement Water- Proofing Compounds</p> <p>19. S: 4098 Lime Pozzolana Mixture (1st Revision) (Amendment 2) IS: 3201 Criteria for Design and Construction of Precast Concrete Trusses.</p> <p>20. S: 2204 Code of Practice for Construction of Reinforced Concrete Shell Roof.</p> <p>21. S: 2210 Criteria for The Design of R.C. Shell Structures and Folded Plates.</p> <p>22. S: 2751-1979 Code of Practice for Welding of Mild Steel Bars Used for Reinforced Concrete Construction.</p> <p>23. S: 2502-1963 Code of Practice for Bending and Fixing Vibrators for Consolidating Concrete.</p> <p>24. S: 3558-1983 Code of Practice for Use of Immersion Vibrators for Consolidating Concrete.</p> <p>25. S: 3414-1968 Code of Practice for Design and Installation of Joints</p>	

Sl . N o.	Item Description	Specifica tion referenc e	IS Ref:	Remar ks
			<p>in Buildings</p> <p>26. S: 4014-1967 Code of Practice for Steel Tubular Scaffolding. (Part I & II)</p> <p>27. S: 2571-1970 Code of Practice for Laying In-Situ Cement Concrete Flooring.</p> <p>28. S: 2250 Code of Practice for Preparation and Use of Masonry Mortar (1st Revision)</p> <p>29. .2.5 Construction Safety S: 3696-1987 Safety Code for Scaffolds and Ladders. (Part I& II)</p> <p>30. S: 3385 Code of Practice for Measurement of Civil Engineering Works</p> <p>31. .2.6 Measurement IS: 1200 Method of Measurement of Building Works.</p> <p>32. S: 3385 Code of Practice for Measurement of Civil Engineering Works.</p>	
4.	Masonry Brick work/laterite stones	CPWD specifications sub head 7.0	<ol style="list-style-type: none"> 1. IS 3620(Laterite) 2. IS: 1077-1992 Specifications for Common Burnt Clay Building Bricks 3. IS: 1200 Measurements for Building Works 4. IS: 1725 Specifications for Solid Cement blocks used in General Building Construction 5. IS: 1905-1987 Code of Practice for Structural Safety of Buildings: Masonry Walls. 6. IS: 2116-1980 Sand for Masonry Mortars 7. IS: 2180 Specification for Heavy Duty Burnt Clay Building Bricks 8. IS: 2185-1979 Specification for Concrete Masonry Units: Hollow and Solid Concrete Blocks 9. IS: 2212-1991 Code of Practice for Brick Work 10. S: 2222 Specification for Burnt Clay Perforated Building Bricks 11. S: 2691-1988 Specification for Burnt Clay Facing Bricks 12. S: 3414-1968 Code of Practice for Design and Installation of Joints in Buildings 	

Sl . N o.	Item Description	Specifica tion referenc e	IS Ref:	Remar ks
			<p>13. S: 3466 Specification for Masonry Cement</p> <p>14. S: 3952 Specification for Burnt Clay Hollow Blocks for Walls and Partitions</p> <p>15. S:1124 water absorption and specific gravity of laterite stones</p> <p>16. S:1121 compressive strength of laterite stones</p> <p>17. S 1197(Pt.I) (Rubble)</p>	
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 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 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 Specification for Timber panelled and glazed shutters Part II - Window and ventilator shutters.</p> <p>8. IS: 1200-1992 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. S: 1658 Specification for Fibre Hard Boards</p> <p>11. S: 1761 Specification for transparent sheet glass for glazing and framing purposes</p> <p>12. S: 3087 Specification for wood particle boards (medium density for structural timber building)</p> <p>13. S: 1956 Glossary of terms relating to iron and steel</p> <p>14. S: 814-1991(Part I) Specifications for covered electrodes for metal are welding of structural steel.</p> <p>15. S: 814-1991(Part II)</p> <p>(a) For welding products other than sheets, Specifications for covered electrodes for metal are welding of structural steel</p>	

Sl . N o.	Item Description	Specifica tion referenc e	IS Ref:	Remar ks
			<p>(b) For welding sheets</p> <p>16. S: 815 Classification and coding of covered electrodes for metal are welding and cutting operation.</p> <p>17. S: 1948-1961 Aluminium doors, windows & ventilators</p> <p>18. S: 6227 Code of Practice for use of metal are welding in tubular structure</p> <p>19. S: 6248-1979 Specifications for metal rolling shutters and rolling grill</p> <p>20. S: 1081-1960 Code of Practice for fixing and glazing of metal (steel and aluminum) doors, windows and ventilators</p> <p>21. S: 2062-1999 Weld able Structural Steel</p> <p>22. S: 1361-1978 Specifications for steel windows for Industrial Buildings</p> <p>23. S: 1200-1993(Part VIII) Measurements for steel work and iron work</p> <p>24. S: 1038-1983 Specifications for steel doors, windows, and ventilators</p> <p>25. S: 226-1975 Specifications for structural steel (Standard quality)</p> <p>26. S: 823 Code of procedure for manual metal arc welding of metal steel</p> <p>27. S: 102-1962 Ready mixed paint, brushing, red lead non-sitting, and priming</p> <p>28. S: 1363-1992 For black hexagon bolts, nut and lock nuts(dia. 6 to 39mm) and black hexagon screws (Dia. 6 to 24mm)</p> <p>29. S: 813 Scheme of symbols for welding.</p>	
6.	Flooring	CPWD specifications sub head	<p>1. IS: 1130-1969 Specification For Marble (Blocks, Slabs And Tiles) (Reaffirmed 1993)</p> <p>2. IS: 1141-1973(1141-1993)* Code Of Practice - Seasoning Of Timber (2nd Revision)</p>	

Sl . N o.	Item Description	Specifica tion referenc e	IS Ref:	Remar ks
		11.0	<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 Ad Maintenance Of Linoleum Floor (1st Revision) (Reaffirmed 1990)</p> <p>5. IS: 1200 (Part XI) 1977 Method Of Measurement Of Building And Civil Engineering Work (Part XI) Paving, Floor Finishes, Dado And Skirting) (3rd Revision) (Amendment1) (Reaffirmed 1992)</p> <p>6. IS: 1237-1980 Specification For Cement Concrete Flooring Tiles (1st Revision) (Reaffirmed 1990)</p> <p>7. IS: 1322-1982 (1322-1993) Specification For Bitumen Felts For Water Proofing And Damp-Proofing (4th Revision)</p> <p>8. IS: 1443-1972 Code Or Practice For Laying And Finishing Of Cement Concrete Flooring Tiles (1st Revision) (Reaffirmed 1991)</p> <p>9. IS:1489(Part-1) 1991 Specification For Portland Pozzolana Cement (Part - 1) Fly ash Based (3rd Revision)</p> <p>10. S: 1489- (Part II) 1991 Specification For Portland Pozzolana Cement (Part II) Claimed Clay Based (3rd Revision) (Amendment 1)</p> <p>11. S: 1580-1991 Specification for Bituminous Compounds Of Water Proofing And Caulking Purpose (3rd Revision)</p> <p>12. S: 1195 Bitumen Mastic For Flooring</p> <p>13. S: 3384-1990 Bitumen Primer For Use In Waterproofing And Damp Proofing</p> <p>14. S: 4832(Part - 1) Acid Resistant Mortars - Silicate Type</p> <p>15. S: 4832(Part - 2) Acid Resistant Mortars - Resin Type</p> <p>16. S: 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) 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 Mixed Paint, Brushing, Zinc</p>	

Sl . N o.	Item Description	Specifica tion referenc e	IS Ref:	Remar ks
			<p>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.</p> <p>S: 137-1965 Ready Mixed Paint, Brushing, Matt Or Egg Shell Flat, Finishing Interior to Indian Standard Colour as required (Revised 1993)</p> <p>11.</p> <p>S: 158-1981 Ready Mixed paint, Brushing, Bituminous Black, Lead Free, Acid, Alkali and Heat Resisting (Reaffirmed 1988) (3rd Revision)</p> <p>12.</p> <p>S: 217-1988 Specification For Cut Back Bitumen (2nd Revision)</p> <p>13.</p> <p>S: 218-1983 Specification For Creosote and Anthracite Oil For Use As Wood Preservatives (Reaffirmed 1990) (2nd Revision)</p> <p>14.</p> <p>S: 290-1961 Coal Tar Black Paint (Reaffirmed 1991) (1st Revision)</p> <p>15.</p> <p>S: 341-1973 Black Japan, Types 'A', 'B' & 'C' (Reaffirmed 1991) (1st Revision)</p> <p>16.</p> <p>S: 345-1952 Wood Filter, Transparent - Liquid (withdrawn)</p> <p>17.</p> <p>S: 347-1975 Varnish, Shellac For General Purposes (Reaffirmed 1991) (1st Revision)</p> <p>18.</p> <p>S: 348-1968 French Polish (Reaffirmed 1991) (1st Revision)</p> <p>19.</p> <p>S: 419-1967 Putty For Use On Window Frames (Reaffirmed 1992) (1st Revision)</p> <p>20.</p> <p>S: 427-1965 Distemper, Dry Colour as Required (Reaffirmed</p>	

Sl . N o.	Item Description	Specifica tion referenc e	IS Ref:	Remar ks
			1993) (Revised) 21. S: 428-2000 Distemper, Oil Emulsion, Colour as Required (Reaffirmed 1993) (1st Revision) 22. S: 524-1983 Varnish, Finishing, Exterior, Synthetic Air Drying (Reaffirmed 1990) (2nd Edition) 23. S: 533-1973 Gum Spirit of Turpentine (Oil of Turpentine) (Reaffirmed 1990) (1 st Revision) 24. S: 712-1984 Specification For Building Limes (Reaffirmed 1991) (3rd Revision) 25. S: 1200-1976 (Part: XII) Method of Measurements of Building and Civil Engineering Works: Part: XII-Plastering and Pointing (Reaffirmed 1992) (3rd Revision) 26. S: 1200-1987 Method of Measurements of Building and Civil Engineering Works:	
8.	Cement		1. 43 Grade OPC – IS8112 2. 53 Grade OPC-IS 1269 3. PPC-IS 1489 4. Rapid Hardening Portland cement – IS 4032 5. Portland slag cement IS 455	
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

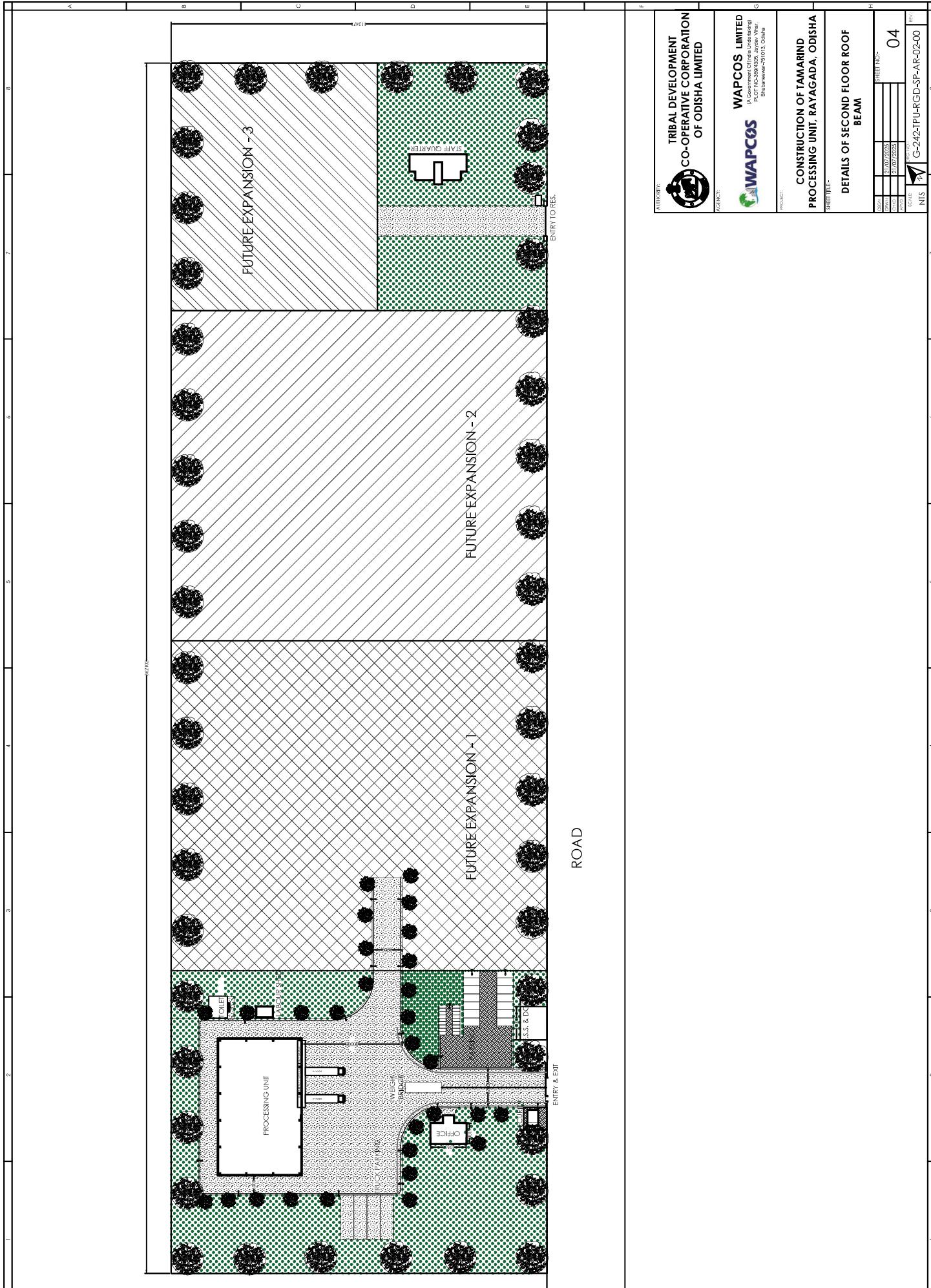
Sl . N o.	Item Description	Specifica tion referenc e	IS Ref:	Remar ks
				items
1 2	Water supply and Sanitary works	CPWD specifications sub head 18 and 17	<p>Water supply</p> <p>1. IS 554 Pipe threads where pressure tight joints are required on the threads- Dimensions, tolerances and designation</p> <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) 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. S 1703 Water fittings - copper alloy float valves (horizontal plunger type) – Specification</p> <p>11. S 2692 Ferrules for water services- Specification</p> <p>12. S 3950 Specification for surface boxes for sluice valves</p> <p>13. S 4736 Specification for Hot-dip Zinc Coatings on mild steel tubes</p> <p>14. S 5312 (Part 2) Swing type reflex (non return) valves for water works purposes. Part 2- Multi door pattern</p> <p>15. S 5312 (Part 2) Swing type reflex (non return) valves for water works purposes. Part 2- Multi door pattern</p> <p>16. S 5382 Rubber sealing rings for gas mains, water mains and sewers</p> <p>17. S 9762 Specification for polyethylene floats (spherical) for float valves</p> <p>18. S 9763 Plastic Bib taps and stop valves (rising spindle) for cold water services specifications</p>	Water supply and Sanitary works

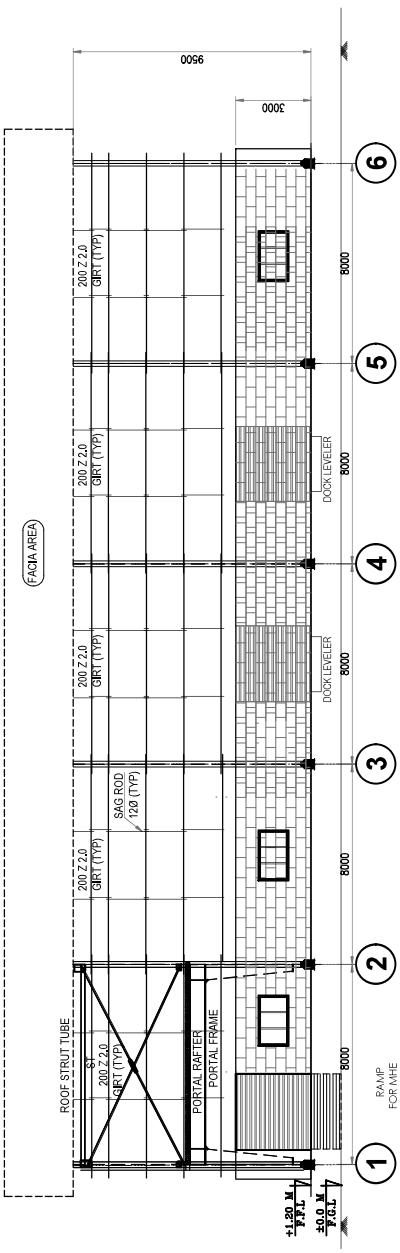
Sl . N o.	Item Description	Specifica tion referenc e	IS Ref:	Remar ks
			<p>19. S 15450 PE-AL-PE Pipes for hot and cold water supplies Specifications</p> <p>20. S 15778 Chlorinated Polyvinyl Chloride (CPVC) pipes for potable hot and cold water distribution supplies-specifications</p> <p>21. S 15801: Polypropylene- Random Copolymer Pipes for hot and cold water supplies Specifications.</p> <p>Sanitary</p> <ol style="list-style-type: none"> 1. IS 771 (Pt.1) Specification for glazed fire clay sanitary appliances: Part 1: General requirements. 2. IS 771 (Pt.-2) Specification for glazed fire clay sanitary appliances: Part 2: Specific requirements of kitchen and laboratory sink. 3. IS 772: Specific actions for general requirements for enamelled cast iron sanitary appliances. 4. IS 774: Flushing cisterns for water closets and urinals (Other than plastic cistern) - Specifications. 5. IS 1300 Phenolic moulding materials.- Specifications 6. IS 1703 Water fittings- copper alloy float valves (horizontal plunger type) – Specification 7. IS 1795 Specification for pillar taps for water supply purposes 8. IS 2267 Polystyrene moulding and extrusion materials – Specifications 9. IS 2326 Specification for Automatic Flushing Cisterns for Urinals (Other than for water closets Part 1: Thermo set seats and covers Specifications 10. S 2548 (Part-2) Plastic seats and covers for water closets Part 2: Thermoplastic seats and covers.- Specifications 11. S 2556 Vitreous sanitary appliances (vitreous china) Specifications 12. S 2556 (Part-1) Part-1: General requirements 13. S 2556 (Part-2) Part-2: Specific requirements of wash-down water closets. 14. S 2556 (Part-3) Part-3: Specific squatting pans 15. S 2556 (Part-4) Part-4: Specific requirements of wash basins. 	

Sl . N o.	Item Description	Specifica tion referenc e	IS Ref:	Remar ks
			<p>16. S 2556 (Part-5) Part-5: Specific requirements of laboratory sinks</p> <p>17. S 2556 (Part-6) Part-6: Specific requirements of Urinals & Partition plates</p> <p>18. S 2556 (Part-7) Part-7: Specific requirements of accessories for sanitary appliances</p> <p>19. S 2556 (Part -14) Part-14: Specific requirements of integrated squatting pans</p> <p>20. S 2556 (Part -15) Part-15: Specific requirements of universal water closets</p> <p>21. S 2963 Specification for Copper alloy waste fittings for wash basins and sinks</p> <p>22. S 3389: Urea formaldehyde moulding materials. – Specifications accessories</p> <p>23. S 4827: Specification for electroplated coating of nickel and chromium on copper and copper alloys</p> <p>24. S 4984 Specification for high density polyethylene pipes for potable water</p>	

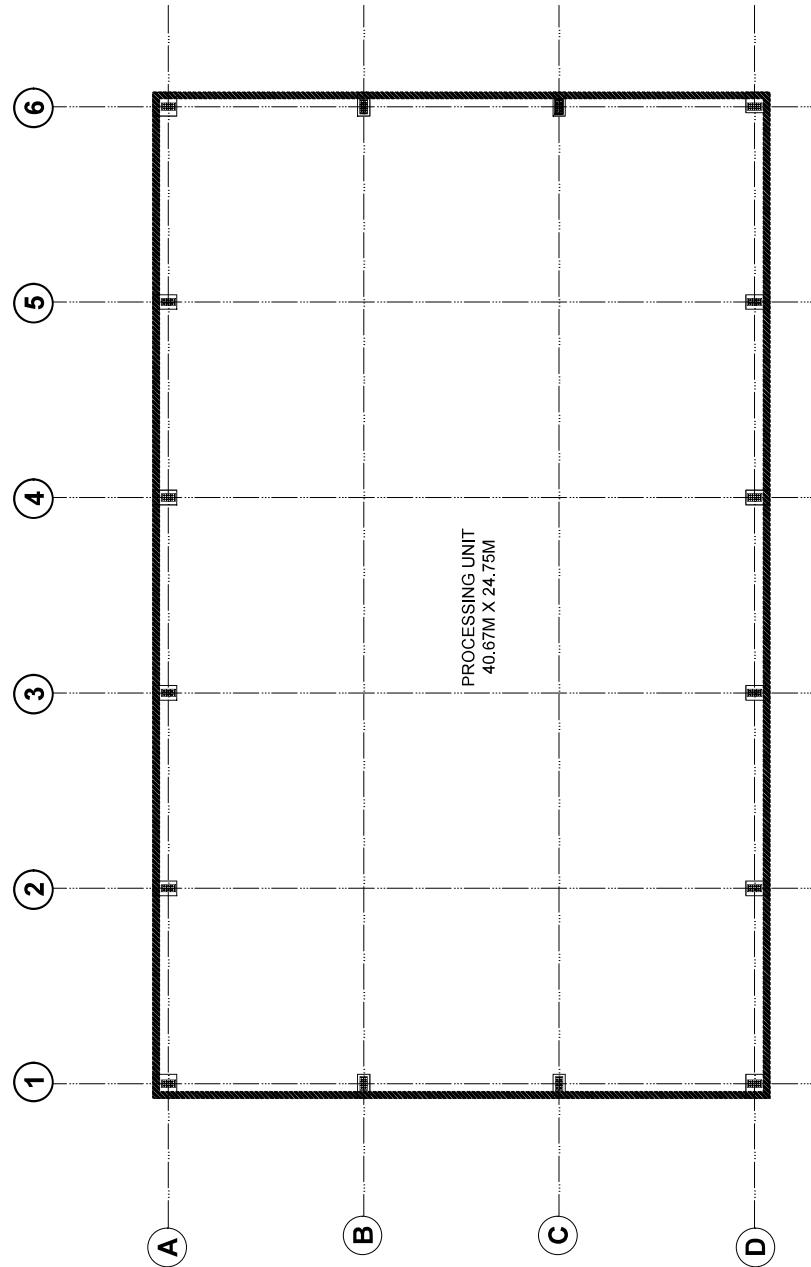
SECTION – VIII

TENDER DRAWINGS OF THE PROJECT





NOTE:- ST - Denotes stilt tube 165.1x4.5 Thk. Connection- 4-H16 / 8mm GUSSET PLATE
SIDEWALL FRAMING ELEVATION @ GRID LINE - H



FLOOR PLAN

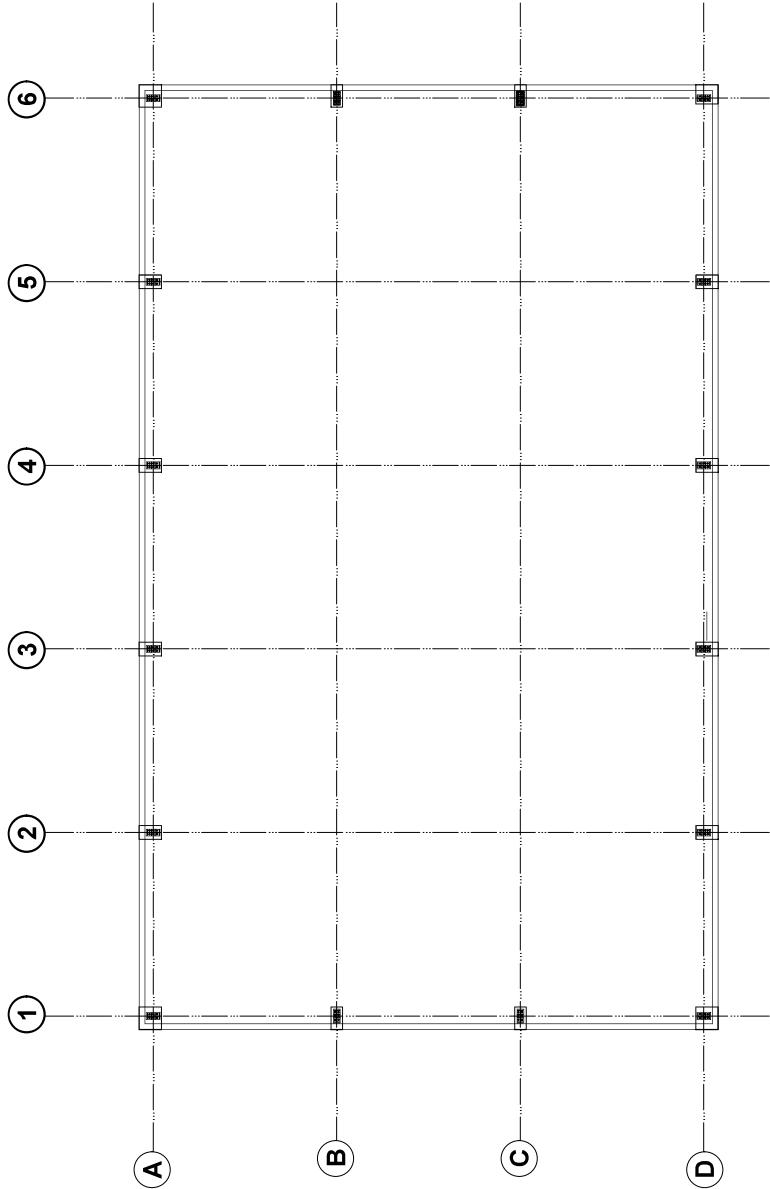
WAPCOS LIMITED
 (A Government of India Undertaking)
 Plot No-2584/345 - Jaydev Vihar,
 Bhubaneswar-751013, Odisha

 WAPCOS

**CONSTRUCTION OF TAMARIND
PROCESSING UNIT, RAYAGADA, ODISHA**

PLAN & ELEVATION

SHEET NO -		01	
2420	21/07/2025	2420	21/07/2025
2420	21/07/2025	2420	21/07/2025
SCALE		PROJ. NO.	
NTS		G-242-TPU-RGD-AR01-00	
		REF.	
		8	



COLUMN SCHEDULE

COLUMN TYPE	COLUMN SIZE	MIX	No.s	REINFORCEMENT	SECTION	TIES DETAILS
C1	835x975	M-30	4	Fe 500 Steel ● 12-Y20 ○ 4-Y16 20		Y@150dc
C2	600 X 975	M-30	4	Fe 500 Steel ● 16-Y20		Y@150dc
C3	500 X 975	M-30	8	Fe 500 Steel ● 12-Y20 ○ 4-Y16		Y@150dc

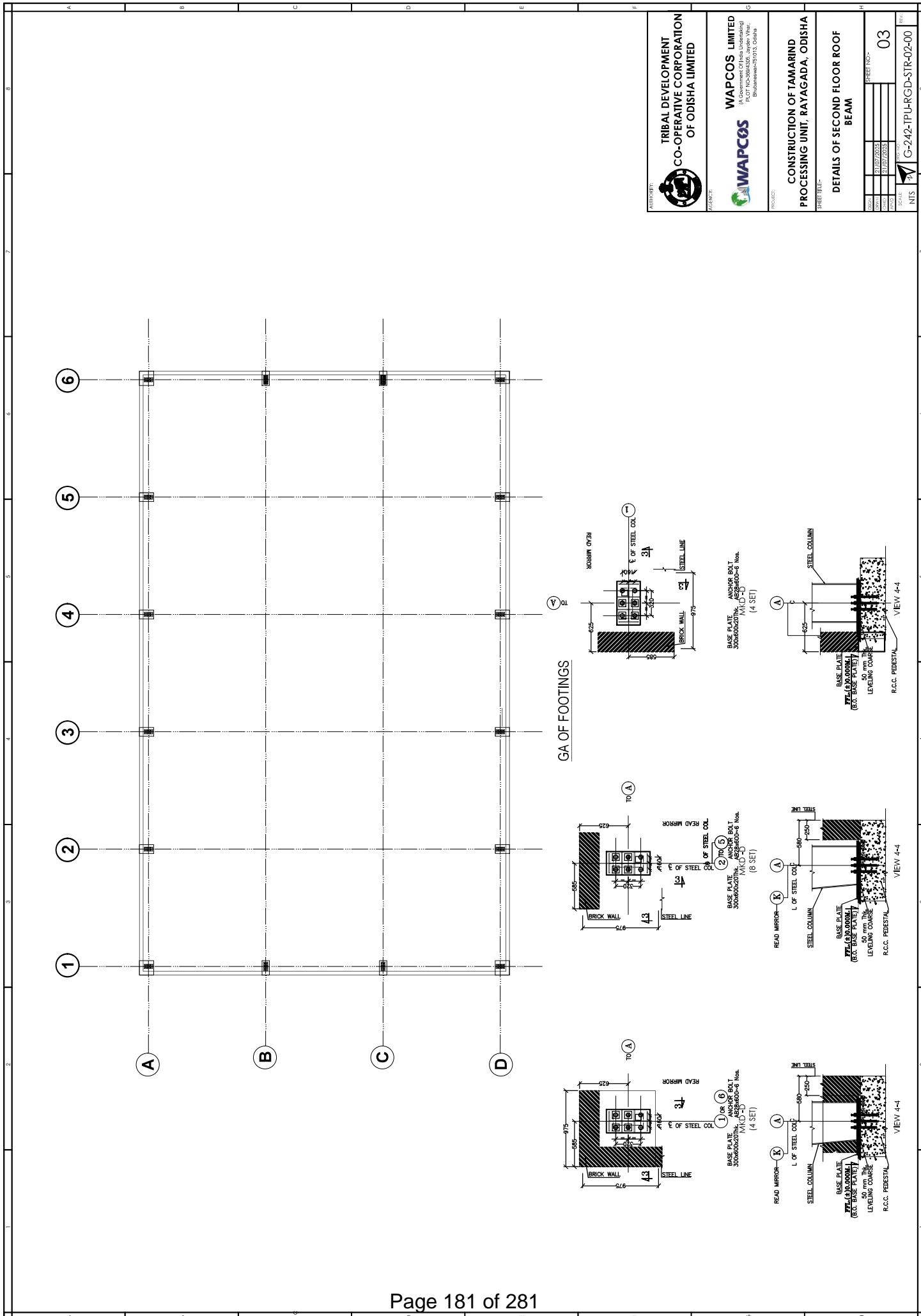
GA OF FOOTINGS

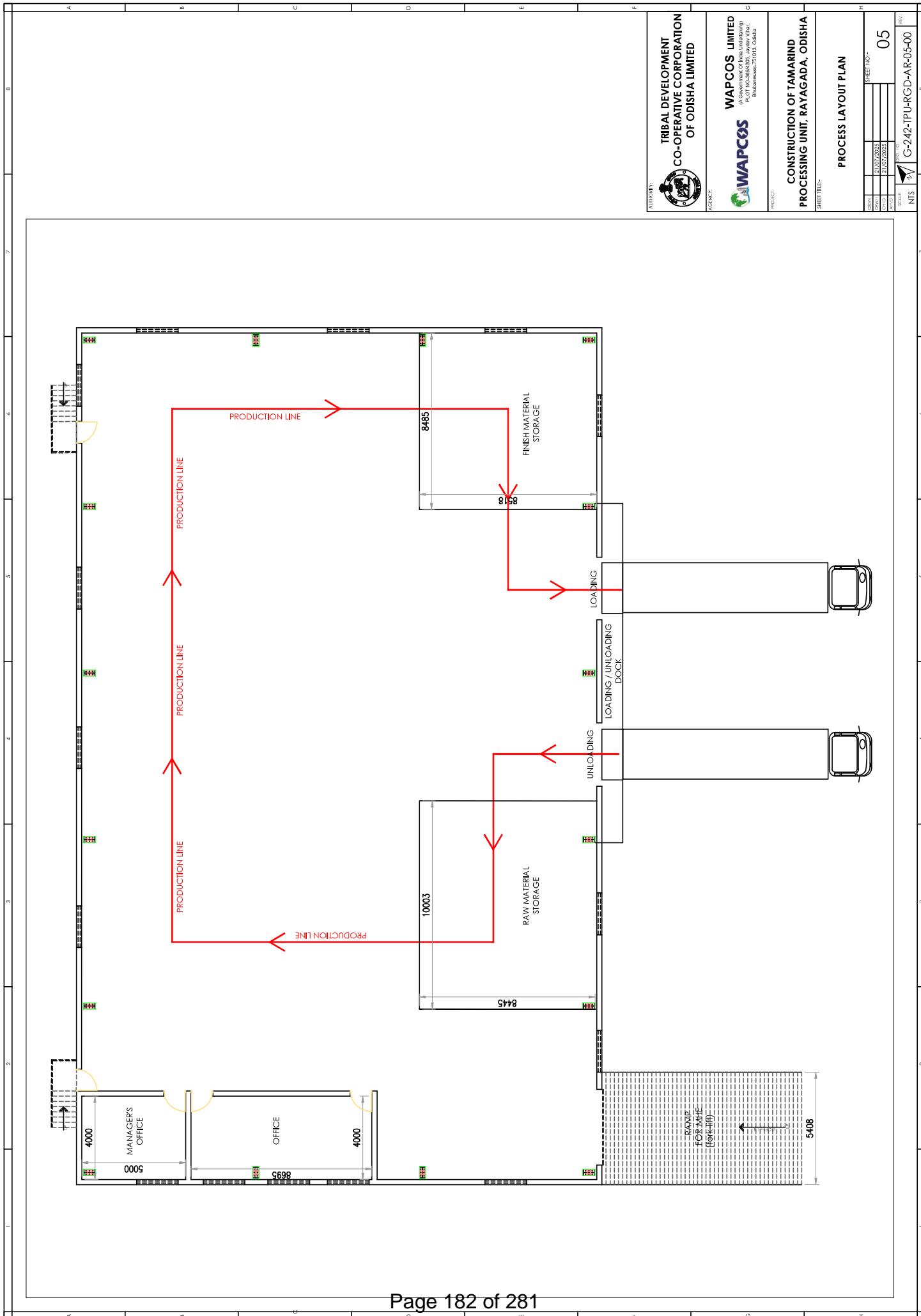
FOOTING TYPE	FOOTING SIZE	No.s	DEPTH	BOTTOM REINFORCEMENT (ALONG A&B)	TOP REINFORCEMENT (ALONG A&B)	MIX
F1	2700x2700	8	600	Y12 @ 150 c/c B/W	Y10 @ 150 c/c B/W	M30
F2	2400x2400	14	600	Y12 @ 175 c/c B/W	Y10 @ 175 c/c B/W	M30



