TENDER FOR

CONSTRUCTION AND MARKETING OF

HIG HOUSING PROJECT OF

MUSSOORIE DEHRADUN DEVELOPMENT AUTHORITY (MDDA) NEAR ISBT DEHRADUN

19/10/2019

Mussoorie Dehradun Development Authority (MDDA)
Transport Nagar, Saharanpur Road, Dehradun – 248001
Tel: 0135 – 6603100, Fax: 0135 – 6603103, Email: info@mddaonline.in

NOTICE INVITING TENDER

Sealed offers are invited from experienced and competent bidders meeting prescribed qualifying criteria for the following work**:-**

"CONSTRUCTION AND MARKETING OF HIG HOUSING PROJECT OF MUSSOORIE DEHRADUN DEVELOPMENT AUTHORITY NEAR ISBT DEHRADUN"

Last Date of Submission of proposal is **08/11/2019 upto 05:00 p.m.**

The **pre-bid meeting** will be held on **31/10/2019 at 01:00 p.m**. in the office of Vice Chairman, Mussoorie Dehradun Development Authority (MDDA), Transport Nagar, Saharanpur Road, Near ISBT, Dehradun-248001, Uttarakhand.

Schedule of Selection

1	Estimated Cost of Work	:	Rs. 43.93 crore + GST
2	Tender Fee (Non-Refundable)	:	Rs. 10,000/- (Rupees Ten Thousand only) including GST in the form of Demand Draft in favour of Secretary MDDA payable at Dehradun.
3	Amount of Earnest Money Deposit	:	Rs. 70.00 Lakhs (Rupees Seventy Lakhs only) in form of FDR/Bank Guarantee in favour of Secretary MDDA payable at Dehradun.
4	Project Completion Period	:	08 (Eight) Months
5	Pre-Bid Meeting	:	31/10/2019 at 03:00 PM in the Office of Mussoorie Dehradun Development Authority, Transport Nagar, Saharanpur Road, Near ISBT, Dehradun- 248001, Uttarakhand.
6	Last date and time for submission of Tender at e-tendering website (www.uktenders.gov.in)	:	08/11/2019 upto 03:00 PM
7	Last date and time for submission of Copy of Technical Proposal along with EMD, tender cost and power of attorney in the office of Vice Chairman, MDDA. **Note:** *(i) If in case of discrepancy in hard and soft copy online proposal shall prevail.* *(ii) Financial proposal shall be submitted online only.*		08/11/2019 upto 05:00 PM
8	Date of opening of Tenders (Technical Bid)	:	08/11/2019 at 05:00 PM
9	Date of opening of Tenders (Financial Bid)	:	To be Intimated Later to technically qualified bidders

Full details, specifications, terms and conditions of work shall be available in the Tender Document for above N.I.T., which can be downloaded from MDDA website www.mddaonline.in and e-tendering website www.uktenders.gov.in. Tender Fee and EMD in the form of Demand Draft shall be deposited along with Power of Attorney and a copy shall be annexed with Online Proposal. The tenderer has to ensure that the tender so downloaded is complete along with all corrigendum/addendum, if any. Incomplete Tender shall be rejected out rightly. Tenders received without EMD, Tender Fee and Power of Attorney and documents pertaining to qualifying criteria mentioned in Tender Document will be summarily rejected.

For further query bidders can visit the site and office of MDDA during the office hours on any working day before the submission date of the bid.

Technical and Financial Bid shall be submitted online only and a sealed copy of Technical Bid along with Tender Fee, EMD and Power of Attorney shall be submitted in the office of Vice Chairman Mussoorie Dehradun Development Authority as per the above-mentioned schedule. The Financial part of the technically qualified tenderers only will be opened. Bids received through Telex, Telegraphic or e-mail tenders will not be entertained.

The successful Tenderers shall have to comply with all the provision of labour laws and rules appended there under as applicable from time to time, MDDA reserves the right to accept or reject or cancel any or all tender(s) at anytime at its sole discretion if necessary, without assigning any reason whatsoever.

The purpose of this NIT is to provide interested parties with information to assist the preparation of their bid. Neither MDDA 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, MDDA 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/Tender. MDDA is not responsible if no due diligence is performed by the Respondents

MDDA, reserves the right not to proceed with the Project at site and It also reserves the right to decline to discuss the Project further with any respondent.

No reimbursement of cost of any type or on any account will be paid to persons or entities submitting their Bid.

IMPORTANT POINTS:

1.1 Bidder should be an Indian organization.

1.2 Bidder must not have been blacklisted or deregistered by any government agencies or public sector undertaking. If so, the same shall be brought to the notice of the Employer.

1.3 MDDA reserves the right to accept or reject or cancel any or all tender(s) at anytime at its sole discretion if necessary, without assigning any reason whatsoever. No Bidder shall have any cause of action or claim against MDDA. for rejection of his Bid.

1.4 The officer inviting tenders 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.

SECTION– I
Instructions to Bidders

1. Introduction

Mussoorie Dehradun Development Authority (MDDA) henceforth referred as Client/Authority, under look the project of development of HIG Dwelling Units at ISBT Dehradun with the objective of provision of quality housing facilities at affordable prices.

The total estimated project cost of the above project is Rs. 148 Cr. (approx.), the project has been completed till 68% and MDDA intends to appoint an agency to construct the remaining Blocks- A, B, H, J & K as defined in Annexure-1 "Site Plan" and to complete the remaining part of the project till satisfactory completion. The DPR estimates of the balance work for which this Tender has been published is estimated at Rs 43.93 Cr. (approx.).

The successful agency shall also be responsible for overall marketing for selling the dwelling units of the HIG Group Housing project. MDDA shall pay upto 3% of the value of the sale consideration amount (excluding GST) of each Dwelling Units sold (calculated on minimum sale of 5 Dwelling Units), to the successful bidder in a manner as outlined in the tender section

Dwelling unit's typology:

Number of units	338
Type A	300
Type B	38
Sold	
Type A	110
Type B	36
Vacant	
Type A	190
Type B	2
Selling price (on completed development)- In Lakh (including GST)	
Selling Price - Type A	₹ 71.50
Selling Price - Type B	₹ 79.20

MDDA invites Tenders from **Construction Agencies/Firms for Construction of non-completed component/remaining work refer Annexure-2, Successful bidder shall do the Civil Works, Electrical works etc. including** overall **Marketing of HIG Housing Project near ISBT Dehradun. (hereinafter referred as Project).** Construction shall be as per applicable CPWD guidelines and specification. Bidders quoting the least cost (L1) shall be considered as successful bidder, the payment will be made as per the actual work done and item wise measurement basis and, the payment of marketing shall be made on the basis of minimum average targeted sales i.e. average 30 units in five (05) months is achieved by the successful bidder.

The scope of successful bidder shall not be limited to construction only but also for marketing of the project.

Guideline & specifications of CPWD, other Indian standards and all statutory guidelines shall be followed:-

A) Interested bidders may submit their proposals by the date as mentioned in Schedule of Selection process.

B) Technical and Financial bids shall be submitted online separately.

C) Proposals should be submitted in English.

2. Purpose

Bidders for the purpose of preparing offer for carrying out "***Construction and Marketing of HIG Housing project of Mussoorie Dehradun Development Authority near ISBT Dehradun***". Bidders are requested to do their self-analysis prior to submission of the proposal.

1) The Schedule of Quantity is given as Annexure-2. The tenderer has to quote their offer as per the Schedule of Quantities. The tenderer shall quote rate(s) in figures as well as in words. In case of any discrepancy between the two, rate(s) quoted in words shall prevail. In case of discrepancy between quoted rate and amount, rate shall prevail. The payment will be made as per the actual work done and item wise measurement basis and the payment of marketing shall be made on the basis of minimum average targeted sales i.e. average 30 units in five (05) months is achieved by the successful bidder.

2) Bidders are advised to examine the available Cost Index/Market Rate while framing their estimate/rates. Rates of DSR are inclusive of GST and Rates of SOR and Market Price are exclusive of GST.

3) The pre-bid meeting will be held on 31/10/2019 at 03:00 p.m. in the office of Vice Chairman, MDDA, Transport Nagar, near ISBT, Dehradun.

4) a) Submission of a tender by a tenderer implies that the tenderer has read this notice

and all other Tender Documents visited the site and has made himself aware of the scope for the project, the specifications, local conditions and other factors having bearings on the execution of the work.

b) While all efforts have been made to avoid errors in the drafting of the tender documents, the Bidder is advised to check the same carefully. No claim on account of any errors detected in the tender documents shall be entertained.

c) MDDA 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, MDDA:

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.

V) 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 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 declare 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 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. MDDA will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

d) Each page of the Tender documents should be stamped and signed by the person or persons submitting the Tender in token of his/their having acquainted himself/themselves and accepted the entire tender documents including various conditions of contract. Any Bid with any of the Documents not so signed is liable to be rejected at the discretion of MDDA. The signatures shall be in blue ink.
e) The bidder shall attach the original authorization letter/power of Attorney as the proof.
f) The Bidders are expected to carefully examine all the contents of the tender documents including instructions, conditions, terms, specifications, drawings and get clarifications, if required, from MDDA and take them fully into account before submitting their offer. Failure to comply with the requirements as detailed in these documents shall be at the Bidder's own risk. Bidders which are not responsive to the requirements of the tender documents will be rejected.
g) The bids not meeting the minimum eligibility criteria, Technical Bids not accompanied with EMD and Tender Document Fees of requisite amount in acceptable format, Bids in altered/modified formats, or in deviation with any other requirements stipulated in the tender documents are liable to be rejected.
h) The Bid submitted on behalf of a Firm shall be signed by all the Partners of the Firm or by a Partner who has the necessary authority on behalf of the Firm to enter into the proposed contract. Otherwise, the bid is liable to be rejected by the MDDA.
i) The bidders are expected to meet the minimum eligibility criteria as given in the tender document to participate in this tender. MDDA will reject the Bids that do not meet the minimum eligibility criteria as laid down, based on their submission along with the tender documents, even after the bid opening process is concluded.
j) 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/ /performance guarantee will be forfeited and the bidder will be liable to be banned from doing any business with MDDA.
k) Incomplete Price bid shall be liable to be rejected, at the discretion of MDDA. The total bid price shall cover the entire scope of works covered in the tender.
l) MDDA shall not be responsible for any postal delay and the bids received after stipulated date & time whatsoever be the reason, the bid is liable to be rejected by the MDDA

5) Procedure for submission of bid:

i) The Tender Fee (non-refundable) of **Rs. 10000/- (Rupees Ten Thousand only**) in the Sealed Envelope in form of Demand Draft in favour of Secretary, MDDA payable at Dehradun.

ii) Earnest Money Deposit (EMD) of **Rs. 70,00,000/- (Rupees Seventy Lakhs only)** in the Sealed Envelope in form of Bank Guarantee/FDR in favour of Secretary, MDDA payable at Dehradun.

iii) The Earnest Money may be accepted only in the following forms:
- Demand Draft of a Scheduled Bank.
- Fixed Deposit Receipt (FDR) of a Scheduled Bank in the name of Secretary MDDA payable at Dehradun.

iv) The Offer of the bidder may not be considered for further evaluation, if the Cost of Tender, Power of Attorney and EMD are not submitted in the form and manner as stated above and their offer is liable to be rejected.

v) The EMD of unsuccessful tenderer(s) except lowest three will be refunded after finalization of tender process. **The Earnest Money deposit submitted by the successful tenderer shall be retained by MDDA until the Performance Bank Guarantee (PBG) (i.e. 5% of contract value) is submitted.**

vi) If any tenderer withdraws or make any changes in his offer already submitted before the expiry of the above validity period or any extension thereof without the written consent of MDDA, the EMD amount will be forfeited for such act of the tenderer.

vii) **MDDA reserves the right of forfeiture of Earnest Money deposit (EMD) in case of the successful tenderer**.

a) After opening of Tender, revokes his tender within the validity period or increases his earlier quoted rates.

b) Does not commence the work within the period as per LOI/Contract. In case the LOI/Contract is silent in this regard then within 20 days after award of contract.

c) EMD shall not carry any interest. EMD shall be interest free.

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

7) Contents of Technical Bid:

The Technical Bid, clearly labelled as **"TECHNICAL BID"** has to be submitted with the following:

i) Bidder's covering letter of offer.

ii) Power of Attorney / Authorization Letter to sign the Tender in original

iii) Copy of Signed & stamped NIT documents (comprising of total documents-all pages) including documents related to Qualifying criteria.

iv) Tender Fee in the Sealed Envelope in the form of Demand Draft

v) Earnest Money Deposit in the Sealed Envelope in the form of Bank Guarantee/FDR from any Scheduled Bank in favour of Secretary MDDA payable at Dehradun

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

8) Contents of Financial Bid

The Financial Bid, clearly labeled as "FINANCIAL BID" should be submitted online only, in the Schedule of Quantities as Annexure-2 (format prescribed). These prices should include all costs associated with the Project an any out of pocket/mobilization expenses, Sales Tax, (except Goods and Service Tax), Purchase Tax, Turnover Tax, Excise Duty, Work Contract Tax or any other tax on materials as applicable shall be paid by the Contractor himself. The Contractor shall quote his rates considering all such taxes. If MDDA is required to pay any such tax, the same shall be deducted from the contractor.

9) 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. MDDA shall in no case be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.

10) Language of Bid

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

11) Currency of Bid

Bid prices shall be quoted in Indian Rupees.

12) Outer cover:

It shall be super scribed with **"TENDER DOCUMENT FOR CONSTRUCTION AND MARKETING OF HIG HOUSING PROJECT OF MUSSOORIE DEHRADUN DEVELOPMENT AUTHORITY NEAR ISBT DEHRADUN".**

Due date of submission shall be written on all the covers/envelopes of the bid without fail. Bids received after the due date and time shall not be accepted.

"No request for extension of the due date indicated above shall be entertained".
Telegraphic or Fax or E-Mail offers shall not be accepted under any circumstances.

13) Tender submitted by tenderer shall remain valid for acceptance for a period of **120 (One Hundred Twenty)** days from the date set for submission of the tender. The tenderer shall not be entitled within the said period of **120 (One Hundred Twenty)** days to revoke or cancel or vary the tender given or any item thereof, without the consent of MDDA. In case tenderer revokes, cancels, or varies his tender in any manner without the consent of MDDA, within this period, his earnest money will be forfeited.

Financial Bid of those Bidders who will be technically qualified for the subject project, on the basis of evaluation of technical bids, will be opened on specified date. The date & time to open the price bid (Part-II) shall be intimated to the technical qualified bidders and in such a case, representative of the bidder shall be allowed to attend. MDDA decision in this regard shall be final & binding. The lowest Financial Bid so opened shall be awarded the work (L-1 Bidder).

Acceptance of MDDA is a prerequisite for consideration of Bidder's offer for this work. Accordingly, Bidder(s) not acceptable to MDDA. shall not be considered and shall be rejected by MDDA and no correspondence and claim etc. from the Bidder in pursuant to the Tender shall be entertained by MDDA under any circumstances whatsoever.

3. Brief Description of Bidding Process

a) In order to identify and select an entity for award of the Project, the MDDA intends to adopt a single stage, open, transparent, competitive bidding process (the "Bidding Process"). The single stage of the Bidding Process is the Proposal stage during which Proposal(s) are being invited from the Bidders.

b) The evaluation of the Proposals would be carried out on least cost-based selection in two (2) mutually distinct and sequential steps.

c) The first step would be the Qualification Step which would involve a test for responsiveness based on technical and financial qualification criteria set forth herein.

d) In the qualification step, the qualification submission comprising information of the Bidders on their Technical capacity and Financial capacity for undertaking the Project would be evaluated and, Based on this step, only those Proposals that meet the technical capacity and financial capacity as set out in this Tender Document for the Project would be qualified and their financial proposals would be opened for identification and selection of the Bidder to whom the Project, subject to the terms of tender, be awarded (the "Selected Bidder").

e) The bidder quoting the lowest (L1) bid will be called for further discussions to sign a Contract Agreement, who shall be responsible for complete Construction and overall Marketing of HIG Housing Project of Mussoorie Dehradun Development Authority near ISBT Dehradun as per the Specification and guidelines.

4. Procurement of Documents (Tender Fee)

The Tender Document can be downloaded from e-tendering website www.uktenders.gov.in or MDDA website www.mddaonline.in A demand draft for Rs. 10000/- (Rupees Ten thousand Only), including GST in favour of "Secretary, Mussoorie Dehradun Development Authority" payable at Dehradun, the above-mentioned payment shall be made along with the submission of Proposal and the copy demand draft shall be Annexed with technical proposal.

5. Site visit and verification of information

Bidders are encouraged to submit their respective Proposals after visiting the Project site and ascertaining for themselves the site conditions, traffic, location, surroundings, climate, access to the site, availability of data, Applicable Laws and regulations or any other matter considered relevant by them. Bidders are invited to examine the Project in greater detail, and to carry out, at their cost, such studies as may be required for submitting their respective Proposals.

6. Communications

All communications should be addressed to:

Vice Chairman
Mussoorie Dehradun Development Authority (MDDA)
Transport Nagar, Saharanpur Road,
Dehradun – 248001
Tel: 0135 – 6603100, 0135-6603115,
Fax: 0135 – 6603103
Email: *info@mddaonline.in*,

The Official Website of the Authority is**: www.mddaonline.in**

All communications, should contain the following information, to be marked at the top in bold letters:

"TENDER DOCUMENT FOR CONSTRUCTION AND MARKETING OF HIG HOUSING PROJECT OF MUSSOORIE DEHRADUN DEVELOPMENT AUTHORITY NEAR ISBT DEHRADUN."

7. Third Party Inspection

MDDA will appoint Third Party Monitoring Agency for the inspection of quality of material, checking of bills, construction quality, etc. Successful Bidder shall have to cooperate with the Third Party for inspection purpose.