 TRIBAL DEVELOPMENT
 CO-OPERATIVE CORPORATION
 OF ODISHA LIMITED

FOOTING & COLUMN DETAIL		SHEET NO:-	REV:-
SECTION	300x150		
SDW/H	31/07/2023		
SDW/L	21/07/2023		
SDW/C			
SDW/D			
SCALE	1:50		
NITS	44		
G-242-TPU-RGD-STR-01-00			

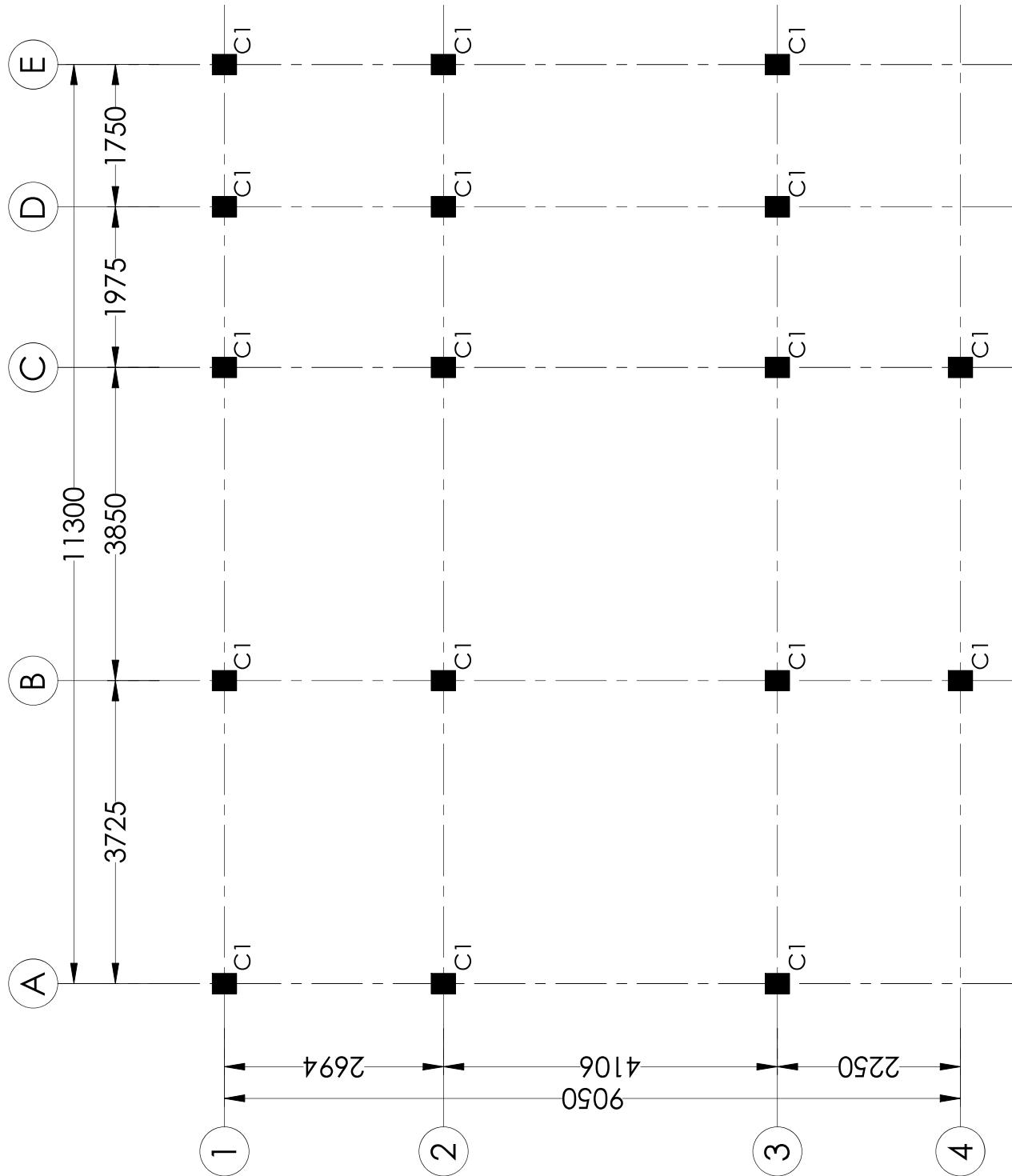




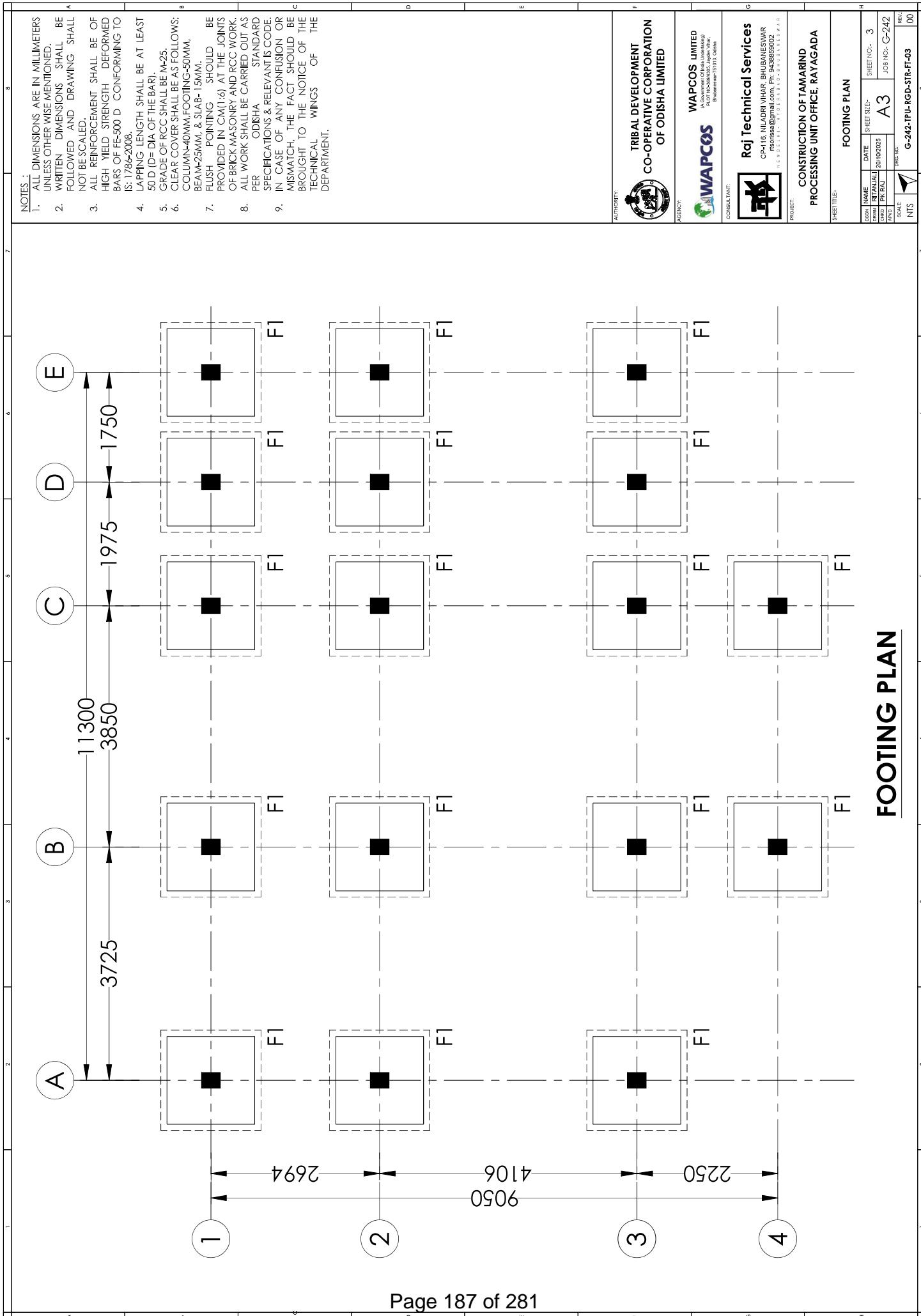
The image contains several architectural and photographic elements. At the top, there is a table titled 'SPECIFICATION' with columns for 'ITEM' and 'DETAILS'. Below the table are two photographs of a modern two-story house with a red and orange facade, a central entrance, and a car parked in front. To the right of the photographs are two sets of architectural drawings: one showing a 3D perspective view and another showing a cross-section or elevation detail. The drawings include labels like 'FLOORING', 'DADO', 'WALL', 'PLASTER', 'WATER SUPPLY', and 'CEILING PLASTER'. There are also logos for 'WAPCOS LIMITED' and 'Raj Technical Services'.

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHER WISE MENTIONED.
2. WRITTEN DIMENSIONS SHALL BE FOLLOWED AND DRAWING SHALL NOT BE SCALED.
3. ALL REINFORCEMENT SHALL BE OF HIGH TENSILE STRENGTH DEFORMED BARS OF FE-500 D CONFORMING TO IS:1786-2008.
4. LAPPING LENGTH SHALL BE AT LEAST 50 D (D = Dia. of the bar).
5. GRADE OF RCC SHALL BE M-25.
6. CLEAR COVER SHALL BE AS FOLLOWS: COLUMN-40MM; FLAT-40MM, BEAM-25MM; & SLAB-15MM.
7. FLUSH POINTING SHOULD BE PROVIDED IN CM(1:6) AT THE JOINTS OF BRICK MASONRY AND RCC WORK.
8. ALL WORK SHALL BE CARRIED OUT AS PER BOMBSA STANDARD SPECIFICATIONS & RELEVANT IS CODE.
9. IN CASE OF ANY CONFUSION OR MISMATCH, THE FACT SHOULD BE BROUGHT TO THE NOTICE OF THE TECHNICAL DEPARTMENT OF THE AIR FORCE.

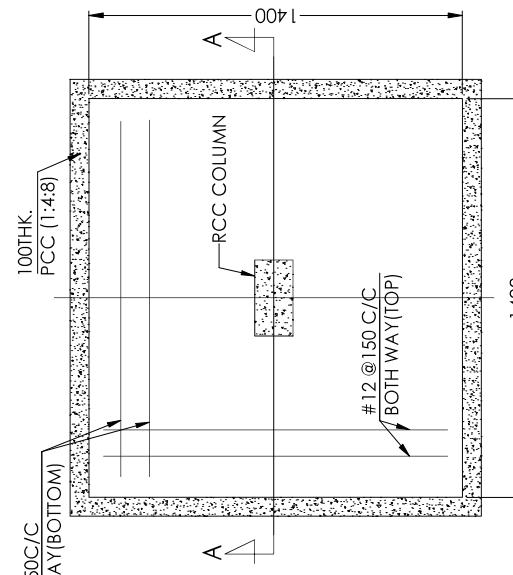
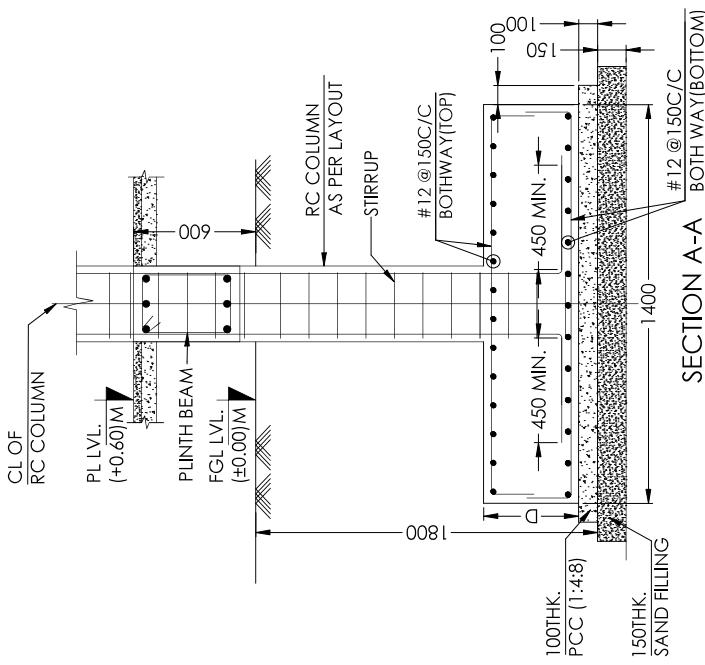


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FOOTING SCHEDULE (REFER TYP. DETAIL)

FTG. No.	SIZE		THICKNESS	REINFORCEMENT (BOTTOM & TOP)	
	L	W		D	BOTTOM REINF. (BOTH WAYS)
F1	1400	1400	300	#12@150c/c	#12@150c/c



FOOTING PLAN OF F1

NOTE:

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE MENTIONED.
2. DRAWING DIMENSIONS SHALL BE FOLLOWED AND DRAWING SHALL NOT BE SCALED.
3. ALL REINFORCEMENT SHALL BE OF HIGH YIELD STRENGTH DEFORMED BARS OF FE-500 D CONFORMING TO IS: 1788-2008.
4. LAPING LENGTH SHALL BE AT LEAST 50 D (D = DIAMETER OF THE BAR).
5. GRADE OF RCC SHALL BE M-25.
6. CLEAR COVER SHALL BE AS FOLLOWS: COLUMN-40MM; FOOTING-50MM, BEAM-25MM & SLAB-15MM.
7. FLUSH POINTING SHOULD BE PROVIDED IN CM(1:6) AT THE JOINTS OF BRICK MASONRY AND RCC WORK.
8. ALL WORK SHALL BE CARRIED OUT AS PER ORDSHA STANDARD SPECIFICATIONS & RELEVANT IS CODE.
9. IN CASE OF ANY CONFUSION OR MISMATCH, THE FACT SHOULD BE BROUGHT TO THE NOTICE OF THE TECHNICAL WINGS OF THE DEPARTMENT.

A circular stamp with the word "AUTHORITY" around the top edge and a central emblem in the middle.

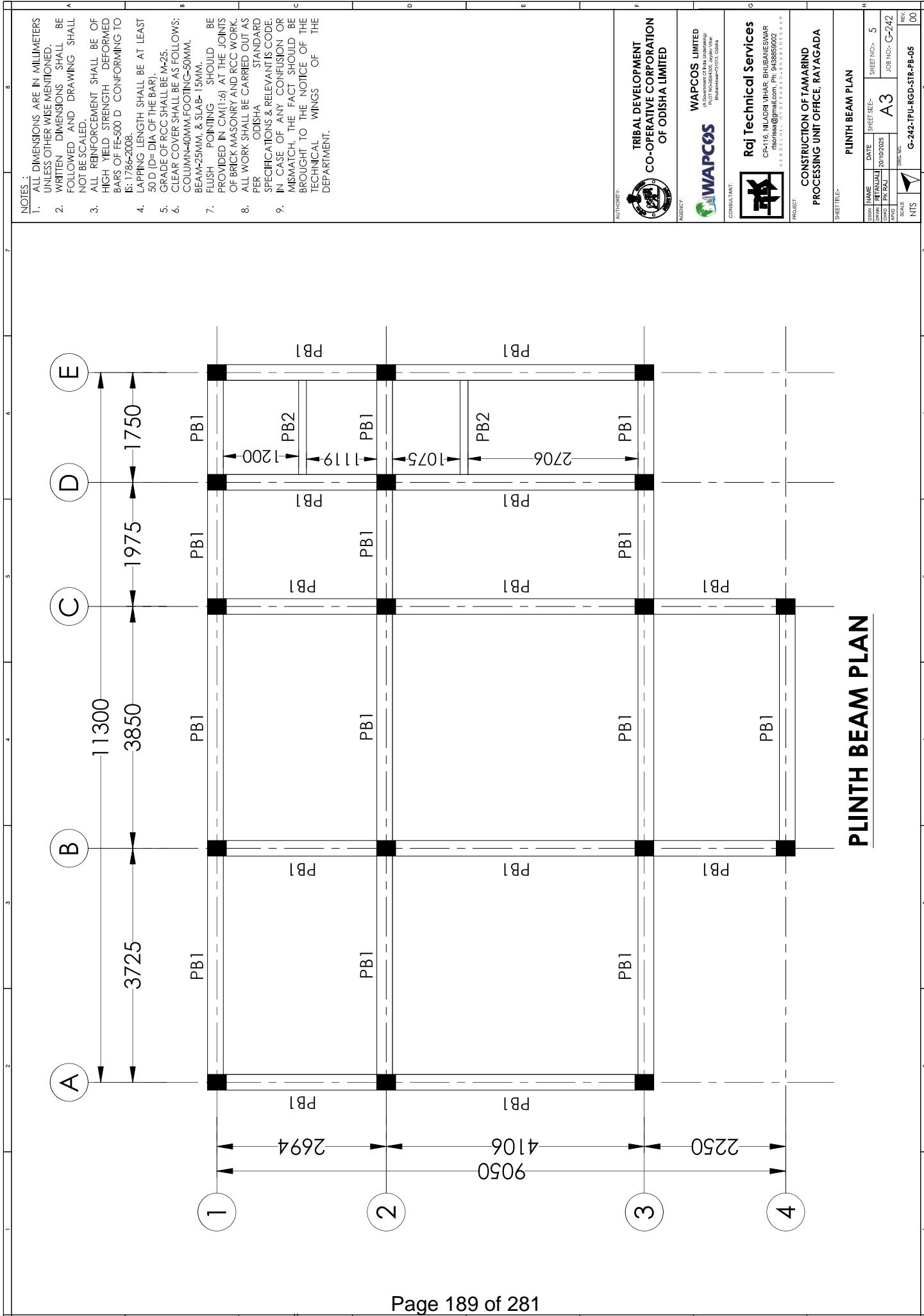
TRIBAL DEVELOPMENT
CO-OPERATIVE CORPORATION
OF ODISHA LIMITED

WA
CONSULTANT:


CON
PROCES
PROJECT:

SHEET TITLE- FOC	DSGN RITANJALI	NAME PK RAJ
DRWN CHKD	PK RAJ	APVD
SCALE NTS		

1



NOTES :

- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE MENTIONED.
- WRITTEN DIMENSIONS SHALL BE FOLLOWED AND DRAWING SHALL NOT BE SCALED.
- ALL REINFORCEMENT SHALL BE OF HIGH YIELD STRENGTH DEFORMED BARS OF FE-500 D CONFORMING TO IS: 1786-2008.
- LAPPING LENGTH SHALL BE AT LEAST 50 D (D= Dia OF THE BAR).
- GRADE OF RCC SHALL BE M-25.
- CLEAR COVER SHALL BE AS FOLLOWS: COLUMN-40MM, FOOTING-50MM, BEAM-25MM, & SLAB-15MM.
- FLUSH POINTING SHOULD BE PROVIDED IN CMI(1:6) AT THE JOINTS OF BRICK MASONRY AND RCC WORK.
- ALL WORK SHALL BE CARRIED OUT AS PER ORDSHA STANDARD SPECIFICATIONS & RELEVANT IS CODE.
- IN CASE OF ANY CONFUSION OR MISMATCH, THE FACT SHOULD BE BROUGHT TO THE NOTICE OF THE TECHNICAL WINGS OF THE DEPARTMENT.

AUTHORITY:



AGENCY:



CONSULTANT:



PROJECT:



CONSTRUCTION OF TAMARIND PROCESSING UNIT OFFICE, RAYAGADA



GROUND FLOOR ROOF BEAM PLAN



PROJECT:



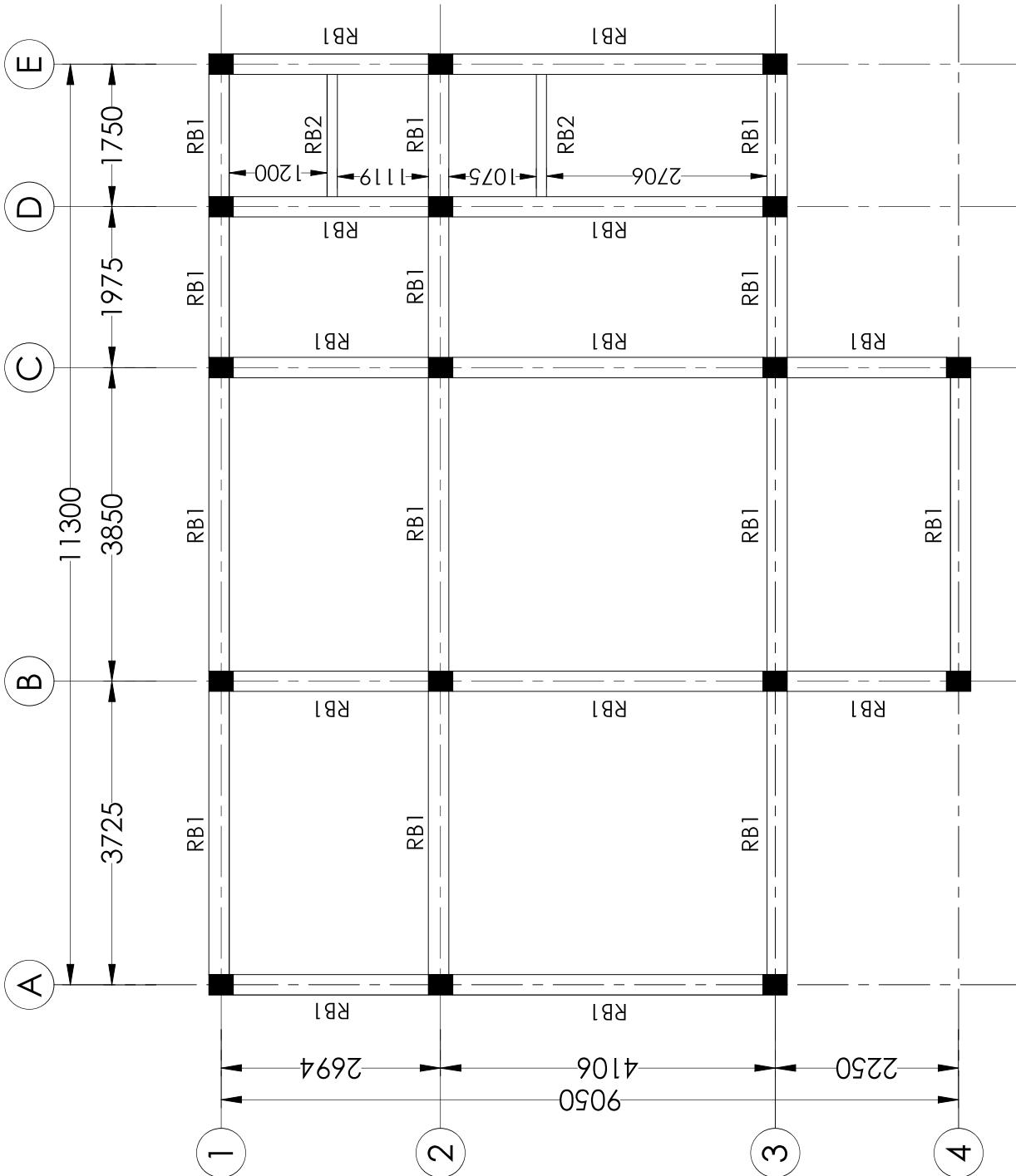
CONSTRUCTION OF TAMARIND PROCESSING UNIT OFFICE, RAYAGADA

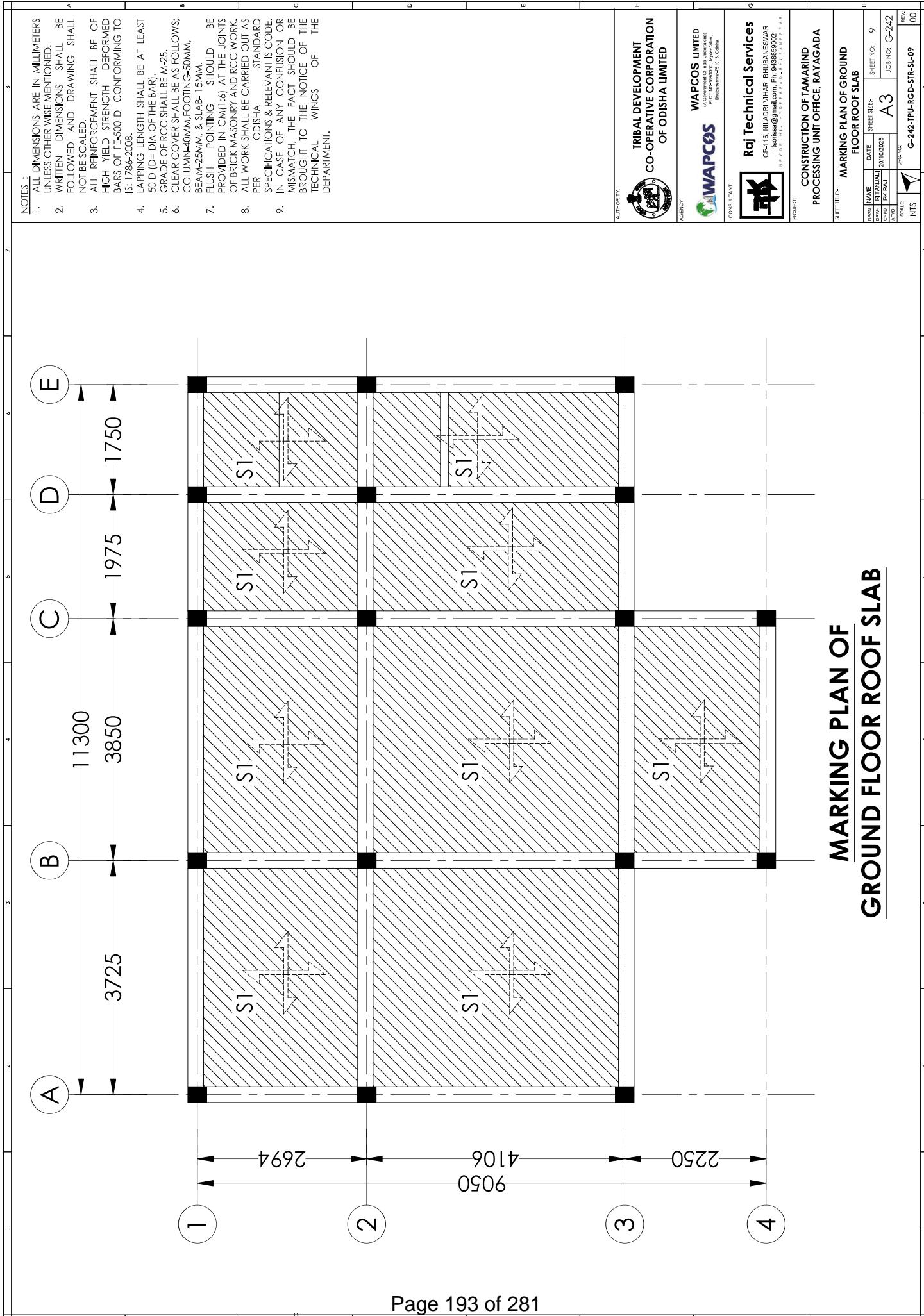


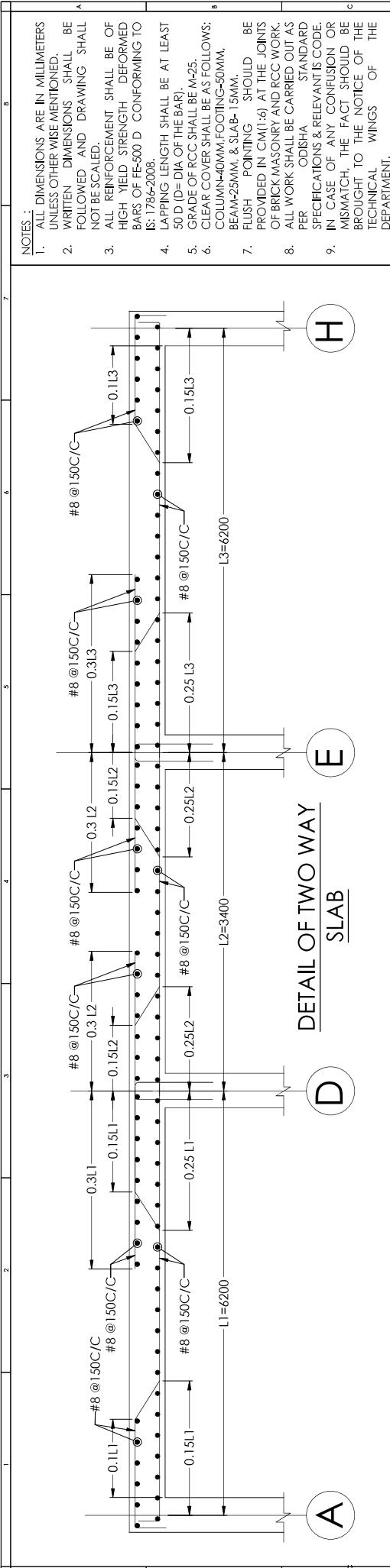
GROUND FLOOR ROOF BEAM PLAN



PROJECT:







SCHEDULE OF ROOF SLAB:-

SLAB MARKED	THICKNESS	SHORT SPAN	LONG SPAN
S1	125	#8 @150 C/C	#8 @ 150 C/C

AUTHORITY:

WAPCOS
TRIBAL DEVELOPMENT
CO-OPERATIVE CORPORATION
OF ODISHA LIMITED

AGENCY:

Raj Technical Services
CP-116, NALANDA VHR, BHUBANESWAR
(A Government Of India Undertaking)
For Construction Of 200000 Sq. Mtr. Residential Project
In Odisha, Phase-I, 751015 Cuttack, Odisha.