8. Proposal Evaluation

General

a. From the time the bids are opened to the time the contract is awarded, if any contractor wishes to contact MDDA on any matter related to its proposal, it should do so in writing at the address indicated. Any effort by the firm to influence the MDDA in the proposal evaluation, proposal comparison or contract award decisions may result in the rejection of the proposal.

b. Bidders are advised that the selection of Bidder shall be on the basis of an evaluation by the Authority through the Selection Process specified in this Tender. Bidders shall be deemed to have understood and agreed that no explanation or justification for any aspect of the Selection Process will be given and that the Authority's decisions are without any right of appeal whatsoever.

c. The Bidder shall submit its Proposal in the form and manner specified in the Tender. Upon selection, the lowest Bidder shall be required to enter into an agreement with the Authority.

d. The Technical Proposal shall not include any financial information.

e. The Financial Proposal should be complete, i.e., it should list all costs associated with the Assignment/Project.

f. The financial proposal should be prepared in **Indian Rupees.**

g. Qualification, the bidder must fulfil the following conditions:-

A proposal shall be rejected at this stage if the Bidders proposal found Non- Responsive.

QUALIFICATION CRITERIA:

The Proprietors/Partnership Firms/Companies who fulfill the following requirements shall be eligible to apply. **Joint ventures/Consortium are accepted as per the conditions stipulated in the clauses below:-**

1. Joint ventures/Consortium are allowed on a condition that Lead partner of the bidding JV/Consortium should be the construction agency and in its name and qualifies for eligibility condition mentioned in Clause 3 as mentioned below.

2. No. of JV/Consortium partners shall not more than 3 firms is allowed.
   (In case the subsidiary firm/parent firm wants to use the technical credentials of the parent firm/subsidiary firm, then Bidder/s can participate by forming Consortium/JV with wholly owned subsidiaries/holding companies/parent company to meet the technical qualification criteria.)
   The collated strength of the consortium/JV shall be evaluated for technical qualification.

3. For being considered the Bidder should meet the following minimum **qualification** criteria:

The following requirements to be furnished by the bidders for **qualification** as per the tender document:-

a) The Bidder/s shall be a Proprietor ship firm /Private Company/firm incorporated in India under the (Indian) Companies Act 1956/2013 or a company incorporated under equivalent law abroad or Limited Liability Partnership (LLP) firm incorporated under the Limited Liability Partnership Act, 2008 or under equivalent law in any other country. The Bidder/s shall be required to submit a true copy of its Incorporation Certificate, along with Proposal.

b) Bidder must have a Valid Goods & Service Tax (GST) Registration, and Pan card (copy must be enclosed).

c) Lead partner must have RERA Registration.

d) Bidder should have been operational in India from at least 10 years with the proof of incorporation/commencement of business The Bidder/s shall be required to submit Incorporation Certificate/ Registration Certificate commencement proof shall be submitted along with the proposal.

e) The Bidder/or any of its JV/Consortium partner should not have been blacklisted/debarred/termination of contract except for reasons of convenience of Client by any Government/Public Company/ PSUs/funding agencies, etc. Declaration should be submitted on Stamp Paper.

f) For Part (A):-

Lead Bidder should have satisfactorily completed the works as mentioned below during the last five years ending previous day of last day of submission of bid.

- **One similar completed works of order value not less than Rs 35.50 Crores.**

OR

- **Two similar completed works of order value not less than Rs 22.00 Crores.**

OR

- **Three similar completed works of order value not less than Rs.18.00 Crores.**

Similar works (A) means cumulative work involving Building works comprising of construction of buildings/complex/residential town ship including HVAC/Fire Fighting/Electrical jobs and site services works in the projects. Completion certificate needs to be enclosed).

For Part (B):- Marketing

(i) For components of Marketing works related to the project the bidder should either himself meet the eligibility criteria or he will have to associate with the concerned specialist marketing agencies who have experience of Real Estate Marketing and experience of selling minimum 75 dwelling units in last 5 years. Even if, such specialized work shall be executed by the specialized agencies, the work shall be deemed to be executed by the lead bidder for all purposes and the responsibility of works executed etc. shall continue to be that of the lead bidder only.

g) The bidder should provide documentary proof of eligibility requirement as mentioned above. The completion certificates should clearly indicate (a) the date of completion of work (b) completed value of work. The completion certificate should be signed by an officer not below the rank of Executive Engineer or equivalent.

h) Non-refundable Tender Fee of Rs. 10,000/- (including GST) (Rupees Ten Thousand Only), through Demand Draft in favour of Secretary, Mussoorie Dehradun Development Authority (MDDA) payable at Dehradun.

i) Earnest Money Deposit (EMD) of **Rs. 70,00,000/- (Rupees Seventy Lakhs only),** through Bank Guarantee/FDR in favour of Secretary, Mussoorie Dehradun Development Authority (MDDA) payable at Dehradun.

j) The Bidder (in case of single business entity) should have a Positive Networth and minimum average annual turnover of Indian Rs. 13.50 Cr. (Rupees Thirteen Crores Fifty Lakhs only) during the last three (3) financial years (FY: 15-16, 16-17 & 17-18)
Audited balance sheet along with Profit & Loss statement and turnover for last three years (Certificate from CA/Auditor shall be attached) with the proposal.

k) Technical Key Personnel list & detailed C.V. as per Form-IV

S.No.	**Requirement of Technical Staff**		**Minimum Experience (Years)**	**Designation of Technical Staff**
	Minimum Qualification	**Numbers**		
1.	B.Tech (Civil)	1	10 (Having Experience of one similar nature of work)	Project Manager
2.	B.Tech (Civil)	2	5	Construction Engineer/ Billing Engineer/ Quality Control & Safety Engineer
3.	B.Tech (Electrical)	1	5	Electrical Engineer
4.	Diploma (Civil)	6	5	Supervisor

NOTE:

Any entity which has been barred by the Central Government, any State Government, a statutory authority or a Public sector undertaking, as the case may be, from participating in any project, and the bar subsists as on the date of Proposal, would not be eligible to submit a Proposal either by itself or through its Associate.

9. Public Opening and Evaluation of Financial Proposals

A) After the evaluation of Technical Proposal is completed, MDDA shall notify only those bidders whose proposals have been short-listed of the same and the date and time for opening of financial proposals.

B) The Financial Proposals shall be opened publicly in the presence of the Bidder's representatives who choose to attend. The name of the Bidder, and the proposed amount shall be read aloud and recorded when the Financial Proposals are opened. There will be an Evaluation Committee constituted by MDDA for evaluation of technical and financial proposal.

C) The Evaluation Committee will determine whether the Financial Proposals are complete, correct any computational errors, etc.

D) The bidder who has bid the lowest amount (L1) will be invited for discussions/ clarifications for the purpose of signing a Contract Agreement.

10. Conflict of Interest

A Bidder shall not have a conflict of interest that may affect the Selection Process (the "Conflict of Interest"). Any Bidder found to have a Conflict of Interest shall be disqualified. In the event of disqualification, MDDA shall forfeit and appropriate the Bid Security as mutually agreed genuine pre-estimated compensation and damages payable to MDDA for, inter alia, the time, cost and effort of MDDA including consideration of such Bidder's Proposal, without prejudice to any other right or remedy that may be available to MDDA hereunder or otherwise.

MDDA requires that the Bidder provides professional, objective, and impartial advice and at all times hold the Authority's interest's paramount, avoid conflicts with other assignments or its own interests, and act without any consideration for future work. The Bidder/Contractor shall not accept or engage in any assignment that would be in conflict with its prior or current obligations to other clients, or that may place it in a position of not being able to carry out the assignment in the best interests of the Authority.

11. Number of Proposals

No Bidder shall submit more than one Proposal for the Project. A Bidder applying individually or as an Associate shall not be entitled to submit another proposal either individually or as a member of any consortium, as the case may be.

12. Cost of Proposal

The Bidders shall be responsible for all of the costs associated with the preparation of their Proposals and their participation in the Selection Process including visits to the Authority, Project site etc. MDDA will not be responsible or in any way liable for such costs, regardless of the conduct or outcome of the Selection Process.

13. Acknowledgement by Bidder

It shall be deemed that by submitting the Proposal, the Bidder has**:**

a) made a complete and careful examination of the Tender;

b) received all relevant information requested from the Authority;

c) acknowledged and accepted the risk of inadequacy, error or mistake in the information provided in the tender or furnished by or on behalf of the Authority or relating to any of the matters referred in this tender;

d) Satisfied itself about all matters, things and information, including matters referred herein above, necessary and required for submitting an informed Proposal and performance of all of its obligations thereunder;

e) acknowledged that it does not have a Conflict of Interest; and

f) The Authority shall not be liable for any omission, mistake or error on the part of the Bidder in respect of any of the above or on account of any matter or thing arising out of or concerning or relating to tender or the Selection Process, including any error or mistake therein or in any information or data given by the Authority.

14. Clarifications

To facilitate evaluation of Proposals, the Authority may, at its sole discretion, seek clarifications from any Bidder regarding its Proposal. Such clarification(s) shall be provided within the time specified by the Authority for this purpose. Any request for clarification(s) and all clarification(s) in response thereto shall be in writing.

If a Bidder does not provide clarifications sought under above within the specified time, its Proposal shall be liable to be rejected. In case the Proposal is not rejected, the Authority may proceed to evaluate the Proposal by construing the particulars requiring clarification to the best of its understanding, and the Bidder shall be barred from subsequently questioning such interpretation of the Authority.

15. Amendment in tender

At any time before the submission of Proposals, MDDA may amend the tender by issuing an addendum in writing or by standard electronic means. The addendum shall be uploaded on the website**,** **www.uktenders.gov.in** and **www.mddaonine.in,** and will be binding on all of them. Bidder shall update themselves by visiting the website regularly, for not being updated by the bidders themselves, MDDA bears no responsibility. Bidders shall acknowledge receipt of all amendments. To give Bidders reasonable time in which to take an amendment into account in their Proposals MDDA may, if the amendment is substantial, extend the deadline for the submission of Proposals.

16. Proposal Due Date

Proposal should be submitted on or before date and time as mentioned in schedule of selection process at e-tendering website i.e. **www.uktenders.gov.in** and in the manner and form as detailed in this tender document. The Authority may, in its sole discretion, extend the Proposal Due Date by issuing an Addendum in accordance with uniformly for all Bidders.

17. Late Proposals

Proposals received after the specified time on Proposal Due Date shall not be eligible for consideration and shall be summarily rejected.

18. Bid Security (EMD)

The Bidder shall furnish as part of its Proposal, a Bid Security of **Rs. 70,00,000/- (Rupees Seventy Lakhs only),** in the form of a Bank Guarantee/FDR issued by one of the Nationalized/Scheduled Banks in India in favour of the Secretary, Mussoorie Dehradun Development Authority payable at Dehradun (the "Bid Security"), The Selected Bidder's Bid Security shall be returned, upon the Bidder submitting the Performance Security at the time of signing the Agreement which shall be 10% of the Contract Value.

Any Bid not accompanied by the Bid Security shall be rejected by the Authority as non-responsive.

The Authority shall not be liable to pay any interest on the Bid Security and the same shall be interest free.

The Bidder, by submitting its Proposal pursuant to this Tender, shall be deemed to have acknowledged that without prejudice to the Authority's any other right or remedy hereunder or in law or otherwise, the Bid Security shall be forfeited and appropriated by the Authority as the mutually agreed pre-estimated compensation and damage payable to the Authority for, inter alia, the time, cost and effort of the Authority in regard to the TENDER including the consideration and evaluation of the Proposal under the following conditions:

a) If a Bidder withdraws its Proposal during the period of its validity as specified in this tender document and as extended by the Bidder from time to time;

b) In the case of a Selected Bidder, if the Bidder fails to sign the Agreement or commence the assignment respectively; or

c) If the Bidder is found to have a Conflict of Interest.

19. Submission, Receipt, and Opening of Proposal

21.1 The Bidder shall submit their Technical and Financial Proposals Online only. The original proposal, both Technical and Financial Proposals shall contain no interlineations or overwriting, except as necessary to correct errors made by the

Bidders themselves. The person who signed the proposal must initial such corrections. Submission letters for both Technical and Financial Proposals should respectively be in the format as mentioned in this tender.

21.2 An authorized representative of the bidder shall initial all pages of the original Technical and Financial Proposals. The authorization shall be in the form of a written power of attorney accompanying the Proposal or in any other form demonstrating that the representative has been dully authorized to sign. The signed Technical and Financial Proposals shall be marked "ORIGINAL". **The financial proposal shall be submitted online only and shall be signed digitally.**

21.3 The envelopes containing the EMD, Bid Document Fee, Original Power of Attorney etc. shall be placed into an outer envelope and sealed. This outer envelope shall bear the submission address, reference number be clearly marked "DO NOT OPEN, BEFORE 05:00 p.m. on 08/11/2019". MDDA shall not be responsible for misplacement, losing or premature opening if the envelope is not sealed and/or marked as stipulated. This circumstance may be case for Proposal rejection. **The Financial Proposal shall be submitted online only and shall be sealed digitally**. **If the Financial Proposal is not submitted online digitally sealed, this will constitute grounds for declaring the Proposal non-responsive.**

21.4 **Online Submission:** Signed "Technical Proposal" shall be uploaded in the prescribed format and supporting documents along with scanned copy of EMD, Bid Document Fee and Power of Attorney as mentioned. Similarly, the original signed 'Financial Proposal' shall be placed in a digitally sealed envelope clearly marked 'Financial Proposal' and shall contain the financial proposal in the prescribed format.

21.5 The completed Proposal must be submitted online on or before the specified time. Proposals submitted by fax, telex, telegram or e-mail shall not be entertained.

20. Confidentiality

Information relating to the examination, clarification, evaluation, and recommendation for the selection of Bidders shall not be disclosed to any person who is not officially concerned with the process or is not a retained professional adviser advising the Authority in relation to matters arising out of or concerning the Selection Process. The Authority will treat all information, submitted as part of the Proposal, in confidence and will require all those who have access to such material to treat the same in confidence. The Authority may not divulge any such information unless it is directed to do so by any statutory entity that has the power under law to require its disclosure or is to enforce or assert any right or privilege of the statutory entity and/or the Authority.

21. Award of work

After selection, a Letter of Award (the "LOA") shall be issued, by the Authority to the Selected Bidder and the Selected Bidder shall, on receipt of the LOA, sign and send the Letter of Acceptance of the LOA in acknowledgement thereof. In the event the Letter of Acceptance of the LOA duly signed by the Selected Bidder is not received within a week, the Authority may, unless it consents to extension of time for submission thereof, forfeit

the Bid Security of such Applicant as mutually agreed genuine pre-estimated loss and damage suffered by the Authority on account of failure of the Selected Bidder to acknowledge the Letter of Award, and the next Bidder may be considered.

22. Execution of Agreement

After acknowledgement of the LOA as aforesaid by the Selected Bidder, it shall execute the Agreement with MDDA.

23. Pre-Bid Meeting

Pre-Bid Meeting of the Bidders shall be conducted in accordance to the Schedule of the Selection Process at the designated date, time and place.

24. Miscellaneous

26.1. The Selection Process shall be governed by, and construed in accordance with, the laws of India and the Courts at Dehradun shall have exclusive jurisdiction over all disputes arising under, pursuant to and/ or in connection with the Selection Process.

26.2. The Authority, in its sole discretion and without incurring any obligation or liability, reserves the right, at any time, to;

(a) suspend and/ or cancel the Selection Process and/ or amend and/ or supplement the Selection Process or modify the dates or other terms and conditions relating thereto;

(b) consult with any Bidder in order to receive clarification or further information;

(c) retain any information and/ or evidence submitted to the Authority by, on behalf of, and/ or in relation to any Bidder; and/ or

26.3. Independently verify, disqualify, reject and/ or accept any and all submissions or other information and/ or evidence submitted by or on behalf of any Bidder.

26.4. It shall be deemed that by submitting the Proposal, the Bidder agrees and releases the Authority, its employees, agents and advisers, irrevocably, unconditionally, fully and finally from any and all liability for claims, losses, damages, costs, expenses or liabilities in any way related to or arising from the exercise of any rights and/or performance of any obligations hereunder, pursuant hereto and/or in connection herewith and waives any and all rights and/or claims it may have in this respect, whether actual or contingent, whether present or future.

26.5. The Authority reserves the right to make inquiries with any of the clients listed by the Bidders in their previous experience record.

SECTION-II

Scope of Work

CONDITIONS OF PARTICULAR APPLICATION

1) The instructions to the Bidders for submission of Tender are enclosed as above.
   This Tender is being invited by Mussoorie Dehradun Development Authority for executing a part of the work for the subject job as per enclosed Schedule of Quantities (SOQ) as Annexure-2 for project Construction of HIG Housing Project of Mussoorie Dehradun Development Authority near ISBT Dehradun.

SCOPE OF WORK

Scope of work shall include "**Construction and overall Marketing of HIG Housing Project of Mussoorie Dehradun Development Authority near ISBT Dehradun"** as per the Drawings, Specification and details set forth under this Tender document. And to obtain all approvals from statutory authorities for start to complete the work of "**Construction and Marketing of HIG Housing Project of Mussoorie Dehradun Development Authority near ISBT Dehradun"** including furnishing, internal storage water supply, sanitary installations and internal electrical services etc.

The scope of work shall include obtaining necessary approvals including statutory approvals for any part of work which are required for the necessary completion of the project." 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 ready to move and shall remove all defects, if any, developed during Defects Liability Period (DLP).

The data given by the MDDA is only for information and guidance of the bidder who shall verify these data and shall be responsible for the overall execution of the project. MDDA shall not be responsible for the technicality/accuracy of the attachments. MDDA reserves the right to modify the scope of work as per the requirement of user department at any stage if necessary, without assigning any reason whatsoever. The Bidder shall visit the site also to examine whatever information he may require.