CONSULTANT:

WAPCOS LIMITED
CP-116, NALANDA VHR, BHUBANESWAR
(A Government Of India Undertaking)
For Construction Of 200000 Sq. Mtr. Residential Project
In Odisha, Phase-I, 751015 Cuttack, Odisha.

PROJECT:

**CONSTRUCTION OF TAMARIND
PROCESSING UNIT OFFICE, RAYAGADA**

Sheet No:-

**GROUND FLOOR ROOF SLAB
SCHEDULE & DETAIL SECTION**

DESIGN DRAWN BY	NAME	DATE	SHEET NO:-
PK RAJ	PK RAJ	20/02/2023	10
CHIEF	PK RAJ		
APPROV			
SCALE			
DOC. NO.:			
NTS			

G-242-TPU-RGD-STR-SL-10

REV. 00

GROUND FLOOR PLAN
AREA = 127 SQM

SCHEDULE OF OPENING

SL.NO.	TYPE	SIZE	SIL	HEIGHT	DOOR	REMARK
01	D	750 X 2100	00	2100	FRP DOOR	
02	D1	900 X 2100	00	2100	WPC DOOR (SINGLE SWING)	
03	D2	1000 X 2100	00	2100	WPC DOOR (SINGLE SWING)	
04	D3	1100 X 2100	00	2100	WPC DOOR (DOUBLE SWING)	
04	W	900 X 1350	750	2100	ALUMINUM SLIDING WINDOW/2 FRAME	WINDOW
05	W1	1200 X 1350	750	2100	ALUMINUM SLIDING WINDOW/2 FRAME	
06	W2	2100 X 1350	750	2100	ALUMINUM SLIDING WINDOW/3 FRAME	
07	V	750 X 600	1500	2100	M.S. GRILL WITH LOUVERED	VENTILATOR
07	V1	900 X 600	1500	2100	M.S. GRILL WITH LOUVERED	
08	FG	900 X 1350	1500	2100	GRILL	

ITEM

ITEM	PLATE	1. PLINTH PROTECTION WILL BE 150 MM WIDTH WITH PCC(1:24) GRADED OUTWARD.
FLOORING	1. ALL FLOORING SHOULD BE OF VINYL TILE FLOORING 2. FLOOR TILE SIZE (600X600 MM)	
TOILET	3. TOILET FLOOR SHOULD BE OF ANTI-SLIP TILE.	
WALL	4. FLOOR TILE SIZE (600X600 MM)	
DADO	1. 100 MM HIGH DADO SHOULD BE PROVIDED AS INTERNAL WALL SURFACE SHOULD BE FINISHED WITH 15MM THICK COAT OVER 10MM THICK PLASTER. 2. PLASTER HEIGHT SHOULD BE 20MM ABOVE THE G.L. 3. ALL HORIZONTAL & VERTICAL JOINTS SHOULD BE PROVIDED WITH MASHIC OF STANDARD SIZE.	
PLASTER	4. ALL PLASTER JONTS SHOULD BE DRY. 5. ALL OPENINGS SHOULD HAVE CHAMFERED EDGES.	
WATER SUPPLY	1. CEILING PLASTER IS NOT PERMISSIBLE IN CONSTRUCTION. 2. ROOF SURFACE SHOULD BE FINISHED WITH 20MM THICK CEMENT PLASTER(1:4).	
	1. ALL WATER SUPPLY PIPES SHOULD BE OF CPVC 2. ALL WATER SUPPLY PIPES, SANI PIPES AND RAIN WATER PIPES SHALL BE PVC. NOT LESS THAN 100MM DIA	

AREA STATEMENT

GROUND FLOOR AREA	127 SQMT
TERRACE FLOOR AREA	18 SQMT
BUILT FLOOR AREA	145 SQMT

TRIBAL DEVELOPMENT CO-OPERATIVE CORPORATION OF ODISHA LIMITED

WAPCOS LIMITED
A Government of India Undertaking
Plot No.D-855, Jayee Nagar
Bhubaneswar-751013, Odisha

Roj Technical Services
C-16, NILADRI NHAR, BHUBANESWAR
NEDULI-1, NEDULI-2, Bhubaneswar-751013, Odisha
E-mail: rojtechservice@gmail.com, Ph: 9438585002

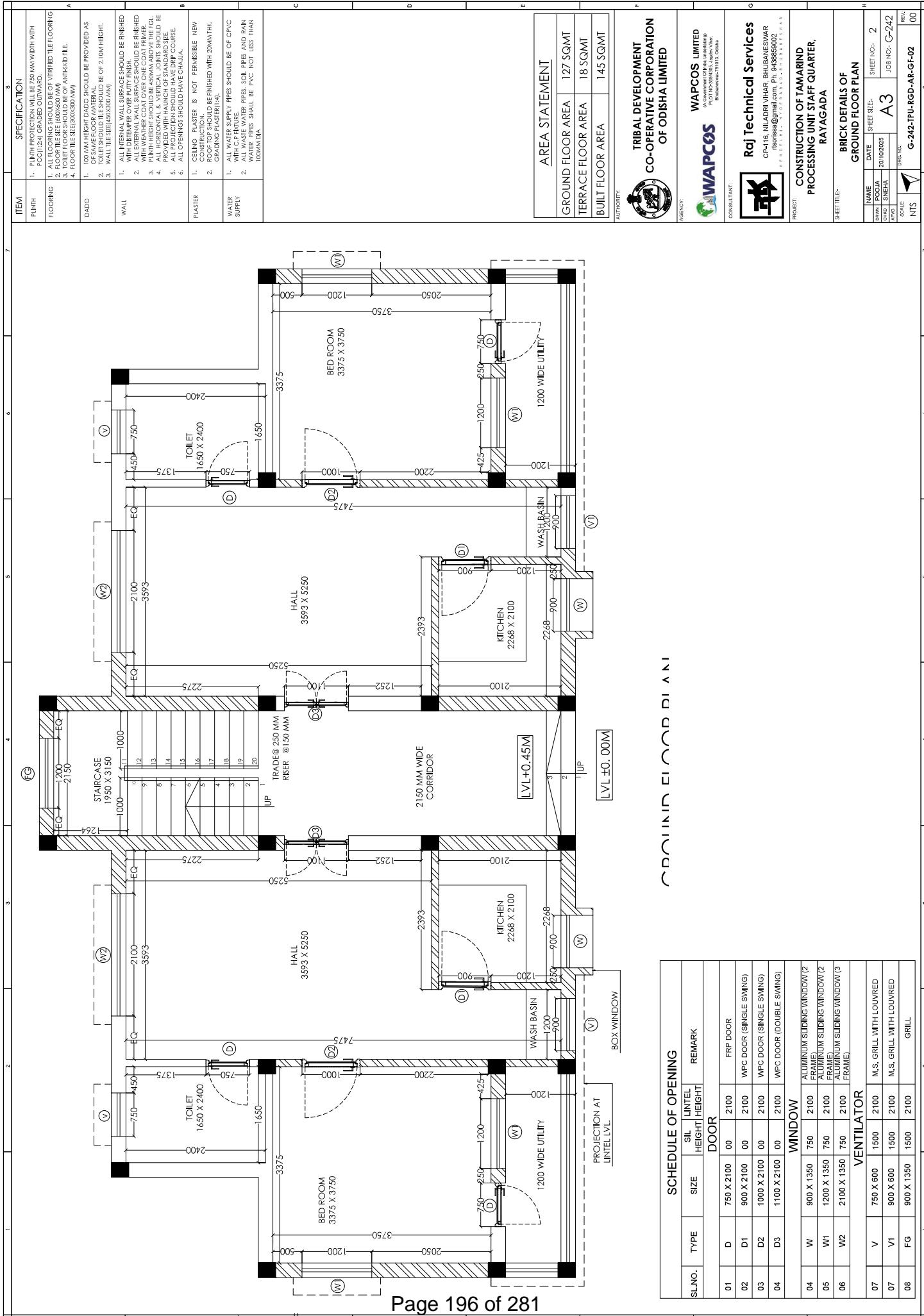
PROJECT CONSTRUCTION OF TAWARIND PROCESSING UNIT STAFF QUARTER, RAYAGADA

GROUND FLOOR PLAN

NAME	DATE	sheet size-
SHRI. POKA	20/10/2025	A3
SHRI. SNEHA		
AND		
DR. PCS		
SCALE		

SHEET TITLE-
NIS  G-242-TPU-RGD-AR-GF-01

REV. 00



ITEM	SPECIFICATION
PLINTH	1. PLINTH PROTECTION WILL BE 750 MM WIDTH WITH PCC 1:4:2 GRADED COWDARD. 2. ALL FLOORING SHOULD BE OF VITRIFIED TILE FLOORING 200X400 MM. 3. FLOOR TILES SHOULD BE OF ANISHAD TILE 400X400 MM. 4. FLOOR TILES SHOULD BE PROVIDED AS 100 MM HIGH DADO SHOULD BE PROVIDED AS 100 MM HIGH. 5. FLOOR TILES SHOULD BE PROVIDED AS 100 MM HIGH.
FLOORING	1. ALL INTERNAL WALL SURFACE SHOULD BE FINISHED WITH DRYWALL OVER PUTTY INSILIC. 2. ALL INTERNAL WALL SURFACE SHOULD BE FINISHED WITH DRYWALL OVER PUTTY INSILIC. 3. PLINTH HEIGHT SHOULD BE 450MM ABOVE THE FLOOR. 4. ALL HORIZONTAL & VERTICAL LINES SHOULD BE PROVIDED WITH A Haunch OF STANDARD SIZE. 5. ALL PROJECTION SHOULD HAVE A DIP COURSE. 6. ALL OPENINGS SHOULD HAVE A CHAJJA.
DADO	1. 100 MM HIGH DADO SHOULD BE PROVIDED AS 100 MM HIGH. 2. FLOOR TILES SHOULD BE PROVIDED AS 100 MM HIGH.
WALL	1. CEILING PLASTER IS NOT PRIMABLE NEW CONSTRUCTION. 2. ROOF TOP SHOULD BE FINISHED WITH 20MM THK. GRADING PLASTER [1:4].
PLASTER	1. ALL WATER SUPPLY PIPES SHOULD BE OF CPVC WITH C/FUTURE 2. ALL WATER SUPPLY PIPES, SOIL PIPES AND RAIN WATER PIPES SHALL BE PVC NOT LESS THAN 100MM DI.

This architectural floor plan illustrates a three-story building with the following details:

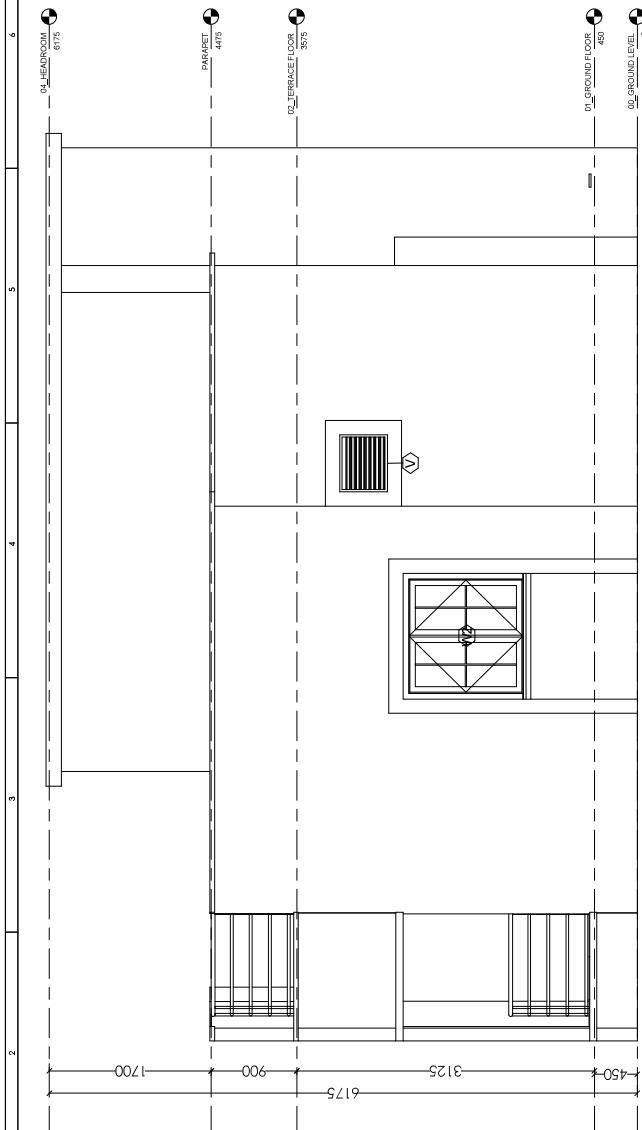
- Dimensions:** The building is 2010 units wide and 1115 units deep. The overall height is 1450 units, with a 19-unit gap at the bottom.
- Rooms and Features:**
 - Ground Floor:** Includes a Kitchen (1115 x 900), a Dining Room (1115 x 600), a Living Room (1115 x 600), a Staircase, a Laundry Room, a Store Room, and a Kitchen Sink.
 - Second Floor:** Features a Living Room (1115 x 600), a Dining Room (1115 x 600), a Kitchen (1115 x 600), a Staircase, and a Store Room.
 - Third Floor:** Contains a Living Room (1115 x 600), a Dining Room (1115 x 600), a Kitchen (1115 x 600), a Staircase, and a Store Room.
 - Exterior:** The building has a total width of 2010 units, with a 19-unit gap at the bottom. There are two sets of double doors on the ground floor, one on the left and one on the right, each with a 19-unit gap. The building is surrounded by a 19-unit wide walkway.
- Vertical Labels:** The vertical axis on the left is labeled with numbers 1 through 7, representing floors. The vertical axis on the right is labeled with "GROUNDFLOOR" and "GROUNDELEVEL".
- Horizontal Labels:** The bottom horizontal axis is labeled with "1115", "900", "2010", and "1450".
- Annotations:** Various annotations are present, including "PARAPET 4875", "TERRACE FLOOR 2015", and "GROUNDFLOOR 480".

FRONT ELEVATION

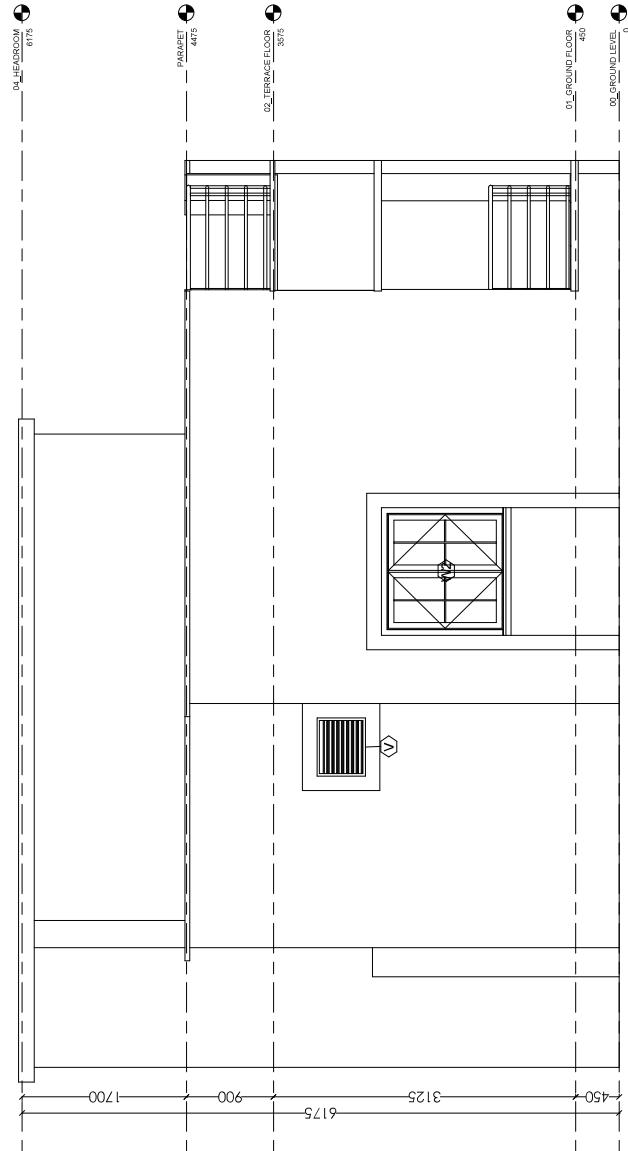
FRONT ELEVATION

REAR ELEVATION

Page 198 of 281

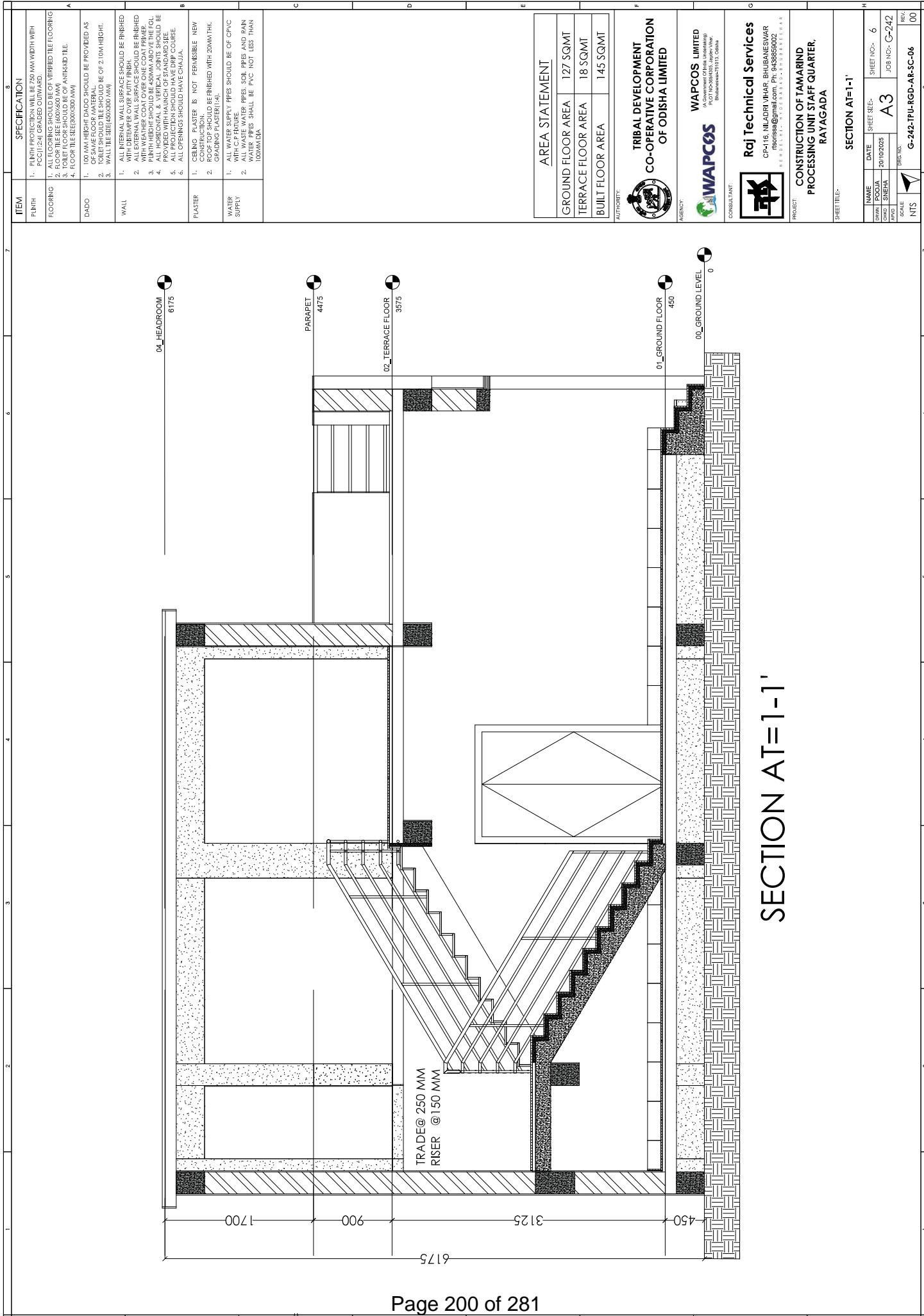


LEFT SIDE ELEVATION



RIGHT SIDE FIXATION

ITEM		SPECIFICATION	
PUNTH		1. PUNTH PROTECTION WILL BE 150 MM WIDTH WITH PCC(1:2:4) DRAINED OUTWARD 2. COLOR OF THE PUNTH SHOULD BE OF VITRIFIED TILE FLOORING 3. PUNTH SHOULD BE 400 MM DEEP AND 100 MM THICK. 4. PUNTH SHOULD BE 100 MM THICK.	
FLOORING		1. ALL FLOORING SHOULD BE OF VITRIFIED TILE FLOORING 2. COLOR OF THE FLOORING SHOULD BE ANALYSTILE. 3. FLOORING SHOULD BE 100 MM THICK.	
DADO		1. 100 MM HIGH DADO SHOULD BE PROVIDED AS OF SAME COLOR AS FLOORING. 2. DADO SHOULD BE 100 MM DEEP AND 100 MM THICK. 3. WALL SHEET(300 MM).	
WALL		1. ALL INTERNAL WALL SURFACE SHOULD BE FINISHED WITH INTERNAL WALL SHEET & IT SHOULD BE PAINTED WITH WATER BASE COAT OVER THE COAT PRIMER. 2. ALL INTERNAL WALL SHEET & IT SHOULD BE PAINTED WITH WATER BASE COAT OVER THE COAT PRIMER. 3. PLINTH(EIGHT) SHOULD BE 500 MM ABOVE THE FLOOR. 4. ALL HORIZONTAL & VERTICAL JOINTS SHOULD BE PROVIDED WITH MORTAR PLACING & IT SHOULD BE PLASTERED. 5. ALL OPENINGS SHOULD BE PROVIDED WITH COAT PRIMER. 6. ALL OPENINGS SHOULD HAVE CHAJA.	
PLASTER		1. CEILING PLASTER IS NOT PERMISSIBLE. 2. ROOF CONSTRUCTION IS TO BE FINISHED WITH 20MM THK. GRANITE PLASTER(16).	
WATER SUPPLY		1. ALL WATER SUPPLY PIPES SHOULD BE OF CPVC WHICH IS CUT IN TUBE. 2. ALL WATER WATER PIPES, SOIL PIPES AND RAIN WATER PIPES SHALL BE PVC, NOT LESS THAN 10MM(DIA).	



DIES: ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE MENTIONED. WRITTEN DIMENSIONS SHALL BE FOLLOWED AND DRAWING SHALL NOT BE SCALED.

ALL REINFORCEMENT SHALL BE OF HIGH STRENGTH DEFORMED BARS OF FE-500 D CONFORMING TO IS: 1788-2008.

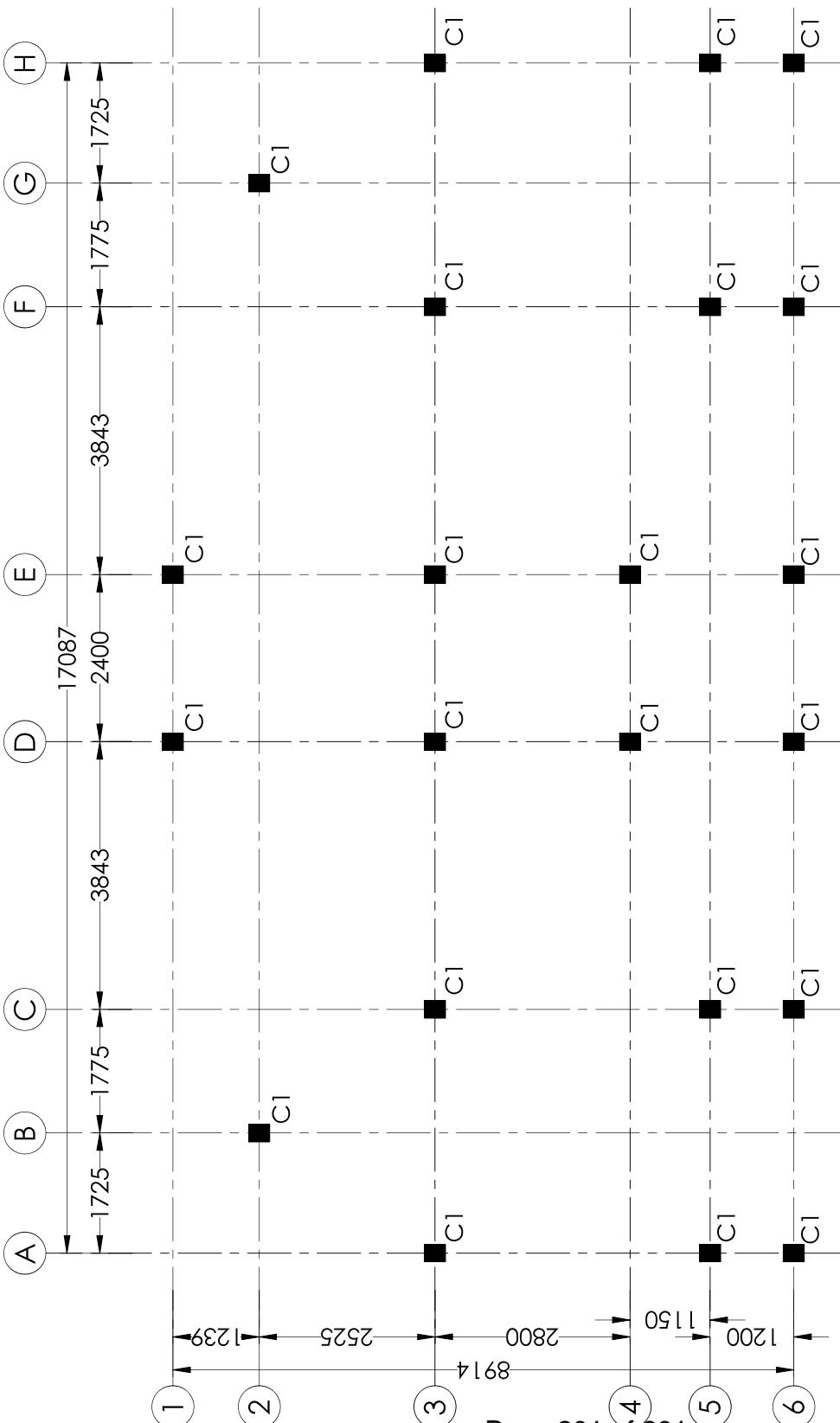
LAPPING LENGTH SHALL BE AT LEAST 50 D (D = Dia of the bar).

GRADE OF RCC SHALL BE M-25.

CLEAR COVER SHALL BE AS FOLLOWS:

COLUMN	40MM
FOOTING	50MM
FLUSH	25MM
PONTING	15MM

RE PROVIDED IN C1(1.6) AT THE JOINTS OF BRICK MASONRY AND RCC WORK. ALL WORK SHALL BE CARRIED OUT AS PER ODISHA STANDARD SPECIFICATIONS & RELEVANT CODES. IN CASE OF ANY CONFUSION OR MISMATCH, THE FACT SHOULD BE BROUGHT TO THE NOTICE OF THE TECHNICAL WINGS OF THE DEPARTMENT.



COLUMN PLAN

COLUMN MARKED	SIZE IN MM.	MAIN REINF. VERTICAL	STIRRUP	SECTION	SHAPE OF STIRRUP
C1	250 X 300	6-#12	#8@100C/C AT SUPPORT & #8@150C/C. AT MID SPAN	6-#12	

COLLUMN SCHEDULE :

CONSULT



MINISTRY OF
LABOUR
(A. Government Of India Undertaking)
D. C. T. NO. 2000/2005 (Regd. No. 16/2005)

FLC 1 NO 30004303, Jagjeet Vimal,
Bhubaneswar-751013, Odisha

卷之三

- 10 -

Raj Technical Services

P-116. NILADRI V/HAR. BHUBANESWAR

rtorissa@gmail.com, Ph: 9438859002

SECTION OF TAMA BIRD

WING UNIT STAFF QUARTER

BAYAGADA

卷之三

MAN FI AND SCHERDIEK

JUNIOR PLAN & SCHEDULE

F-1

SHEET NO.: 1

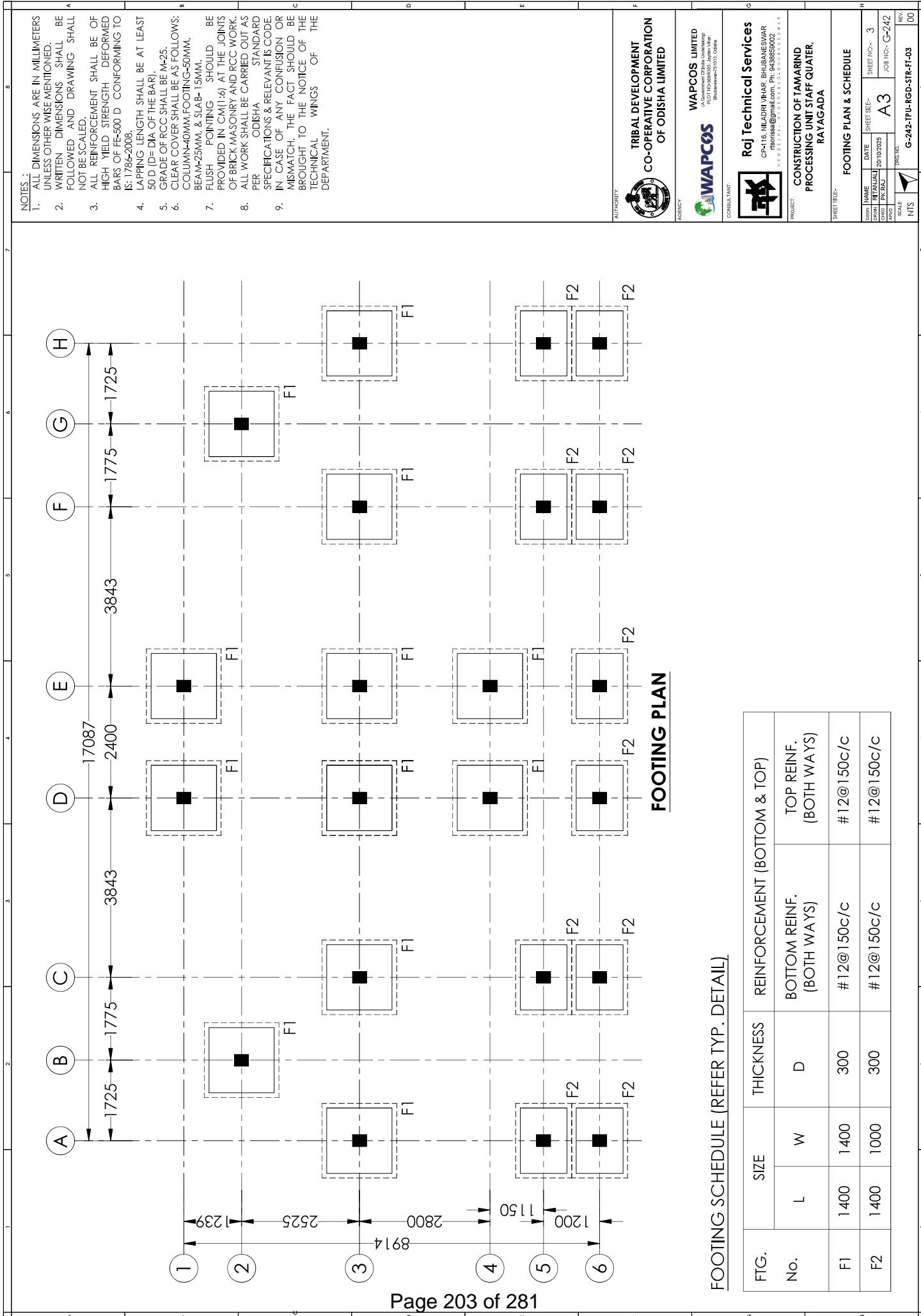
JOB NO:- G-24

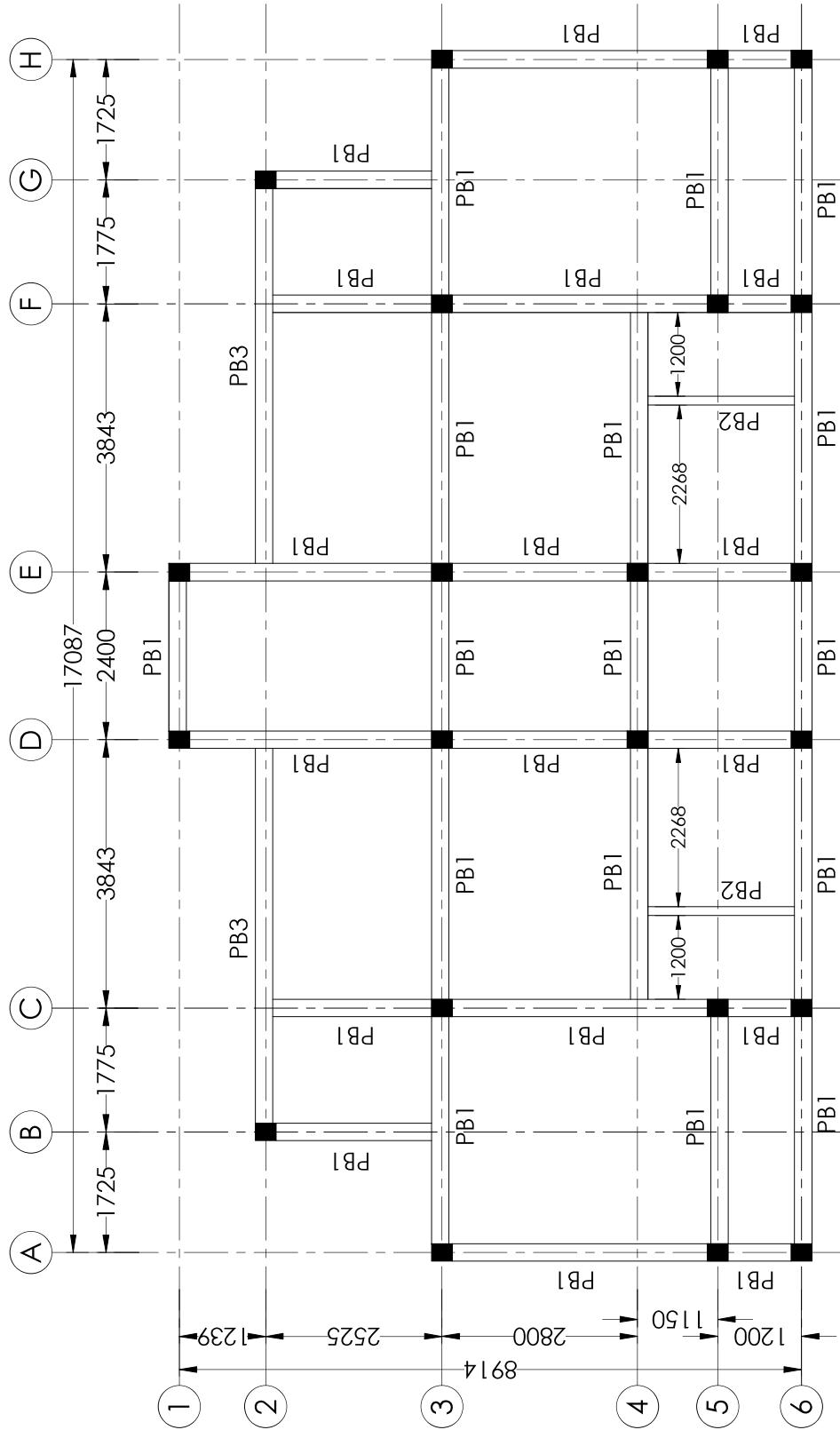
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G-242-TPU-RGD-STR-CL-01

80

11 of 11

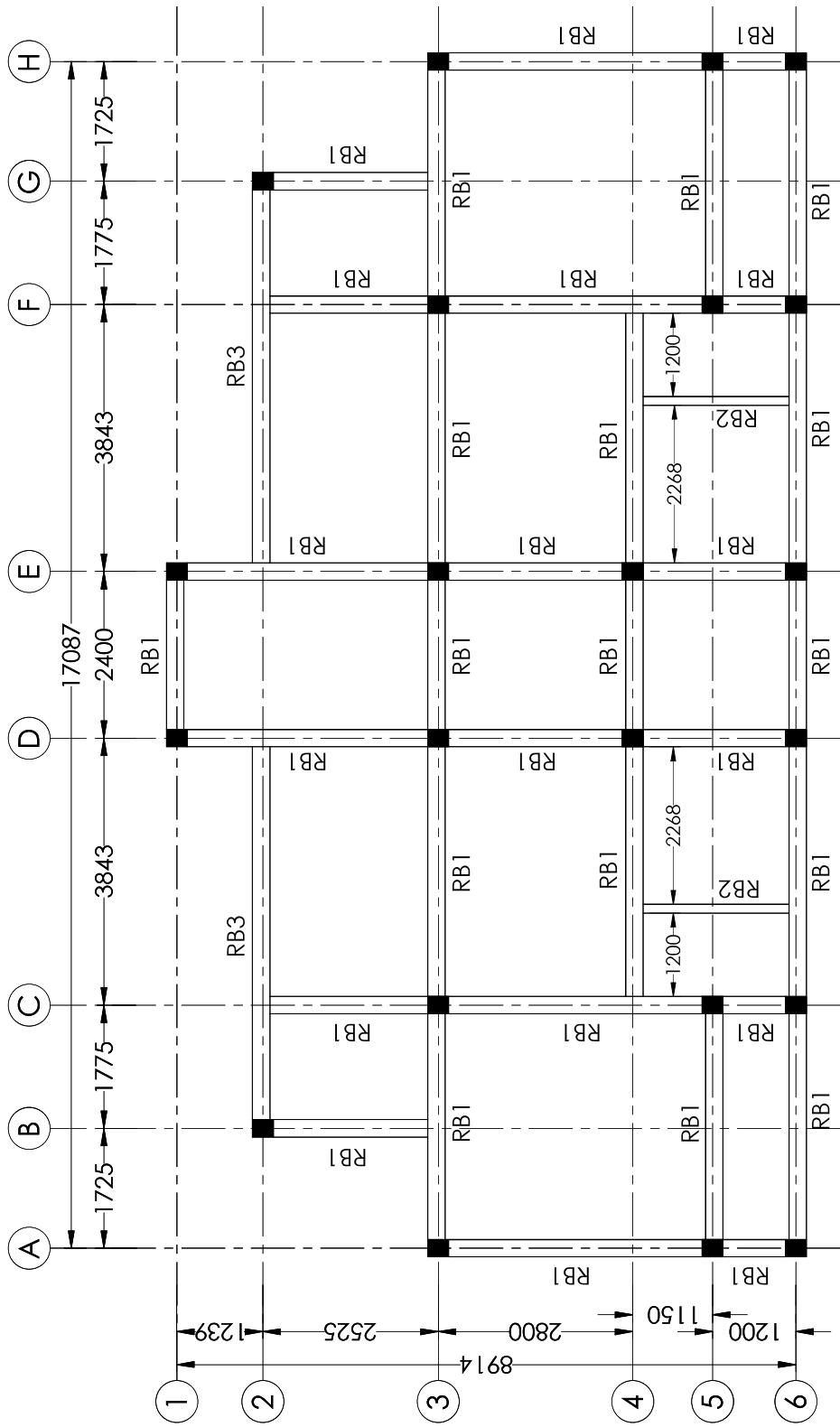




PLINTH BEAM PLAN

108

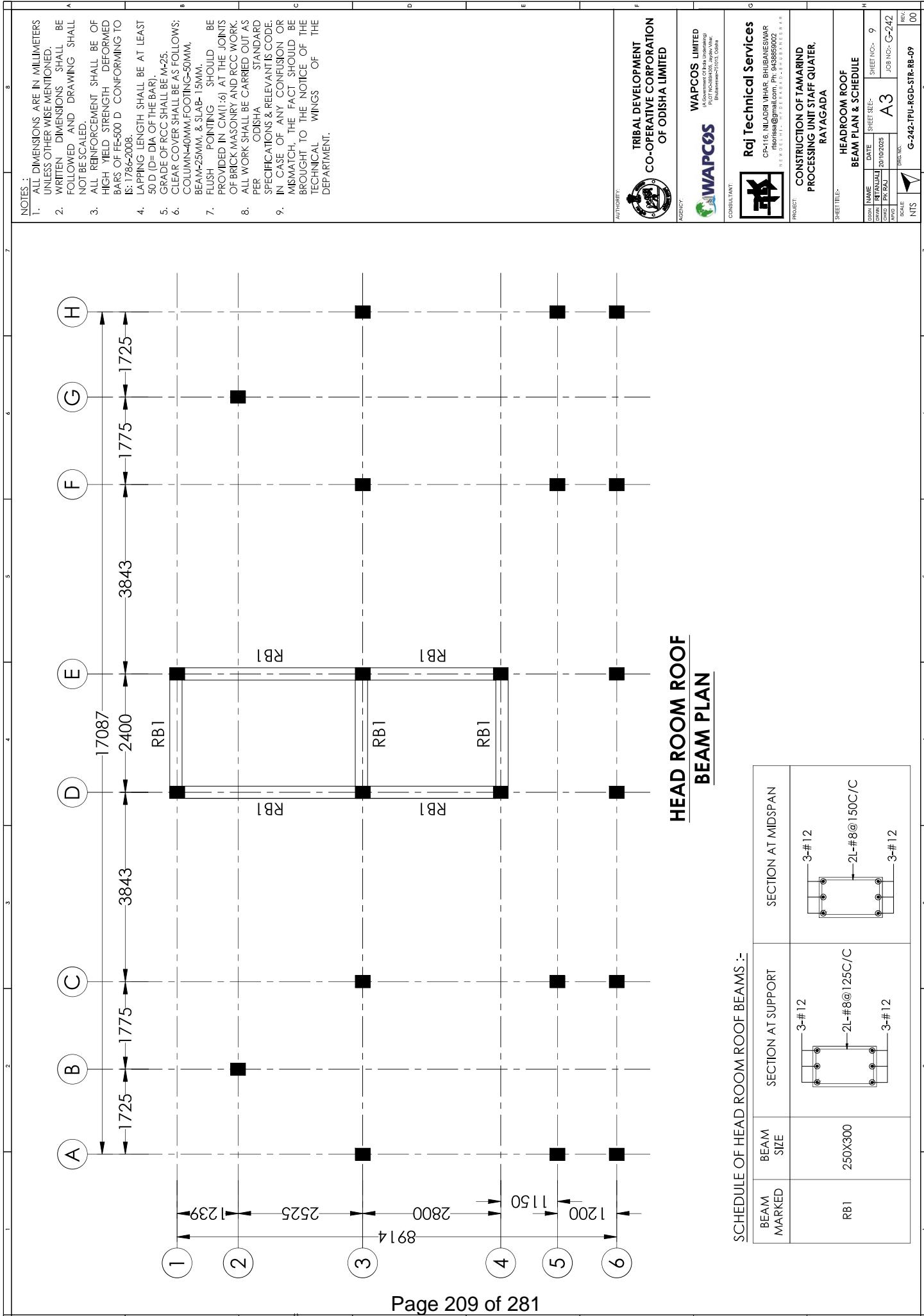
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISEWISE MENTIONED.
2. WRITTEN DIMENSIONS SHALL BE FOLLOWED AND DRAWING SHALL NOT BE SCALED.
3. ALL REINFORCEMENT SHALL BE OF HIGH TENSILE STRENGTH DEFORMED BARS OF FE-500 D CONFORMING TO IS-1786-2008.
4. LAP SPACING LENGTH SHALL BE AT LEAST 50 D (D = DIA OF THE BAR).
5. GRADE OF RCC SHALL BE M-25.
6. CLEAR COVER SHALL BE AS FOLLOWS: COLUMN-40MM; FOOTING-50MM, BEAM-25MM, & SLAB-15MM.
7. FLUSH POINTING SHOULD BE PROVIDED IN CMTL:6 AT THE JOINTS OF BRICK MASONRY AND RCC WORK.
8. ALL WORK SHALL BE CARRIED OUT AS PER ODISHA STANDARD SPECIFICATIONS & RELEVANT IS CODE.
9. IN CASE OF ANY CONFUSION OR MISMATCH, THE FACT SHOULD BE BROUGHT TO THE NOTICE OF THE TECHNICAL WINCS OF THE DEPARTMENT.



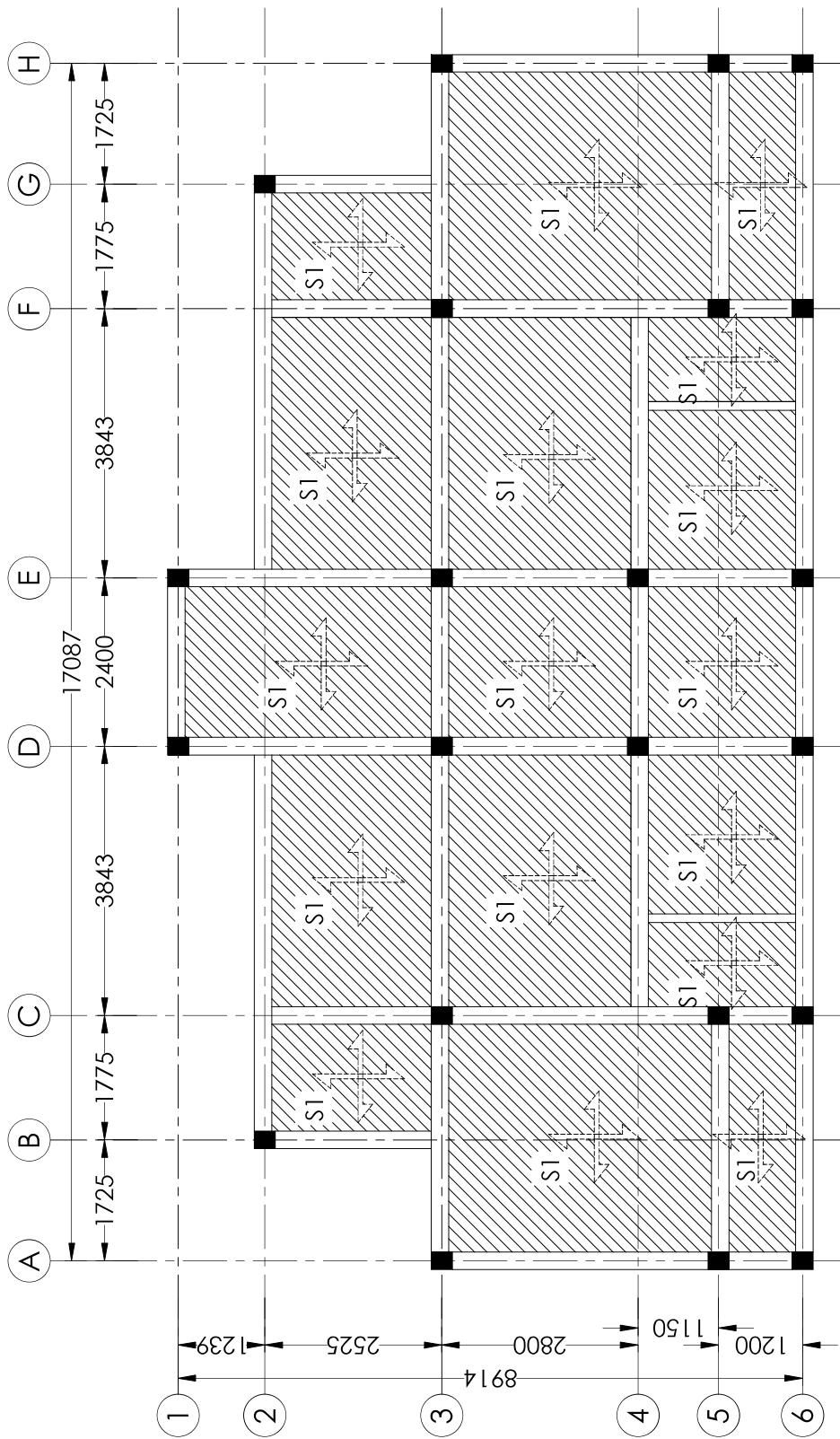
GROUND FLOOR ROOF BEAM PLAN

CP-16, NILADRI VIHAR, BHUBANESWAR
NEW DELHI - HYDERABAD - BHUBANESWAR
ntsorissa@gmail.com, Ph: 94388589002

**CONSTRUCTION OF TAMARIND
PROCESSING UNIT STAFF QUATER,
RAYAGADA**



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5.	GRADE OF RCC SHALL BE M-25.
6.	CLEAR COVER SHALL BE AS FOLLOWS: COLUMN-40MM FLATING-50MM, BEAM-25MM, & SLAB- 15MM.
7.	FLUSH POINTING SHOULD BE PROVIDED IN CMI(16) AT THE JOINTS OF BRICK MASONRY AND RCC WORK.
8.	ALL WORK SHALL BE CARRIED OUT AS PER ODSHA STANDARDS.
9.	IN CASE OF ANY CONFUSION OR SPECIFICATIONS & RELEVANT IS CODE, MISMATCH, THE FACT SHOULD BE BROUGHT TO THE NOTICE OF THE TECHNICAL WINGS OF THE DEPARTMENT.



GROUND FLOOR ROOF

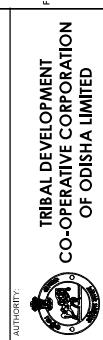
SLAB PLAN



Raj Technical Services
CP-116, MILADRI VILLA, BHUBANESWAR
(A Government Of Odisha Undertaking)
Phone: 06743-270101, 270102
E-mail: RajServices@gmail.com, www.rajtechnicalservices.com

**CONSTRUCTION OF TAMARIND
PROCESSING UNIT STAFF QUATER,
RAYAGADA**

PROJECT:	MARKING PLAN OF GROUND FLOOR ROOF SLAB		
DESIGN DRAWN BY:	R. RAJANJU	DATE:	SHEET NO:- 10
CHIEF DRAFTS:	PK RAJ	20/02/2023	JOB NO:- G-242
SCALE:	1:50	DESIGN:	NTS



WAPCOS LIMITED
TRIBAL DEVELOPMENT
CO-OPERATION
OF ODISHA LIMITED

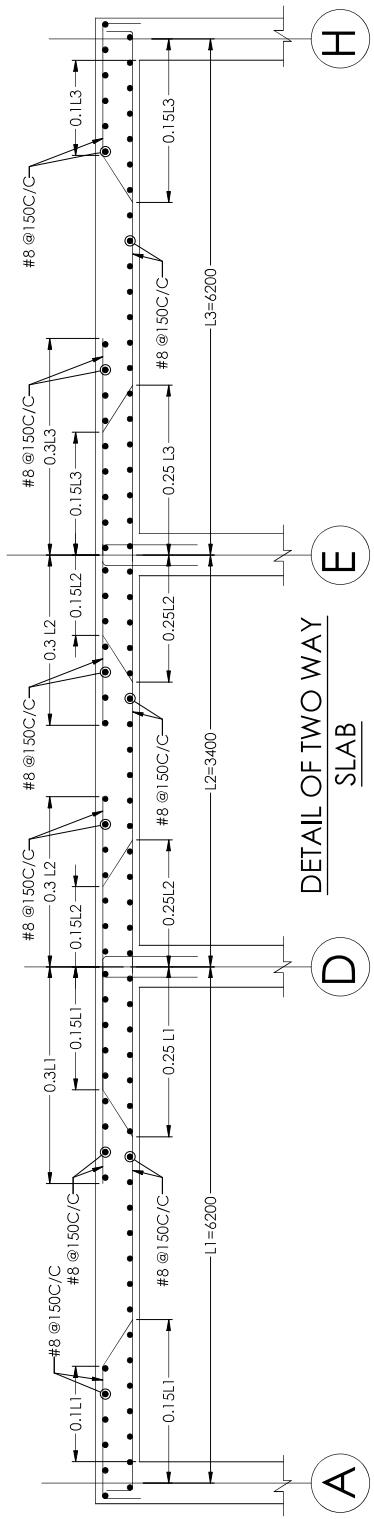


CONSULTANT:

**CONSTRUCTION OF TAMARIND
PROCESSING UNIT STAFF QUATER,
RAYAGADA**

PROJECT:	MARKING PLAN OF GROUND FLOOR ROOF SLAB		
DESIGN DRAWN BY:	R. RAJANJU	DATE:	SHEET NO:- 10
CHIEF DRAFTS:	PK RAJ	20/02/2023	JOB NO:- G-242
SCALE:	1:50	DESIGN:	NTS

1	NOTES :
2	1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE MENTIONED.
3	2. WRITTEN DIMENSIONS SHALL BE FOLLOWED AND DRAWING SHALL NOT BE SCALLED.
4	3. ALL REINFORCEMENT SHALL BE OF HIGH YIELD STRENGTH DEFORMED BARS OF FE-500 D CONFORMING TO IS:1786-2008.
5	4. LAPING LENGTH SHALL BE AT LEAST 50 D (D= DIA OF THE BAR).
6	5. GRADE OF RCC SHALL BE M-25. CLEAR COVER SHALL BE AS FOLLOWS: COLUMN=40MM FLUTING=50MM, BEAM=25MM, & SLAB= 15MM.
7	6. BE PROVIDED IN CMI(16) AT THE JOINTS OF BRICK MASONRY AND RCC WORK.
8	7. FLUSH POINTING SHOULD BE PROVIDED IN CMI(16).
9	8. ALL WORK SHALL BE CARRIED OUT AS PER ODSHA STANDARD SPECIFICATIONS & RELEVANT IS CODE.
	9. IN CASE OF ANY CONFUSION OR MISMATCH, THE FACT SHOULD BE BROUGHT TO THE NOTICE OF THE TECHNICAL WINGS OF THE DEPARTMENT.



SCHEDULE OF ROOF SLAB :-

SLAB MARKED	THICKNESS	SHORT SPAN	LONG SPAN
S1	125	#8 @125 C/C	#8 @150 C/C

A	NOTES :	1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE MENTIONED.			
B	2. WRITTEN DIMENSIONS SHALL BE FOLLOWED AND DRAWING SHALL NOT BE SCALLED.	3. ALL REINFORCEMENT SHALL BE OF HIGH YIELD STRENGTH DEFORMED BARS OF FE-500 D CONFORMING TO IS:1786-2008.			
C	4. LAPING LENGTH SHALL BE AT LEAST 50 D (D= DIA OF THE BAR).	5. GRADE OF RCC SHALL BE M-25. CLEAR COVER SHALL BE AS FOLLOWS: COLUMN=40MM FLUTING=50MM, BEAM=25MM, & SLAB= 15MM.			
D	6. BE PROVIDED IN CMI(16) AT THE JOINTS OF BRICK MASONRY AND RCC WORK.	7. FLUSH POINTING SHOULD BE PROVIDED IN CMI(16).			
E	8. ALL WORK SHALL BE CARRIED OUT AS PER ODSHA STANDARD SPECIFICATIONS & RELEVANT IS CODE.	9. IN CASE OF ANY CONFUSION OR MISMATCH, THE FACT SHOULD BE BROUGHT TO THE NOTICE OF THE TECHNICAL WINGS OF THE DEPARTMENT.			
F	AUTHORITY:				
G	AGENCY:				
H	PROJECT:				

AUTHORITY:



AGENCY:

WAPCOS

LIMITED

CONSTRUCTION OF TAMARIND

PROCESSING UNIT STAFF QUATER

RAYAGADA

CONSULTANT:



PROJECT:

G

GROUND FLOOR ROOF BEAM

SCHEDULE & DETAIL SECTION

H

SHEET NO.:	1	DATE:	20/02/2023	SHEET NO.:	11
DESIGN DRAWN:	R. RAJANU	DESIGN DRAWN:	PK RAJ	DESIGN DRAWN:	PK RAJ
CHIEF DRAFTS:		CHIEF DRAFTS:		CHIEF DRAFTS:	
SCALE:	A3	SCALE:	A3	SCALE:	A3

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REV:

00

J

JOB NO.:

G-242-TPU-RGD-STR-SL-11

K

DESIGN DRAWN:

PK RAJ

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DESIGN DRAWN:

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DESIGN DRAWN:

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DESIGN DRAWN:

PK RAJ

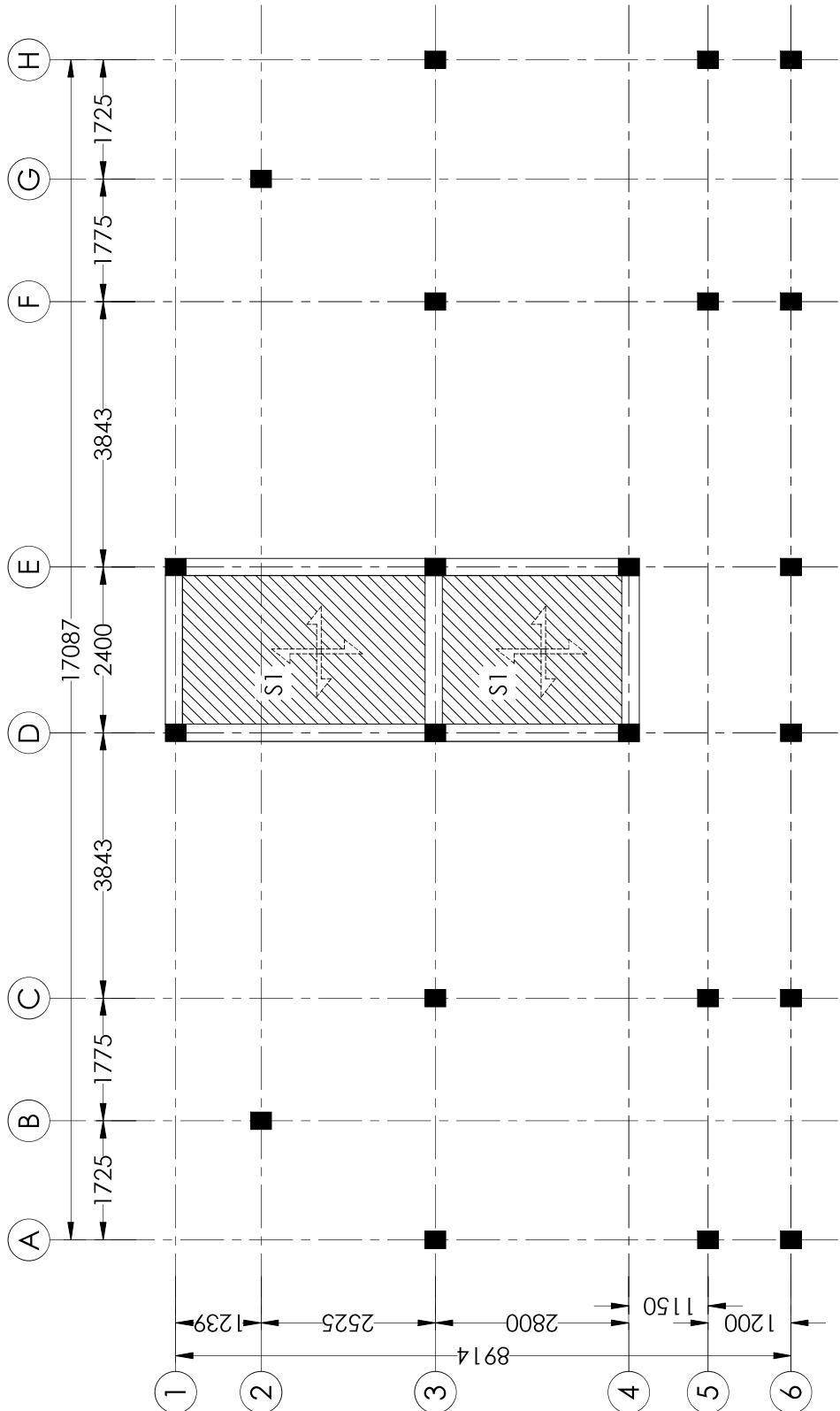
S

DESIGN DRAWN:

PK RAJ

NOTES :

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- LAPPING LENGTH SHALL BE AT LEAST 50 D (D= DIA OF THE BAR).
- GRADE OF RCC SHALL BE M-25.
- CLEAR COVER SHALL BE AS FOLLOWS: COLUMN-40MM FLARING-50MM, BEAM-25MM, & SLAB-15MM.
- FLUSH POINTING SHOULD BE PROVIDED IN CMI(16) AT THE JOINTS OF BRICK MASONRY AND RCC WORK.
- ALL WORK SHALL BE CARRIED OUT AS PER ODSHA STANDARD SPECIFICATIONS & RELEVANT IS CODE.
- IN CASE OF ANY CONFUSION OR MISMATCH, THE FACT SHOULD BE BROUGHT TO THE NOTICE OF THE TECHNICAL WINGS OF THE DEPARTMENT.