The responsibility of the Bidder shall include carrying out all the activities for the completion of the Project, which generally shall include the following, and any additional activities incidental to these:-

MDDA may in their absolute discretion issue further drawings and/or written instructions, details, directions and explanations, which are, hereafter collectively referred to as "MDDA's instructions" in regard to:

i) The variation or modification of the quality or quantity of works or the addition or omission or substitution of any work.
ii) Any discrepancy in the drawings or between the Schedule of Quantities and/or drawings

and/or specification.

iii) The removal from the site of any defective material brought thereon by the Contractor and the substitution of any other material thereof.

iv) The demolition removal and/or re-execution of any work executed by the Subcontractor/s.

v) The dismissal from the work of any persons employed there upon.

vi) The opening for inspection of any work covered up.

vii) The rectification and making good of any defects under clauses herein after mentioned and those arising during the maintenance period (retention period) /defect liability period.

viii) Royalty at the prevalent rates and all other incidental expenditure, if any shall have to be paid by the Contractor on all the materials like boulders, stone metals, earth, sand, bajri etc. collected by him for the execution of the work directly to the concerned revenue Authority of the Sate or Central Government. His rates are deemed to include all such expenditure and nothing extra shall be paid.

ix) Overall marketing of the Project in consultation and approval of MDDA.

PERFORMANCE SECURITY

a) The Successful Bidder shall within Fifteen (15) days of the acceptance of the LOA, execute a Performance Bank Guarantee as per contract, from a scheduled Commercial Bank, for an amount equivalent to the 5% of the accepted Contract Value, which shall be kept valid for the entire period of work and shall be refunded to the contractor soon after the completion of work and issuance of the completion certificate. The EMD of the successful Bidder shall be retained by MDDA until the Performance Bank Guarantee (PBG) is submitted.

   The Performance Bank Guarantee of the successful Bidder will be invoked and forfeited if he fails to comply with any of the conditions of contract.

b) The Contractor shall from time to time at the request of the MDDA suitably extend the validity of Performance Bank Guarantee as may from time to time be required by MDDA.

SECTION– III
Technical Specifications

1. The Work will be executed strictly in accordance with the CPWD specification corrected up to date at the time of tenders, unless specified to contrary.

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

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

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

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

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

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

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

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

10. Amount of the work can be increased or decreased due to any item omitted and substituted in accordance with the requirement of the project.

11. The Contractor shall be responsible for providing to the entire satisfaction of the Project Manager at his own expenses for the following amenities for all the labour employed by him:-
    i) Suitable temporary hutting accommodation.
    ii) Trench latrines, bathing enclosures, platforms separately for men and women and their regular cleanliness.
    iii) Clean drinking water.

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

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

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

14. Error or omission, if any in the nomenclature rate or unit of the items or work shall be corrected as per CPWD schedule of Rates 2016.

Materials and testing of materials for quality:

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

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

SECTION– IV

Schedule of Quantities

As per Annexure- 2

SECTION- V

Technical Proposal - Forms

FORM-I

Letter of Proposal

(On Bidder's letter head)

(Date and Reference)

To,

.....

.....

.....

Sub: SELECTION OF CONSTRUCTION AND MARKETING OF HIG HOUSING PROJECT OF MUSSOORIE DEHRADUN DEVELOPMENT AUTHORITY NEAR ISBT DEHRADUN.

Dear Sir,

With reference to your Tender Document dated ……, I/We, having examined all relevant documents and understood their contents, hereby submit our Proposal for Selection of Construction and Marketing of HIG Housing Project of Mussoorie Dehradun Development Authority near ISBT Dehradun.

The proposal is unconditional and unqualified.

1. I/We acknowledge that the MDDA will be relying on the information provided in the Proposal and the documents accompanying the Proposal for selection of the Bidder, and we certify that all information provided in the Proposal and in the Appendices is true and correct, nothing has been omitted which renders such information misleading; and all documents accompanying such Proposal are true copies of their respective originals.
2. This statement is made for the express purpose of appointment as the Bidder for the aforesaid Project.
3. I/We shall make available to the MDDA any additional information it may deem necessary or require for supplementing or authenticating the Proposal.
4. I/We acknowledge the right of MDDA to reject our application without assigning any reason or otherwise and hereby waive our right to challenge the same on any account whatsoever.
5. I/We certify that in the last five years, we or any of our Associates have neither failed to perform on any contract, as evidenced by imposition of a penalty by an arbitral or judicial authority or a judicial pronouncement or arbitration award against the Applicant, nor been expelled from any project or contract by any public authority nor have had any contract terminated by any public authority for breach on our part.

6. I/We certify that in the last five years, we or any of our Associates have not been blacklisted/ debarred/ termination of contract except for reasons of convenience of Client by any government/ government board/ corporation/ company/ PSU Company/ statutory body/ non-government in last 5 years.

7. I/We declare that:

   (a) I/We have examined and have no reservations to the Tender Documents, including any Addendum issued by the Employer;

   (b) I/We do not have any conflict of interest in accordance to the Tender Document;

8. I/We understand that you may cancel the Selection Process at any time and that you are neither bound to accept any Proposal that you may receive nor to select the Bidder, without incurring any liability to the Applicants in accordance to the Tender document.

9. I/We declare that we/any member of Consortium, are is not a member of any other Consortium applying for Selection as a Bidder.

10. I/We certify that in regard to matters other than security and integrity of the country, we or any of our Associates have not been convicted by a Court of Law or indicted or adverse orders passed by a regulatory authority which would cast a doubt on our ability to undertake the Project or which relates to a grave offence that outrages the moral sense of the community.

11. I/We further certify that in regard to matters relating to security and integrity of the country, we have not been charge-sheeted by any agency of the Government or convicted by a Court of Law for any offence committed by us or by any of our Associates.

12. I/We further certify that no investigation by a regulatory authority is pending either against us or against our associates or directors /managers/employees or against to be engaged team members.

13. I/We hereby irrevocably waive any right or remedy which we may have at any stage at law or howsoever otherwise arising to challenge or question any decision taken by the Authority [and/ or the Government of India] in connection with the selection of Bidder or in connection with the Selection Process itself in respect of the above-mentioned Project.

14. I/We agree and understand that the proposal is subject to the provisions of the Tender document. In no case, shall I/we have any claim or right of whatsoever nature if work for the Project is not awarded to me/us or our proposal is not opened or rejected.

15. I/We agree to keep this offer valid for 120 (One Hundred Twenty Days) days from the PDD specified in the Tender.

16. A Power of Attorney in favour of the authorised signatory to sign and submit this Proposal and documents is attached herewith in prescribed format.

17. In the event of my/our firm being selected as the Bidder, I/we agree to enter into an Agreement.

18. I/We have studied Tender Document and all other documents carefully. We understand that except to the extent as expressly set forth, we shall have no claim, right or title arising out of any documents or information provided to us by the MDDA or in respect of any matter arising out of or concerning or relating to the Selection Process including the award of Work.

19. The Financial Proposal is being submitted online along with the Technical Proposal separately digitally sealed. This Technical Proposal read with the Financial Proposal shall constitute the Application which shall be binding on us.

20. I/We agree and undertake to abide by all the terms and conditions of the Tender Document.

In witness thereof, I/we submit this Proposal under and in accordance with the terms of the Tender Document.

Yours faithfully,

(Signature, name and designation of the authorised signatory)

(Name and seal of the Bidder/ Lead Member)

FORM-II

Firm's References

Using the format below, provide information on each reference assignment for which your firm, either individually as a corporate entity or as one of the major companies within an association, was legally contracted.

(i) Relevant services carried out in the last five years that best illustrate qualifications

Firm's Name:

<table>
<tr><td colspan="2">Assignment Name:</td><td>Country:</td></tr>
<tr><td colspan="2">Location within Country:</td><td>Key professional staff provided by your Firm/ (profiles):</td></tr>
<tr><td colspan="2">Name of Client:</td><td>No. of Staff:</td></tr>
<tr><td colspan="2">Address:</td><td>No. of Staff-months:
Duration of assignment:</td></tr>
<tr><td>Start Date
(Month/Year):</td><td>Completion Date
(Month/Year):</td><td>Approx. Value of Services
(in Rs.):</td></tr>
<tr><td colspan="2">Name of Associated Bidders, if any:</td><td>No. of months of key professional staff
provided by Associated Bidders:</td></tr>
<tr><td colspan="3">Name of Senior Staff (Project Director/Coordinator, Team Leader) involved and functions performed:</td></tr>
<tr><td colspan="3">Narrative Description of Project:</td></tr>
<tr><td colspan="3">Description of Actual Services Provided by Your Staff:</td></tr>
<tr><td colspan="3"></td></tr>
</table>

(ii) Particulars and Experience of firm(s)

Relevant services carried out in the similar to the assignment both Part (A) and Part (B) as described in Eligibility conditions, considered to best illustrate experience and capabilities of the firm format given below:

S. No.	Field of specialisation	Assignment Name	Name of Client	Project Cost in Rs.	Stage of Project execution on ground (initiated/ in progress/ completed)	Any other relevant information
1	**2**	**3**	**4**	**5**	**6**	**7**
	Part (A) / Part (B)					
1						
2						
3						
4						
5						

FORM-III

Team Composition & Task Assignments

Key Professionals

Sl. No.	Name	Proposed Position	Total experience (years)	Relevant experience in years
1. 2. 3. 4.				

FORM-IV

Format of Curriculum Vitae (CV) for Proposed Key Professionals

Proposed Position: _____

Name of Firm: _____

Name of Expert: _____

Profession: _____

Date of Birth: _____

Years with Firm/Entity: _____ Nationality: _____

Membership in Professional Societies: _____

Detailed Tasks Assigned: _____

Key Qualifications: _____

[Give an outline of expert member's experience and training most pertinent to tasks on assignment. Describe degree of responsibility held by expert member on relevant previous assignments and give dates and locations. Use about half a page.]

Education: _____

[Summarize college/university and other specialized education of expert member, giving names of schools, dates attended, and degrees obtained. Use about one quarter of a page.]

Employment Record: _____

[Starting with present position, list in reverse order every employment held. List all positions held by expert member since graduation, giving dates, names of employing organizations, titles of positions held, and locations of assignments. For experience in last ten years, also give types of activities performed and client references, where appropriate. Use about two pages.]

Languages: _____

[For each language indicate proficiency: excellent, good, fair, or poor; in speaking, reading, and writing]

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, these data correctly describe me, my qualifications, and my experience. If awarded the Contract, I undertake to work with this Firm only on this assignment.

_____ _____

[Signature of Key Professional] [Signature of authorized representative of Firm]

Date: Day/Month/Year

Full name of Key Professional: _____

Full name of Authorized Representative: _____

FORM-V

Activity* (Work) Schedule

Sl. No.	**Item of Activity (Work)**	**Weeks from start of the assignment (in the form of a Bar Chart)**											
		1	2	3	4	5	6	7	8	9	10	…	Number of Weeks
		1	2	3	4	5	6	7	8	9	10	…	Number of months
1.													Subtotal (1)
2.													Subtotal (2)
3.													Subtotal (3)
4.													Subtotal (4)

FORM-VII

Format for Annual Turnover as per the Audited Accounts
Towards the qualifying experience

(Equivalent in Rs. Crores)

Bidder*	----------*(Name of Bidder)*				
FY	**2015-16**	**2016-17**	**2017-18**	**Total**	**Average**
Annual Turnover					

Certificate from the Statutory Auditor/Chartered Accountant

This is to certify that..... (*Name of the Bidder)* has Positive Net Worth and has received the payments and earned net profit and has Annual Turnover shown above against the respective years.

Name of the audit firm/CA:

Seal of the audit firm/CA:

Date:

(Signature, name, registration no. and designation of the authorised signatory)

The Bidder should provide the Financial Capability based on its own financial statements. Financial Capability of the Bidder's parent company or its subsidiary or any associate company will not be considered for computation of the Financial Capability of the Bidder.

* Bidder should fill in details as per the row titled Annual turnover and net profit in the row below. In case the Bidder is a Consortium, for the purpose of evaluation on financial parameters, financial parameters of all the members shall be furnished in separate sheet for consideration.

POWER OF ATTORNEY

Know all men by these presents, We, ... (name of Firm and address of the registered office) do hereby constitute, nominate, appoint and authorize Mr./ Ms..... Son/Daughter/Wife and presently residing at....., who is presently employed with/ retained by us and holding the position of ..... as our true and lawful attorney (hereinafter referred to as the "Authorized Representative") to do in our name and on our behalf, all such acts, deeds and things as are necessary or required in connection with or incidental to submission of our Proposal for and selection as …… (……..) including but not limited to signing and submission of all applications, proposals and other documents and writings, participating in pre-bid and other conferences and providing information/ responses to the MDDA, representing us in all matters before the Authority, signing and execution of all contracts and undertakings consequent to acceptance of our proposal and generally dealing with MDDA in all matters in connection with or relating to or arising out of our Proposal for the said Project and/or upon award thereof to us till the entering into of the Agreement with MDDA.

AND, we do hereby agree to ratify and confirm all acts, deeds and things lawfully done or caused to be done by our said Authorized Representative pursuant to and in exercise of the powers conferred by this Power of Attorney and that all acts, deeds and things done by our said Authorized Representative in exercise of the powers hereby conferred shall and shall always be deemed to have been done by us.

In witness whereof we, ...the above-named Principal have executed this Power of Attorney on this ..... Day of ....., 20.....

For .....

(Signature, name, designation and address)

Witnesses:

1.

2.

Notarised

Accepted

.....

(Signature, name, designation and address of the Attorney)

Notes:

- *The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and when it is so required the same should be under common seal affixed in accordance with the required procedure.*

- *Wherever required, the Bidder should submit for verification the extract of the charter documents and other documents such as a resolution/power of attorney in favour of the person executing this Power of Attorney for the delegation of power hereunder on behalf of the Bidder.*

- *For a Power of Attorney, Bidders may submit a General Power of Attorney notarized in India. However, at the time of negotiation it is mandatory to submit the Power of Attorney executed and issued overseas, legalised by the Indian Embassy and notarised in the jurisdiction where the Power of Attorney is being issued. However, the Power of Attorney provided by Bidders from countries that have signed The Hague Legislation Convention, 1961 are not required to be legalised by the Indian Embassy if it carries a conforming Apostille certificate.*

SECTION- VI

Financial Proposal – Forms

FORM FIN-I

[*Location, Date*]

To,

[Name & Address of Nodal Officer]

Sub: SELECTION OF CONSTRUCTION AND MARKETING OF HIG HOUSING PROJECT OF MUSSOORIE DEHRADUN DEVELOPMENT AUTHORITY NEAR ISBT DEHRADUN.

Sir,

We, the undersigned, offer to provide the services for the above assignment in accordance with your Tender vide advertisement dated [*Date*] for Selection of Construction and Marketing of HIG Housing Project of Mussoorie Dehradun Development Authority near ISBT Dehradun.

2. We are hereby submitting our Financial Proposal for …….

3. We undertake that, in competing for (and, if the award is made to us, in executing) the above contract, we will strictly follow the laws against fraud and corruption in force in India namely "Prevention of Corruption Act 1988" and shall strictly follow all the Labour Laws and all the applicable Laws.

4. We have gone through the Tender documents and understand the terms and conditions. We understand that you are not bound to accept any proposal you receive.

Authorized Signature: _____

Name and Title of Signatory: _____

Name of the Firm: _____

Address: _____

FORM FIN-II

Format for Financial Proposal / Price Bid

Name of the Bidder:

PRICE SCHEDULE

(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevant columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only)

Number#	Text#	Number#	Text#	Number#	Text#
Sl. No.	**Item Description**	**Quantity**	**Units**	**Total Amount without Taxes**	**Total Amount in Words**
1	**2**	**3**	**4**	**6**	**7**
1.	**"SELECTION OF CONSTRUCTION AND MARKETING OF HIG HOUSING PROJECT OF MUSSOORIE DEHRADUN DEVELOPMENT AUTHORITY NEAR ISBT DEHRADUN."**	1	Nos		
Total in Figures					
Quoted Rate in words					

ANNEXURE- 1

Site Plan

DRAFT MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding is made at Dehradun on this …….day of ……, 20….

Between

Mussoorie Dehradun Development Authority (MDDA), having its office at Transport Nagar, Saharanpur Road Dehradun-248001, through its Secretary, hereinafter referred to as 'FIRST PARTY' of the First Part, which expression shall, unless repugnant to the context thereof, shall include its successor in office, administrators in interest, assigns etc. of the one part.

AND

……having its office:- ……., …….., Dehradun, through its …….., hereinafter referred to as 'SECOND PARTY' of the Second Part, which expression, shall, unless repugnant to the context thereof, include the successors in office, administrators in interest, assigns, executors etc. of the other part.

Whereas on the proposal of the First Party, the Second Party has agreed to carry out the construction and marketing of HIG housing at ISBT in Dehradun (hereinafter referred to as 'Project') as per the clauses laid down here below, having estimated cost of Rs. ……..…… Lakh including other Charges but excluding GST as applicable which shall be paid by the First Party.

1. TERMS AND CONDITIONS

1.1 It is agreed that the estimated cost of Project is Rs. …….. Lakh as indicated above based on the financial bid of the second party.

1.2 The First Party shall co-ordinate between various department (viz. Nagar Nigam, Mining, PWD, Irrigation Department, Jal Sansthan/Jal Nigam, BSNL, Peyjal Nigam, Police etc.) wherever/whenever required for smooth execution of Project with firm concept to commissioning.

1.3 The First Party shall provide space or demark the Site/ stretches for Construction of the housing units including external development as outlined in the DPR, wherever available.

1.4 For the purpose of Clause 3, the progress of Project shall be reviewed at least every month by the Inspection Committee formed by the Vice Chairman, MDDA. The minutes of such review shall be duly recorded by the Inspection Committee for records and for further reference.

1.5 The Second Party shall be wholly responsible for the safe keeping, security, protection of assets created etc. at the site and any loss or damage to the assets created.

1.6 The Second Party shall provide monthly physical and financial progress report of the project duly certified by its authorized officer.

1.7 The Second Party shall be responsible for ensuring the quality standards of all the material & works of the project. Accordingly in order to ensure quality standards, the Second Party shall ensure inspection and testing from advisors/ professional of repute and the reports of such inspections shall be submitted to the First Party. However, this being the responsibility of the Second Party, the First Party shall have a right to get quality standards checked from any of its officer (s) or any professional (s) or agency having experience in the field, and the Second Party shall cooperate and provide relevant information to the said officer (s) or professional (s).

1.8 The Second Party shall ensure that all materials and workmanship shall be of good quality conforming generally to accepted standards of Indian standards Specification and Codes.

1.9 The Second Party shall be wholly responsible for the safety and security of Road users, vehicles etc during the project period and shall in no way shift its such liability / burden to the First Party.

2. SCOPE OF WORK

2.1 The Second Party has to do construction of the group housing project at ISBT in strict adherence to the DPR provisioned to the second party by the first party. And in case of additional work in addition to the work not contained in the DPR, as entrusted by the First Party to the Second Party as per requirement of work, the same shall be measured extra and payment thereof shall be made accordingly by the First Party to the Second Party.

2.2 The second party shall be given marketing rights to the dwelling units on behalf of the first party to the interested buyers.

2.3 The second party shall prepare the creatives contents, media and co-ordinate with channel partners for promotion of the project.

2.4 The expense for outdoor publications viz. print media, social media, tvc or any other promotional activities viz. events, BSMs shall be borne by the Second party.

2.5 The second party shall be paid upto 3% (Three percent) of the sale value consideration of dwelling units on successful sale (on receiving Final Payment).

2.6 The second party shall market the project in a manner such that, minimum average 30 units are sold in every 5 months. The payment shall be calculated on minimum sale of 5 Dwelling Units.

2.7 In the event that the second party fails to maintain the average selling frequency of 30 dwelling units in 5 months, the second party shall be liable to a penalty of 0.5% on the sale commission to be received on the units sold.

3. TIME FRAME AND PAYMENT SCHEDULE

3.1 The Second Party shall complete the project within 08 months as per the Time Schedule and phasing of the progress/completion of the project, except in the cases of force majeure, as under :-

S.No.	Item	No. of Months	Payment %
1.	On Date of Star of Work		10% (against Bank Guarantee)
2.	Percentage Achievement of Physical Progress upto 25%	02 Months	25%
3.	Percentage Achievement of Physical Progress upto 50%	04 Months	25%
4.	Percentage Achievement of Physical Progress upto 75%	06 Months	25%
5.	Percentage Achievement of Physical Progress upto 100%	08 Months	15%

3.1.(a) The first Party will ensure adequate fund flow to the construction agency commensurate with physical progress as per schedule as indicated above and financial progress of previously released funds/last disbursement.

3.2 The Second Party shall strictly adhere to the above Work Schedule and in case of delay in the completion of work the punitive deduction @ 0.1 Percent of the estimated cost every day shall be levied to the maximum period of one month and thereafter the deduction of 0.25% percent of the estimated cost per day shall be levied to the maximum period of another one month and in case still the Second Party does not comply with the work schedule, the First Party will be at liberty to proceed to invoke Termination Clause of this MOU.

4. MODIFICATION

No modification, variation or amendment or the contract shall have no force until and unless such modification, variation or amendment is in writing and an addendum to this MOU to that effect is executed between the parties.

5. THIRD PARTY INSPECTION

MDDA will appoint Third Party Monitoring Agency for the inspection of quality of material, checking of bills, construction quality, etc. Successful Bidder shall have to cooperate with the Third Party for inspection purpose.

6. INDEMNIFICATION

6.1 The Second Party shall keep the First Party totally indemnified and harmless against all claims, dues, payments, fines, penalties, compensation, liabilities and other losses etc. which may incur on account of non-compliance or violation of any statutory provisions.

6.2 The Second Party shall keep the First Party harmless against all dues relating to EPF, ESI, workmen compensation, claim including other statutory levies and taxes relating to workers, labourers, supervisors, engineers etc. etc. and the Second Party shall be liable and responsible for all such claims. For all purpose and intent the workers, labourers, supervisors, engineers etc. engaged by the Second Party for carrying out the project, shall be deemed to be the workers/ employees of the Second Party and the Second Party will be the Principal Employer in this respect.

7. DEFECTS AND DEFICIENCIES

7.1 The Second Party shall be liable and responsible for any defect in the construction of project of whatsoever nature intimated by the First Party to the Second Party even after handing over the project by the Second Party for a period of further three years and shall rectify the same to the satisfaction of the First Party within a period of 15 days from the date of intimation and in case of failure to do so, the First Party shall be at liberty to claim damages along with interest from Second Party through Dispute Resolution System and thereafter through Arbitration as laid down in this MOU.

7.2 Though the MOU is valid for 08 months only from the date of its execution, however, the parties hereby agree that for the purpose of defects/ deficiency in the project work, this MOU shall remain in force for a further period of three years from the date of handing over the project by the Second Party to the First Party.

8. FORCE MAJEURE

Both the parties shall ensure due compliance with the terms of this MOU. However, no party shall be liable for any claim or any loss or damage what so ever arising out of failure to carry out the terms of the MOU to the extent that such a failure is due to force majeure events, such as war, rebellion, mutiny, civil, commotion, riot, accident, Act of God and any other reason beyond the control of concerned party. But any party

claiming the benefit on this account shall reasonably satisfy the other party of the existence of such an event and give written notice within a reasonable time to the other party to this effect. The services shall be started as soon as practicable by the parties concerned after such eventuality has come to and or ceased to exist.

9. DELAY AND NEGLIGENCY

That any negligence, delay or deficiency in the progress of work, or lapse on the part of Second Party as intimated by the First Party to the Second Party, the same shall be rectified by the Second Party to the satisfaction of First Party within a period of 15 days and in case of failure by the Second Party to rectify the same within the said period/project or repetition of the said deficiency or delay, the First Party shall have the right to take back the entire project from the Second Party by terminating this MOU as per Termination Clause.

10. TERMINATION OF MOU

10.1. If the progress of the project does not match with the targets as set out in Clause 3 or the Second Party fails to rectify the defects as intimated by the First Party to the Second Party, within a period of 15 days or repetition of the said deficiency in the execution of work, the First Party shall be at liberty to terminate this MOU by giving fifteen days' Notice to the Second Party to show cause as to why the captioned MOU be not terminated and in case of failure to give reasonable and satisfactory reply, the First Party shall by a reasonable and speaking order terminate the MOU.

10.2 In case of termination of this MOU, the project shall stand withdrawn from the Second Party and the First Party shall be at liberty to allot the same to some other agency and in such case the Second Party shall peacefully handover the project to the said Agency as may be directed by the First Party immediately along with all the constructed portion and the building material on as is where is basis, tools and plants, designs, drawings and all other ,material / records etc. relating to the project so that the construction work / implementation of the project does not get adversely affected. In such event the Second Party shall refund the amount in proportionate to the incomplete work, as estimated by the First Party. No claim arising out of this exercise shall neither be raised by the Second Party nor shall be maintainable before any Forum of whatsoever nature.

11. DISPUTE RESOLUTION

Amicable Settlement

In case of any dispute, the parties shall use their best efforts to settle amicably all disputes arising out of or in connection with this MOU or the interpretation there of:

Dispute Settlement through Arbitration

In case the dispute having not been resolved amicably, the same shall be referred to the Sole Arbitrator appointed by the parties mutually. Both the parties agree that for the purpose of Arbitration the provisions of Arbitration and Conciliation Act, 1996 shall be applicable. Both the parties further agree that place of Arbitration shall be at Dehradun and the court of District Judge, Dehradun only shall have jurisdiction to adjudicate over the proceedings of Arbitration. Both the parties further agree that they shall not invoke the jurisdiction of Civil Courts to settle any grievance arising out of this MOU but shall proceed for the arbitration to settle their grievances as stipulated herein.

IN WITTNESS WHERE OF parties hereto have set their hands through their authorized representatives, on this MOU and affixed their respective seals on date, month and year first above written in the presence of witnesses.

FIRST PARTY Signature & Seal	SECOND PARTY Signature & Seal
Witness:-1	**Witness:-2**
Name and address	Name and Address

PROPOSED RESIDENTIAL BUILDING AT DEHRADUN					
SR.No.	**Description**	**Unit**	**Quantity**	**Rate**	**Amount**
1	Providing and laying in position ready mixed M-25 grade concrete for reinforced cement concrete work, using cement content as per approved design mix, manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work, including pumping of R.M.C. from transit mixer to site of laying , excluding the cost of centering, shuttering finishing and reinforcement, including cost of admixtures in recommended proportions as per IS : 9103 to accelerate/ retard setting of concrete, improve workability without impairing strength and durability as per direction of the Engineer -in - charge.(Note :- Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately).R.C.C	**Cum**	3513.7		
2	Steel reinforcement for R.C.C. work including straightening, cutting, bending,placing in position and binding all complete above plinth level.-Thermo-Mechanically Treated bars of grade Fe-500 D or more	**KG**	667000		
3	Surface dressing of the ground including removing vegetation and inequalities not exceeding 15 cm deep and disposal of rubbish, lead upto 50 m and lift upto 1.5 m.	**Sqm**	2813.57		
4	Supplying and filling in plinth with Jamuna sand under floors, including watering, ramming, consolidating and dressing complete.	**Cum**	422.03		
5	Diluting and injecting chemical emulsion for POSTCONSTRUCTIONAL anti-termite treatment (excluding the cost of chemical emulsion) With Chlorpyriphos/Lindane E.C. 20% with 1% concentration	**Sqm**	2813.57		
6	CC Work	**Sqm**	2813.57		
7	1:4:8 (1 Cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size)	**CUM**	636.94		
8	Columns, Pillars, Piers, Abutments, Posts and Struts	**Sqm**	5326.4		
9	Suspended floors, roofs, landings, balconies and access platform	**Sqm**	10996.38		
10	Lintels, beams, plinth beams, girders, bressumers and cantilevers	**Sqm**	7618.88		
11	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and sizes in :	**Cum**	1935		
12	Half brick masonry with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V	**Sqm**	15940		
13	Extra for providing and placing in position 2 Nos 6mm dia. M.S. bars at every third course of half brick masonry.	**Sqm**	15940		
14	Plaster 6mm	**Sqm**	18000		
15	Plaster 12mm	**Sqm**	20500		
16	Plaster 15mm	**Sqm**	20500		
17	Plaster 18mm	**Sqm**	27800		
18	M.s Railing work (Blacony Railing+staircase+Fire Staircase+Ms Louver+Main Gate+railing)	**Kg**	102100		
19	Providing and fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railing, staircase railing and similar works, including applying priming coat of approved steel primer.				
20	M.S. Tube	**Kg**	40000		
21	Providing and fixing 18mm thick gang saw cut mirror polished (premoulded and prepolished) machine cut for kitchen platforms, vanity counters ,window sills , facias and similar locations of required size of approved shade, colour and texture laid over 20mm thick base cement mortar 1:4 (1 cement : 4 coarse sand) with joints treated with white cement, mixed with matching pigment,epoxy touch ups, including rubbing, curing moulding and polishing to edge to give high gloss finish etc. complete at all levels.	**Sqm**	1026.08		
22	Extra for providing opening of required size & shape for wash basin/ kitchen sink in kitchen platform, vanity counter and similar location in marble/ Granite/stone work, including necessary holes for pillar taps etc. including moulding, rubbing and polishing of cut edges etc. complete.	**Each**	704		
23	Providing and fixing Ist quality ceramic glazed wall tiles conforming to IS:15622 (thickness to be specified by the manufacturer), of approved make,in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge, in skirting, risers of steps and dados, over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm, including pointing in white cement mixed with pigment of matching shade complete	**Sqm**	12172.16		
24	Providing and laying Ceramic glazed floor tiles of size 300x300 mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS : 15622 of approved make in colours such as White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick cement mortar 1:4 (1 Cement : 4 Coarse sand), including pointing the joints with white cement and matching pigment etc., complete.	**Sqm**	5502.99		

25	Providing and laying Vitrified tiles in different sizes (thickness to be specified by manufacturer) with water absorption less than 0.08 % and conforming to I.S. 15622, of approved make in all colours & shade in skirting, riser of steps and Dado over 12 mm thick bed of cement mortar 1:3 (1 cement: 3 coarse sand), including grouting the joint with white cement & matching pigments etc. complete	**Sqm**	14580		
26	Providing and laying **Vitrified tiles** in different sizes (thickness to be specified by manufacturer) with water absorption less than 0.08 % and conforming to I.S. 15622, of approved make in all colours & **shade in skirting, riser of steps and Dado** over 12 mm thick bed of cement mortar 1:3 (1 cement: 3 coarse sand), including grouting the joint with white cement & matching pigments etc. complete	**Sqm**	1747.8		
27	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia & length (hold fast lugs or dash fastener shall be paid for separately).	**Cum**	75.8		
28	Providing and fixing ISI marked flush door shutters conforming to IS: 2202 (Part I) decorative type, core of block board construction with frame of 1st class hard wood and well matched teak 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters.	**Sqm**	566.72		
29	Providing and fixing ISI marked flush door shutters conforming to IS :2202 (Part I) non-decorative type, core of block board construction with frame of 1st class hard wood and well matched commercial 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters:35 mm thick including ISI marked Stainless Steel butt hinges with necessary screws	**Sqm**	2515.04		
30	Providing and fixing Aluminium body tubular type universal hydraulic door closer (having brand logo with ISI, IS : 3564, embossed on the body, door weight upto 36 kg to 80 kg and door width from 701 mm to 1000 mm) with double speed adjustment with necessary accessories and screws etc. complete shown as per architectural drawing and direction of the Engieer-in-Charge	**Nos**	352		
31	Jali door	**Sqm**	566.72		
32	Fire door	**Sqm**	176		
33	Three track three panels sliding door with fly proof S.S wire mesh (Two nos. glazed & one no. wire mesh panels) made of (big series) frame 116 x 45 mm & sash 46 x 82 mm both having wall thickness of 2.3 ± 0.2 mm and single glazing bead / double glazing bead of appropriate dimension. (Area of door above 2.00sqm upto 5.00 sqm)	**Sqm**	2188.85		
34	Three track three panels sliding window with fly proof SS wire mesh (Two nos. glazed & one no. wire mesh panels) made of (small series) frame 92 x 44 mm & sash 32 x 60 mm both having wall thickness of 1.9 ± 0.2 mm and single glazing bead of appropriate dimension (Area of window upto 1.75 sqm).	**Sqm**	600.4		
35	Providing and fixing factory made uPVC white colour fixed glazed windows/ventilators comprising of uPVC multi-chambered frame and mullion (where ever required) extruded profiles duly reinforced with 1.60 ± 0.2 mm thick galvanized mild steel section made from roll forming process of required length (shape & size according to uPVC profile), , uPVC extruded glazing beads of appropriate dimension, EPDM gasket, G.I fasteners 100 x 8 mm size for fixing frame to finished wall, plastic packers, plastic caps and necessary stainless steel screws etc. Profile of frame shall be mitred cut and fusion welded at all corners, mullion (ifrequired) shall be also fusion welded including drilling of holes for fixing hardware's and drainage of water etc. After fixing framethe gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of required size and of approved quality, all complete as per approved drawing & direction of Engineer-in-Charge. (Single / double glass panes and silicon sealant shall be paid separately). Note: For uPVC frame, sash and mullion extruded profiles minus 5% tolerance in dimension i.e. in depth & width of profile shall be acceptable. 9.147B.1 Fixed window / ventilator made of (small series) frame 47 x 50 mm & mullion 47 x 68 mm both having wall thickness of 1.9 ± 0.2 mm and single glazing bead of appropriate dimension. (Area upto 0.75 sqm)	**Sqm**	193.6		
36	Green Baroda Lift Wall+Staircase+Lobby Work(Replace Kota Stone)	**Sqm**	3500		
37	b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115mm size with 50% of cement mortar 1:5 (1 cement : 5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement :5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs c) After two days of proper curing applying a second coat of cement slurry using 2.75 kg/ sqm of cement admixed with water proofing	**Sqm**	2834.85		
38	Providing gola 75x75 mm in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 stone aggregate 10 mm and down gauge), including finishing with cement mortar 1:3 (1 cement : 3 fine sand) as per standard design :	**Rmt**	1896.9		

39	Making khurras 45x45cm with average minimum thickness of 5 cm cement concrete 1:2:4 (1 cement :2 coarse sand : 4 graded stone aggregate of 20mm nominal size) over P.V.C. sheet 1m x 1m x 400 micron, finished with 12mm cement plaster 1:3 (1 cement :3 coarse sand) and a coat of neat cement rounding the edge sand making and finishing the outlet complete	**Nos**	70		
40	Supply with Filling fly ash amd earth in trenches or embankment in layer for Toilets	**Sqm**	622.4		
41	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade :Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture	**Sqm**	3153.97		
42	Door Handel Lock .	**Nos**	1760		
43	Door Closer	**Nos**	352		
44	Providing and fixing 150 mm bright finished floor brass door stopper with rubber cushion, necessary brass screws etc. to suit shutter thickness complete	**Nos**	1052		
45	Providing and applying white cement based putty of average thickness1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.	**Sqm**	78953.4		
46	External paint-Finishing walls with Acrylic Smooth exterior paint of required shade :New work (Two or more coat applied @ 1.67 ltr/10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/10 sqm)	**Sqm**	15065		
47	Internal paint-Wall painting with acrylic emulsion paint, having VOC (Volatile Organic Compound) content less than 50 grams/ litre, of approved brand and manufacture, including applying additional coats wherever required, to achieve even shade and colour.Two Coat	**Sqm**	78953.4		
48	Providing and laying water proofing treatment in sunken portion of WCs, bathroom etc., by applying cement slurry mixed with water proofing cement compound consisting of applying : a) First layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sqm. This layer will be allowed to air cure for 4 hours. b) Second layer of slurry of cement @ 0.242 kg/sqm mixed with water proofing cement compound @ 0.126 kg/sqm. This layer will be allowed to air cure for 4 hours followed with water curing for 48 hours. The rate includes preparation of surface, treatment and sealing of all joints, corners, junctions of pipes and masonry with polymer mixed slurry.	**Sqm**	7161.05		
49	Injection grouting: Note: (The Water proofing work must be executed by an approved specialized Agency. The Contractor shall give a 10 years guarantee as per instruction of the Project Manager).Providing & fixing 18mm dia nozzles at 1.2 meter center to center on the junction of the base & verticals. Also at 0.75metre center to center at all construction joints, corners etc. and injecting non shrink grout mixed with an admixture of neat cement slurry.	**Sqm**	230		
50	Providing and fixing stainless steel (Grade 304) railing made of Hollow tubes, channels, plates etc., including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete, i/c fixing the railing with necessary accessories & stainless steel dash fasteners , stainless steel bolts etc., of required size, on the top of the floor or the side of waist slab with suitable arrangement as per approval of Engineer-incharge, (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts,fasteners etc.).	**Rm**	680		
51	Tremix Floor 1:1.5:3 with Hardner (as per specification 150mm thik average	**Cum**	550		