WAPCOS
TRIBAL DEVELOPMENT
CO-OPERATION
OF ODISHA LIMITED



WAPCOS
TRIBAL DEVELOPMENT
CO-OPERATION
OF ODISHA LIMITED



WAPCOS
TRIBAL DEVELOPMENT
CO-OPERATION
OF ODISHA LIMITED



Raj Technical Services
CP-416, MILADRI VILLA, BHUBANESWAR
(A Government Of Odisha Undertaking)
Plot No. 25/103, Sector-25/103, Odisha
E-mail: rts.oss@gmail.com, Ph: 943858902



**CONSTRUCTION OF TAMARIND
PROCESSING UNIT STAFF QUATER,
RAYAGADA**



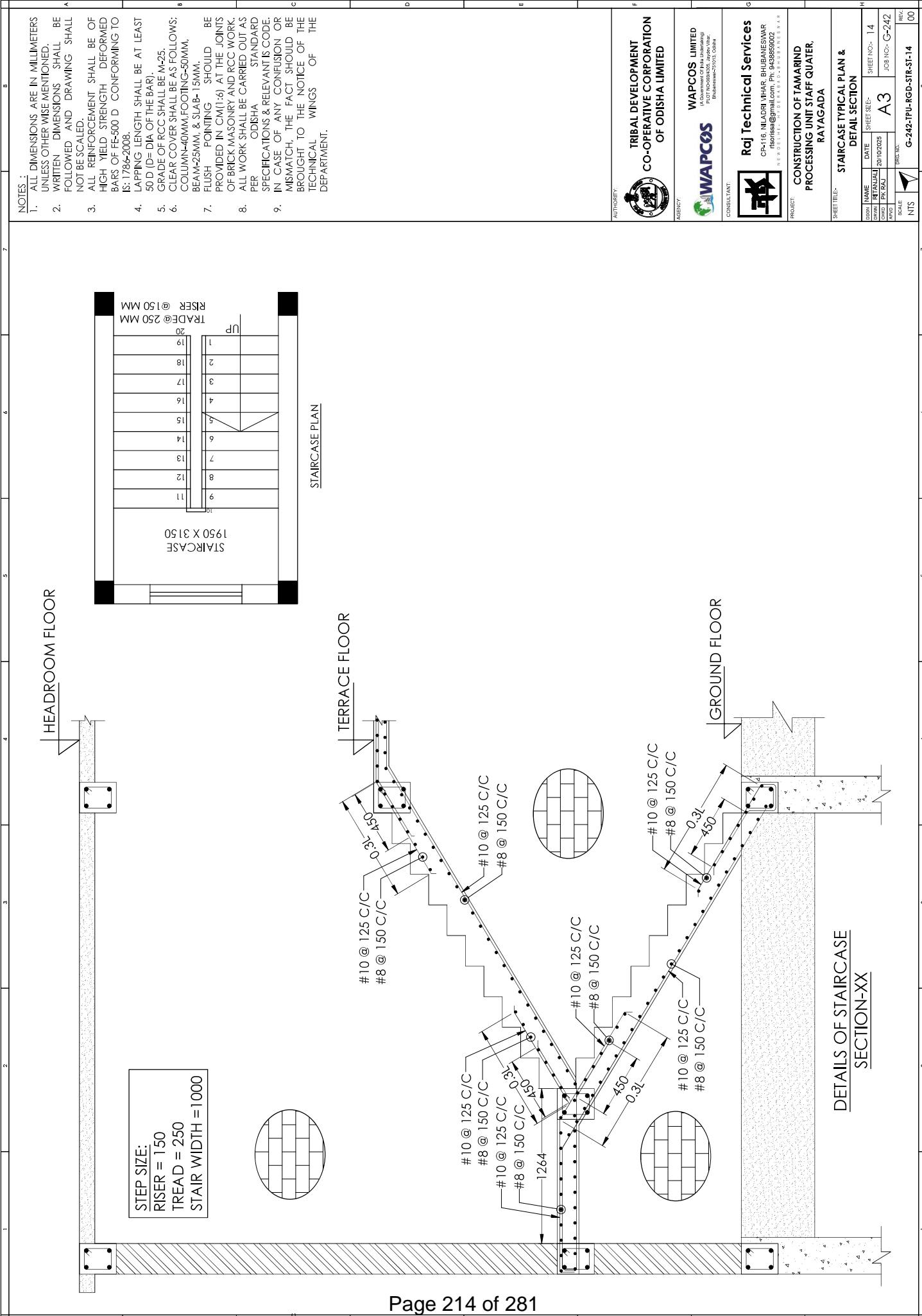
**MARKING PLAN OF
HEAD ROOM ROOF SLAB**
SHEET NO:- 7
DESIGN DRAWN BY: P.K RAJ
DATE: 20/02/2023
CHQD: P.K RAJ
APWD: 1
SCALE: 1:50
DRAFT NO.: G-242-TPU-RGD-STR-SL-12
NTS
REV: 00

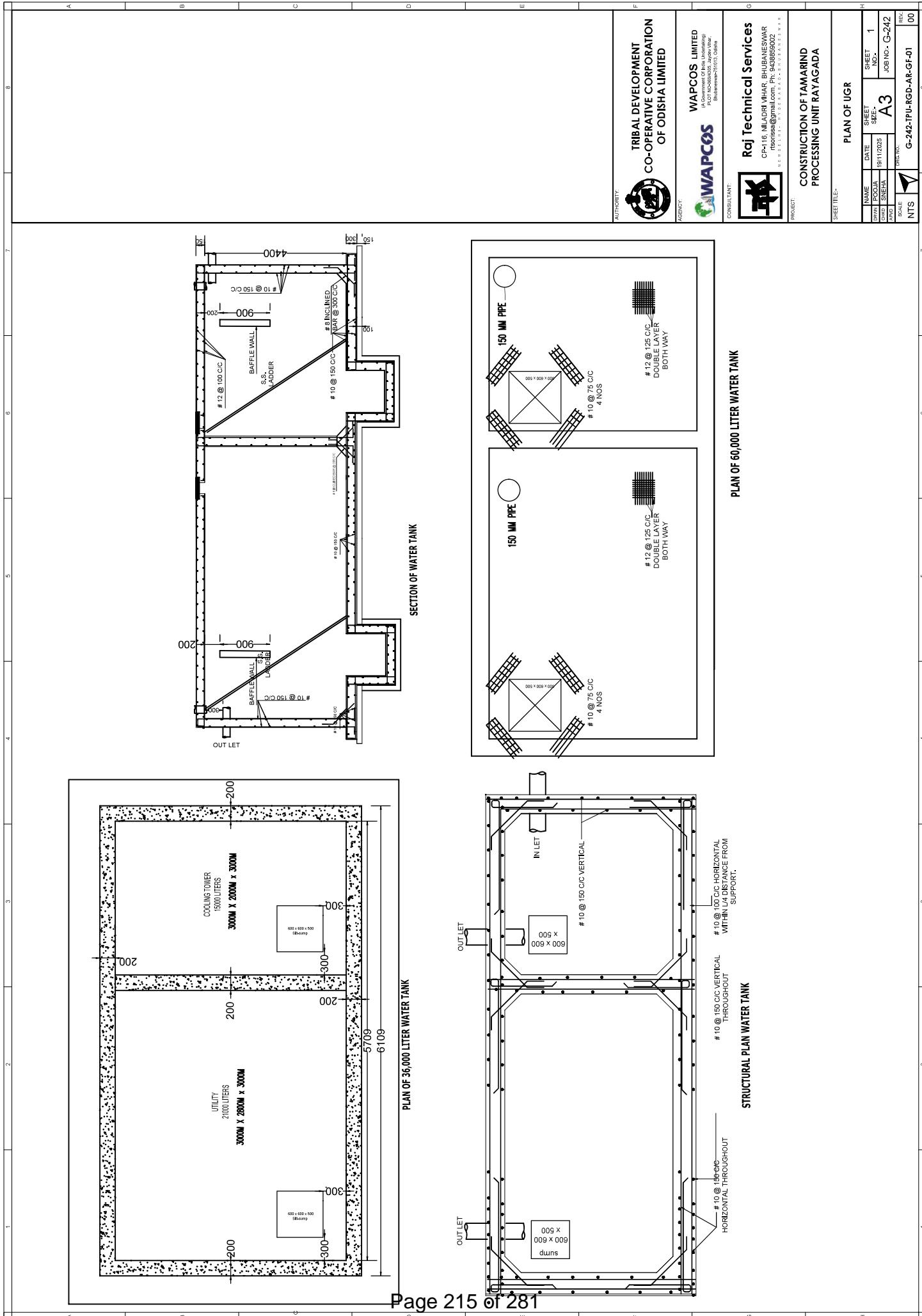


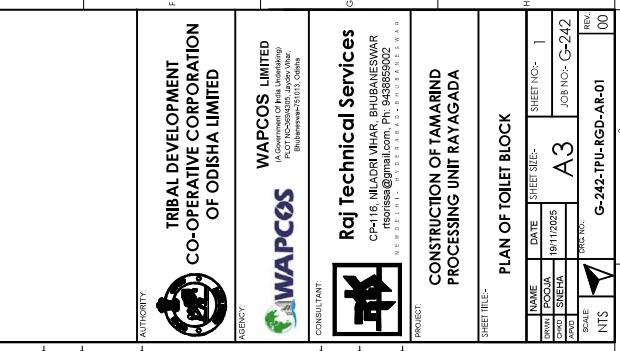
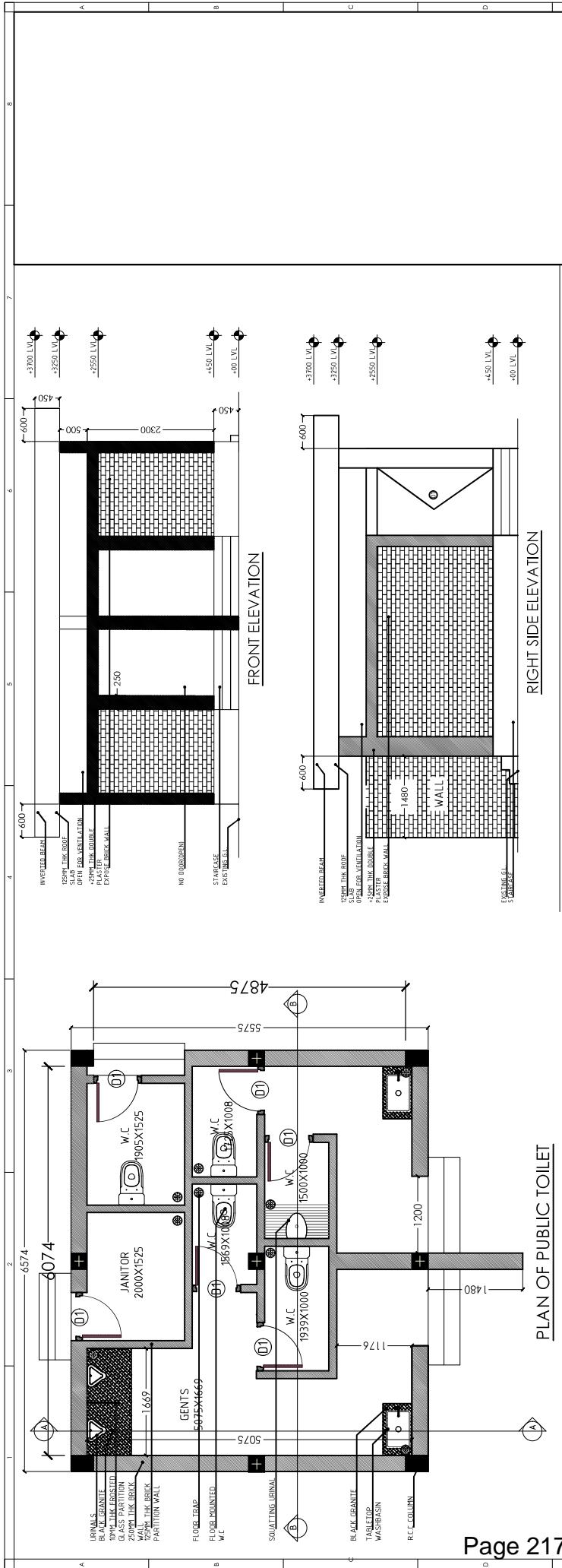
**MARKING PLAN OF
HEAD ROOM ROOF SLAB**
SHEET NO:- 8
DESIGN DRAWN BY: P.K RAJ
DATE: 20/02/2023
CHQD: P.K RAJ
APWD: 1
SCALE: 1:50
DRAFT NO.: G-242-TPU-RGD-STR-SL-12
NTS
REV: 00

HEAD ROOM ROOF SLAB PLAN

Page 213 of 281



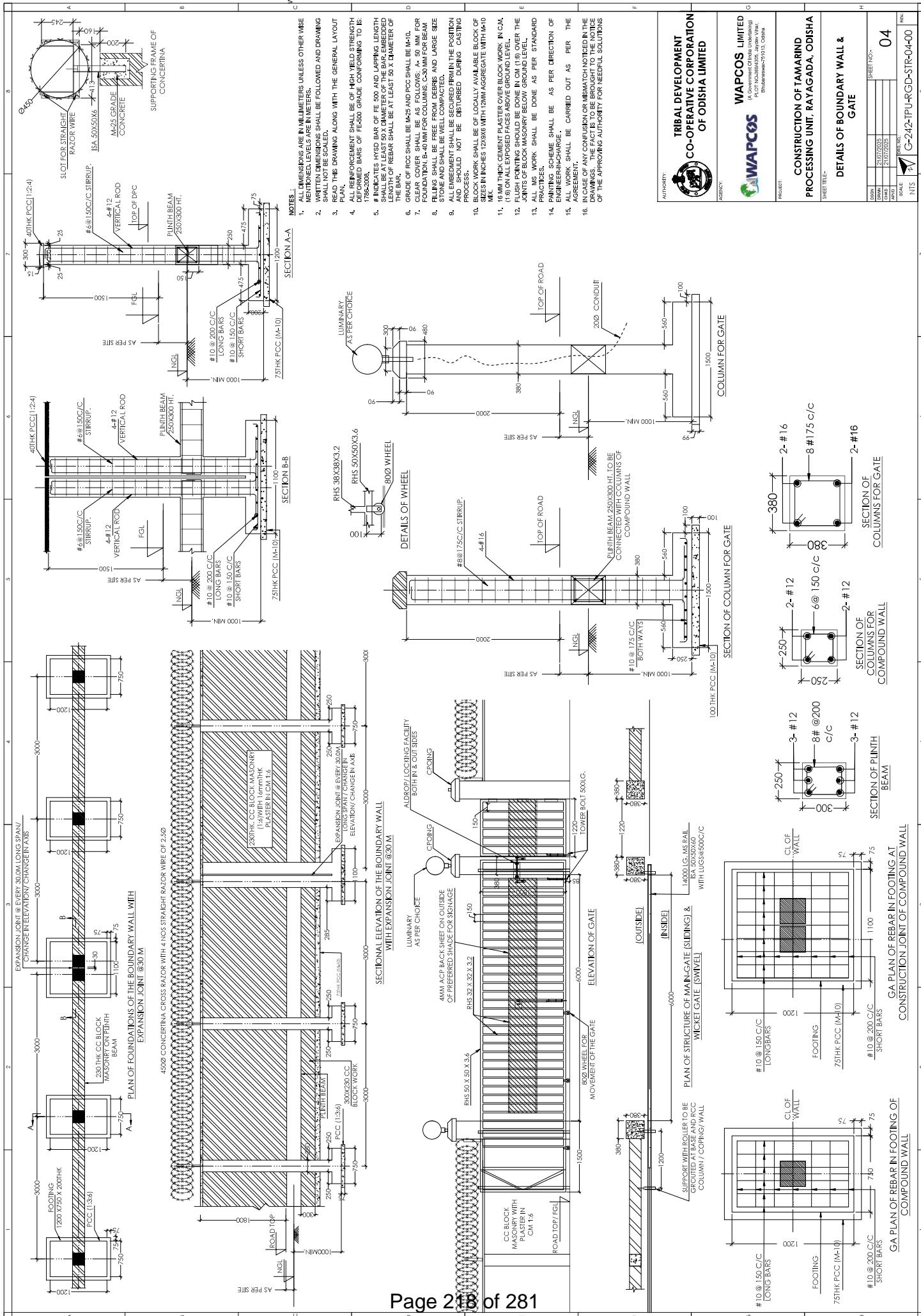




G-242-TPU-RGD-Ar-01

NTS

1000x1000mm



Volume-II

SECTION-IX FINANCIAL PROPOSAL

- LETTER OF TRANSMITTAL FOR FINANCIAL BID**
 - TOTAL COST OF WORKS**

**Letter of Transmittal for Financial Bid
(On Original Letter Head of Bidder)**

Dated:

To,
The Project Manager,
Odisha, WAPCOS
Limited

Sub: Financial Bid for the work ----- (Name of Work /Project)

Dear Sir,

With reference to your NIT document dated, I/we, having examined the Bidding Documents and understood their contents, hereby submit my/our Bid for the aforesaid Project. The Bid is unconditional and unqualified.

1. I / We acknowledge that the WAPCOS will be relying on the information provided in the BID and the documents accompanying the BID for selection of the Contractor for the aforesaid Project, and we certify that all information provided in the Bid are true and correct; nothing has been omitted which renders such information misleading; and all documents accompanying the BID are true copies of their respective originals.
2. The BID Price has been quoted by me / us after taking into consideration all the terms and conditions stated in the NIT, draft Agreement, our own estimates of costs and after a careful assessment of the site and all own the conditions that may affect the project cost and implementation of the project.
3. I/ We acknowledge the right of the Authority to reject our BID without assigning any reason or otherwise and hereby waive, to the fullest extent permitted by applicable law, our right to challenge the same on any account whatsoever.
4. In the event of my/ our being declared as the Selected Bidder, I/we agree to enter into a Agreement in accordance with the draft that has been provided to me/us prior to the BID Due Date. We agree not to seek any changes in the aforesaid draft and agree to abide by the same.
5. I/ We shall keep this offer valid as period specified in the NIT.
6. I / We hereby submit our FINANCIAL BID and offer Price excluding GST as filled in excel format in Summary Sheet for undertaking the aforesaid Project in accordance with the Bidding Documents and the Agreement.

Yours faithfully,

Date:

(Signature, name and designation
of the Authorized signatory)

Place:

Name and seal of Bidder

TOTAL COST OF WORKS

Description	Total Amount (Excluding GST) Rs.
Project Name: Construction of Tamarind Processing Unit in Rayagada District	DO NOT FILL COST HERE
Total amount in words:	
DO NOT FILL COST HERE AS IT IS TECHNICAL PROPOSAL FILE	

Note:

- These details to be submitted in the financial bid (Excel File on CPP portal and no such details should be submitted in the Technical Bid.
- **The quoted rate filled in Schedule of Quantities, should include all associated costs with the project including any Out-of-pocket Expenses/Review & Modification of Design & Drawing if required/Clearances Expenses /Mobilization Expenses, taxes (Excluding GST) if any applicable as per Govt. terms, shall be paid by the Contractor. The Goods and Services Tax (GST) shall be reimbursed upon submission of proof of payment of 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 be reimbursed to the Agency on submission of proof of Deposition of GST.
- The tenderer shall quote rates up to second decimal and as well as in words. In case of any discrepancy rate quoted in words shall prevail.
- The payment will be made as per the actual measurement against the BOQ items at the awarded rate.
- The estimated cost mentioned in NIT is based on the rates of item of works in OSOR 2022 (*Civil and Plumbing Works – OSOR 2022, Electrical & Fire Fighting Works – OSOR 2022* and Non OSOR items on market rates. The work is to be executed in Odisha; hence bidder may quote the rate/ cost accordingly after due consideration of prevailing market rates.
- The rates for items involving deviations—such as extra items, substituted items, or changes in item quantities—shall be determined in accordance with Clause 12 of the General Conditions of Contract (GCC) and the Special Conditions of Contract (SCC). **However, payment to the contractor shall be made only after obtaining approval from the Principal Employer/Owner/Client, if required.**

SECTION - IX

FINANCIAL BID

9.1 FORM OF QUOTATION

Quotation for “(Name of Work /Project)”

To

Project Manager

Odisha

Plot No: 369/4305,
1st Floor and 2nd Floor,
Ekamra Kanan Road,
Jayadev Vihar, Pin: 751013,
Bhubaneswar,
Telephone No.:
Email :

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 percentage 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 ““(Name of Work /Project)” is Rupees _____ (Amount in Words and Figures) being _____ % (less/excess) over the estimated cost.

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 _____ 2025.

CONSTRUCTION OF TAMARIND PROCESSING UNIT IN RAYAGADA, ODISHA

CONSTRUCTION OF TAMARIND PROCESSING UNIT IN RAYAGADA, ODISHA

Processing Unit

Sl.No.	ITEMS OF WORKS	=	AMOUNT (In Rs.)
A	Civil Works	=	13,531,998.22
B	PH & Sanitary Works	=	1,353,199.82
C	Electrical Works	=	1,353,199.82
D	Fire Fighting Systems.	=	1,500,000.00
J	SUB TOTAL (A to I)		17,738,397.86

ABSTRACT OF CIVIL WORK

CONSTRUCTION OF TAMARIND PROCESSING UNIT IN RAYAGADA, ODISHA

Item No/S.No	Description of work	Unit	Rate	Quantity	Amount
A	EARTH WORK				
1	Earth work in stoney earth and gravels mixed with stone and boulder not exceeding 0.014 cum in volume within 50m initial lead and 1.5m initial lift including rough dressing and breaking clods to maximum 5cm to 7cm and laying in layer not exceeding 0.3m in depth and as per specification approved by the dept.				
i	Ordinary Soil	CuM	276.89	422.46	116,975.92
b)	extra for every additional lift of 1.5 m or part there of in excavation/ banking excavated or stacked materials				
	Ordinary Soil	CuM	22.00	83.34	1,833.48
2	Supplying & Filling foundation trenches , plinth & ditches with clean course river sand well watered and rammed in layers not exceeding 23 c.m. in depth with all lead and lift including cost, conveyance, loading, unloading, stacking,royalties and all taxes of sand,cost & conveyance of water, cost of all Labour,labour cess,T&P required for the work etc. complete in all respect as directed by the Engineer- in -charge.	CuM	696.40	528.11	367,774.55
3	Back filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead upto 50 m and lift upto 1.5m.	CuM	153.80	139.41	21,441.53
4	Making plinth protection 150 mm thick of cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) over 75mm thick bed of dry brick ballast 40 mm nominal size, well rammed and consolidated and grouted with fine sand, including finishing the top smooth				-
		SqM	2,398.50	96.00	230,256.00

5	Supplying , diluting and and preparing chemical emulsion like CHLORPYRIPHOS or other chemicals approved by central Insecticides Board or as directed by the manufacturer and spraying the mixture uniformly by sprayer as pre-constructional anti termite treatment and creating a chemical barrier under and around wall trenches, basement excavation, top surface of plinth filling, junction of walls and floors along with external perimeter of the building, surrounding the pipes and conduits etc. complete at the rate of 7.5 litres (or as directed by the manufacturer) per sqm on vertical and 5.0 liters per sqm on horizontal surfaces, 50% of the emulsion to be filled in the holes made in trenches at 150mm center to center etc. complete.as per IS:6313/1981 (PART-II) and as per the direction of engineer-in-charge including all cost of materials labour, taxes etc. all complete.	SqM	164.00	960.00	157,440.00
B	PLAIN & REINFORCEMENT CONCRETE				-
1	Providing and laying P.C.C[1:4:8] using 4cm size metal etc in foundation and floors using cement , 40 mm size crusher broken H.G.Metal and screened and washed sharp river sand for mortar of approved quality and from approved quarry including hoisting ,lowering and laying concrete to the required level, ramming ,watering and curing etc	CuM	5,689.10	120.48	685,411.39
	Terrace Floor dummy Column	CuM			
2	Providing and laying in position ready mixed M30 grade concrete having compressive strength at 28 days test not less than 250kg/sq.cm for reinforced cement concrete work using cement content as per approved design mix etc including Rigid & smooth centering and shuttering.				-
a	For R.C.C foundation, footing bases of column, mass concrete,pre-cast etc.	CuM	6,974.55	66.46	463,542.54
b	For R.C.C plinth band etc.	CuM	7,845.70	86.74	680,561.12
c	R.C.C Beam & Coloum				
i	Ground Floor	CuM	16,242.00	12.29	199,670.97
d	Lintel				
i	Ground Floor	CuM	14,689.00	1.22	17,847.14
f	Chaja				
i	Ground Floor	Sqm	1,251.66	13.37	16,728.37
g	Roof slab,Landing,Balcony,				
i	Ground Floor	CuM	14,229.20	-	-
3	Cutting ,Straightening coiled or bend up HYSD/TMT Reinforcement bars welding or jointing if necessary , bending ,tying the grills as required for R.C.C works etc winding wire extra				-
a	Foundation	Qntl	8,871.00	163.41	1,449,594.04
b	Ground floor	Qntl	8,871.00	26.49	234,973.21
C	BRICK WORK				

1	Fly Ash Brick Masonry in cement mortar of mix (1:6) using Fly Ash bricks of size 25c.m x 11 c.m x 8 c.m in Foundation & Plinth having crushing strength not less than 75 kg per square c.m. with cement and screened & washed sharp sand for mortar after immersing the bricks for 6 (Six) hours in water before use in works with all necessary projections, splays cutting, circular moulding, corbelling, chamfering, watering and curing etc. including cost, conveyance, stacking, loading, unloading, royalties, all taxes, cost of all labour, Labour cess, scaffolding, sundries and T&P required for the works etc. complete in all respect as directed by the Engineer-in-charge.				
	Foundation and Plinth	CuM	5,750.00	36.10	207,552.00
2	Fly Ash Brick Masonry in cement mortar of mix (1:6) using Fly Ash bricks of size 25c.m x 11 c.m x 8 c.m in superstructure having crushing strength not less than 75 kg per square c.m. with cement and screened & washed sharp sand for mortar after immersing the bricks for 6 (Six) hours in water before use in works with all necessary projections, splays cutting, circular moulding, corbelling, chamfering, watering and curing etc. including cost, conveyance, stacking, loading, unloading, royalties, all taxes, cost of all labour, Labour cess, scaffolding, sundries and T&P required for the works etc. complete in all respect as directed by the Engineer-in-charge.				
a	Ground Floor	CuM	5,783.00	88.13	509,678.92
D	PLASTERING & PAINTING				
1	Providing 12mm. Thick cement plaster in cement mortar or mix(1:6) in all floors at all height with cement & screened and washed sharp river sand for mortar and finished smooth to the rough surface of the brick masonry walls after racking out the joints (alongwith providing grooves wherever necessary) including watering and curing, rounding of corners etc. complete with cost, conveyance, loading, unloading, royalties and taxes of all materials, cost of all labour, T&P, sundries and scaffolding required for the work etc. as directed by the Engineer-in-charge.				
a	Ground floor	SqM	189.00	787.20	148,780.80
2	Providing 16mm. Thick cement plaster in cement mortar or mix(1:6) in all floors at all height with cement & screened and washed sharp river sand for mortar and finished smooth to the rough surface of the brick masonry walls after racking out the joints (alongwith providing grooves wherever necessary) including watering and curing, rounding of corners etc. complete with cost, conveyance, loading, unloading, royalties and taxes of all materials, cost of all labour, T&P, sundries and scaffolding required for the work etc. as directed by the Engineer-in-charge.				
a	Ground floor	SqM	273.20	537.60	146,872.32

3	Providing average 6 mm thick cement plaster(1:4) to R.C.C surfaces finished smooth including deep chipping & slurring treatment etc. complete.as per the direction of the Engineer-in-charge.				
a	Ground floor	SqM	212.00	-	-
4	Providing and applying 2 coats with 100% acrylic emulsion paint on New surface including one coat of primer (exterior quality) of approved make & shade by reputed manufacturer to make an even finished surface over a coat of primer with water bound cement primer in all heights with all scaffolding and staging charges including cost , conveyance, taxes of all materials, cost of all labours , T & P, sundries etc. as required for the work complete.				
a	Ground floor	SqM	178.90	787.20	140,830.08
5	Supplying and painting of internal walls and ceiling with two or more coats of ACRYLIC emulsion paint on New surface which includes two coat of internal putty with a coat of primer all complete. The shade and brand to be of approved brand & shade over the surfaces including preparation of surface, with cost of all materials, labour, conveyance taxes of all materials,scaffolding etc., as per the direction of the Engineer-in-charge.				
a	Ground floor	SqM	288.40	1,422.51	410,251.49
6	Painting with synthetic enamel paint over a coat of primer of approved colour, shade and brand on New wood work /steel work in two or more coats as required to give an even shade including an under coat of suitable primer of approved brand and manufacturer including cost of all materials with taxes and transportation, loading, unloading, scaffolding, all labour, Labour cess, sundries, T&P, etc. complete as per the direction of the Engineer-in-charge including filling gaps with putties, scrapping, sand papering and cleaning the surface to make free from rusts, dusts and oily substances before applying primer etc. complete.				
a	Ground floor	sqm	262.80	16.20	4,257.36
7	Providing ,fixing of false ceiling with Aluminium anodised T section No. 3215 with 2feet C/C ,L section 1705 up to 15 micron on 4 walls to be fixed by means of steel screw P.V.C plug Alumunium grid 2ftx2ft with pre laminated particle board suspended from ceiling etc all complete. including cost of scaffolding stagging charges with cost of all materials ,labour, T & P etc all complete.				
	Ground floor	sqm	-	525.00	-
	First floor	sqm	-	875.00	-
E	FLOORING				

1	Providing and laying in position 200mm thick Tremix/VDF flooring P.C.C. M-30 grade concrete using 20mm nominal size HBG down graded chips for plain cement concrete work using cement content 400kg/cum as per approved design mix having continuous agitated mixer, mix design of specified grade for reinforced cement concrete work and for VDF flooring using screed board vibrator, placing of filtermat(nylon cloth to act as very fine filter), top mat (large single PVC sheet). Vacuum process using vacuum pump about 0.08MPA which reduces water content about 15-20%, power travelling, brooming, T&P Charges including power, loading, unloading and hire charges, making grooves of 6mm wide and 25mm deep @ 1.5m C/C both ways, filling the joints with sealing compound of approved quantity "Grade-A" (Ref: DSR-SH 16.46.1) with cost of material, labour, conveyance, royalty etc. complete basing on IS 256:2000 minimum slump is 25mm to 75mm and minimum thickness is 125mm .				
a	Ground floor	SqM	6,601.20	525.00	3,465,630.00
2	12mm thick cement plaster in CM(1:4) with cement punning for skirting & Dados including all cost. complete with cost, conveyance, royalty of all materials and labour with T&P required for the work with royalties, taxes etc. complete in all floors as per direction of Engineer-in-charge.				
a	Ground floor	SqM	231.20	157.50	36,414.00

5	Fixing Granite tiles (19MM thk) in floors treads or steps and landing on 25mm thick bed of cement mortar 1 :1 (1 cement : 1 sand) jointed with neat cement slurry mixed with pigment to match the shades on the tiles etc. complete as per direction of engineer in charge.				
a	Ground floor	SqM	3,474.10	18.63	64,722.48
F	DOOR & WINDOW				
2	Tata Pravesh General Steel Finish/ wood finish Doors: Supply and fixing of 46mm thick GI doors and frame conforming to IS 277 galvanised plain skin passed sheets of 0.8mm in shutter and 12mm in frame with minimum 120 gsm zinc coating with profile dimension of 100mm x 58mm. Frame filled with Polyurethane foam and shutter duly filled with Honeycomb and both coated with minimum 60 microns of RAL powder coating. Accessories will be provided with doors.	Sqm	10,485.76	2.52	26,424.13
3	Supplying, fitting, fixing up window (sliding type) made up aluminum Section 9778 as windows frame, section No. 4095, 4096 and 9777, 3994 as shutter frame with rubber beading including locking arrangement including all fitting including cost of materials all taxes labour, T&P etc. complete as per direction of Engineer-in-charge. including cost of frosted glass & SS mosquito net.	Sqm	8,007.00	220.00	1,761,540.00
G	STEEL WORK				
1	Supplying, fitting and fixing of M.S grills, grill gates with top and bottom rails, (as per I.S. specification and as per approved drawings) in proper position in all floors and at all height including making holes to brick walls/ R.C.C structure/wood work etc. and making good to the damaged walls/ structures with cement concrete (1:2:4) with black hard crusher broken granite stone chips of 12mm to 20mm size (20mm size not to exceeds 25%) including watering and curing including cost, conveyance, loading, unloading, stacking, royalties and taxes of all materials, cost of all Labour, Labour cess ,Sundries, T&P required for the work etc.complete as per the direction of Engineer in charge (W.I. / M.S. windows grills, grill gates, collapsible gates with top and bottom rails, steel windows, steel doors, steel frames for doors and windows, staircase and parapet railings square bar along with required nos. of nails and screws and other required materials of approved quality and approved size shall be supplied by the contractor at his own cost.)	KG	100.70	324.00	32,626.80