Plumbing & water supply work

S.R.	Description	unit	Quantity	Rate	Amount
1	China Orissa Pattern WC Pan	**Each**	**176**		
2	Wall Hung European Type Water Closet	**Each**	**704**		
3	Concealed Cistern Dual Flush	**Each**	**704**		
4	Under Counter Circular Wash Basin With Cp Brass	**Each**	**880**		
5	Silent Bottel Trap 32mm dia With 50 mm	**Each**	**880**		
6	Wash Basin Mixer	**Each**	**880**		
7	Short Body Bib Cock	**Each**	**880**		
8	Toilet Holder Tissue	**Each**	**704**		
9	Coral Super Value Pack	**Each**	**704**		
10	Angle Valves	**Each**	**4224**		
11	Health Faucet	**Each**	**704**		
12	Overhead Shower	**Each**	**704**		
13	Bath and Shower Mixer	**Each**	**704**		
14	Kitchen Sink Singal Bowl	**Each**	**176**		
15	Sink Mixer	**Each**	**176**		
16	Cp Waste	**Each**	**704**		
17	PVC Connection	**Each**	**3696**		
18	Exten Nipple	**Each**	**4400**		
19	Splash Shower Pannel	**Each**	**176**		
20	Towel Ring	**Each**	**880**		
21	Soap Dish	**Each**	**880**		
22	Mirror In Toilets	**Each**	**880**		
23	Floor Trap	**Each**	**1760**		
24	PVC Floor Drain	**Each**	**704**		
25	Balcony Drain	**Each**	**528**		
26	UPVC Soil waste and vent pipes 80mm dia	**Meter**	**7383**		
27	UPVC Soil waste and vent pipes 110mm dia	**Meter**	**6139**		
28	UPVC Soil waste and vent pipes 160mm dia	**Meter**	**1326**		
29	UPVC Soil waste and vent pipes 65mm dia	**Meter**	**1209**		
30	UPVC Soil waste and vent pipes 40mm dia	**Meter**	**406**		
31	MS Holder Bet Clamps 150mm	**Each**	**1056**		
32	MS Holder Bet Clamps 100mm	**Each**	**2640**		
33	MS Holder Bet Clamps 80mm	**Each**	**2640**		
34	MS Holder Bet Clamps 65mm	**Each**	**1056**		
35	MS Holder Bet Clamps 160mm	**Each**	**81**		
36	Plain Band	**Each**	**805**		
37	Plain Junction(110X110X110)	**Each**	**880**		
38	Plain Junction(80x80x80mm)	**Each**	**880**		
39	Terminal PVC 110mm	**Each**	**100**		
40	Terminal PVC 80mm	**Each**	**366**		
41	PVC Trap 110mm	**Each**	**176**		
42	Deep Sealtrap 110mm	**Each**	**1584**		
43	Providing, fixing testing, and commissioning of CPVC) pipe as per CTS SDR-11 - pipe material as per ASTM D 1784 and pipe dimension and specs as per ASTM D 2846 & fittings such as tees, elbows, reducers, male/female connector, clamps etc. , jointing with CPVC solvent cement as per manufacturer recommendations conforming to ASTM-F493 complete (Exposed Pipe) [Pipe running in shaft and terrace etc.]. For Cold & flushing water supply				
44	1/2 Inch dia pipe (Sch. - 11)	**Rm**	**14500**		
45	3/4 Inch dia pipe (Sch. - 11)	**Rm**	**2655**		
46	1 Inch dia pipe (Sch. - 11)	**Rm**	**3958**		
47	1-1/4 Inch dia pipe (Sch. - 11)	**Rm**	**2630**		
48	1-1/2 Inch dia pipe (Sch. - 11)	**Rm**	**1962**		
49	2 Inch dia pipe (Sch. - 11)	**Rm**	**1085**		
50	Providing, fixing testing, and commissioning of CPVC) pipe as per CTS SDR-80 - pipe material as per ASTM D 1784 and pipe dimension and specs as per ASTM D 2846 & fittings such as tees, elbows, reducers, male/female connector, clamps etc. , jointing with CPVC solvent cement as per manufacturer recommendations conforming to ASTM-F493 complete. (Exposed Pipe) [Pipe running in shaft and terrace etc.]. For Cold & flushing water supply				
51	2-1/2 Inch dia pipe (Sch. - 80)	**RM**	**1107**		
52	Providing and fixing PEx piping (Giacomini, Italy) (Pipe in pipe) system, NSF approved with crimp/compression joints as required all complete. with adequate size Nitril Elastomeric **rubber insulation** . **For Hot water supply only**				
53	15 mm dia	**RM**	**5662.5**		
54	20 mm dia	**RM**	**1195**		
55	Providing, fixing, testing and commissioning Ball valve with hard chrome plated ball inside PTFE (Teflon) seat and ring with chrome plated centre handle with female BSP threads complete in all respect. Minimum working pressure 15 Kg/cm^2.				
56	15 mm NB	**Each**	**182**		

57	20 mm NB	**Each**	**885**		
58	25 mm NB	**Each**	**182**		
59	32 mm NB	**Each**	**60**		
60	40 mm NB	**Each**	**29**		
61	50 mm NB	**Each**	**16**		
62	Providing and fixing wafer type cast iron butterfly valves tested to 15kg/sqcm pressure including flanges.				
63	65 mm NB	**Each**	**16**		
64	80 mm NB	**Each**	**13**		
65	100 mm NB	**Each**	**8**		
66	150 mm NB	**Each**	**2**		
67	P/F G.I. pipe with necessary fittings complete - pipe to be of medium class and threaded joints to be made using hole tite to ensure leak proof instalation, pipes to be painted with 2 coats of red oxide primer over 2 coats of enamel paint of shade as approved. **(Plant room & roof piping)**				
68	150 mm dia, NB	**RM**	**28**		
69	100 mm dia, NB	**RM**	**130**		
70	80 mm dia, NB	**RM**	**490**		
71	65 mm dia, NB	**RM**	**139**		
72	50 mm dia, NB	**RM**	**85**		
73	40 mm dia, NB	**RM**	**70**		
74	32 mm dia, NB	**RM**	**35**		
75	25 mm dia, NB	**RM**	**23**		
76	P/F G.I. pipe with necessary fittings complete - pipe to be of medium class and threaded joints to be made using hole tite to ensure leak proof instalation, pipes to be painted with 2 coats of red oxide primer over 2 coats of enamel paint of shade as approved. **(External Cold & Flushing Water Work)**				
77	100 mm dia, NB	**RM**	**183**		
78	80 mm dia, NB	**RM**	**178**		
79	Providing, fixing testing, and commissioning of CPVC) pipe as per CTS SDR-11 - pipe material as per ASTM D 1784 and pipe dimension and specs as per ASTM D 2846 & fittings such as tees, elbows, reducers, male/female connector, clamps etc. , jointing with CPVC solvent cement as per manufacturer recommendations conforming to ASTM-F493 complete. **(External irrigation Work)**				
80	1" dia (SDR 11)	**RM**	**38**		
81	2" dia pipe (SDR - 11)	**RM**	**255**		
82	Providing and filling sand of grading zone V or coarse grade alround the CPVC pipes in external work.				
83	25 mm dia, NB	**RM**	**38**		
84	50 mm dia, NB	**RM**	**255**		
85	80mm dia,NB,75mm	**RM**	**178**		
86	100 mm dia, NB	**RM**	**183**		
87	P/F Y Strainer in cast iron with SS 304 screen having 1.2mm perforations complete with BS 10 F flange, boths/nuts complete.				
88	150 mm dia	**Each**	**1**		
89	Providing and fixing brass auto air vent valve PN 10 rating of GIA complete suitable for domestic cold water supply.				
90	15 mm dia nominal bore	**Each**	**13**		
91	Providing & Fixing of washing hydrant / Garden hydrant outlet consisting 1 No. 20mm dia. ball valve & brass nozzle for connecting rubber hose including pipes, fittings and accesssories complete.	**Nos**	**11**		
92	Providing, fixing, testing and commissioning of motorised butterfly valve of 50mm dia for filling of overhead water tank complete with high and low level control switches to control tanks. The level controllers shall be installed in overhead tanks. The level switch will close the valve when water level is high in overhead tank and open the valve when overhead water tank level is low. The system should be complete in all respects with accessories 220 V AC / 2 V DC, IP67 electrical water level control unit, copper control wiring in whether proof casing etc. (Make: AIP/Audco/Advance)	**Each**	**1**		
93	Providing and fixing 600 mm dia F.R.P. water tank manhole cover and frame and lockable arrangement complete in all respects (load bearing 500kg) .	**Each**	**1**		
94	Providing & fixing S.S. (304) 700 mm long pipe puddle flanges of required size to under water tanks & retaining wall. (Water Tank shall be constructed by civil contractor - not included in this contract).				
95	Note :				
96	1. Both end screwed upto 65 mm				
97	2. One end screwed & other end flanged above 65 mm				

98	3. Size of plate welded center of pipes - 3 D x 3 D x 5 mm (D- Diameter of Pipes)				
99	25 mm dia	**Each**	**23**		
100	50 mm dia	**Each**	**6**		
101	65 mm dia	**Each**	**6**		
102	80 mm dia	**Each**	**6**		
103	100 mm dia	**Each**	**23**		
104	150 mm dia	**Each**	**6**		
105	Providing & fixing brass mesh in elbow with necessary G.I. Vent pipe with fittings				
106	100 mm dia	**Each**	**11**		
107	Providing & fixing mosquito proof brass overflow grating for tanks				
108	65 mm dia	**Each**	**11**		
109	Providing and fixing M.S. structural work fabricated from standard sections, (MS rounds, angles, channels etc.) including cutting to size, drilling, welding, including cost of fasteners, clamps in RCC structural members as directed, including two or more coats of synthetic paint over one coat of primer after surface preparation including cutting and making good walls.	**KG**	**263**		
110	Providing & fixing M.S. slotted angle iron 40x40x2 mm thick with stove enamel finish & fixed to brick masonry or RCC walls with 12mm dia bolts embedded in cement concrete blocks 1:2:5 (1 cement: 2 coarse sand: 5 stone aggregate 12.5 mm nominal size) 100x100x100 mm size for masonry walls & with expandable anchor fasteners on RCC spaced not exceeding 600 mm with 15 mm dia G.I. spacer between wall & angle complete as directed by Engineer-in-Charge.	**Mtr**	**173**		
111	Constructing masonry chamber 30x30x50 cm,inside with 75 class designation brick work in cement mortar 1:4 (1 cement:4 coarce sand) for stop cock complete with C.I. surface box 100x100x75mm (inside) with locking arrangement and RCC top slab 1:2:4 mix (1 cement : 2 corase sand: 4 graded stonr aggregate 20mm nominal size) necessary excavation foundation concret 1:5:10 (1 cement:5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortor 1:3 (1 cement : 3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design.				
112	With F.P.S. bricks	**Each**	**9**		
113	Constructing masonry Chamber 90X80X75 cm, inside with 75 class designation brick work in cement mortar 1:4 (1 cement: 4 coarse sand) for sluice valve, with C.I. surface box 100 mm top diameter, 160 mm bottom diameter and 180 mm deep (inside) with channel lid and RCC top slab 1:2:4 mix (1 cement: 2 coarse sand: 4 graded stone sggregate 20 mm nominal size) necessary excavation foundation concrete 1:5:10 (1 cement : 5 fine sand: 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement: 3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design:				
114	With F.P.S. bricks	**Each**	**2**		
115	Providing & Fixing of water meter conforming to IS and tested by Municipal Board complete				
116	50 mm dia nominal bore	**Each**	**1**		
117	Sterilization of all cold water supply lines as per specifcation with chlorine dosing.	**Item**	**1**		
118	Making 50mm Diam. water connection with local authority including approvals / liasioning, excavtion & back filling, cutting and making good of existing Authority supply line etc. complete (Fees Payment by Client)	**Item**	**1**		
119	Providing and fixing SW pipes including all fittings & support as per manufactures recommendation.				
120	150 mm dia	**RM**	**10**		
121	250 mm dia	**RM**	**18**		
122	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) alround uPVC pipes including bed concrete as per standard design.				
123	150 mm dia	**RM**	**10**		
124	250 mm dia	**RM**	**18**		
125	Providing and laying non-pressure NP2 class RCC pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete. - **For Sewage Line**				
126	250 mm dia RCC pipe	**RM**	**488**		

127	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) haunching bed concrete for R.C.C. pipes as per standard design.				
128	250 mm dia RCC pipe	**RM**	**488**		
129	Providing and fixing square-mouth S.W. gully trap grade 'A" complete with C.I. Grating, brick masonry chamber with bricks of class designation 75 in cement mortar 1:5 (1 cement : 5 coarse sand) inside plaster above trap 12 mm thick m cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement outside plaster 12 mm thick in cement mortar 1:3 (1cement :3 coarse sand) 10 cm thick foundation concrete 1:5:10 mix (1cement :5 coarse sad : 10 graded stone aggregate 40 mm nominal size) space between chamber, and trap filled-with cement concrete 1:2:4 (1cement :2 coarse sand :4graded stone aggregate 20 mm nominal size) and water tight C.I. cover with frame of 300 x 300 mm size (inside) the weight of cover to be not less than 4.50 kg frame to be not less than 2.70 kg as per standard design.				
130	180x150mm size P type With FPS bricks	**Each**	**119**		
131	Construction brick masonry manhole with 75 class designation bricks in cement mortar 1:4 (1 cement : 4 coarse sand) RCC top slab with 1:2:4 mix (1 cement : 2 coarse sand 4 graded stone aggregate 20mm nominal size) foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size) inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement complete as per standard design.				
132	Inside size 90 x 80 cm and 60 cm deep including F.R.P. Cover with frame 600x450 mm dimensions (capable to bear 20 T Load).				
133	With FPS bricks	**Each**	**34**		
134	Inside size 120 x 90 cm and 100 cm deep including F.R.P. Cover with frame 600 x 450 dia dimensions (capable to bear 20 T Load).				
135	With FPS bricks	**Each**	**29**		
136	Constructing brick masonary circular manhole 1.2m internal dia at bottom and 0.6 m dia at top in cement mortar 1:4 (1 cement : 4 coarse sand) inside cement plaster 12mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement, foundation concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40mm nominal size) and making necessary channel in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement all complete as per standard design.				
137	1.5 m deep with including F.R.P. Cover with frame 600 x 450 dia dimensions (capable to bear 20 T Load).				
138	With F.P.S. bricks class designation 75	**Each**	**6**		
139	Constructing brick masonary circular manhole 1.52m internal dia at bottom and 0.6 m dia at top in cement mortar 1:4 (1 cement : 4 coarse sand) inside cement plaster 12mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement, foundation concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40mm nominal size) and making necessary channel in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement all complete as per standard design.				
140	2.3 m deep with including F.R.P. Cover with frame 600 x 450 dia dimensions (capable to bear 20 T Load).				
141	With F.P.S. bricks class designation 75	**Each**	**2**		
142	Extra for depth for for manhole 90 x 80 cm beyond 60 cm deep.				
143	With F.P.S. bricks class designation 75	**M**	**3**		
144	Extra for depth for for manhole 120 x 90 cm beyond 60 cm deep.				
145	With F.P.S. bricks class designation 75	**M**	**6**		
146	Extra for depth for circular manholes 1.2 m internal dia (at bottom)(beyond 2.30m.				
146	With F.P.S. bricks class designation 75	**M**	**4**		

147	Extra for depth for circular manholes 1.52 m internal dia (at bottom)(beyond 2.30m.				
148	With F.P.S. bricks class designation 75	**M**	**4**		
149	Providing and fixing of orange colour safety rest of minimum 6 mm thick plastic encapsulated as per IS:10910 on 12 mm dia steel bar conforming to IS: 1786 having minimum cross section as 23 mm x 25 mm and over all minimum length 263 mm width as 165 mm with minimum 112 mm space between protruded legs having 2 mm as per standard drawing and suitable to withstand the bend test and chemical resistance test as per specifications and having manufacturer's permanent identification mark to be visible even after fixing, including fixing in manholes with 30 x 20 x 15 cm cement concrete block 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) complete as per design.	**Each**	**69**		
150	Excavating trenches of required width for pipe, cables etc including excavation for sockets, & dressing of sides, ramming of bottoms, depth upto 1.5m including getting out the excavated soil & then returning the soil as required, in layers not exceeding 20 cm in depth including consolidating each deposited layer by ramming, watering etc and disposing of surplus excavated soil as directed, within lead of 50m.				
151	All kinds of soil				
152	Pipes, cables etc exceeding 80 mm dia but not exceeding 300 mm dia	**RM**	**515**		
153	Making 250mm Diam. Sewage connection with municipal line including approvals/ liasioning, excavtion & back filling, cutting and making good of existing municiapl line & approval from Pollution Control Board etc. complete (Payment by Client)	**Item**	**1**		
154	Providing and laying non-pressure NP2 class RCC pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete.				
155	150 mm dia RCC pipe	**Rm**	**63**		
156	250 mm dia RCC pipe	**Rm**	**258**		
157	300 mm dia RCC pipe	**Rm**	**205**		
158	450 mm dia RCC pipe	**Rm**	**73**		
159	600 mm dia RCC pipe	**Rm**	**18**		
160	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) haunching bed concrete for R.C.C. pipes as per standard design.				
161	150 mm dia RCC pipe	**Rm**	**63**		
162	250 mm dia RCC pipe	**Rm**	**258**		
163	300 mm dia RCC pipe	**Rm**	**205**		
164	450 mm dia RCC pipe	**Rm**	**118**		
165	600 mm dia RCC pipe	**Rm**	**18**		
166	Constructing Road gully chamber with bricks of class designated 75 in cement mortar 1:5 (1 cement : 5 coarse sand), foundation concrete 1:4:8, inside & outside 12 mm thick cement plaster 1:3 (1 cement : 3 coarse sand) finished with a coat of neat cement including excavation, refilling and disposal of surplus earth as directed by Engineer-in-charge complete as per standard design.				
167	600 x 600 x 600 mm size with F.R.P. Catch Basin Cover/grating with frame (500 x 600 mm) with fixed in 15 cm thick cement mortar 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) (Medium Duty)	**Each**	**65**		
168	Construction brick masonry manhole with 75 class designation bricks in cement mortar 1:4 (1 cement : 4 coarse sand) RCC top slab with 1:2:4 mix (1 cement : 2 coarse sand 4 graded stone aggregate 20mm nominal size) foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size) inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement complete as per standard design.				
169	Inside size 90 x 80 cm and 60 cm deep including F.R.P. Cover with frame 600x450 mm dimensions (capable to bear 20 T Load).				
170	With FPS bricks	**Each**	**4**		

171	Excavating trenches of required width for pipe, cables etc including excavation for sockets & dressing of sides, ramming of bottoms, depth upto 1.5m including getting out the excavated soil & then returning the soil as required, in layers not exceeding 20 cm in depth including consolidating each deposited layer by ramming, watering etc and disposing of surplus excavated soil as directed, within lead of 50m.				
172	All kinds of soil				
173	Pipes, cables etc exceeding 80 mm dia but not exceeding 300 mm dia	**RM**	**688**		
174	Providing and constructing Rain water Harvesting Pit of 4000 dia. x 3000 mm size depth (internal) in overall size with inlet & outlet connection with Upto 1500mm from ground level Ist class brick 230 mm thick in cement mortar 1:4 (1 cement: 4 coarse sand) inside and outside 12 mm thick plaster with cement mortar 1:3 (1 cement : 3 coarse sand) with a floating coat of neat cement on inside surface, After 1500mm depth 500 mm thicksand bed; then 500mm thick gravel and 500mm thick boulders. C.I (heavy duty) manhole cover 560 mm (weight not less than 208 kg) including necessary excavation backing filling, disposal of surplus earth, Providing and fixing of C.I manhole steps complete as per standard design.				
175	Constructing Rain Water Harvesting Pits.	**Item**	**1**		
176	350mm diameter boring with 150mm dia, upvc slotted pipes located centrally in 350mm diameter bore filled with boulder.	**Meter**	**60**		
177	Providing and laying UPVC back flow preventor with flanges generally as specified complete				
178	200 nominal bore	**Each**	**1**		
179	Providing and fixing 210mm dia. UPVC pipes (6 Kg/sqcm) including all fittings, excavation and back filling for connecting over flow from rain water harvesting pits to external network.	**RM**	**30**		
180	Constructing masonry valve Chamber 1000 x 1000 x1000 mm, inside with 75 class designation brick work in cement mortar 1:5 (1cement: 5 fine sand) for sluice valve/butter fly valve, with C.I. Surface box 100x100x75 mm (inside) with hinged cover fixed in cement concrete slab 1:2:4 mix (1cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) necessary excavation foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design.				
181	With F.P.S. bricks	**Each**	**1**		
182	Making Storm connection with municipal line including approvals/ liasioning, excavtion & back filling, cutting and making good of existing municiapl line & approval from Pollution Control Board etc. complete (Payment by Client)	**Item**	**1**		
183	Constructing brick masonry covered open drain with bricks of class designation 75 in cement mortar 1:5 (1 cement : 5 fine sand) & RCC culvertincluding precast RCC horizontal grating with frame complete as per standard design:				
184	Earth work in excavation by mechanical means(Hydraulic excavator)/ manual means in foundation trenches or drains(not exceeding 1.5m in width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift up to 1.5m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50m. eover areas (exceeding 30 cm in depth, 1.5m in widths as well as 10 sqm on plan) including disposalof excavated earth, lead upto 50m and lift upto 1.5, disposed earth to be levelled and neatly dressed.				
185	All kinds of soil	**Cum**	**283**		
186	Providing and laying in position cement concrete of specified grade including the cost of centring and shuttering - All work upto plinth level:				
187	1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size)	**Cum**	**38**		
188	Brick work with F.P.S. bricks of class designation 75 in foundation and plinth in:				
189	Cement mortor 1:4 (1 cement : 4 fine sand)	**Cum**	**60**		

190	Providing & laying in position specified grade of reinforced cement concrete excluding the cost of centering, shuttering, finishing and reinforcement- all work upto plinth level				
191	1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)	**Cum**	**7**		
192	15 mm cement plaster 1:3 (1 cement:3 coarse sand) finished with a floating coat of neat cement on the rough side of single or half brick wall	**Sqm**	**425**		
193	Precast grating for open drains of 90mm thick (of Size : 900x450x90mm).	**Nos**	**400**		
194	**WATER SUPPLY & DRAINAGE PUMPS**				
195	Raw Water Treatment Feed Pump set				
196	Supplying, installing, testing & commissioning of horizontal / vertical centrifugal filter feed water pumps CI head & Base, SS-304 impeller along with motor, pressure guage with isolation cock, isolation valve, NRV on delivery line, isolation valve, stainer				
197	Pumps shall be suitable for 415 ± 10% volts 3 phase 50 Hz A.C supply & shall be having the following requirement complete with foundation and associated civil works.				
198	Suction & Delivery Header - SS 304				
199	Control Valve On suction and Delivery - Ball Valve Only (No Butterfly Valve Accepted).				
200	Flow Prevention - Only Check Valve				
201	Suction & delivery header including all pipes, suction & delivery sides valves, NRV, Pressure gauges & accessories complete.				
202	Flow Rate : 6.0 LPS (1 duty + 1 stand by)				
203	Head : 35 M				
204	Min. Motor HP : 6.5 H.P. (Each)	**Set**	**1**		
205	HYDRO-PNEUMATIC SYSTEM :-				
206	Supply, Installation, Testing And Commissioning Of Compact Self Contained Skid Mounted Hydropneumatic System As Follows:				
207	a. Vertical, In-Line, Multisage, centrifugal pumps with SS-304 casing and impeller and shaft, CI base & S.S suction-discharge casing coupled with TEFC efficiency class 1 motor, 2900 rpm, three phase (with mechanical seal)				
208	b. Skid mounted or wall mounted electrical control panel with microprocessor PID controller and frequency inverter integrated in a single enclouser with pressure sensor transmitter, minimum two lined LCD display, diodes to indicate pump ready, pump running and fault and capable to communicate with other controllers following MODBUS-RTU or BACNET Class-2 protocall through RS485 port. System should be capable to compensate for frictional losses at lower flows. All alarms should be displayed in the controller. System should be equiped with dry running protection				
209	Quantity : 1 No.				
210	c. Precharged diaphram pressure vessel with food grade membrane, charging connection, connected to outlet header with necessary flanges, gaskets, isolating valves, nuts/bolts etc complete.				
211	d. Set of accessories such as pressure guage, pressure transducers, inter connecting power and control cabling, MS base frame with epoxy & synthetic enamel paint, neoprane rubber pads(anti vibration) etc. complete				
212	e. GI suction and delivery header with flanges for inlet connection, common outlet header with flanges for outlet connections as required, and inter connecting piping with flexible connections, eccentric type reducers etc. all necessary indigenous accessories as required to complete the installation.				
213	Domestic hydropneumatic system as follows:				
214	No. of pumps 3 (2 Working + 1 Standby)				
215	Water Flow Rate 9.0 LPS each				
216	Head 80 M	**Set**	**1**		
217	Submersible pumps complete with non-clog type impeller, minimum solid handling capacity of 3-15 mm, suitable for operation on 415 ± 10 V, 50 Hz AC power supply, 2900 RPM. The pump shall be complete with guide wire for lifting and lowering of pump, Galvanized lifting chain, etc. as per specifications. The pump shall be complete with automatic built-up water level controller with necessary starter panel with length of control / power cable upto the panel.				
218	Two nos. of pump installed in one sump pit 1 working & 1 standby with automatic / manual operation as requireds.				
219	Waste Water Sump Pumps (For Basement)				
220	Flow rate : 2.0 LPS				

221	Head : 10.0 Mtrs.				
222	Min. Motor HP : 2.0 (Each)				
223	Set of 2 pumps (1duty +1 stand by)	**Each**	**1**		
224	Supply, Installation, Testing and Commissioning of pump controllers cum level controllers with level indicators in 16G powder coated steel sheet metal panels including the following:	**Each**	**7**		
225	WATER TREATMENT PLANT				
226	Dual Media Filter				
227	Supplying, storing, handling, installation, testing & commissioning of Vertical FRP Dual Media Filter tested to 7.0 Kg/sqcm consisting of intial charge of media consisting (300mm bed depth of anthracite, filtering sand and support media), with frontals and manual multiport valve of 40 NB .				
228	Capacity : 6.0 LPS				
229	Working Pressure : (2.5 ± 1.5)MWC				
230	SUPPLY	**Each**	**1**		
231	HANDLING AND INSTALLATION	**Each**	**1**		
232	Activated Carbon Filter				
233	Supplying, storing, handling, installation, testing & commissioning of Vertical FRP Activated Carbon Filter tested to 7.0 Kg/sqcm consisting of intial charge of media consisting (900mm bed depth of activated carbon of Iodine value 350-400 and support media), with frontals and manual multiport valve of 40 NB .				
234	Capacity : 6.0 LPS				
235	Working Pressure : (2.5 ± 1.5)MWC				
236	MOC of vessel : FRP				
237	SUPPLY	**Each**	**1**		
238	HANDLING AND INSTALLATION	**Each**	**1**		
239	Water Softener				
240	Supplying, storing, handling, installation, testing & commissioning of Vertical FRP Softener tested to 7.0 Kg/sqcm consisting of intial charge of resin with mild steel frontals and manual multiport valve of 40 NB . HDPE Brine tank of min. 200 Liters complete with brine ejector and brine valve.				
241	Capacity : 6.0 LPS				
242	Working Pressure : (2.5 ± 1.5) Kg/cm²				
243	MOC of vessel : FRP				
244	SUPPLY	**Each**	**1**		
245	HANDLING AND INSTALLATION	**Each**	**1**		
246	ALUM DOSING EQUIPMENT				
247	High density opaque polyethylene vessel having 50 Lt. capacity complete with brass strainer, solution control valves set, interconnecting piping and valves as per specification. (0-12 lph)				
248	Chemical feed pump diaphragm type with a rated capacity of 12 Litres. per hour against a pressure of 75 psi, the capacity shall be adjustable throughout 15 to 100 % of rating. Pump motor shall be fractional horse power (1/12 or 1/8 H.P) suitable for single phase 230 V, 50 Hz. AC supply.				
249	SUPPLY	**Each**	**1**		
250	HANDLING AND INSTALLATION	**Each**	**1**		
251	CHLORINATOR				
252	Polyethylene chlorinator cylindrical in shape constructed of high density opaque polyethylene complete with suction assembly, shut-off valves, interconnecting piping valves and cover. Capacity 50 Ltrs. (0-6 lph)				
253	Chemical feed pump shall be diaphragm type with a rated capacity of 5 ltrs. per hour against a pressure of 75 psi, the capacity shall be adjustable throughout 15 to 100 % of rating. Pump motor shall be fractional horse power (1/12 or 1/8 H.P) suitable for single phase 230 V, 50 Hz. AC supply.				
254	SUPPLY	**Each**	**1**		
255	HANDLING AND INSTALLATION	**Each**	**1**		
256	Test kit shall for conducting a PPM hardness test on effluent water samples drawn from sample cock installed on softeners.				
257	SUPPLY	**Each**	**1**		
258	HANDLING AND INSTALLATION	**Each**	**1**		
259	ELECTRICAL WORKS FOR PLUMBING INSTALLATION WORKS				
260	CUBICAL PANEL BOARD - PLUMBING				
261	i) For 2 x 6.5 HP Filter Feed Pumps (1 duty + 1 stand by)				

262	i) For 3 x 21.5 HP Treated Water Transfer Pumps (1 duty + 1 stand by)				
263	iii) For 2 x 2.0 HP Basement Waste Sump Pumps (1 Duty + 1 Stand by) - (only isolator).- pump room				
264	iv) For 4 x 3.7 HP Bore well Pump (only isolator).				
265	Supply, installation, testing and commissioning of Cubical type sectionalised floor standing switch board of 31 MVA fault capacity at 415 V complete with 3.5 strip, 160 A capacity Aluminium Bus - Bar Electrolytic grade, cable alley, switchgears of following capacity & as per specifications.				
266	INCOMER				
267	100 A TP MCCB with heavy duty solid neutral link with (0-100A) ammeter with 3 CT and selector switch, (0 - 500 V) voltmeter with selector switch, phase indication light with protection fuse. - 01 Set				
268	OUTGOINGS				
269	For 2 Nos. - For 2 x 6.5 HP Filter Feed Pumps				
270	12 A TP MCB with 10 A DOL starter, overload relay, 96 mm (0-25A) ammeter with single CT, start / stop push buttons, on / off / trip indication lights with protection fuse, single phase preventer. - 01 set.				
271	For 3 x 21.5 HP Treated Water Transfer Pumps (H.S)				
272	40.0 A TP MCB with isolator				
273	For 2 x 2.0 HP Waste Water Transfer Pumps - pump room				
274	25 A TP MCB with 10 A DOL starter, overload relay, 96 mm (0-25A) ammeter with single CT, start / stop push buttons, on / off / trip indication lights with protection fuse, single phase preventer. - 01 set.				
275	For 4 No. - 3.7 HP Borewell Pump				
276	32 A TP MCB with isolator - 2 Sets				
277	For supply, installation, testing & commissioning of plumbing control panel as per above details (with standrad items supplied by Manufactures)	**Item**	**1**		
278	NOTE :				
279	i) All the drainage pumps shall be work cyclic process i.e. in first operation duty pump work on duty and stand by pump duty pump work on stand by and stand by pump work as duty pump.				
280	ii) The drainage Stand by pumps automatically work as drainage assist pump for Duty pump when level of water rises in drainage sump pumps i.e. Both pumps can work at a time & operation shall be controlled with the help of level controllers and float switches.				
281	POWER & CONTROL CABLING				
282	Supply, laying, testing and commissioning of power and control cabling, as per Standard specification including end termination as required.				
283	Power cabling (XLPE) insulated and PVC sheathed, armoured, Aluminium Conductor of 1.1 KV grade on existing cable trays).				
284	3C x 10 Sq. mm	**RMt**	**28**		
285	3C x 6 Sq. mm	**RMT**	**35**		
286	Control Cabling (PVC insulated and PVC sheathed, armoured, Copper Conductor of 1.1 KV grade on existing cable trays).				
287	5C x 1.5 Sq. mm	**RMT**	**63**		
288	Earthing Strip / Wires.				
289	Providing and fixing 25 x 5 mm copper strip in 40 mm	**RMT**	**28**		
290	Providing and fixing 25 x 5 mm copper strip on surface or in recess for connections etc. as required.	**RMT**	**23**		
291	Providing and fixing 4.0 mm dia. Copper wire on surface or in recess for loop earthing as required.	**RMT**	**35**		
292	Supply & laying of rubber mat of size 1000 mm & 12 mm thick.	**RMT**	**6**		
293	Supply and installation of ladder type 16G ms cadmium plated 'U' shaped channel 40mm x 20mm cable tray of following sizes:				
294	150 mm wide	**RMT**	**15**		

295	300 mm wide	**RMT**	**25**		
296	FIRE FIGHTING PLANT ROOM EQUIPMENTS				
297	TERRACE LEVEL - FIRE PUMP	**Set**	**6**		
298	Supplying, storing, handling, shifting, installation, testing and commissioning, supervision of testing of electric driven terrace pump suitable for automatic operation of horizontal end section centrifugal type sychoronous speed of 2900 rpm TEFC confirming to IP : 55 & Flexible coupling & coupling guard mounted on common bed plate of fabricated mild steel channel or cast iron type as required.				
299	Capacity : 900 lpm				
300	App.head : 35 m				
301	App. H.P. : 15 HP				
302	PANELS:				
303	Supply, installation, testing and commissioning of following integrated, cubicle type,dead front, extensible, sheet steel control panel. The panel shall be suitable for 440 volts, 50 cycles, 4 wire supply				
304	The following components and accessories shall be mounted with ineach control panel.				
305	One no 60 amps TP incoming MCCB with the following:				
306	0-500 volts 96 x96 square mm voltmeter with slector switch and control fuses- 1 SET				
307	0-100 amps 96 x96 square mm ammeter with CT's and slector switch- 1 SET				
308	Phase indicating lamp with toggle switches.				
309	Indication lamps for ON/OFF/TRIP status				
310	Outgoing Feeders / Starters as below:				
311	60 ATP MCCB with star / delta as starter suitable for 15 HP motor for Downcomer Pump - 1 Set				
312	Provision in control panel to connect flow switch for autmatic operation of roof fire pumps.				
313					
314	Supply and installation of pressure gauge panel as per the requirement & comprising:				
315	Pressure gauges & pressure switches with ball valve and 2 x 1.5 sq mm copper conductor wiring to motor starter panel				
316	Water piping from system upto the gauge panel along with valves etc.				
317	Sheet metal enclosure with glass paneling etc. as approved	**Set**	**6**		
318	Supply, fabrication (as per code), installation, testing and commissioning of Pressure vessels 450mm diameter and 1000mm high fabricated from 8-10mm M.S. plate with accessories inside painting with epoxy paint and outside with enamel.	**Each**	**6**		
319	Providing, fixing, testing & commissioning of resilient rubber lined single arch vibration eliminators suitable for raw water up to 45 deg. C temperature, working pressure 8.8 Kg/cm2 and test pressure 14 Kg/cm2 for :-				
320	150 mm dia	**Each**	**11**		
321	FIRE FIGHTING SYSTEM				
322	NOTE : Contractor shall obtain, from the local fire authority, completion certificate with respect to his work as required for occupation of the building without any extra cost.				
323	Supply, installation, testing, trial run and commissioning of hydrants all complete as required and as approved				
324	Internal hydrants / landing valves generally as specified and all complete with:				
325	63mm dia single outlet landing valve IS marked with suitable size bolts, nuts, washers and gaskets. Landing valve shall be as per IS code.	**Each**	**50**		
326	First aid hose reel with 25 mm dia, 30 m long rubber hose, ball valve, piping, nozzle and pressure guage as per IS code.	**Each**	**50**		
327	63mm reinforced rubber hoses (RRL) with male and female SS coupling, IS marked- 15 m. as per IS code.	**Each**	**100**		
328	standard short size SS branch pipe with nozzle of 20mm nomnal bor outlet with instaneous type 63 mm dia coupling complete as per IS code.	**Each**	**50**		
329	Fire Axe	**Each**	**50**		
330	Aluminium 1000x1800 door for recessed fire hose cabinet. The door shall have a front glass with lock and key arrangement & shall be painted with post office red colour (approval shall be taken on the basis of submitted sample before ordering).	**Each**	**50**		
331	1200x600x2100 Recessed type mansoary box of accommodating fire hose reel, landing valve, hose pipes, fittings, 1 No. CO2 & 1 No. Dry podwer type portable fire extinguishers & accessories.- By Civil Contractor.	**Each**			