2	Supplying, fitting and fixing of Stainless steel of 304 grade in hand railing using 50mm dia of 2mm thick circular pipe with balustrade of size 32mmx32mmx2mm @ 0.90mtr.C/C and stainless square pipe bracing of size 32mmx32mmx2mm in 3 rows in stair case as per approved design and specification ,buffing, polishing etc with cost,conveyance,taxes of all materials, labour, T & P etc. requird for the complete in all respect.	Rmt	3,596.00	34.50	124,062.00
3	Steel work in built up tubular(round, square or recctangular hollow tubes etc) trusses etc, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc complete.	KG	171.00	5,197.71	888,808.84
4	Tensile Fabric structure. Design, Fabrication, Manufacturing, Assembly, Supply & installation of tensile Fabric (Serge Ferrari ,France , 902 S2 Type II, 950 GSM PVDF Coated fabric) and manufacture specification including all accessories, necessary fixing arrangement etc. Including welding and all fixing accessories, Corner plate etc.	SqM	2,683.00	98.81	265,101.86
5	Fitting & fixing G.C.I. Sheet in roof drilling hole in wind ties including fixing of ridges valleys wind ties including cost of materials ,labour for fixing etc all complete	SqM	468.61	1,080.64	506,394.87
6	Insulation	SqM	125.00	384.00	48,000.00
	Rubber Flooring				100,000.00
TOTAL CIVIL WORK					13,531,998.22

Estimate for :-

"Construction of TDCC Admin Ofice building"

Sl.No.	ITEMS OF WORKS	=	AMOUNT (In Rs.)
A	CIVIL WORKS	=	14,45,917.75
B	PH & SANITARY WORKS	=	5,36,369.27
C	ELECTRICAL WORKS	=	4,60,273.75
D	Fire Fighting Systems.	=	32,566.00
E	SUB TOTAL (A+B+C+D)		24,75,126.77

ABSTRACT OF CIVIL WORK

"Construction of TDCC Admin Ofice building"

Item No/S.No	Description of work	Unit	Rate	Quantity	Amount
A	EARTH WORK				
1	Earth work in stoney earth and gravels mixed with stone and boulder not exceeding 0.014 cum in volume within 50m initial lead and 1.5m initial lift including rough dressing and breaking clods to maximum 5cm to 7cm and laying in layer not exceeding 0.3m in depth and as per specification approved by the dept.				
i	Ordinary Soil	CuM	276.89	77.48	21,454.14
b)	extra for every additional lift of 1.5 m or part there of in excavation/ banking excavated or stacked materials				
	Ordinary Soil	CuM	22.00	-	-
2	Supplying & Filling foundation trenches , plinth & ditches with clean course river sand well watered and rammed in layers not exceeding 23 c.m. in depth with all lead and lift including cost, conveyance, loading, unloading, stacking,royalties and all taxes of sand,cost & conveyance of water, cost of all Labour,labour cess,T&P required for the work etc. complete in all respect as directed by the Engineer- in -charge.	CuM	696.40	123.74	86,171.75
3	Back filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead upto 50 m and lift upto 1.5m.	CuM	153.80	25.57	3,932.52
4	Making plinth protection 150 mm thick of cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) over 75mm thick bed of dry brick ballast 40 mm nominal size, well rammed and consolidated and grouted with fine sand, including finishing the top smooth	SqM	2,398.50	16.79	40,258.82

5	Supplying , diluting and and preparing chemical emulsion like CHLORPYRIPHOS or other chemicals approved by central Insecticides Board or as directed by the manufacturer and spraying the mixture uniformly by sprayer as pre-constructional anti termite treatment and creating a chemical barrier under and around wall trenches, basement excavation, top surface of plinth filling, junction of walls and floors along with external perimeter of the building, surrounding the pipes and conduits etc. complete at the rate of 7.5 litres (or as directed by the manufacturer) per sqm on vertical and 5.0 liters per sqm on horizontal surfaces, 50% of the emulsion to be filled in the holes made in trenches at 150mm center to center etc. complete.as per IS:6313/1981 (PART-II) and as per the direction of engineer-in-charge including all cost of materials labour, taxes etc. all complete.	SqM	164.00	72.93	11,960.52
B	PLAIN & REINFORCEMENT CONCRETE				-

1	Providing and laying P.C.C[1:4:8] using 4cm size metal etc in foundation and floors using cement , 40 mm size crusher broken H.G.Metal and screened and washed sharp river sand for mortar of approved quality and from approved quarry including hoisting ,lowering and laying concrete to the required level, ramming ,watering and curing etc	CuM	5,689.10	12.12	68,936.25
2	Providing and laying in position ready mixed M25 grade concrete having compressive strength at 28 days test not less than 250kg/sq.cm for reinforced cement concrete work using cement content as per approved design mix etc including Rigid & smooth centering and shuttering.				-
a	For R.C.C foundation, footing bases of column, mass concrete,pre-cast etc.	CuM	6,974.55	9.01	62,870.34
b	For R.C.C plinth band etc.	CuM	7,845.70	4.52	35,496.89
c	R.C.C Beam & Coloum				
i	Ground Floor	CuM	16,242.00	6.58	1,06,834.80
d	Lintel				
i	Ground Floor	CuM	14,689.00	1.89	27,794.43
f	Chaja				
i	Ground Floor	Sqm	1,251.66	0.46	574.51
g	Roof slab,Landing,Balcony,				
i	Ground Floor	CuM	14,229.20	11.40	1,62,248.45
3	Cutting ,Straightening coiled or bend up HYSD/TMT Reinforcement bars welding or jointing if necessary , bending ,tying the grills as required for R.C.C works etc winding wire extra				-
a	Foundation	Qntl	8,871.00	14.23	1,26,228.12
b	Ground Floor	Qntl	8,871.00	23.37	2,07,330.50
C	BRICK WORK				
1	Fly Ash Brick Masonry in cement mortar of mix (1:6) using Fly Ash bricks of size 25c.m x 11 c.m x 8 c.m in Foundation & Plinth having crushing strength not less than 75 kg per square c.m. with cement and screened & washed sharp sand for mortar after immersing the bricks for 6 (Six) hours in water before use in works with all necessary projections, splay cutting, circular moulding, corbelling, chamfering, watering and curing etc. including cost, conveyance, stacking, loading, unloading, royalties , all taxes ,cost of all labour,Labour cess ,scaffolding, sundries and T&P required for the works etc. complete in all respect as directed by the Engineer-in-charge.				
	Foundation and Plinth	CuM	5,750.00	4.29	24,664.63

2	Fly Ash Brick Masonry in cement mortar of mix (1:6) using Fly Ash bricks of size 25c.m x 11 c.m x 8 c.m in superstructure having crushing strength not less than 75 kg per square c.m. with cement and screened & washed sharp sand for mortar after immersing the bricks for 6 (Six) hours in water before use in works with all necessary projections, splay cutting, circular moulding, corbelling, chamfering, watering and curing etc. including cost, conveyance, stacking, loading, unloading, royalties, all taxes, cost of all labour, Labour cess, scaffolding, sundries and T&P required for the works etc. complete in all respect as directed by the Engineer-in-charge.				
a	Ground Floor	CuM	5,783.00	18.60	1,07,590.22

3	Fly Ash Brick masonry in cement mortar of mix [1:4] using Fly Ash bricks of size 25cm12cmx8cm in superstructure having crushing strength not less than 75 kg /m ² etc[Half Brick work]				-
a	Ground Floor	CuM	5,982.00	1.14	6,806.34
D	PLASTERING & PAINTING				
1	Providing 12mm. Thick cement plaster in cement mortar or mix(1:6) in all floors at all height with cement & screened and washed sharp river sand for mortar and finished smooth to the rough surface of the brick masonry walls after racking out the joints (alongwith providing grooves wherever necessary) including watering and curing,rounding of corners etc. complete with cost,conveyance, loading, unloading, royalties and taxes of all materials, cost of all labour,T&P,sundries and scaffolding required for the work etc. as directed by the Engineer-in- charge.				
a	Ground Floor	SqM	189.00	134.93	25,501.56
2	Providing 16mm. Thick cement plaster in cement mortar or mix(1:6) in all floors at all height with cement & screened and washed sharp river sand for mortar and finished smooth to the rough surface of the brick masonry walls after racking out the joints (alongwith providing grooves wherever necessary) including watering and curing,rounding of corners etc. complete with cost,conveyance,loading, unloading, royalties and taxes of all materials, cost of all labour,T&P,sundries and scaffolding required for the work etc. as directed by the Engineer-in- charge.				
a	Ground Floor	SqM	273.20	124.53	34,022.59
4	Providing and applying 2 coats with 100% acrylic emulsion paint on New surface including one coat of primer (exterior quality) of approved make & shade by reputed manufacturer to make an even finished surface over a coat of primer with water bound cement primer in all heights with all scaffolding and staging charges including cost , conveyance, taxes of all materials, cost of all labours , T & P, sundries etc. as required for the work complete.				
a	Ground Floor	SqM	178.90	134.93	24,138.78
5	Supplying and painting of internal walls and ceiling with two or more coats of ACRYLIC emulsion paint on New surface which includes a coat of primer all complete. The shade and brand to be of approved brand & shade over the surfaces including preparation of surface, with cost of all materials, labour, conveyance taxes of all materials,scaffolding etc., as per the direction of the Engineer-in-charge.				
a	Ground Floor	SqM	288.40	124.53	35,915.50

6	Painting with synthetic enamel paint over a coat of primer of approved colour, shade and brand on New wood work /steel work in two or more coats as required to give an even shade including an under coat of suitable primer of approved brand and manufacturer including cost of all materials with taxes and transportation, loading, unloading, scaffolding, all labour, Labour cess, sundries, T&P, etc. complete as per the direction of the Engineer-in-charge including filling gaps with putties, scrapping, sand papering and cleaning the surface to make free from rusts, dusts and oily substances before applying primer etc. complete.				
a	Ground Floor	sqm	262.80	14.74	3,874.20
E	FLOORING				
1	Supplying, fitting and fixing vitrified tile in floors of size 600mm x 600mm of approved make conforming to I.S 13755 laid on 20 mm thick cement mortar (1:4) (1 cement : 4 sand)and filling joints with white cement of approved quality including cost of all materials, labour T&P etc.required for the work all complete as per direction of engineer in charge.				

a	Ground Floor	Sqm	1,135.20	71.93	81,651.81
2	Fixing vitrified tiles (600mm x 600mm) in dados skirting and risers of steps on 12mm thick cement plaster (1:3) jointed with neat cement slurry mixed with pigments to match the shade of the tiles including rubbing and polishing complete as per direction of engineer in charge.				
a	Ground Floor	Sqm	1,282.20	4.05	5,188.04
F	DOOR & WINDOW				
1	Providing and fixing Fiber Reinforced Plastic door (FRP) door in cluding all fittings and cost, conveyance of all materials, labours and T&P required for the work etc, all complete as per direction of engineer in charge.	Sqm	6,103.00	5.04	30,759.12
2	providing and fixing upvc(unplasticised poly vinyl chloride) door frame in including all fittings and cost,conveyance of all materials, labours and T&P required for the work etc, all complete as per direction of engineer in charge.				
	Ground Floor	Sqm	1,431.00	20.40	29,192.40
2	Providing and fixing 30 mm thick factory made single extruded WPC (Wood polymer composite) solid plain flush door shutter of required size fixing with stainless steel butt hinges of required size with necessary full body threaded star headed counter sunk S.S screws, all complete as per direction of engineer in charge.	Sqm	4,550.00	2.52	11,466.00
3	Supplying, fitting, fixing up window (sliding type) made up aluminum Section 151-154, 151-155, as windows frame section No. 151- 155, 151-153 and 151-167 as shutter frame with 5mm thick black glass as panel fitted with rubber beading including locking arrangement including all fitting including cost of materials all taxes labour, T&P etc. complete as per direction of Engineer-incharge.	Sqm	-	13.77	-
G	STEEL WORK				

1	Supplying, fitting and fixing of M.S grills, grill gates with top and bottom rails, (as per I.S. specification and as per approved drawings) in proper position in all floors and at all height including making holes to brick walls/ R.C.C structure/wood work etc. and making good to the damaged walls/ structures with cement concrete (1:2:4) with black hard crusher broken granite stone chips of 12mm to 20mm size (20mm size not to exceeds 25%) including watering and curing including cost, conveyance, loading, unloading, stacking, royalties and taxes of all materials, cost of all Labour, Labour cess ,Sundries, T&P required for the work etc.complete as per the direction of Engineer in charge (W.I. / M.S. windows grills, grill gates, collapsible gates with top and bottom rails, steel windows, steel doors, steel frames for doors and windows, staircase and parapet railings square bar along with required nos. of nails and screws and other required materials of approved quality and approved size shall be supplied by the contractor at his own cost.)	KG	100.70	275.40	27,732.78
H	Grading plaster				
1	2.0 cm thick grading Plaster (1:4) on roof slab including all cost, conveyance, royalty & taxes etc.comp.to work site for new work as per the specification approved by the department & direction of E.I.C	sqm	387.30	91.20	35,321.76
	TOTAL CIVIL WORK				14,45,917.75

**ESTIMATE FOR CONSTRUCTION OF STAFF QUARTER TAMARIND PROCESSING UNIT
RAYAGADA**

SI.No.	ITEMS OF WORKS		AMOUNT (In Rs.)
A	TOTAI CIVIL WORK	=	2,453,350.57
B	PH & SANITARY WORKS	=	573,465.94
C	ELECTRICAL WORKS	=	490,670.00
D	FIRE FIGHTING	=	32,566.00
E	SUB TOTAL (A+B+C+D)	=	3,550,052.50

ABSTRACT OF CIVIL WORK

ESTIMATE FOR CONSTRUCTION OF STAFF QUARTER TAMARIND PROCESSING UNIT RAYAGADA

Item No/S.No	Description of work	Unit	Rate	Quantity	Amount
A	EARTH WORK				
1	Earth work in stoney earth and gravels mixed with stone and boulder not exceeding 0.014 cum in volume within 50m initial lead and 1.5m initial lift including rough dressing and breaking clods to maximum 5cm to 7cm and laying in layer not exceeding 0.3m in depth and as per specification approved by the dept.				
i	Ordinary Soil	CuM	276.89	66.45	18,399.49
ii	Soft Rock	CuM	431.82	-	
iii	Hard Rock	CuM	762.92	-	
b)	extra for every additional lift of 1.5 m or part there of in excavation/ banking excavated or stacked materials				
	Ordinary Soil	CuM	22.00	-	-
2	Supplying & Filling foundation trenches , plinth & ditches with clean course river sand well watered and rammed in layers not exceeding 23 c.m. in depth with all lead and lift including cost, conveyance, loading, unloading, stacking,royalties and all taxes of sand,cost & conveyance of water, cost of all Labour,labour cess,T&P required for the work etc. complete in all respect as directed by the Engineer-in -charge.	CuM	696.40	22.15	15,425.26
3	Back filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead upto 50 m and lift upto 1.5m.	CuM	153.80	44.30	6,813.34
4	Making plinth protection 150 mm thick of cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) over 75mm thick bed of dry brick ballast 40 mm nominal size, well rammed and consolidated and grouted with fine sand, including finishing the top smooth				
		SqM	2,398.50	23.90	57,312.16
5	With Chlorpyrifos/Lindane E.C. 20% with 1% concentration				
		SqM	164.00	119.80	19,647.20
C	PLAIN & REINFORCEMENT CONCRETE				
6	Providing and laying P.C.C[1:4:8] using 4cm size metal etc in foundation and floors using cement , 40 mm size crusher broken H.G.Metal and screened and washed sharp river sand for mortar of approved quality and from approved quarry including hoisting ,lowering and laying concrete to the required level, ramming ,watering and curing etc	CuM	5,689.10	16.42	93,432.09
7	Providing and laying in position ready mixed M25 grade concrete having compressive strength at 28 days test not less than 250kg/sq.cm for reinforced cement concrete work using cement content as per approved design mix etc including Rigid & smooth centering and shuttering.				
a	For R.C.C foundation, footing bases of column, mass concrete,pre-cast etc.	CuM	6,974.55	8.06	56,197.44

b	For R.C.C plinth band etc.	CuM	7,845.70	6.73	52,771.65
c	R.C.C Beam & Coloum				
i	Ground Floor	CuM	16,242.00	10.42	169,239.91
ii	Terrace Floor	CuM	18,291.00	1.21	22,154.52
d	Lintel				
i	Ground Floor	CuM	14,689.00	2.38	34,890.60
ii	Terrace Floor	CuM	15,618.50	0.42	6,576.17
e	Staircase				
	Ground Floor	CuM	16,123.20	1.59	25,656.04
f	Chaja				
i	Ground Floor	CuM	1,251.66	0.46	574.51
ii	Terrace Floor	CuM	1,427.08		
g	Roof slab,Landing,Balcony,				
i	Ground Floor	CuM	14,229.20	14.33	203,904.44
ii	Terrace Floor	CuM	15,876.20	1.35	21,353.49
8	Cutting ,Straightening coiled or bend up HYSD/TMT Reinforcement bars welding or jointing if necessary , bending ,tying the grills as required for R.C.C works etc winding wire extra				
a	Foundation	Qntl	8,871.00	11.73	104,053.00
i	Ground Floor	Qntl	8,871.00	27.35	242,614.77
ii	Terrace Floor	Qntl	8,904.00	2.83	25,188.36
D	BRICK WORK				
9	Fly Ash Brick Masonry in cement mortar of mix (1:6) using Fly Ash bricks of size 23c.m x 11 c.m x 8 c.m in Foundation & Plinth having crushing strength not less than 75 kg per square c.m. with cement and screened & washed sharp sand for mortar after immersing the bricks for 6 (Six) hours in water before use in works with all necessary projections, splay cutting, circular moulding, corbelling, chamfering, watering and curing etc. including cost, conveyance, stacking, loading, unloading, royalties , all taxes ,cost of all labour,Labour cess ,scaffolding, sundries and T&P required for the works etc. complete in all respect as directed by the Engineer-in-charge.				
	Foundation and Plinth	CuM	5,750.00	3.58	20,609.44

i	Ground Floor	CuM	5,783.00	27.51	159,108.76
iv	Terrace Floor	CuM	6,158.00	8.47	52,161.80
10	Fly Ash Brick masonry in cement mortar of mix [1:4] using Fly Ash bricks of size 23cm12cmx8cm in superstructure having crushing strength not less than 75 kg /m ² etc[Half Brick work]				
i	Ground Floor	CuM	5,982.00	8.92	53,371.37
11	Providing 12mm. Thick cement plaster in cement mortar or mix(1:6) in all floors at all height with cement & screened and washed sharp river sand for mortar and finished smooth to the rough surface of the brick masonry walls after racking out the joints (alongwith providing grooves wherever necessary) including watering and curing,rounding of corners etc. complete with cost,conveyance, loading, unloading,royalities and taxes of all materials, cost of all labour,T&P,sundries and scaffolding required for the work etc. as directed by the Engineer-in- charge.				-
i	Ground Floor	sqm	189.00	298.24	56,367.60
iv	Terrace Floor	sqm	193.60	43.76	8,471.55
12	Providing 16mm. Thick cement plaster in cement mortar or mix(1:6) in all floors at all height with cement & screened and washed sharp river sand for mortar and finished smooth to the rough surface of the brick masonry walls after racking out the joints (alongwith providing grooves wherever necessary) including watering and curing,rounding of corners etc. complete with cost,conveyance,loading, unloading,royalities and taxes of all materials, cost of all labour,T&P,sundries and scaffolding required for the work etc. as directed by the Engineer-in- charge.				-
i	Ground Floor	sqm	273.20	345.82	94,479.05
iv	Terrace Floor	sqm	280.10	41.45	11,609.58
13	Finishing wall surface of wall with cement based wall putty [water based] of approved make and finished smooth and even surface to receive painting including cost etc				-
i	Ground Floor	sqm	288.40	814.48	-
iv	Terrace Floor	sqm	294.40	94.88	-
14	Providing and applying 2 coats with 100% acrylic emulsion paint on New surface including one coat of primer (exterior quality) of approved make & shade by reputed manufacturer to make an even finished surface over a coat of primer with water bound cement primer in all heights with all scaffolding and staging charges including cost , conveyance, taxes of all materials, cost of all labours , T & P, sundries etc. as required for the work complete.				-
i	Ground Floor	sqm	178.90	298.24	53,355.36
iv	Terrace Floor	sqm	183.10	43.76	8,012.09
15	Supplying and painting of internal walls and ceiling with two or more coats of ACRYLIC emulsion paint on New surface which includes a coat of primer all complete. The shade and brand to be of approved brand & shade over the surfaces including preparation of surface, with cost of all materials, labour, conveyance taxes of all materials,scaffolding etc., as per the direction of the Engineer-in-charge.				-
i	Ground Floor	sqm	288.40	516.23	148,882.02
iv	Terrace Floor	sqm	294.40	53.43	15,730.28

16	Painting with synthetic enamel paint over a coat of primer of approved colour, shade and brand on New wood work /steel work in two or more coats as required to give an even shade including an under coat of suitable primer of approved brand and manufacturer including cost of all materials with taxes and transportation, loading, unloading, scaffolding, all labour, Labour cess, sundries, T&P, etc. complete as per the direction of the Engineer-in-charge including filling gaps with putties, scrapping, sand papering and cleaning the surface to make free from rusts, dusts and oily substances before applying primer etc. complete.				
ii	Ground Floor	sqm	262.80	18.45	4,848.66
E	FLOORING				-
18	Supplying, fitting and fixing vitrified tile in floors of size 600mm x 600mm of approved make conforming to I.S 13755 laid on 20 mm thick cement mortar (1:4) (1 cement : 4 sand) and filling joints with white cement of approved quality including cost of all materials, labour T&P etc.required for the work all complete as per direction of engineer in charge.				-
i	Ground Floor	sqm	1,135.20	123.23	139,896.14
19	Fixing vitrified tiles (600mm x 600mm) in dados skirting and risers of steps on 12mm thick cement plaster (1:3) jointed with neat cement slurry mixed with pigments to match the shade of the tiles including rubbing and polishing complete as per direction of engineer in charge.				-
i	Ground Floor	sqm	1282.20	15.64	20,053.61
20	Fixing Granite tiles (19mm thick) in floors treads or steps and landing on 25mm thick bed of cement mortar 1 :1 (1 cement : 1 sand) jointed with neat cement slurry mixed with pigment to match the shades on the tiles etc. complete as per direction of engineer in charge.				-
i	Ground Floor	sqm	3,474.10	17.58	61,074.68
F	DOOR & WINDOW				-
21	Providing and fixing of 30mm thick WPC door shutter with hinges, tower bolt, handle, stainless steel screws etc. including the cost of all materials, hardware fittings, cost of all labour, conveyance, taxes, loading, unloading, T&P etc. complete as per the direction of Engineer-in-charge.	Sqm	4,550.00	20.79	94,594.50
22	Providing and fixing of WPC Door Frames with Rebate cuts and Finished cross section size 75mm x 45mm or 90mm x 50mm including cost of all materials, cost of all labour, conveyance, taxes, loading, unloading, scaffolding, staging, watering and curing, T&P etc. complete as per the direction of the Engineer-in-charge.	Rmt	1,442.85	56.10	80,943.92
G	STEEL WORK				-

	Supplying, fitting and fixing of M.S grills, grill gates with top and bottom rails, (as per I.S. specification and as per approved drawings) in proper position in all floors and at all height including making holes to brick walls/ R.C.C structure/wood work etc. and making good to the damaged walls/ structures with cement concrete (1:2:4) with black hard crusher broken granite stone chips of 12mm to 20mm size (20mm size not to exceeds 25%) including watering and curing including cost, conveyance, loading, unloading, stacking, royalties and taxes of all materials, cost of all Labour, Labour cess ,Sundries, T&P required for the work etc.complete as per the direction of Engineer in charge (W.I. / M.S. windows grills, grill gates, collapsible gates with top and bottom rails, steel windows, steel doors, steel frames for doors and windows, staircase and parapet railings square bar along with required nos. of nails and screws and other required materials of approved quality and approved size shall be supplied by the contractor at his own cost.)	KG	100.70	369.00	37,158.30
#REF!	Supplying, fitting and fixing of Stainless steel of 304 grade in hand railing using 50mm dia of 2mm thick circular pipe with balustrade of size 32mmx32mmx2mm @ 0.90mtr.C/C and stainless square pipe bracing of size 32mmx32mmx2mm in 3 rows in stair case as per approved design and specification ,buffing, polishing etc with cost,conveyance,taxes of all materials, labour, T & P etc. requird for the complete in all respect.	Rmt	3,596.00	22.60	81,269.60
					-
H	Grading plaster				
24	2.0 cm thick grading Plaster (1:4) on roof slab including all cost, conveyance, royalty & taxes etc.comp.to work site for new work as per the specification approved by the department & direction of E.I.C				
	Terrace Floor	Sqm	387.30	174.22	67,475.41
	Head Room	Sqm	387.30	19.81	7,672.41
	TOTAL CIVIL WORK				2,453,350.57

**CONSTRUCTION OF GATE & SECURITY ROOM FOR TAMARIND PROCESSING UNIT IN
RAYAGADA, ODISHA**

Gate

SI.No.	ITEMS OF WORKS		AMOUNT (In Rs.)
A	CIVIL WORKS	=	2,438,206.12
B	PH & SANITARY WORKS		150,290.33
C	ELECTRICAL WORKS		69,419.00
D	SUB TOTAL (A+B+C)		2,657,915.45
D	Say		2,658,000.00

ABSTRACT OF CIVIL WORK					
CONSTRUCTION OF GATE & SECURITY ROOM FOR TAMARIND PROCESSING UNIT IN RAYAGADA, ODISHA					
Item No/S.No	Description of work	Unit	Rate	Quantity	Amount
A	EARTH WORK				
1	Earth work in stoney earth and gravels mixed with stone and boulder not exceeding 0.014 cum in volume within 50m initial lead and 1.5m initial lift including rough dressing and breaking clods to maximum 5cm to 7cm and laying in layer not exceeding 0.3m in depth and as per specification approved by the dept.				
i	Ordinary Soil	CuM	276.89	163.08	45,155.60
ii	Soft Rock	CuM	431.82	-	-
b)	extra for every additional lift of 1.5 m or part there of in excavation/ banking excavated or stacked materials				
	Ordinary Soil	CuM	22.00	-	-
2	Supplying & Filling foundation trenches , plinth & ditches with clean course river sand well watered and rammed in layers not exceeding 23 c.m. in depth with all lead and lift including cost, conveyance, loading, unloading, stacking, royalties and all taxes of sand, cost & conveyance of water, cost of all Labour,labour cess,T&P required for the work etc. complete in all respect as directed by the Engineer-in -charge.	CuM	696.40	38.03	26,480.61
3	Back filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead upto 50 m and lift upto 1.5m.	CuM	153.80	53.82	8,276.96
4	Making plinth protection 150 mm thick of cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) over 75mm thick bed of dry brick ballast 40 mm nominal size, well rammed and consolidated and grouted with fine sand, including finishing the top smooth				-
		SqM	2,398.50	13.50	32,379.75
5	Supplying , diluting and and preparing chemical emulsion like CHLORPYRIPHOS or other chemicals approved by central Insecticides Board or as directed by the manufacturer and spraying the mixture uniformly by sprayer as pre-constructional anti termite treatment and creating a chemical barrier under and around wall trenches, basement excavation, top surface of plinth filling, junction of walls and floors along with external perimeter of the building, surrounding the pipes and conduits etc. complete at the rate of 7.5 litres (or as directed by the manufacturer) per sqm on vertical and 5.0 liters per sqm on horizontal surfaces, 50% of the emulsion to be filled in the holes made in trenches at 150mm center to center etc. complete.as per IS:6313/1981 (PART-II) and as per the direction of engineer-in-charge including all cost of materials labour, taxes etc. all complete.	SqM	164.00	18.00	2,952.00
B	PLAIN & REINFORCEMENT CONCRETE				-

6	Providing and laying P.C.C[1:4:8] using 4cm size metal etc in foundation and floors using cement , 40 mm size crusher broken H.G.Metal and screened and washed sharp river sand for mortar of approved quality and from approved quarry including hoisting ,lowering and laying concrete to the required level, ramming ,watering and curing etc	CuM	5,689.10	11.74	66,790.03
7	Providing and laying in position ready mixed M30 grade concrete having compressive strength at 28 days test not less than 250kg/sq.cm for reinforced cement concrete work using cement content as per approved design mix etc including Rigid & smooth centering and shuttering.				-
a	For R.C.C foundation, footing bases of column, mass concrete,pre-cast etc.	CuM	6,974.55	33.27	232,039.41
b	For R.C.C plinth band etc.	CuM	7,845.70	11.96	93,818.88
c	R.C.C Beam & Coloum				
i	Ground Floor	CuM	16,242.00	10.12	164,287.99
d	Lintel				
i	Ground Floor	CuM	14,689.00	0.68	10,025.24
f	Chaja				
i	Ground Floor	Sqm	1,251.66	5.63	7,040.59
g	Roof slab,Landing,Balcony,				
i	Ground Floor	CuM	14,229.20	3.06	43,576.93
8	Cutting ,Straightening coiled or bend up HYSD/TMT Reinforcement bars welding or jointing if necessary , bending ,tying the grills as required for R.C.C works etc winding wire extra				-
a	Foundation	Qntl	8,871.00	45.11	400,158.99
b	Ground floor	Qntl	8,871.00	20.24	179,520.80
C BRICK WORK					
9	Fly Ash Brick Masonry in cement mortar of mix (1:6) using Fly Ash bricks of size 25c.m x 11 c.m x 8 c.m in Foundation & Plinth having crushing strength not less than 75 kg per square c.m. with cement and screened & washed sharp sand for mortar after immersing the bricks for 6 (Six) hours in water before use in works with all necessary projections, splay cutting, circular moulding, corbelling, chamfering, watering and curing etc. including cost, coveyance,stacking, loading, unloading, royalties , all taxes ,cost of all labour,Labour cess ,scaffolding, sundries and T&P required for the works etc. complete in all respect as directed by the Engineer-in-charge.				
	Foundation and Plinth	CuM	5,750.00	6.77	38,916.00
2	Fly Ash Brick Masonry in cement mortar of mix (1:6) using Fly Ash bricks of size 25c.m x 11 c.m x 8 c.m in superstructure having crushing strength not less than 75 kg per square c.m. with cement and screened & washed sharp sand for mortar after immersing the bricks for 6 (Six) hours in water before use in works with all necessary projections, splay cutting, circular moulding, corbelling, chamfering, watering and curing etc. including cost, coveyance,stacking, loading, unloading, royalties , all taxes ,cost of all labour,Labour cess ,scaffolding, sundries and T&P required for the works etc. complete in all respect as directed by the Engineer-in-charge.				
a	Ground Floor	CuM	5,783.00	35.25	203,850.75
10	Fly Ash Brick masonry in cement mortar of mix [1:4] using Fly Ash bricks of size 25cm12cmx8cm in superstructure having crushing strength not less than 75 kg /m ² etc[Half Brick work]				-
a	Ground Floor	CuM	5,982.00	1.73	10,363.82

D	PLASTERING & PAINTING				
11	Providing 12mm. Thick cement plaster in cement mortar or mix(1:6) in all floors at all height with cement & screened and washed sharp river sand for mortar and finished smooth to the rough surface of the brick masonry walls after racking out the joints (alongwith providing grooves wherever necessary) including watering and curing,rounding of corners etc. complete with cost,conveyance, loading, unloading, royalties and taxes of all materials, cost of all labour,T&P,sundries and scaffolding required for the work etc. as directed by the Engineer-in- charge.				
a	Ground floor	SqM	189.00	290.32	54,870.93
2	Providing 16mm. Thick cement plaster in cement mortar or mix(1:6) in all floors at all height with cement & screened and washed sharp river sand for mortar and finished smooth to the rough surface of the brick masonry walls after racking out the joints (alongwith providing grooves wherever necessary)including watering and curing,rounding of corners etc. complete with cost,conveyance,loading, unloading,royalties and taxes of all materials, cost of all labour,T&P,sundries and scaffolding required for the work etc. as directed by the Engineer-in- charge.				
a	Ground floor	SqM	273.20	144.00	39,340.80
13	Providing and applying 2 coats with 100% acrylic emulsion paint on New surface including one coat of primer (exterior quality) of approved make & shade by reputed manufacturer to make an even finished surface over a coat of primer with water bound cement primer in all heights with all scaffolding and staging charges including cost , conveyance, taxes of all materials, cost of all labours , T & P, sundries etc. as required for the work complete.				
a	Ground floor	SqM	178.90	290.32	51,938.68
14	Supplying and painting of internal walls and ceiling with two or more coats of ACRYLIC emulsion paint on New surface which includes two coat of internal putty with a coat of primer all complete. The shade and brand to be of approved brand & shade over the surfaces including preparation of surface, with cost of all materials, labour, conveyance taxes of all materials,scaffolding etc., as per the direction of the Engineer-in-charge.				
a	Ground floor	SqM	288.40	228.50	65,899.40
15	Painting with synthetic enamel paint over a coat of primer of approved colour, shade and brand on New wood work /steel work in two or more coats as required to give an even shade including an under coat of suitable primer of approved brand and manufacturer including cost of all materials with taxes and transportation, loading, unloading, scaffolding, all labour, Labour cess, sundries, T&P, etc. complete as per the direction of the Engineer-in-charge including filling gaps with putties, scrapping, sand papering and cleaning the surface to make free from rusts, dusts and oily substances before applying primer etc. complete.				