332	Supply, installation, testing, trial run and commissioning of hydrants all complete as required and as approved **(at roof level)**.				
333	Internal hydrants/landing valves generally as specified and all complete with:				
334	63mm dia single outlet landing valve IS marked with suitable size bolts, nuts, washers and gaskets. Landing valve shall be as per IS code.	**Each**	**6**		
335	63mm reinforced rubber hoses (RRL) with male and female SS coupling, IS marked- 15 m as per IS code.	**Each**	**11**		
336	standard short size SS branch pipe with nozzle of 20mm nomnal bor outlet with instaneous type 63 mm dia coupling complete as per IS code.	**Each**	**6**		
337	Fire Axe	**Each**	**6**		
338	Aluminium Powder coated 900x1800 door for recessed fire hose cabinet. The door shall have a front glass with lock and key arrangement & shall be painted with post office red colour (approval shall be taken on the basis of submitted sample before ordering).	**Each**	**6**		
339	900x600x1800 Recessed type mansoary box of accommodating fire hose reel, landing valve, hose pipes, fittings, 1 No. CO2 & 1 No. Dry podwer type portable fire extinguishers & accessories.- By Civil Contractor.	**Each**			
340	Providing, installing, testing & commisioning of fire brigade inlet connection (fire department connection) consisting of 4 Nos. 63 mm dia instantaneous inlet arranged on a 50 mm dia header, 1 No. 150 mm diameter sluice valve, 1 No. 150mm dia. Non-return valve and wall mounted box of M.S. construction with glass door to house the above mentioned components. as per IS code.	**Set**	**6**		
341	Providing, installing, testing & commisioning of fire brigade draw out connection (fire department connection) with suction pipe MS class 'C' 100 mm dia. & 100 mm dia. foot valve & steel chain including wall mounted box M.S. construction with glass door to house the above mentioned componenets.	**Set**	**0**		
342	Supply, fabrication & laying heavy grade IS marked black mild steel piping complete with all fittings, pipe supports, clamps etc. as approved with weleded jointing for external hydrant system. Thes pipes shall be provided with 2mm thick weather proof treatment like covering with pypkote complete.				
343	150 nominal bore	**M**	**200**		
344	100 nominal bore	**M**	**83**		
345	Excavation upto hard murram as per general profiles and back filling	**Meter**	**281**		
346	Making 1:2:4 cement concrete supports and thrust blocks generally as per required and approved.	**CUM**	**38**		
347	Supply and installation of Butterfly Valves with mating flanges generally as specified all complete.				
348	150 nominal bore	**Each**	**8**		
349	100 nominal bore	**Each**	**0**		
350	Providing and laying cast iron non-return valve IS marked with flanges genertally as specified complete.				
351	150 nominal bore	**Each**	**6**		
352	100 nominal bore	**Each**	**0**		
353	Supply, installation testing and commissioning double flanged MS pot strainers with M.S. body and SS 40-grade mesh strainer.				
354	Size 150mm	**Each**	**6**		
355	Supply, installation, testing and commissioning C.I. flanged double air valves size 25mm with 25mm SS isolation valve etc. all complete.	**Each**	**6**		
356	Supply, fabrication & laying heavy grade (Class C) IS marked black mild steel piping complete with all forged fittings, pipe supports, clamps, painting etc. as approved with threaded and welded jointing for Wet Riser System.				
357	Note: a. Threaded joint upto 50mm diameter pipe.				
358	b. Welded joint above 50mm diameter pipe.				
359	200 mm nominal bore (Class C)	**RM**	**0**		
360	150 mm nominal bore (Class C)	**RM**	**45**		
361	100 mm nominal bore (Class C)	**RM**	**238**		
362	80 mm nominal bore (Class C)	**RM**	**15**		

363	65 mm nominal bore (Class C)	**RM**	**15**		
364	25 mm nominal bore (Class C)	**RM**	**45**		
365	Supply, installation, testing and commissioning brass orifice plates in pipelines to reduce pressure from 8 kg. to 3.5 kg/sq.cm.	**Each**	**55**		
366	Providing & Fixing C.I.sluice valve(with cap) complete with bolts,nuts,rubber insertions etc.(the tail pieces if required will be paid separately)	**Each**	**6**		
367	Preparation of working drawing, getting approval from statutory/ local fire authority at all stage of work including inspection of authorities, obtaining licences from authorities including incidental changes etc. complete in all respect.	**Job**	**1**		
368	PORTABLE FIRE EXTINGUISHERS & EXIT SIGNAGES				
369	Supply, storing, handling, shifting, installation, testing and commissioning of portable fire Extinguishers as described below:				
370	4.5 kg carbon dioxide extinguisher, IS marked, with high pressure discharge tube, horn, control valve, CCE approved cylinder	**Each**	**50**		
371	Providing & Fixing of stored pressure Fire Extinguisher ABC powder type (Mono Ammonium Phosphate Powder) Magnetic Pressure Gauge having the facility to check at site, Discharge Time less than 9 Secs, Controllable discharge mechanism, Range minimum 4 Meters, applicable on Class A,B,C and electrically started Fire, A Rating- 21A, B Rating 55B as per BS EN-3 BIS 15683 marked, Can Construction : Deep drawn & CO2 Mig welded, Valve Construction : Forging & Machining, Internal Coating of Can : Epoxy Powder coating, External Coating ofCan : Epoxy Polyster Powder coating, Sheet metal thickness : 1.60MM, Helium LeakDetection Tested, Warranty 5 Years.				
372	6 kg Mono ammonium phosphate (ABC) type cartridge operated extinguishers	**Each**	**50**		

electrical work

S.No	DESCRIPTION	UNIT	TOTAL QUANTITY	RATE	AMOUNT
I	**SUB HEAD (I) :- INTERNAL WIRING**				
1	**Point wiring** in **PVC conduit**, with modular type switch :-				
	Wiring for light point/fan point/exhaust fan point/call bell point with 1.5 Sq.Mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, with modular switch, modular plate,suitable GI box and earthing the point with 1.5 Sq.Mm FRLS PVC insulated copper conductor single core cable etc. as required.				
	Group A	Point	0.00		
	Group B	Point	12103.00		
	Group C	Point	1061.00		
2	Twin Control Point wiring in PVC conduit, with modular type switch :-				
	Wiring for twin control light point with 1.5 Sq.Mm FRLS PVC insulated copper conductor single core cable in surface/recessed medium class PVC conduit, 2 way modular switch, modular plate,suitable GI box and earthing the point with 1.5 Sq.Mm FRLS PVC insulated copper conductor single core cable etc. as required.	Point	748.00		
3	Power plug wiring in PVC conduit (2 x 4 Sq.Mm.) :-				
	Wiring for power plug with 2 x 4 Sq.Mm. FRLS PVC insulated, copper conductor single core cable in surface / recessed medium class PVC conduit along with 1 no 4 Sq.Mm FRLS PVC insulated copper conductor single core cable for loop earthing as required.	M	12320.00		
4	Circuit / Sub main wiring in PVC conduit :-				
	Wiring for circuit / submain wiring alongwith earth wire with the following sizes of PVC insulated, copper conductor single core cable in surface/ recessed medium class PVC conduit as required.				
	2 X 1.5 sq. mm + 1 X 2.5 sq. mm earth wire.	M	81100.00		
	2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire.	M	44158.00		
	2 X 4 sq. mm + 1 X 4 sq. mm earth wire	M	24692.00		
	2 x 10 sq.mm. + 1 x 10 sq.mm. Earth wire	M	0.00		
	4 x 10 sq.mm. + 2 x 10 sq.mm. Earth wire	M	7500.00		
5	S/F light plug point Modular type accessories :-				
	Supply and fixing of suitable size **GI box with modular plate and cover** in front on surface or in recess including providing and fixing 3 pin 5/6 amps modular socket outlet and 5/6 amps. modular switch, connection etc. as required. (For light plugs to be used in non residential buildings).	Each	7963.00		
6	S/F power plug point modular type accessories :-				
	Supply and fixing of suitable size **GI box with modular plate and cover** in front on surface or in recess, including providing and fixing 6 pin 5/6 & 15/16 amps modular socket outlet and 15/16 amps. modular switch, connection etc. as required.	Each	2249.00		
7	Supplying and fixing **20 amps**, 240 volts, SPN, industrial type socket outlet, with 2 poles and earth metal enclosed plug top along with 20 amps. "C" curve, **SP MCB** in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket outlet, and complete with connections, testing and commissioning etc. as required.	Each	1770.00		
8	S/F modular type electronic **fan regulator** :-				
	Supply and fixing of stepped type electronic **fan regulator** on the existing modular plate switch box including connections but excluding modular plate etc. as required.	Each	941.00		
9	S/F modular type **blanking plate** :-				
	Supply and fixing **modular blanking plate** on the existing modular plate & switch box excluding modular plate as required.	Each	188.00		
	TOTAL SUB HEAD (I) (DSR'2016)				
II	**SUB HEAD (II) :- DISTRIBUTION BOARDS & MCB's**				
1	Supplying and fixing **5 amps. to 32 amps**. rating, 240 volts `C' series, **miniature circuit breaker (MCB)**suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
	single pole	Each	3872.00		
2	Supplying & fixing single pole, **blanking plate** in the existing MCB DB complete etc. as required.	Each	1032.00		
3	Supplying and fixing following way, prewired TP&N MCB distribution board of steel sheet for 415 volts,on surface /recess, complete with loose wire box, terminal connectors for all incoming and outgoing circuits, duly prewired with suitable size FRLS PVC insulated copper conductor up to terminal blocks, tinned copper bus bar, neutral link, earth bar, din bar, detachable gland plate, interconnections, powder painted including earthing etc. as required (But without MCB / RCCB / Isolators).				

	4 way (4 + 12), Double door	Each	0.00		
	6 way (4 + 18), Double door	Each	176.00		
	8 way (4 + 24), Double door	Each	9.00		
4	Supplying and fixing following way prewired SP&N MCB distribution board of steel sheet for 240 volts on surface / recess, complete with loose wire box, terminal connectors for all incoming and outgoing circuits, duly prewired with suitable size FRLS PVC insulated copper conductor up to terminal blocks, tinned copper bus bar, neutral link, earth bar, din bar, detachable gland plate bus bar, interconnections, powder painted including earthing etc. as required. (But without MCB / RCCB / Isolator)				
	2 + 4 way, Double door	Each	0.00		
	2 + 8 way, Double door	Each	10.00		
5	S/F **DP MCB Isolator**				
	Supplying and fixing following rating, double pole, (single phase and neutral), 240 V, residual current circuit breaker (RCCB), having a sensitivity current 30 mA in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
	63 Amps	Each	565.00		
6	S/F **TP MCB Isolator**				
	Supplying and fixing following rating, **four pole**, 415 V, isolator in the existing MCB DB complete with connections, testing and commissioning etc.				
	63 Amps	Each	185.00		
	TOTAL SUB HEAD (II) (DSR'2016)				
III	**SUB HEAD (III) :- TELEPHONE, TELEVISION & DATA SYSTEM**				
1	**S/F MODULAR BOXES, BASE & COVER PLATE :-**				
	Supplying and fixing following size / modules, GI box along with modular base & cover plate for modular switches in recess etc as required				
	1 or 2 Module (75 mm x 75 mm)	Each	1762.00		
2	**S/F MODULAR TYPE SWITCH / SOCKET :-**				
	Supplying and fixing following modular switch / socket on the existing modular plate & switch box including connections but excluding modular plate etc as required				
	Telephone Socket outlet	Each	1058.00		
	TV Antenna socket outlet	Each	707.00		
3	Supply and fixing of following sizes of medium class **PVC conduit** along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required :				
	20 mm.	M	9772.00		
	25 mm.	M	8504.00		
4	Supply and drawing following pair, **0.5 sq.mm. FRLS PVC insulated annealed copper conductor**, **unarmoured telephone cable** in the existing surface / recessed steel/ PVC conduit as required.				
	2 Pair	M	13954.00		
5	Supply and drawing co-axial **TV cable RG-6 grade, 0.7 mm.** Solid copper conductor PE insulated, shielded with fine tinned copper braid and protected with PVC sheath in the existing surface / recessed steel/ PVC conduit as required.	M	9527.00		
	TOTAL SUB HEAD (III) (DSR'2016)				
1	Providing, fixing, connecting & testing of **Telephone Tag Block** krone type in a suitable size 1.6 mm thick dust and vermin proof Sheet steel enclosure duly painted by synthetic enamel over anti corrosive primer, lockable and hinged cover with provision for cable through glands complete in all respects.				
	5 pair krone (Hensel - KG 9001 - size 136*253*115 mm)	Nos	177.00		
	10 pair krone (Hensel - KG 9001 - size 136*253*115 mm)	Nos	0.00		
	20 pair krone (Hensel - KG 9001 - size 136*253*115 mm)	Nos	0.00		
2	Supply and Erecting modular type computer jack RJ 45 ISI mark approved make with mounting plate and box with wiring connections complete.	Nos.	2.00		
3	Supplying & installing UTP networking Cat-6 cable suitable for LAN/WAN computer net working as per catalog no. DC6CAUTP4P3X.	Metre	60.00		
	TOTAL SUB HEAD (III) (NON-DSR)				

VI	**SUB HEAD (VI) :- MISCELLANEOUS**				
	(DSR'2016)				
1	Providing and fixing **M.V. danger notice plate** of 200mmx150mm made of mild steel, atleast 2mm thick and vitreous enamelled white on both sides and with inscription single red colour on front side as required.	Each	191.00		
2	Providing and fixing **hexagonal fan box** circular/ Hexagonal cast iron or M.S. sheet box for ceiling fan clamp, of internal dia 140 mm, 73 mm height, top lid of 1.5 mm thick M.S. sheet with its top surface hacked for proper bonding, top lid shall be screwed into the cast iron/ M.S. sheet box by means of 3.3 mm dia round headed screws, one lock at the corners. Clamp shall be made of 12 mm dia M.S. bar bent to shape as per standard drawing.	Each	1997.00		
	TOTAL SUB HEAD (VI) (DSR'2016)				
VII	**SUB HEAD(VII):-INTERNAL LIGHTING FIXTURES & FANS**				
	(DSR'2016)				
	SUPPLY OF LIGHTING FIXTURES				
	(NON-DSR'2016)				
1	Supply of **1 * 28 watt T5 Surface/Ceiling mounted fluorescent light** fixture similar to **Bajaj** Cat. Ref. No : **BLPR 128** or equivalent.	Each	1125.00		
	Supply of 2 *** 28 watt T5 Surface/Ceiling mounted fluorescent light** fixture similar to **Bajaj** Cat. Ref. No : **BLPR 128** or equivalent.	Each	13.00		
2	Supply of **Mirror Light fixture 1x11/15w Retrofit CFL Bajaj** catalouge no.**BJCH 115** or Equivalent.	Each	704.00		
3	Supply of **1* 18 watt D Type CFL** similar to **Bajaj** Cat. Ref. No :**BJDS118C WEB** or Equivalent./LED Ceiling Light 5w	Each	3820.00		
4	Supply of **15W Bracket light fixtrure** as per Bajaj cat no: **BJLF1 15W RF** OR equivalent inlcuding the lamps	Each	1760.00		
5	Supply of **2* 18 watt D Type CFL** similar to **Bajaj** Cat. Ref. No : **BCSC 218 CFL W2EB** or Equivalent.	Each	360.00		
6	supply of **10W RETROFIT CFL BULK HEAD LIGHT** as per Bajaj cat no : **BJDB 10 CFL RF** OR equivalent including the lamps	Each	98.00		
7	Supply of **11W Retrofit CFL** as per Bajaj similar to Bajaj Cat. Ref. No : BJLF311WRF or Equivalent.	Each	0.00		
8	Supply of **Decorative 9/12 lamps chandelier.**	Each	176.00		
	SUPPLY OF CEILING & EXHAUST FANS				
1	Supply of AC 230/250 volts, 50 HZ **ceiling fan** with standard down rod, blades, 2 nos. caps & regulator etc. ISI marked complete as required.				
	1200 mm sweep	Nos	941.00		
2	Supply of AC 230/250 volts, 50 HZ **exhaust fans** including providing nuts, bolts, mounting frame and other accessories etc. complete				
	(Make : Bajaj / Crompton / Havells)				
	300 mm sweep 900 rpm	Nos	356.00		
3	Supply of 450 mm dia **Wall Bracket Fan** including providing nuts, bolts, mounting frame and other accessories etc complete in all respect as required.	Nos	176.00		