a	Ground floor	sqm	262.80	29.70	7,805.16
E	FLOORING				
16	Supplying, fitting and fixing vitrified tile in floors of size 600mm x 600mm of approved make conforming to I.S 13755 laid on 20 mm thick cement mortar (1:4) (1 cement : 4 sand)and filling joints with white cement of approved quality including cost of all materials, labour T&P etc.required for the work all complete as per direction of engineer in charge.				
a	Ground floor	SqM	1,135.20	24.50	27,812.40
17	Fixing vitrified tiles (600mm x 600mm) in dados skirting and risers of steps on 12mm thick cement plaster (1:3) jointed with neat cement slurry mixed with pigments to match the shade of the tiles including rubbing and polishing complete as per direction of engineer in charge.				
a	Ground floor	SqM	1,282.20	7.35	9,424.17

18	Fixing Granite tiles (19MM thk) in floors treads or steps and landing on 25mm thick bed of cement mortar 1 :1 (1 cement : 1 sand) jointed with neat cement slurry mixed with pigment to match the shades on the tiles etc. complete as per direction of engineer in charge.				
a	Ground floor	SqM	3,474.10	28.20	97,969.62
19	Fixing Ceramic tile (300mm x 300mm) in floors treads or steps and landing on 25mm thick bed of cement mortar 1:1 (1cement : 1sand) jointed with neat cement slurry mixed with pigment to match the shades of the tiles including rubbing and polishing complete as per direction of engineer in charge.				
a	Ground floor	SqM	1,328.80	6.30	8,371.44
20	Fixing Ceramic glazed wall tile in dados skirting and risers of step on 12mm thick cement plaster (1:3) jointed with neat cement slurry mixed with pigment to match the shades on the tiles etc. complete as per direction of engineer in charge.				
a	Ground floor	SqM	1,448.60	20.48	29,660.09
F DOOR & WINDOW					
21	Providing and fixing of WPC Door Frames with Rebate cuts and Finished cross section size 75mm x 45mm or 90mm x 50mm including cost of all materials, cost of all labour, conveyance, taxes, loading, unloading, scaffolding, staging, watering and curing, T&P etc. complete as per the direction of the Engineer-in-charge.	Sqm	1,442.85	3.15	4,544.98
22	Providing and fixing of 30mm thick WPC door shutter with hinges, tower bolt, handle, stainless steel screws etc. including the cost of all materials, hardware fittings, cost of all labour, conveyance, taxes, loading, unloading, T&P etc. complete as per the direction of Engineer-in-charge.	Sqm	4,550.00	4.41	20,065.50
23	Supplying, fitting, fixing up window (sliding type) made up aluminum Section 9778 as windows frame, section No. 4095, 4096 and 9777, 3994 as shutter frame with rubber beading including locking arrangement including all fitting including cost of materials all taxes labour, T&P etc. complete as per direction of Engineer-in-charge. including cost of frosted glass & SS mosquito net.	Sqm	6,867.40	5.40	37,083.96
G STEEL WORK					

24	Supplying, fitting and fixing of M.S grills, grill gates with top and bottom rails, (as per I.S. specification and as per approved drawings) in proper position in all floors and at all height including making holes to brick walls/ R.C.C structure/wood work etc. and making good to the damaged walls/ structures with cement concrete (1:2:4) with black hard crusher broken granite stone chips of 12mm to 20mm size (20mm size not to exceeds 25%) including watering and curing including cost, conveyance, loading, unloading, stacking, royalties and taxes of all materials, cost of all Labour, Labour cess ,Sundries, T&P required for the work etc.complete as per the direction of Engineer in charge (W.I. / M.S. windows grills, grill gates, collapsible gates with top and bottom rails, steel windows, steel doors, steel frames for doors and windows, staircase and parapet railings square bar along with required nos. of nails and screws and other required materials of approved quality and approved size shall be supplied by the contractor at his own cost.)	KG	100.70	594.00	59,815.80
25	Supplying, fitting and fixing of Stainless steel of 304 grade in hand railing using 50mm dia of 2mm thick circular pipe with balustrade of size 32mmx32mmx2mm @ 0.90mtr.C/C and stainless square pipe bracing of size 32mmx32mmx2mm in 3 rows in stair case as per approved design and specification ,buffing, polishing etc with cost,conveyance,taxes of all materials, labour, T & P etc. requird for the complete in all respect.	Rmt	3,596.00	10.00	35,960.00
H	Grading plaster				
26	2.0 cm thick grading Plaster (1:4) on roof slab including all cost, conveyance, royalty & taxes etc.comp.to work site for new work as per the specification approved by the department & direction of E.I.C	sqm	387.30	24.50	9,488.85
27	Monuments of musical Instruments above top of the gate	Ls			
28	Steel work in built up tubular(round, square or recctangular hollow tubes etc) trusses etc, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc complete.	KG	171.00	1,200.00	205,200.00
29	Tensile Fabric structure. Design, Fabrication, Manufacturing, Assembly, Supply & installation of tensile Fabric (Serge Ferrari ,France , 902 S2 Type II, 950 GSM PVDF Coated fabric) and manufacture specification including all accessories, necessary fixing arrangement etc. Including welding and all fixing accessories, Corner plate etc.	sqm	2,683.00	40.00	107,320.00
A TOTAL CIVIL WORK					2,438,206.12
	PH				

1	Supplying all materials, labour and T&P for fitting and fixing white glazed vitreous china porcelain Indian Pan water closet of size 23" of approved make confirming to IS-2556 and top inlet for sinking into floor with 100mm PVC 'P' trap etc. including supply of necessary cement concrete for fitting the closet etc. complete in all respect in all floors including cost, conveyance and taxes of all materials etc. complete and as per PH specification and direction of Engineer-in-charge.	Nos	5828.27	2	11656.54
2	Supplying all materials, labour and T&P for fitting and fixing white glazed vitreous china porcelain wash basin of size 450mm x 300mm of approved make confirming to IS-2556 and top inlet for sinking into floor with 100mm PVC 'P' trap etc. including supply of necessary cement concrete for fitting the closet etc. complete in all respect in all floors including cost, conveyance and taxes of all materials etc. complete and as per PH specification and direction of Engineer-in- charge.	Nos	9,320.30	2	18640.6
3	Supplying all materials, labour, T&P and fixing standard sized CP Bib cock of approved make etc complete including cutting the wall and making good the damages, including cost of all materials complete as per PH specification and direction of Engineering-in-charge.	Nos	1,882.00	2	3764
4	Supplying all materials, labour, T&P and fixing standard sized 15mm dia Angular Stop cock of approved make etc complete including cutting the wall and making good the damages, including cost of all materials complete as per PH specification and direction of Engineering-in- charge.	Nos	1,172.00	2	2344
5	CPVC pipe confirming to IS 15778 - 32 mm dia	R.mtr	6,974.41	15	104616.11
6	fitting and fixing uPVC SWR pipes (Type-B)(Co-moulded Ring type)- 110 mm dia	R.Mtr	828.11	10	8281.07
7	110mmx110mm 'P' Trap (Make:Astral)	nos	494	2	988
B	TOTAL PH WORK				150,290.33
	INTERNAL WIRING.				
1	Recessed wiring to light point / first light of group control/ call bell point/ exhaust fan point /wall fan point with 1.5 sq.mm FRLSH PVC insulated single core multistrand copper conductor of ISI marked in 20 mm dia non-metallic PVC conduit with 6 Amp, 250 V clip in type switch ISI marked and ceiling rose ISI marked mounted on G.I modular box with face plate & cover of suitable size , with 1.5 sq.mm FRLSH PVC insulated single core multistrand copper conductor as earth wire including all accessories and connection as per direction of Engineer in Charge.				
2	Group A	Nos.	969	5	4,845.00
3	Group B	Nos.	1442	5	7,210.00
4	Group C	Nos.	1992	2	3,984.00
5	Recessed wiring to secondary light point looped from primary light point with 1.5sqmm FRLSH PVC insulated single core multistrand copper conductor of ISI marked with 20mm dia non-metallic PVC conduit with 1.5sqmm FRLSH PVC insulated single core multistrand copper conductor for running earth including 3 plate ISI marked Ceiling rose with all accessories & connection as per direction of Engineer-in-charge.	Nos.	639	2	1,278.00

6	Recessed wiring to fan point with 1.5 sq.mm FRLSH PVC insulated single core multistrand copper conductor of ISI marked in 20 mm dia non-metallic PVC conduit with 6 Amp, 250 V clip in type switch ISI marked, ceiling rose and Modular Stepped Fan Regulator mounted on G.I modular box with face plate & cover of suitable size with 1.5 sq.mm FRLSH PVC insulated single core multistrand copper conductor as earth wire including all accessories and connection as per direction of Engineer in Charge.	Nos.	2561	2	5,122.00
7	Recessed wiring for 6 pin 16 amp socket outlet with 16Amp, 250 V clip in type switch ISI marked mounted on G.I moular box with face plate & cover of suitable size including all accessories and connection as per direction of Engineer-in-charge.	Nos.	1529	2	3,058.00
8	Supply, Installation, Testing and Commissioning of pre-wired fluorescent fitting / compact fluorescent fitting /LED fitting of all sizes complete with all accessories and lamp etc. directly on ceiling /wall or recessed in false ceiling , including connection with 1.5 sq.mm FR PVC insulated single core multistrand copper conductor and earthing as required and approved by Engineer-i-Charge.				-
9	Ceiling mounted 600mm X 600mm 36W Surface/recessed LED fixture	Nos	4994	2	9,988.00
10	Ceiling mounted 15W LED of Recessed/Surface light.	Nos	1466	2	2,932.00
11	45W LED Street Light fixture with required size GI clamp and accessories as required for fixing in wall.	Nos	7749	2	15,498.00
12	BLDC type 1200mm Ceiling Fan	Nos	3213	2	6,426.00
13	250mm PVC Exhaust fan with louvers	Nos	3189	2	6,378.00
	Recessed wiring to submain in 2 x 1.5 sq.mm FRLSH PVC insulated single core multistrand copper conductor of ISI marked confirming to IS-694/1990 in 20 mm dia non-metalic heavy duty PVC conduit 1.6 mm thick along with 1 x 1.5 sq.mm FRLSH PVC insulated single core multistrand copper conductor as earth wire as eqired.	Mtrs	135	20	2,700.00
C	TOTAL PH WORK				69,419.00
	Total(A+B+C)				2,657,915.45
	Say			Rs.	2,658,000.00

ABSTRACT FOR THE CONSTRUCTION OF ROAD FOR CONSTRUCTION OF TAMARIND PROCESSING UNIT AT RAYAGADA , ODISHA

Sl.no	Item of Work	Unit	Rate	Qty	Amount
1	Site Clearance				
	Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs ,sapling and trees girth up to 300mm, removal of stumps of trees cut earlier and disposal of unserviceable material and stacking of serviceable material to be used or auctioned, up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.				
		SQM	8.36	3,819.00	31,941.73
2	Surface Cutting				
a	Earth work in excavation in hard soil or gravelly soil including dressing and levelling the bed				
		Cum	431.82	521.55	225,217.54
3	SAND FILLING				
	Filling foundation trenches and plinth with sweet river sand, well watered and compacted , top surface dressed and leveled to proper gradient in layers of 0.225 mtr including cost of all materials, conveyance, all taxes and royalties, loading and unloading, including cost of all labour, T&P, sundries etc. complete as per direction of the Engineer-in-charge.	cum	696.40	563.35	392,316.94
4	BACK FILLING				
	Back filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead upto 50 m and lift upto 1.5m.				
		cum	153.80	-	-
5	DLC				
	Construction of dry lean cement concrete Sub- base over a prepared sub-grade with coarse and fine aggregate conforming to IS: 383, the size of coarse aggregate not exceeding 25 mm, aggregate cement ratio not to exceed 15:1, aggregate gradation after blending to be as per Table 600.1, cement content not to be less than 150kg/cum, optimum moisture content to be determined during trial length construction , concrete strength not to be less than 10Mpa at 7 days, mixed in a batching plant, transported to site, laid with a paver and compacting with vibratory roller, finishing as per the instruction of Engineer-in-Charge				
		cum	3,938.00	389.50	1,533,849.40
6	M30				
	Providing, lifting, hoisting and laying Reinforced cement concrete of M-30 Grade to road surface layer. with 12mm to 20mm size black hard crusher broken				
		cum	4,945.80	521.55	2,579,481.99
11	brick work				
	Providing bricks masonry work using (230mmx110x0cm size) having crushing strength not less than 75Kg/Sqcm in cement mortar (1:6) make the surface wet by water before use with all necessary projections, splay cutting, circular moulding, corbelling etc as per drawings. including cost, conveyance, all taxes, royalties, loading and unloading of all materials, including cost of all labour, scaffolding, watering and curing, sundries, T&P etc. complete as per the direction of the Engineer-in-charge.				
	Foundation	cum	5,750.00	85.50	491,625.00
12	Plaster				
	Providing 16mm thick cement plaster to the outside surface of brick masonry wall with cement mortar (1:6) including racking out joints, scraping and cleaning the surface and finishing the plaster surface smooth using wooden floats only to proper plumbs and level and making grooves, beads and drip coarse to give required ornamental finish as per drawings including cost of all materials, conveyance, loading and unloading, all taxes and royalties, all labour, scaffolding, watering and curing, sundries and T&P etc. complete as per direction of the Engineer-in-charge				
	ground floor	sqm	212.00	889.20	188,510.40
7	Painting				
	Painting marking with adequate nos of coats on the kerb stone on both sides of road to give uniform finish with road marking paint of superior make as approved by the Engineer-in-charge, i/c cleaning the surface of oil dirt, scales, oil, grease and other foreign material etc. and lining out etc. complete as per direction of Engineer-in-Charge. New work (Two or more coats)	sqm	262.80	889.20	233,681.76

ABSTRACT FOR THE CONSTRUCTION OF DRAINAGE FOR CONSTRUCTION OF TAMARIND PROCESSING UNIT AT RAYAGADA , ODISHA

Sl No	CIVIL WORK	Unit	Rate	Qty	Amount
1	EARTH WORK IN EXCAVATION				
	Earth work in excavation of foundation trenches and column foundation and pits in all kinds of soil within an initial lift of 1.5m including dressing the sides and levelling the bed & depositing the excavated materials away from the site within an initial lead of 50m as per direction of Engineer-in-charge including cost of all labour, sundries, Tools & plants etc. complete.				
	Foundation	cum	276.89	285.53	79,060.00
2	SAND FILLING				
	Filling foundation trenches and plinth with sweet river sand, well watered and compacted , top surface dressed and leveled to proper gradient in layers of 0.225 mtr including cost of all materials, conveyance, all taxes and royalties, loading and unloading, including cost of all labour, T&P, sundries etc. complete as per direction of the Engineer-in-charge.				
	Foundation	cum	696.40	63.45	44,187.00
3	PLAIN CEMENT CONCRETE (1:4:8)				
	Providing and laying Plain cement concrete of proportion (1:4:8) using 4cm size metal etc. in foundation and floors using cement, 40mm. Size crusher broken H.G.Metal and screened and washed sharp river sand for mortar of approved quality and from approved quarry including hoisting, lowering and laying concrete to the required level, ramming,watering and curing etc. complete to required levels, laid in layers not exceeding 15cm thick in each layer including cost, conveyance, loading, unloading, royalties and taxes of all materials, cost of all labour,T&P required for the work including shoring, shuttering and dewatering(if required) including hire and running charges of water pump required for the work etc. complete in all respect as directed by the Engineer-in-charge.				
	Foundation	cum	5,689.10	30.55	173,802.00
4	REINFORCED CEMENT CONCRETE				
	Providing, lifting, hoisting and laying Reinforced cement concrete of M-30 Grade to Footings, retaining Wall and column. with 12mm to 20mm size 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, scaffolding, watering and curing for the required period including cost of all materials with taxes, royalties transportation, loading and unloading, all labour, sundries, T&P including hire & running charges of concrete mixer and vibrator etc completed as per direction of the Engineer-in-charge but excluding the cost of materials and labour for reinforcement bars for the work.				
	footing	cum	6,974.55	91.65	639,218.00
	Wall	cum	16,242.00	42.30	687,037.00
6	Reinforcement				
	Providing, fixing TOR Fe-500 reinforcement bars for RCC work of required diameter of approved quality with 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 fan hooks, hoisting, lowering and laying including cost, conveyance and taxes of M.S. Rods or tor steel and binding wires of 18 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 E-I-C. (Linear measurements will be taken & quantity will be calculated on standard weight. Weight of binding wire will not be considered for measurement.)				
	footing & wall	Qntl	8,871.00	117.22	1,039,893.00
	TOTAL				2,663,197.00

ABSTRACT FOR THE CONSTRUCTION OF BOUNDARY WALL FOR CONSTRUCTION OF TAMARIND PROCESSING UNIT AT RAYAGADA , ODISHA

SI No	CIVIL WORK	Unit	Rate	Qty	Amount
	Item of Work				
1	Site Clearance				
	Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs ,sapling and trees girth up to 300mm, removal of stumps of trees cut earlier and disposal of unserviceable material and stacking of serviceable material to be used or auctioned, up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.				
		SQM	8.36	3,349.78	28,017.18
					-
2	EARTH WORK IN EXCAVATION				
	Earth work in excavation of foundation trenches and column foundation and pits in all kinds of soil within an initial lift of 1.5m including dressing the sides and levelling the bed & depositing the excavated materials away from the site within an initial lead of 50m as per direction of Engineer-in-charge including cost of all labour, sundries, Tools & plants etc. complete.				-
	Ordinary/Hard Soil	cum	276.89	1,161.29	321,551.30
					-
3	SAND FILLING				
	Filling foundation trenches and plinth with sweet river sand, well watered and compacted , top surface dressed and leveled to proper gradient in layers of 0.225 mtr including cost of all materials, conveyance, all taxes and royalties, loading and unloading, including cost of all labour, T&P, sundries etc. complete as per direction of the Engineer-in-charge.				-
	Foundation	cum	696.40	74.60	51,950.05
					-
4	BACK FILLING				
	Back filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead upto 50 m and lift upto 1.5m.				-
		cum	153.80	836.79	128,698.69
5	PLAIN CEMENT CONCRETE (1:4:8)				-
	Providing and laying Plain cement concrete of proportion (1:4:8) using 4cm size metal etc. in foundation and floors using cement, 40mm. Size crusher broken H.G.Metal and screened and washed sharp river sand for mortar of approved quality and from approved quarry includign hoisting, lowering and laying concrete to the required level, ramming,watering and curing etc. complete to required levels, laid in layers not exceeding 15cm thick in each layer including cost, conveyance, loading, unloading, royalties and taxes of all materials, cost of all labour,T&P required for the work including shoring, shuttering and dewatering(if required) including hire and running charges of water pump required for the work etc. complete in all respect as directed by the Engineer-in-charge.				-
	Foundation	cum	5,689.10	35.33	201,007.28
					-
6	REINFORCED CEMENT CONCRETE M20				-
	Providing and laying in position ready mixed M25 grade concrete having compressive strength at 28 days test not less than 250kg/sq.cm for reinforced cement concrete work using cement content as per approved design mix etc including Rigid & smooth centering and shuttering.				-
6.1	Column base footing	cum	6,974.55	87.60	610,970.58
6.2	Plinth beam	cum	7,845.70	82.53	647,466.39
6.3	Column Ground Floor	cum	16,242.00	49.74	807,836.48
					-
7	Reinforcement				-

SI No	CIVIL WORK	Unit	Rate	Qty	Amount
Item of Work					
	Providing, fixing TOR Fe-500 reinforcement bars for RCC work of required diameter of approved quality with 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 fan hooks, hoisting, lowering and laying including cost, conveyance and taxes of M.S. Rods or tor steel and binding wires of 18 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 E-I-C. (Linear measurements will be taken & quantity will be calculated on standard weight. Weight of binding wire will not be considered for measurement.)				-
7.1	Foondation and Plinth	Qntl	8,871.00	169.11	1,500,174.81
7.2	Ground floor	Qntl	8,871.00	59.69	529,465.64
8	BRICK WORK IN SUPER STRUCTURE				-
	Providin bricks masonry work using (230mmx110x0cm size) having crushing strength not less than 75Kg/Sqcm in cement mortar (1:6) make the surface wet by water before use with all necessary projections, splays cutting, circular moulding, corbelling etc as per drawings. including cost, conveyance, all taxes, royalties, loading and unloading of all materials, including cost of all labour, scaffolding, watering and curing, sundries, T&P etc. complete as per the direction of the Engineer-in-charge.				-
8.1	Foundation	cum	5,750.00	214.56	1,233,743.00
8.2	Superstructure	cum	5,783.00	174.83	1,011,012.98
8.3	Fly Ash Brick masonry in cement mortar of mix [1:4] using Fly Ash bricks of size 25cm12cmx8cm in superstructure having crushing strength not less than 75 kg /m ² etc [Half Brick work]	cum	5,982.00	51.25	306,553.57
9	Plaster				-
	Providing 16mm thick cement plaster to the outside surface of brick masonry wall with cement mortar (1:6) including racking out joints, scraping and cleaning the surface and finishing the plaster surface smooth using wooden floats only to proper plumbs and level and making grooves, beads and drip coarse to give required ornamental finish as per drawings including cost of all materials, conveyance, loading and unloading, all taxes and royalties, all labour, scaffolding, watering and curing, sundries and T&P etc. complete as per direction of the Engineer-in-charge				-
9.1	ground floor	sqm	212.00	1,551.78	328,977.36
10	Providing 12mm thick cement plaster to the outside surface of brick masonry wall with cement mortar (1:6) including racking out joints, scraping and cleaning the surface and finishing the plaster surface smooth using wooden floats only to proper plumbs and level and making grooves, beads and drip coarse to give required ornamental finish as per drawings including cost of all materials, conveyance, loading and unloading, all taxes and royalties, all labour, scaffolding, watering and curing, sundries and T&P etc. complete as per direction of the Engineer-in-charge	sqm	273.20	1,316.68	359,716.98
11	Painting				-
	Providing & Painting two coats with Water soluble weather coat paints of approved shade to the outside walls over a coat of primer(including cost of primer) by means of rollers to outside surface of new walls with a approved quality exterior grade putty after scraping, cleaning the surface including all cost of materials, scaffolding, labour, watering & curing T&P etc complete as per direction of E-I-C.				-
	Ground floor	sqm	288.40	2,868.46	827,263.86
					-

Sl No	CIVIL WORK	Unit	Rate	Qty	Amount
Item of Work					
13	Painting two coats with approved Enamel Paint on Steel surface over a coat of Red Oxide Primer including preparation of base with a approved quality & finishing the surface, smooth including all cost of materials, labour, scaffolding, T&P etc. complete as per the direction of E-I-C.				-
		sqm	262.80	682.47	179,351.80
14	Supplying and Fixing of M.S. Grills, M.S.Doors, M.S. Gate etc including cost,conveyance of all materials, priming, and labour for fitting fixing etc.complete as per the instruction of Engineer-in-Charge				-
		kg	100.70	14,040.00	1,413,828.00
15	Supplying,fitting & fixing of galvanised concentina coil 26" dia stretched to 6mtr/51 spiral(minimum 125 clips per coil of 96 mtr length per bondle) including cost of all labour,material,T & P etc. completed as per the direction of E.I.C	kg	91.45	3,750.40	342,974.08
Total					10,830,560.01
				SAY	10,830,600.00

CONSTRUCTION OF PARKING AT TAMARIND PROCESSING UNIT IN RAYAGADA, ODISHA					
Sl.no	Item of Work	Unit	Rate	Qty	Amount
2	Surface Cutting				
a	Earth work in excavation in hard soil or gravelly soil including dressing and levelling the bed				
		Cum	276.89	255.45	70,732.14
3	SAND FILLING				
	Filling foundation trenches and plinth with sweet river sand, well watered and compacted, top surface dressed and leveled to proper gradient in layers of 0.225 mtr including cost of all materials, conveyance, all taxes and royalties, loading and unloading, including cost of all labour, T&P, sundries etc. complete as per direction of the Engineer-in-charge.	cum	696.40	170.30	1,18,596.92
4	BACK FILLING				
	Back filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead upto 50 m and lift upto 1.5m.				
		cum	153.80	85.15	13,096.07
5	GSB				
	Construction of granular sub-base by providing Close graded Granular subbase Grading-III material as per table 400-1, spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with vibratory roller to achieve the desired density complete as per Clause 401 of MoSRT&H Specifications for Road & Bridge works (4th Revision) Unit = cum Taking output = 300 cum				
		cum	1,705.14	255.45	4,35,577.01
6	Paver Block				
	Fixing of interlocking blocks (PAVER STONE) of 80mm thick of approved pattern & shade over required thick bed of sand.	Sqm	809.78	1,703.00	13,79,054.87
					-
7	Providing and laying at or near ground level factory made kerb stone of M-30 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge).	cum	6,527.22	1.70	11,115.85
8	Steel work in built up tubular (round, square or rectangular hollow tubes etc) trusses etc, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc complete.	KG	171.00	1,200.00	2,05,200.00
					-
9	Tensile Fabric structure. Design, Fabrication, Manufacturing, Assembly, Supply & installation of tensile Fabric (Serge Ferrari, France, 902 S2 Type II, 950 GSM PVDF Coated fabric) and manufacture specification including all accessories, necessary fixing arrangement etc. Including welding and all fixing accessories, Corner plate etc.	Sqm	2,683.00	20.00	53,660.00
10	EV Charging Station	Kw	60.00	7,500.00	4,50,000.00
				Parking TOTAL	27,37,032.86

Abstract of Estimate for Electrical Power Sub-staion.

SI No	Description of Materials.	Amount in Rs.
1	Estimate for Supply, installation,testing & commisioning of 1 x 500KVA, 11/.4KV S/S along with arrangement for mounting of 11KV metering unit and Tapping 11KV OH line for power supply to Tamanid Processing Unit Rayagada.	3,927,225.00
	Total (A)	3,927,225.00
	Add: CESU 6% Supervision Charges Towards 11KV Line & Substation such as 6% on Package-1.	235,633.50
		4,162,858.50
	Add: Inspection Fees for Obtaining Statutory Clearance from E.I. (Govt. Of ODISHA)	150,000.00
		4,312,858.50

Estimate for Electrical Power Sub-staion and DG Set for Construction of Tamarind Processing Unit Raygada ,Odisha

SI No	Description of Materials.	Unit	Qty.	Rate in Rs.	Amount in Rs.
1	Supply, installation, testing & commissioning of 11Mtr long 150x150mm R.S. Joist pole for intermediate pole as support including supply of all required materials complete with its foundation and coppering as per specification of CESU & direction of EIC.	Kg	350	205.00	71,750.00
2	Supply & fixing of 11KV V cros arm with nut and bolts with back clamp as required and as per direction of EIC.	Nos	2	1,250.00	2,500.00
3	Supply & fixing of 11KV Straight cros arm maid out of 100 x 50 x 6mm MS channel with nut and bolts as required and as per direction of EIC.	Pair	2	3,000.00	6,000.00
4	Supply & fixing of 11KV B & S type disc insulator as per direction of EIC.	Nos	15	750.00	11,250.00
5	Supply & fixing of 11KV B & S type hard ware fittings as per direction of EIC.	Nos	8	750.00	6,000.00
6	Supply & fixing of 11KV Top chanel with nut & bolts as per direction of EIC.	Nos	2	350.00	700.00
7	Supply & fixing of 11KV Pin insulator with GI pin as per direction of EIC.	Nos	5	325.00	1,625.00
8	Supply & installation of Coil earth as per technical specification & direction of EIC.	Nos	2	350.00	700.00
9	Termination of 11KV Line at the end pole with the pole of CESU & jumpering including supply of all required materials like Al. binding wire, tape etc. as per site condition & direction of EIC.	Job	2	5,200.00	10,400.00
10	Supply, installation, testing & comisioning of 10Mtr long 200x100mm R.S. Joist pole for sub-station Double pole structure complete with foundation cost including coupling as per specification of CESU & direction of EIC.	Kg	450	165.00	74,250.00
11	Supply & fabrication of 100 x 50 x 6mm MS channel (9.2 Kg/ Mtr) 75 x 40 x 6mm MS channel (6.8 Kg/ Mtr) and 50 x 50 x 6 mm MS Angle (4.5KG/Mtr) for combi cover arrangement for mounting 11KV metering unit and mounting necessary arrangement for mounting of 1no. 400 Amp 300C 11KV AB switch 1no, 11 KV 3pole 400A HG Fuse and 3Nos. 12KV, 10KA LA as per specification of CESU and direction of EIC.	K.g.	450	175.00	78,750.00
12	Supply & fixing of 32mm medium gauge G.I. pipe for control cable & complete as per technical specification & direction of EIC to be used for 11kv Metering Unit.	Rmt	30	385.00	11,550.00
13	Supply & stringing of 95 sqmm. Insulated Aluminium conductor for Termination of AB switch, LA and HG Fuse for S/S DP including jumpering, fixing of PG clamps etc. complete as per site condition & direction of EIC.	Km	0.15	135,000.00	20,250.00
14	Supply, installation, testing and commisioning of 7c X 2.5 sqmm. PVC insulated copper wire & complete as per technical specification and direction of EIC.	Rmt	30	450.00	13,500.00
15	Supply, installation, testing & comisioning of 11KV AB Switch 3 Pole (400 Amp.) as per Specification of CESU & direction of EIC	Set	2	17,500.00	35,000.00
16	Supply, installation, testing & comisioning of 11KV HG Fuse 3 Pole (400 amp.) as per Specification of CESU & direction of EIC	No.	2	15,500.00	31,000.00
17	Supply, installation, testing & comisioning of 11 KV L.A. 12KV-10KA as per Specification of CESU & direction of EIC	No.	8	2,500.00	20,000.00
18	Supply, installation, testing and commissioning of HT stay set complete with insulator, 7/8 GI stay wire, clamps & bolts, nuts complete as required and with excavation and mass concreting as per technical specification & direction of EIC.	Nos	8	4,800.00	38,400.00
19	Supply, Installation,testing & commissioning of earthing complete with 3.0mtr X 50mm dia GI pipe perforated earth electrode complete with inspection chamber & cover complete including excavation of pit in hard stone as per technical specification & direction of EIC. (5Nos. for S/S and 2Nos. for 11KV metering unit.)	Nos	20	5,200.00	104,000.00
20	Supply & laying of 40x6mm GI Flat for earthing as per Specification of CESU & direction of EIC	K.g.	200	175.00	35,000.00

21	Supply of all materials & fixing / laying of No. 6 G.I. wire for earth connection as required & as per direction of EIC.	Mtr.	75	75.00	5,625.00
22	Supply & fixing of 50x6mm copper Z clamp for extension of TFR LT Bushing (4nos x0.8kg) each for connection of LT cable as per Specification of CESU & direction of EIC	Kg	20	1,500.00	30,000.00
23	Supply & painting of Red Oxide paint on pole & other MS structure as per Specification of CESU & direction of EIC	Ltr	15	175.00	2,625.00
24	Supply & painting of All. Paint on pole & other MS structure as per Specification of CESU & direction of EIC	Ltr	15	185.00	2,775.00
25	Supply & painting of Black Paint on pole & other MS structure as per Specification of CESU & direction of EIC	Ltr	15	165.00	2,475.00
26	Supply & fixing of MS Nut , Bolt & Washer as required and direction of EIC	K.g.	70	135.00	9,450.00
27	Supply, installation, testing & commissioning of 500KVA, 11/0.433KV 3phase, 50Hz core typ, oil immersed (ONAN), vector group DYN-11, out door type copper wound transformer with LT termination box having arrangement for termination of 3 nos 3 ½ C X 300 mm ² Ar. AL. PVC cable to be mounted on the plinth complete as required & as per the specification of IE Rule and direction of EIC.	No	1	950,000.00	950,000.00
28	Supply, installation, testing & commissioning of Substation feeder pillar panel, out door yard mounted type with following switch gears & accessories : I/C- 1 no. 800 Amps TP ACB MDO & 1000A 4 bar electrolytic aluminium bus with instruments : (a) 1 no 0-500V voltmeter with S/S & phase indicating lamps with control fuses complete as required & as per EIC.	No.	1	550,000.00	550,000.00
29	Supply, delivery, laying & testing of following size of XLPE insulated, PVC sheathed, round/strip armoured aluminium conductor power cable of 1100 volt grade laid underground/clamped on surface of wall/column/floor/existing G.I pipe/hume pipe as the case may be, including cost of excavation of earth in all kinds of soil & rock, sand, cushioning, protective brick covering, refilling the trench or saddles/clamps/markers, etc as the case may be, but excluding the cost of G.I pipe/hume pipe and complete with making good (Excluding the cost of floor tiles/Granites/Marble) the damages caused as required & as per EIC.				
a)	3 1/2 x 300mm ² A2XFY for (3nos)500 KVA TFR to S/S panel and S/S panel to MDB at control room.	Mtr.	150	1,650.00	247,500.00
30	Supply of all materials like cable Lugs, Gland etc. as required & termination of below mentioned cables complete as per required technical specifications & direction of EIC.				
a)	3 1/2 x 300mm ² A2XFY for (3nos)500 KVA TFR to S/S panel and S/S panel to MDB at control room.	No	40	1,250.00	50,000.00
31	Supply & installation of 100x116mm RS Joist 4mtr longx23kg for resting of LT cable at S/S as required and direction of EIC	Kg	105	205.00	21,525.00
32	Supply of all required materials & construction of plinth for above transformer of size 2m X 2m X 1.5m above G.L complete as per specification of CESU & direction of EIC.	No	5	21,500.00	107,500.00
33	Supply of all materials as required & construction of (10") brick masonry boundary wall 5ft hight from GL for S/S yard as per direction of EIC.	Rmt	75	1,850.00	138,750.00
34	Supply of all materials as required & construction of barbed wire fencing with 65 X 65 GI angle iron supports fixing by concreting on the above mentioned wall for S/S yard complete with required concreting for the angle posts with painting as per technical specification & as per direction of EIC.	Rmt	75	520.00	39,000.00
35	Supply of all materials as required & spreading of sand(150 mm thick) & 40 mm HG metal (150 mm thick) complete for entire S/S yard as direction of EIC.	Sq Mtr	75	275.00	20,625.00
36	Supply of all materials as required and installation of single leaf MS Grill Gate of size 3mtr X 1.65mtr as per details given in technical specification for S/S area with required concreting & painting etc. complete as per direction of EIC.	Set	2	38,000.00	76,000.00
37	Supply and laying of 80mm dia G.I. (M) pipe for cable riser complete as per site Engineers instruction and technical specification.	Mtr	75	1,250.00	93,750.00

38	Supply and fixing of G.I clamp for 80mm dia G.I. medium cable riser pipe as per site Engineers instruction and technical specification.	No	25	320.00	8,000.00
39	Sundries for survey , PVC tape, Ampire tape,Danger Board, small size nut & Bolt preparation of drawing cable socket etc	LS	4	6,000.00	24,000.00

40	DISTRIBUTION BOARD :-				
	Supply, delivery, installation, testing & commissioning of L.T. indoor floor/wall mounted type distribution board made out of 2mm thick for derusting, primered and painted with 2 coats of enamel paint of approved shade, dust & vermin proof, having door & compartmental arrangement for each equipments & bus bar chamber on the top of the panel running horizontally, having provision for cable/conduit entry, earthing studs as per specification mentioned below duly factory wired confirming to the relevant ISS.				
a)	MPDB (Control Room) :- Incomer I - 800Amps 4p ACB EDO 50KA Icw 1Sec- 1no Busbar - 4 no 1000Amps ALU. Busbar (CD - IA/Sqmm) Out going - (i) 400A 3p MCCB (36KA Ics) - 1no (ii) 400A 4p MCCB (36KA Ics) - 2nos (iii) 250A 4p MCCB (36KA Ics) - 2nos (iv) 65KA 4p VSP Controlled by 63A 4P MPDP- 1no (v) 200A 4p MCCB (36KA Ics) - 2nos (vi) 160A 4P MCCB (36 IcsKA) - 2nos Instruments - (i) Multi function meter - 1no (ii) Ammeter 0 to 400/800A with 3 nos 800/5 CT (iii) 3nos LED phase indicating lamps with control fuses + link complete with Factory made internal wiring	Set	1	975,000.00	975,000.00
				Total:	3,927,225.00

Grand Total: 3,927,225.00

ESTIMATE FOR LANDSCAPING AND DECORATIVE PLANTS FOR CONSTRUCTION OF TAMARIND PROCESSING UNIT IN RAYAGADA, ODISHA					
PART-A-DEVELOPMENT OF LANDSCAPING GREENERY DEVELOPMENT					
Sl No	Description of Items	Qnty	Unit	Rate	Amount (Rs)
1	Trenching in Ordinary soil Reclamation work like that Cleaning of unwanted shrubs uprooting of stumps ,vegitation,unwanted grass,wood,twigs,breaking colds,tilling of the area,segregation of debrish stones etc and lifting the above materials from thegarden area and disposing out side the premises as per instruction of Officer-in-Charge.	2500.00	Sqm	8.22	20550.00
2	Supply of good quality garden soil preferably red alluvial/sandy loam with texture neither too coarse nor too fine with a fair degree of water retaining capacity at site as per direction by the Officer/Site-In-Charge.	750.00	cum	320	240000.00
3	Supply of cow dung manure well decomposed garbage free including,unloading and delvery ,in all respect complete as per instruction by Officer/Site -in-Charge.	250.00	cum	705	176250.00
4	Supply & lifting and sprading of soil unifermally over the surface landscape design/advice of the Officer/Site-in-Charge.	750.00	cum	60	45000.00
5	Supply of good quality garden soil preferably red alluvial/sandy loam with texture neither too coarse nor too fine with a fair degree of water retaining capacity at site as per direction by the Officer/Site-In-Charge.	750.00	cum	290	217500.00
6	Supply,Lifting and Sprading of manure unifermally as per direction by the Officer/Site -in-Charge.	750.00	cum	58	43500.00

7	Supply of hedge and edge plant, healthy disease free in poly bags/container including transportation and delivery at site. Planning of Duranta Goldian/Durant Verigata(poly) 8" height 1.e 7 nos per metre at specified location by application of fertilizer and pesticide including watering as per instruction by the Officer-in-Charge.	200.00	Nos	25	5000.00
SUB-TOTAL -A				TOTAL	747800.00

PART-B-DEVELOPMENT OF TREE PLANTATION ORNAMENTALS

11	Supply of Plants with all labour, T & P, Materials and Planting including applying of Utrients/Pesticides(Bio/Organic/Inorganic) all complete as per the instruction by the Engineer-in-Charge.				
Sl No	Description of Items	Qnty	Unit	Rate	Amount (Rs)
a	Supply and Planting of 1.5 to 2 m tall plants - Flowery/Shady etc as per direction of the officer-in-charge.	100	Each	160	16000.00
b	Supply and Planting of Speciman plants - Flowery/Shady etc as per direction of the officer-in-charge.	100	Each	160	16000.00
c	Supply and planting of Herbs & Shrubs well developed in big poly bag as per direction of the officer-in-charge.	70	Each	64.7	4529.00
d	Supply and planting of Cactus Tree including all labour charges with in all respect complete, as per direction of the officer-in-charge.	70	Each	150	10500.00
	SUB TOTAL-B				47029.00
	SUB TOTAL-A				747800.00
	TOTAL(A+ B) =				794829.00

ABSTRACT OF CIVIL WORK

CONSTRUCTION OF TAMARIND PROCESSING UNIT IN RAYAGADA, ODISHA

Labour Shade

Item No/S.No	Description of work	Unit	Rate	Quantity	Amount
A	EARTH WORK				
1	Earth work in stoney earth and gravels mixed with stone and boulder not exceeding 0.014 cum in volume within 50m initial lead and 1.5m initial lift including rough dressing and breaking clods to maximum 5cm to 7cm and laying in layer not exceeding 0.3m in depth and as per specification approved by the dept.				
i	Ordinary Soil	CuM	276.89	43.34	11,999.13
2	Supplying & Filling foundation trenches , plinth & ditches with clean course river sand well watered and rammed in layers not exceeding 23 c.m. in depth with all lead and lift including cost, conveyance, loading, unloading, stacking,royalties and all taxes of sand,cost & conveyance of water, cost of all Labour,labour cess,T&P required for the work etc. complete in all respect as directed by the Engineer- in -charge.	CuM	696.40	32.13	22,377.73
3	Back filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead upto 50 m and lift upto 1.5m.	CuM	153.80	14.30	2,199.42
4	Making plinth protection 150 mm thick of cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) over 75mm thick bed of dry brick ballast 40 mm nominal size, well rammed and consolidated and grouted with fine sand, including finishing the top smooth				-
		SqM	2,398.50	15.75	37,776.38
B	PLAIN & REINFORCEMENT CONCRETE				-
1	Providing and laying P.C.C[1:4:8] using 4cm size metal etc in foundation and floors using cement , 40 mm size crusher broken H.G.Metal and screened and washed sharp river sand for mortar of approved quality and from approved quarry including hoisting ,lowering and laying concrete to the required level, ramming ,watering and curing etc	CuM	5,689.10	5.81	33,059.36
2	Providing and laying in position ready mixed M30 grade concrete having compressive strength at 28 days test not less than 250kg/sq.cm for reinforced cement concrete work using cement content as per approved design mix etc including Rigid & smooth centering and shuttering.				-

a	For R.C.C foundation, footing bases of column, mass concrete,pre-cast etc.	CuM	6,974.55	3.24	22,597.54
b	For R.C.C plinth band etc.	CuM	7,845.70	1.59	12,504.08
c	R.C.C Beam & Coloum				
i	Ground Floor	CuM	16,242.00	12.29	1,99,670.97
3	Cutting ,Straightening coiled or bend up HYSD/TMT Reinforcement bars welding or jointing if necessary , bending ,tying the grills as required for R.C.C works etc winding wire extra				-
a	Foundation	Qntl	8,871.00	5.16	45,797.65
b	Ground floor	Qntl	8,871.00	2.63	23,352.91
C	BRICK WORK				
1	Fly Ash Brick Masonry in cement mortar of mix (1:6) using Fly Ash bricks of size 25c.m x 11 c.m x 8 c.m in Foundation & Plinth having crushing strength not less than 75 kg per square c.m. with cement and screened & washed sharp sand for mortar after immersing the bricks for 6 (Six) hours in water before use in works with all necessary projections, splays cutting, circular moulding, corbelling, chamfering, watering and curing etc. including cost, coveyance,stacking, loading, unloading, royalties , all taxes ,cost of all labour,Labour cess ,scaffolding, sundries and T&P required for the works etc. complete in all respect as directed by the Engineer-in-charge.				
	Foundation and Plinth	CuM	5,750.00	5.92	34,051.50
2	Fly Ash Brick Masonry in cement mortar of mix (1:6) using Fly Ash bricks of size 25c.m x 11 c.m x 8 c.m in superstructure having crushing strength not less than 75 kg per square c.m. with cement and screened & washed sharp sand for mortar after immersing the bricks for 6 (Six) hours in water before use in works with all necessary projections, splays cutting, circular moulding, corbelling, chamfering, watering and curing etc. including cost, coveyance,stacking, loading, unloading, royalties , all taxes ,cost of all labour,Labour cess ,scaffolding, sundries and T&P required for the works etc. complete in all respect as directed by the Engineer-in-charge.				
a	Ground Floor	CuM	5,783.00	7.88	45,541.13
D	PLASTERING & PAINTING				
1	Providing 12mm. Thick cement plaster in cement mortar or mix(1:6) in all floors at all height with cement & screened and washed sharp river sand for mortar and finished smooth to the rough surface of the brick masonry walls after racking out the joints (alongwith providing grooves wherever necessary) including watering and curing,rounding of corners etc. complete with cost,conveyance, loading, unloading, royalties and taxes of all materials,cost of all labour,T&P,sundries and scaffolding required for the work etc. as directed by the Engineer-in- charge.				
a	Ground floor	SqM	189.00	31.50	5,953.50

2	Providing 16mm. Thick cement plaster in cement mortar or mix(1:6) in all floors at all height with cement & screened and washed sharp river sand for mortar and finished smooth to the rough surface of the brick masonry walls after racking out the joints (alongwith providing grooves wherever necessary)including watering and curing,rounding of corners etc. complete with cost,conveyance,loading, unloading,royalities and taxes of all materials,cost of all labour,T&P,sundries and scaffolding required for the work etc. as directed by the Engineer-in- charge.				
a	Ground floor	SqM	273.20	31.50	8,605.80
4	Providing and applying 2 coats with 100% acrylic emulsion paint on New surface including one coat of primer (exterior quality) of approved make & shade by reputed manufacturer to make an even finished surface over a coat of primer with water bound cement primer in all heights with all scaffolding and staging charges including cost , conveyance, taxes of all materials, cost of all labours , T & P, sundries etc. as required for the work complete.				
a	Ground floor	SqM	178.90	31.50	5,635.35
5	Supplying and painting of internal walls and ceiling with two or more coats of ACRYLIC emulsion paint on New surface which includes two coat of internal putty with a coat of primer all complete. The shade and brand to be of approved brand & shade over the surfaces including preparation of surface, with cost of all materials, labour, conveyance taxes of all materials,scaffolding etc., as per the direction of the Engineer-in-charge.				
a	Ground floor	SqM	288.40	63.00	18,169.20
6	Painting with synthetic enamel paint over a coat of primer of approved colour, shade and brand on New wood work /steel work in two or more coats as required to give an even shade including an under coat of suitable primer of approved brand and manufacturer including cost of all materials with taxes and transportation, loading, unloading, scaffolding, all labour, Labour cess, sundries, T&P, etc. complete as per the direction of the Engineer-in-charge including filling gaps with putties, scrapping, sand papering and cleaning the surface to make free from rusts, dusts and oily substances before applying primer etc. complete.				
a	Ground floor	sqm	262.80	10.00	2,628.00
E FLOORING					
1	2.5 cm thick AS Flooring (1:2:4) with 12mm & down grades size hard granite crusher broken chips on new work in Ground Floor.				
a	Ground floor	Page 271 of 281	351.00	27.00	9,477.05

2	12mm thick cement plaster in CM(1:4) with cement punning for skirting & Dados including all cost. complete with cost, conveyance, royalty of all materials and labour with T&P required for the work with royalties, taxes etc. complete in all floors as per direction of Engineer-in-charge.				
a	Ground floor	SqM	231.20	3.60	832.32
G	STEEL WORK				
1	Supplying, fitting and fixing of M.S grills, grill gates with top and bottom rails, (as per I.S. specification and as per approved drawings) in proper position in all floors and at all height including making holes to brick walls/ R.C.C structure/wood work etc. and making good to the damaged walls/ structures with cement concrete (1:2:4) with black hard crusher broken granite stone chips of 12mm to 20mm size (20mm size not to exceeds 25%) including watering and curing including cost, conveyance, loading, unloading, stacking, royalties and taxes of all materials, cost of all Labour, Labour cess ,Sundries, T&P required for the work etc. complete as per the direction of Engineer in charge (W.I. / M.S. windows grills, grill gates, collapsible gates with top and bottom rails, steel windows, steel doors, steel frames for doors and windows, staircase and parapet railings square bar along with required nos. of nails and screws and other required materials of approved quality and approved size shall be supplied by the contractor at his own cost.)	KG	100.70	112.50	11,328.75
3	Steel work in built up tubular(round, square or rectangular hollow tubes etc) trusses etc, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc complete.	KG	171.00	81.00	13,851.00
5	Fitting & fixing G.C.I. Sheet in roof drilling hole in wind ties including fixing of ridges valleys wind ties including cost of materials ,labour for fixing etc all complete	SqM	468.61	27.00	12,652.39
TOTAL CIVIL WORK					5,80,061.10

Estimate for :-

CONSTRUCTION OF TOILET FOR TAMARIND PROCESSING UNIT IN RAYAGADA, ODISHA

SI.No	ITEMS OF WORKS		AMOUNT (In Rs.)
A	CIVIL WORKS	=	14,30,467.82
B	PH & SANITARY WORKS	=	2,14,570.17
C	ELECTRICAL WORKS	=	1,43,046.78
D	SUB TOTAL (A+B+c)	=	17,88,084.77

ABSTRACT OF CIVIL WORK

CONSTRUCTION OF TOILET FOR TAMARIND PROCESSING UNIT IN RAYAGADA, ODISHA

Item No/S.No	Description of work	Unit	Rate	Quantity	Amount
A	EARTH WORK				
1	Earth work in stoney earth and gravels mixed with stone and boulder not exceeding 0.014 cum in volume within 50m initial lead and 1.5m initial lift including rough dressing and breaking clods to maximum 5cm to 7cm and laying in layer not exceeding 0.3m in depth and as per specification approved by the dept.				
i	Ordinary Soil	CuM	276.89	66.34	18,368.26
b)	extra for every additional lift of 1.5 m or part there of in excavation/ banking excavated or stacked materials				
	Ordinary Soil	CuM	22.00	-	-
2	Supplying & Filling foundation trenches , plinth & ditches with clean course river sand well watered and rammed in layers not exceeding 23 c.m. in depth with all lead and lift including cost, conveyance, loading, unloading, stacking,royalties and all taxes of sand, cost & conveyance of water, cost of all Labour,labour cess,T&P required for the work etc. complete in all respect as directed by the Engineer- in -charge.	CuM	696.40	77.49	53,966.99
3	Back filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead upto 50 m and lift upto 1.5m.	CuM	153.80	21.89	3,366.88
4	Making plinth protection 150 mm thick of cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) over 75mm thick bed of dry brick ballast 40 mm nominal size, well rammed and consolidated and grouted with fine sand, including finishing the top smooth				-
		SqM	2,398.50	11.51	27,595.10
5	Supplying , diluting and and preparing chemical emulsion like CHLORPYRIPHOS or other chemicals approved by central Insecticides Board or as directed by the manufacturer and spraying the mixture uniformly by sprayer as pre-constructional anti termite treatment and creating a chemical barrier under and around wall trenches, basement excavation, top surface of plinth filling, junction of walls and floors along with external perimeter of the building, surrounding the pipes and conduits etc. complete at the rate of 7.5 litres (or as directed by the manufacturer) per sqm on vertical and 5.0 liters per sqm on horizontal surfaces, 50% of the emulsion to be filled in the holes made in trenches at 150mm center to center etc. complete.as per IS:6313/1981 (PART-II) and as per the direction of engineer-in-charge including all cost of materials labour, taxes etc. all complete.	SqM	164.00	40.80	6,691.20
B	PLAIN & REINFORCEMENT CONCRETE				-

6	Providing and laying P.C.C[1:4:8] using 4cm size metal etc in foundation and floors using cement , 40 mm size crusher broken H.G.Metal and screened and washed sharp river sand for mortar of approved quality and from approved quarry including hoisting ,lowering and laying concrete to the required level, ramming ,watering and curing etc	CuM	5,689.10	7.70	43,808.69
7	Providing and laying in position ready mixed M30 grade concrete having compressive strength at 28 days test not less than 250kg/sq.cm for reinforced cement concrete work using cement content as per approved design mix etc including Rigid & smooth centering and shuttering.				-
a	For R.C.C foundation, footing bases of column, mass concrete,pre-cast etc.	CuM	6,974.55	7.50	52,316.73
b	For R.C.C plinth band etc.	CuM	7,845.70	2.62	20,583.49
c	R.C.C Beam & Coloum				
i	Ground Floor	CuM	16,242.00	4.53	73,547.43
d	Lintel				
i	Ground Floor	CuM	14,689.00	1.31	19,268.57
f	Chaja				
i	Ground Floor	Sqm	1,251.66	2.40	2,999.28
g	Roof slab,Landing,Balcony,				
i	Ground Floor	CuM	14,229.20	5.10	72,568.92
8	Cutting ,Straightening coiled or bend up HYSD/TMT Reinforcement bars welding or jointing if necessary , bending ,tying the grills as required for R.C.C works etc winding wire extra				-
a	Foundation	Qntl	8,871.00	10.57	93,769.84
b	Ground floor	Qntl	8,871.00	15.30	1,35,736.02
C BRICK WORK					
9	Fly Ash Brick Masonry in cement mortar of mix (1:6) using Fly Ash bricks of size 25c.m x 11 c.m x 8 c.m in Foundation & Plinth having crushing strength not less than 75 kg per square c.m. with cement and screened & washed sharp sand for mortar after immersing the bricks for 6 (Six) hours in water before use in works with all necessary projections, splay cutting, circular moulding, corbelling, chamfering, watering and curing etc. including cost, conveyance, stacking, loading, unloading, royalties , all taxes ,cost of all labour,Labour cess ,scaffolding, sundries and T&P required for the works etc. complete in all respect as directed by the Engineer-in-charge.				
	Foundation and Plinth	CuM	5,750.00	11.51	66,157.20

10	Fly Ash Brick Masonry in cement mortar of mix (1:6) using Fly Ash bricks of size 25c.m x 11 c.m x 8 c.m in superstructure having crushing strength not less than 75 kg per square c.m. with cement and screened & washed sharp sand for mortar after immersing the bricks for 6 (Six) hours in water before use in works with all necessary projections, splay cutting, circular moulding, corbelling, chamfering, watering and curing etc. including cost, conveyance, stacking, loading, unloading, royalties, all taxes, cost of all labour, Labour cess, scaffolding, sundries and T&P required for the works etc. complete in all respect as directed by the Engineer-in-charge.				
a	Ground Floor	CuM	5,949.00	12.74	75,765.45

11	Fly Ash Brick masonry in cement mortar of mix [1:4] using Fly Ash bricks of size 25cm12cmx8cm in superstructure having crushing strength not less than 75 kg /m2 etc[Half Brick work]				
a	Ground Floor	CuM	5,982.00	5.97	35,711.19
D	PLASTERING & PAINTING				
12	Providing 12mm. Thick cement plaster in cement mortar or mix(1:6) in all floors at all height with cement & screened and washed sharp river sand for mortar and finished smooth to the rough surface of the brick masonry walls after racking out the joints (alongwith providing grooves wherever necessary) including watering and curing,rounding of corners etc. complete with cost,conveyance, loading, unloading, royalties and taxes of all materials,cost of all labour,T&P,sundries and scaffolding required for the work etc. as directed by the Engineer-in- charge.				
a	Ground floor	SqM	189.00	149.83	28,318.72
13	Providing 16mm. Thick cement plaster in cement mortar or mix(1:6) in all floors at all height with cement & screened and washed sharp river sand for mortar and finished smooth to the rough surface of the brick masonry walls after racking out the joints (alongwith providing grooves wherever necessary)including watering and curing,rounding of corners etc. complete with cost,conveyance,loading, unloading,royalties and taxes of all materials,cost of all labour,T&P,sundries and scaffolding required for the work etc. as directed by the Engineer-in- charge.				
a	Ground floor	SqM	273.20	77.11	21,067.45
14	Finishing wall surface of wall with cement based wall putty [water based] of approved make and finished smooth and even surface to receive painting including cost etc				
a	Ground Floor	SqM	288.40	251.46	72,519.77
15	Providing and applying 2 coats with 100% acrylic emulsion paint on New surface including one coat of primer (exterior quality) of approved make & shade by reputed manufacturer to make an even finished surface over a coat of primer with water bound cement primer in all heights with all scaffolding and staging charges including cost , conveyance, taxes of all materials, cost of all labours , T & P, sundries etc. as required for the work complete.				
a	Ground floor	SqM	178.90	149.83	26,805.39
16	Supplying and painting of internal walls and ceiling with two or more coats of ACRYLIC emulsion paint on New surface which includes a coat of primer all complete. The shade and brand to be of approved brand & shade over the surfaces including preparation of surface, with cost of all materials, labour, conveyance taxes of all materials,scaffolding etc., as per the direction of the Engineer-in-charge.				
a	Ground floor	SqM	288.40	101.62	29,307.50
E	FLOORING				

17	Fixing Ceramic tile (300mm x 300mm) in floors treads or steps and landing on 25mm thick bed of cement mortar 1:1 (1cement : 1sand) jointed with neat cement slurry mixed with pigment to match the shades of the tiles including rubbing and polishing complete as per direction of engineer in charge.				
a	Ground floor	SqM	1,328.80	38.04	50,550.80
18	Fixing Ceramic glazed wall tile in dados skirting and risers of step on 12mm thick cement plaster (1:3) jointed with neat cement slurry mixed with pigment to match the shades on the tiles etc. complete as per direction of engineer in charge.				
a	Ground floor	SqM	1,448.60	190.21	2,75,541.41
19	Fixing Granite tiles (19MM thk) in floors treads or steps and landing on 25mm thick bed of cement mortar 1:1 (1 cement : 1 sand) jointed with neat cement slurry mixed with pigment to match the shades on the tiles etc. complete as per direction of engineer in charge.				
a	Ground floor	SqM	3,474.10	5.70	19,802.37
F	DOOR & WINDOW				
20	Providing and fixing unplasticised poly vinyl chloride (uPVC) chowkhat in cluding all fittings and cost, conveyance of all materials, labours and T&P required for the work etc, all complete as per direction of engineer in charge.	SqM	1,471.00	3.11	4,567.46
21	Providing and fixing FRP door in cluding all fittings and cost, conveyance of all materials, labours and T&P required for the work etc, all complete as per direction of engineer in charge.	Sqm	5,126.00	16.38	83,963.88
H	Grading plaster				
22	2.0 cm thick grading Plaster (1:4) on roof slab with 6mm size HG chips including all cost, conveyance, royalty & taxes etc.comp.to work site for new work as per the specification approved by the department & direction of E.I.C	sqm	387.30	40.80	15,801.84
TOTAL CIVIL WORK					14,30,467.82

ESTIMATE FOR CONSTRUCTION OF UGR RAYAGADA

SI.No.	ITEMS OF WORKS		AMOUNT (In Rs.)
A	TOTAI CIVIL WORK	=	498,443.27
B	BOREWELL	LS	500,000.00
C	SUB TOTAL (A+B)	=	998,443.27

ABSTRACT OF CIVIL WORK

ESTIMATE FOR CONSTRUCTION OF UGR RAYAGADA

Item No/S.No	Description of work	Unit	Rate	Quantity	Amount
A	EARTH WORK				
1	Earth work in stoney earth and gravels mixed with stone and boulder not exceeding 0.014 cum in volume within 50m initial lead and 1.5m initial lift including rough dressing and breaking clods to maximum 5cm to 7cm and laying in layer not exceeding 0.3m in depth and as per specification approved by the dept.				
i	Ordinary Soil	CuM	276.89	28.88	7,996.65
ii	Soft Rock	CuM	431.82	-	
iii	Hard Rock	CuM	762.92	-	
b)	extra for every additional lift of 1.5 m or part there of in excavation/ banking excavated or stacked materials				
	Ordinary Soil	CuM	22.00	34.65	762.30
2	Supplying & Filling foundation trenches , plinth & ditches with clean course river sand well watered and rammed in layers not exceeding 23 c.m. in depth with all lead and lift including cost, conveyance, loading, unloading, stacking,royalties and all taxes of sand,cost & conveyance of water, cost of all Labour,labour cess,T&P required for the work etc. complete in all respect as directed by the Engineer-in -charge.	CuM	696.40	21.18	14,749.75
3	Back filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead upto 50 m and lift upto 1.5m.	CuM	153.80	42.35	6,513.43
4	With Chlorpyriphos/Lindane E.C. 20% with 1% concentration	SqM	164.00	14.21	2,330.44
B	PLAIN & REINFORCEMENT CONCRETE				
5	Providing and laying P.C.C[1:4:8] using 4cm size metal etc in foundation and floors using cement , 40 mm size crusher broken H.G.Metal and screened and washed sharp river sand for mortar of approved quality and from approved quarry including hoisting ,lowering and laying concrete to the required level, ramming ,watering and curing etc	CuM	5,689.10	2.62	14,925.35
6	Providing and laying in position ready mixed M25 grade concrete having compressive strength at 28 days test not less than 250kg/sq.cm for reinforced cement concrete work using cement content as per approved design mix etc including Rigid & smooth centering and shuttering.				
a	For R.C.C plinth band etc.	CuM	7,845.70	4.97	39,020.59
b	R.C.C Beam & Coloum				
i	UGR	CuM	16,242.00	9.77	158,651.86
c	Roof slab,Landing,Balcony,				
i	Ground Floor	CuM	14,229.20	2.06	29,262.35

7	Cutting ,Straightening coiled or bend up HYSD/TMT Reinforcement bars welding or jointing if necessary , bending ,tying the grills as required for R.C.C works etc winding wire extra				
a	Foundation	Qntl	8,871.00	3.98	35,295.93
i	UGR	Qntl	8,871.00	17.12	151,869.75
8	Providing 12mm. Thick cement plaster in cement mortar or mix(1:6) in all floors at all height with cement & screened and washed sharp river sand for mortar and finished smooth to the rough surface of the brick masonry walls after racking out the joints (alongwith providing grooves wherever necessary) including watering and curing,rounding of corners etc. complete with cost,conveyance, loading, unloading, royalties and taxes of all materials, cost of all labour,T&P,sundries and scaffolding required for the work etc. as directed by the Engineer-in- charge.				-
i	Ground Floor	sqm	189.00	51.48	9,729.72
9	Providing 16mm. Thick cement plaster in cement mortar or mix(1:6) in all floors at all height with cement & screened and washed sharp river sand for mortar and finished smooth to the rough surface of the brick masonry walls after racking out the joints (alongwith providing grooves wherever necessary) including watering and curing,rounding of corners etc. complete with cost,conveyance,loading, unloading,royalties and taxes of all materials, cost of all labour,T&P,sundries and scaffolding required for the work etc. as directed by the Engineer-in- charge.				-
i	Ground Floor	sqm	273.20	46.20	12,621.84
10	Providing and applying 2 coats with 100% acrylic emulsion paint on New surface including one coat of primer (exterior quality) of approved make & shade by reputed manufacturer to make an even finished surface over a coat of primer with water bound cement primer in all heights with all scaffolding and staging charges including cost , conveyance, taxes of all materials, cost of all labours , T & P, sundries etc. as required for the work complete.				-
i	Ground Floor	sqm	178.90	51.48	9,209.77
D	Grading plaster				-
11	2.0 cm thick grading Plaster (1:4) on roof slab including all cost, conveyance, royalty & taxes etc.comp.to work site for new work as per the specification approved by the department & direction of E.I.C				-
	Terrace Floor	Sqm	387.30	14.21	5,503.53
	TOTAL CIVIL WORK				498,443.27