	ERECTION OF LIGHTING FIXTURES AND FANS				
1	Installation, testing and commissioning of pre-wired, flourescent fitting / compact fluorescent fitting of all types, complete with all accessories and tubes etc. directly on ceiling / wall, including connection with 1.5 sq. mm. FRLS PVC insulated, copper conductor, single core cable and earthing etc. as required.	Each	4996.00		
2	Installation, testing and commissioning of ceiling fan including wiring the down rod of standard length (upto 30 cm.) with 1.5 sq. mm. FRLS PVC insulated, copper conductor, single core cable, including providing and fixing phenolic laminated sheet cover on the fan box etc. as required.	Each	1821.00		
3	Installation of **exhaust fan** in the existing opening, including making good the damage, connection, testing, commissioning etc. as required				
	Upto 450 mm sweep	Each	356.00		
4	Supplying and fixing of **call bell/buzzer** suitable for single phase, 230 volts, complete as required.	Each	176.00		

EXTERNAL ELECTRICAL & LIGHTING SYSTEM					
S.No	**DESCRIPTION**	**QTY**	**UNIT**	**RATE**	**AMOUNT(1)**
1	**MAIN LT PANEL**				
	Design, manufacture, supply, installation, testing and commissioning of sheet steel cubicle type LT Panel floor/wall mounted type fabricated from 14 SWG CRCA sheet, free standing, indoor duty, dust proof, vermin proof, front operated electrical panel fabricated as per specifications laid in this document and will be complete with the main and auxiliary bus bars, interconnection, earth bus and will be powder coated finish. The Main LT Panel shall use all draw out type breakers suitable for 415 V AC, 3 phase, 50 Hz, 3 phase 4 wire supply system. Each incoming breaker will have microprocessor based releases and all outgoing breaker will have minimum electrostatic releases or mention in BOQ.				
	(Under no case temperature of main LT panel shall be more at any point of the panel. To avoid heating necessary exhaust fans shall have to be provided along with top louvers).				
	Degree of protection IP-42				
	The internal control wiring shall fuse less. All control wiring and metering protection shall be by MCB's.				
	Colour: Siemens Gray Powder Coated or as per approved shade.				
	INCOMER				
	Two numbers 1600A 4P EDO ACB incomer breaker from transformer having microprocessor based, over current, earth fault, short ckt. with relay, phase to neutral & neutral to earth spark gap surge suppresor for 50KA with fuses, 3 phase monitoring relay with phase sequence. This incomer shall have digital multifunction meter and RS 485 port with matching cast resin CT's, volt meter, voltmeter selector switch,ammeter, ammeter selector switch, indication lights for phases with MCB, ON /OFF /TRIP indication light for spring charge.				
	Circuit Breaker Rating - 1600 Amp 50KA 4P EDO ACB				
	Current Transfomer-				
	Ratio: 1600/5A				
	CL:1 & 5P10, 15VA				
	Relays-				
	IDMT 2 O/C+1 E/F RELAY				
	METERS-				
	Digital Ammeter with selector switch				
	Digital Voltmeter with selector switch				
	Set of indication Lamp-				
	Red-OFF				
	Green-ON				
	White-Trip Circuit Healthy				
	Amber-Trip Condition				
	Set of fine wiring, Ferrules & Fuses.				
	Power Pack 230V AC/24V DC Supply				
	TWO Number 800A 4P EDO ACB incomer breaker from DG SET (500 KVA) having microprocessor based, over current, earth fault, short ckt. with Relay, phase to neutral & neutral to earth spark gap surge suppresor for 50KA with fuses, 3phase monitoring relay with phase sequence. This incomer shall have digital multifunction meter and RS 485 port with matching cast resin CT's, volt meter, voltmeter selector switch,ammeter, ammeter selector switch, indication lights for phases with MCB, ON /OFF /TRIP indication light for spring charge, 1 no. reverse power relay.				
	Circuit Breaker Rating - 800Amp 50KA 4P EDO ACB				
	Current Transfomer-				
	Ratio: 800/5A				
	CL:1 & 5P10, 15VA				
	Relays-				

	IDMT 2 O/C+1 E/F RELAY				
	METERS-				
	Digital Ammeter With selector switch				
	Digital Voltmeter With selector switch				
	Set of indication Lamp-				
	Red-ON				
	Green-OFF				
	White-Trip Circuit Healthy				
	Amber-Trip Condition				
	Set of fine wiring, Ferrules & Fuses.				
	Power Pack 230V AC/24V DC Supply				
	INTERLOCKING				
	Interlocking logic electrical between incomers and bus coupler and it should have auto start and auto trip facility for automatic operation of the breakers.				
	BUS COUPLER				
	One number 1600A 4 pole 50 KA EDO ACB as bus coupler with ON/OFF indication.				
	Bus coupler shall be interlocked electrically with Four incomers				
	Only one incomers can be on at one time in one bus.				
	Bus Coupler shall have electrostatics releases.				
	BUS BAR				
	TPN Aluminium bus bar with heat Shrink Sleeve rated for 2000A.				
	OUTGOING				
	2 nos. 630 AMPS TP MCCB (CAPACITOR PANEL)				
	9 no. 1000A 50KA 4P ACB with microprocessor based releases, ON indication, 1 no. multifunction meter (showing all power parameters) with RS 485 port with selector switch, matching cast resin CT's. (DISTRIBUTION PANEL TYPE A)				
	1 no. 500A 50KA 4P MCCB with microprocessor based releases,,ON indication, 1 no. multifunction meter (showing all power parameters) with RS 485 port with selector switch, matching cast resin CT's. (DISTRIBUTION PANEL TYPE B)				
	1 no. 400A 50 KA 4P MCCB with microprocessor based releases, ON indication, 1 no. multifunction meter (showing all power parameters) with RS 485 port with selector switch, matching cast resin CT's. (DISTRIBUTION PANEL TYPE C)				
	1 no. 630A 50 KA 4P MCCB with microprocessor based releases, ON indication, 1 no. multifunction meter (showing all power parameters) with RS 485 port with selector switch, matching cast resin CT's. (MAIN LIFT PANEL)				
	1 no. 160A 50 KA 4P MCCB with microprocessor based releases, ON indication, 1 no. multifunction meter (showing all power parameters) with RS 485 port with selector switch, matching cast resin CT's. (PLUMBING PANEL)				
	1 no. 500A 50 KA 4P MCCB with microprocessor based releases, ON indication, 1 no. multifunction meter (showing all power parameters) with RS 485 port with selector switch, matching cast resin CT's. (FIRE FIGHTING PANEL)				
	1 no. 100A 50 KA 4P MCCB with microprocessor based releases, ON indication, 1 no. multifunction meter (showing all power parameters) with RS 485 port with selector switch, matching cast resin CT's. (EXTERNAL LIGHTING PANEL)				
	2 no. 630A 50 KA 4P MCCB (SPARE)				
	2 no. 500A 50 KA 4P MCCB (SPARE)				
	Other items such as				
	1 set of control wiring				
	1 Set of designation plates				
	All Items complete as above	1	Nos		
2	**AUTOMATIC POWER FACTOR CORRECTION PANEL (CAPACITOR PANEL)**				

	Supply , Installation, Testing commissioning, Design, manufacture, supply, inspection, handling, assembling, affecting proper connections, testing and commissioning of 14 SWG CRCA sheet steel fabricated cubical type **225 KVAR A P F C Panel** consisting of 100 / 50 / 25 KVAR capacitor units in tier formation, housed in an integrated cubicle type automatic switching ON and OFF control panel, floor mounting, dust & vermin proof, front operated construction, enclosure class - IP 52, powder coated after proper treatment with 9 tank process with top/bottom removable gland plates, as required, double compression type cable glands, earth bus, hinged and lockable doors to achieve dust and vermin proof complete with all inter connections small wiring by min. 2.5 sq. mm. copper wires, ckt labels etc. The Aluminium Bus Bar shall be of suitable length, 500 volts, 3 phase 50 Hz TPN, electrolytic aluminium as per IS 8623.				
	All outgoings MCCB's shall be thermal-magnetic based with inbuilt O/L & S/C release.				
	All MCCB's shall be Ics = 100% Icu, with rotary handle & pad locking arrangement, with adjustable O/L & S/C trip setting as per load requirement. All TP MCCB shall be with heavy duty solid isolable neutral link. The breaking capacity specified is Ics value. The instrument chamber shall be separate and shall comprise of flush type ammeter, voltmeter, selector switches, CT's, PT's, etc				
	Capacitor duty contactors should be used for switching individual capacitor banks.				
	The fault withstanding capacity of panel & its control gear shall be min. 35 KA rms for 1 sec.				
	The capacitor panel shall be integrated with the main L T Panel as per schematic diagram.				
	INCOMING				
	Incomer circuit breaker has been included in the main panel.				
	1 set- 3 CTs , ratio 100/5A Class 1.0 accuracy 15 VA burden for metering.				
	1Nos- (0-100A) digital Ameter with selector switch				
	Micro processor based **automatic power factor control relay** (including power factor meter) in 8 steps for automatic cut off or add on capacitor units to keep the power factor at 0.95 with variation of loads. All associated auxiliary contactors / relays shall be provided with in the scope of work.				
	Phase indicating lamps with HRC fuses, and indicating in each capacitor chamber unit to indicate On/Off status of capacitor unit.				
	BUS BARS				
	800 AMP, 500 Volts, 3 phase 50 HZ TPN high conductivity electrolytic Aluminium bus bar of suitable length, SMC / DMC supports, with colour coding and insulated by heat shrinkable sleeves and clips on shrouds for joints. The current density of bus bar shall be minimum 1.00 sq mm / amp.				
	The Maximum allowable temperature for the Bus bar to be restricted to 85 deg C. The temperature rise should be restricted to 35 deg C above ambient temperature.				
	OUTGOINGS -				
	3 no. of 125 AMPS TPN **25 KA** MCCB and **150 amps** AC3 duty contactor with **50 KVAR** gas filled **415 V** capacitor bank, auto-manual selector switch, start stop push button for manual operation including on/off indicating lamps and delay timer complete.				
	3 no. of 63 AMPS TPN **25 KA** MCCB and **80 amps** AC3 duty contactor with **25 KVAR** gas filled **415 V** capacitor bank, auto-manual selector switch, start stop push button for manual operation including on/off indicating lamps and delay timer complete.	1	SET		

3	Design, manufacture, supply, testing and commissioning of **DISTRIBUTION PANEL TYPE A** fabricated out of 16 SWG CRCA sheet steel, IP52, wall / floor mounting type. The sheet steel shall undergo minimum 9 tank treatment followed by finishing powder coating of min 60 micron thickness. the board includes 415 V electrolitic Aluminium Bus Bar, removable gland plates, cable glands, including connection with outgoing feeders complete in all respect.				
	The incoming MCCB shall be thermal-magnetic based with inbuilt O/L & S/C release with E/F protection and all Outgoings MCCB's shall be thermal-magnetic based with inbuilt O/L & S/C release.				
	All MCCB's shall be Ics = 100% Icu, with rotary handle & pad locking arrangement, with adjustable O/L & S/C trip setting as per load requirement. All TP MCCB shall be with solid isolable neutral link. The breaking capacity specified is Ics value. All outgoing MCB's shall be C type with 10 KA breaking capacity.				
	The above board shall be complete with 3 nos. phase indicating lights, flush mounted Ammeter, Voltmeter, CT's, PT's, selector switches, protective fuses etc. at Incomer with all inter connections by min. 2.5 sq.mm. Copper wires.				
	INCOMER : 630 AMP FP MCCB				
	BUS BAR : 800 AMP,3 phase 50 HZ TPN high conductivity electrolytic Aluminium bus bar of suitable length, insulated by heat shrinkable sleeves. The current density of bus bar shall be minimum 1.00 sq mm / amp.				
	The Maximum allowable temperature for the Bus bar to be restricted to 85 deg C. The temperature rise should be restricted to 35 deg C above ambient temperature.				
	OUT GOINGS :				
	1 no 500 AMP FP MCCB (RISING MAIN TYPE A)				
	1 no 63 AMP TPN MCB (COMMON AREA DB)				
	2 no 63 AMP DP MCB (STILT AREA DB)				
	1 no 100 AMP FP MCB (SPARE)	1	SET		
4	Design, manufacture, supply, testing and commissioning of **DISTRIBUTION PANEL TYPE B** fabricated out of 16 SWG CRCA sheet steel, IP52, wall / floor mounting type. The sheet steel shall undergo minimum 9 tank treatment followed by finishing powder coating of min 60 micron thickness. the board includes 415 V electrolitic Aluminium Bus Bar, removable gland plates, cable glands, including connection with outgoing feeders complete in all respect.				
	The incoming MCCB shall be thermal-magnetic based with inbuilt O/L & S/C release with E/F protection and all Outgoings MCCB's shall be thermal-magnetic based with inbuilt O/L & S/C release.				
	All MCCB's shall be Ics = 100% Icu, with rotary handle & pad locking arrangement, with adjustable O/L & S/C trip setting as per load requirement. All TP MCCB shall be with solid isolable neutral link. The breaking capacity specified is Ics value. All outgoing MCB's shall be C type with 10 KA breaking capacity.				
	The above board shall be complete with 3 nos. phase indicating lights, flush mounted Ammeter, Voltmeter, CT's, PT's, selector switches, protective fuses etc. at Incomer with all inter connections by min. 2.5 sq.mm. Copper wires.				
	INCOMER : 500 AMP FP MCCB				
	The Maximum allowable temperature for the Bus bar to be restricted to 85 deg C. The temperature rise should be restricted to 35 deg C above ambient temperature.				
	OUT GOINGS :				
	1 no 400 AMP FP MCCB (RISING MAIN TYPE B)				
	1 no 63 AMP TPN MCB (COMMON AREA DB)				
	1 no 100 AMP FP MCB (SPARE)	1	SET		

5	Design, manufacture, supply, testing and commissioning of **DISTRIBUTION PANEL TYPE C** fabricated out of 16 SWG CRCA sheet steel, IP52, wall / floor mounting type. The sheet steel shall undergo minimum 9 tank treatment followed by finishing powder coating of min 60 micron thickness. the board includes 415 V electrolitic Aluminium Bus Bar, removable gland plates, cable glands, including connection with outgoing feeders complete in all respect.				
	The incoming MCCB shall be thermal-magnetic based with inbuilt O/L & S/C release with E/F protection and all Outgoings MCCB's shall be thermal-magnetic based with inbuilt O/L & S/C release.				
	All MCCB's shall be Ics = 100% Icu, with rotary handle & pad locking arrangement, with adjustable O/L & S/C trip setting as per load requirement. All TP MCCB shall be with solid isolable neutral link. The breaking capacity specified is Ics value. All outgoing MCB's shall be C type with 10 KA breaking capacity.				
	The above board shall be complete with 3 nos. phase indicating lights, flush mounted Ammeter, Voltmeter, CT's, PT's, selector switches, protective fuses etc. at Incomer with all inter connections by min. 2.5 sq.mm. Copper wires.				
	INCOMER : 400 AMP FP MCCB				
	BUS BAR : 500 AMP, 500 Volts, 3 phase 50 HZ TPN high conductivity electrolytic Aluminium bus bar of suitable length, insulated by heat shrinkable sleeves. The current density of bus bar shall be minimum 1.00 sq mm / amp.				
	The Maximum allowable temperature for the Bus bar to be restricted to 85 deg C. The temperature rise should be restricted to 35 deg C above ambient temperature.				
	OUT GOINGS :				
	1 no 63 AMP FP MCCB (RISING MAIN TYPE C)				
	1 no 63 AMP TPN MCB (COMMON AREA DB)				
	1 no 100 AMP FP MCB (SPARE)	1	SET		
6	Design, manufacture, supply, testing and commissioning of **MAIN LIFT Panel** fabricated out of 16 SWG CRCA sheet steel, IP52, wall / floor mounting type. The sheet steel shall undergo minimum 9 tank treatment followed by finishing powder coating of min 60 micron thickness. the board includes 415 V electrolitic Aluminium Bus Bar, removable gland plates, cable glands, including connection with outgoing feeders complete in all respect.				
	INCOMER :				
	Main Incomer 630 Amps FP MCCB, MCCB terminals shall be suitable to receive connection on one side and Busbar connection on the other side.				
	BUSBAR :				
	800 amps TPN busbar chamber of suitable length with Aluminium busbars.				
	INDICATING PANEL :				
	3 nos phase indicating lamps each backed up with MCB and switch shall be provided for incomer.				
	Provide CT operated ammeter with selector switch for incomer.				
	Provide 0-500 Volts range Volt Meter with selector switch for incomer.				
	Provide CT operated KWH Meter for incomer.				
	OUTGOINGS				
	10 Nos. 100 A FP MCCB (10Towers Lift Panel)				
	2 Nos. 100 A FP MCCB (Spare)				
	The Lift Panel as described above and specifications complete.	1	SET		

7	Design, manufacture, supply, testing and commissioning of **TOWER LIFT PANEL** fabricated out of 16 SWG CRCA sheet steel, IP52, wall / floor mounting type. The sheet steel shall undergo minimum 9 tank treatment followed by finishing powder coating of min 60 micron thickness. the board includes 415 V electrolitic Aluminium Bus Bar, removable gland plates, cable glands, including connection with outgoing feeders complete in all respect.				
	INCOMER :				
	Main Incomer 100 Amps FP MCCB terminals shall be suitable to receive connection on one side and Busbar connection on the other side.				
	BUSBAR :				
	160 amps TPN busbar chamber of suitable length with Aluminium busbars.				
	INDICATING PANEL :				
	3 nos phase indicating lamps each backed up with MCB and switch shall be provided for incomer.				
	Provide CT operated ammeter with selector switch for incomer.				
	Provide 0-500 Volts range Volt Meter with selector switch for incomer.				
	Provide CT operated KWH Meter for incomer.				
	OUTGOINGS				
	2 Nos. 63 A FP MCB (LIFT 1 & 2)				
	1 Nos. 63 A FP MCB (Spare)	5	SET		
8	**FLOOR BOARDS :-(TOWER A,B,C FLATS)**				
	Design, manufacture, suppling, fixing in position testing and commissioning of following MV switchgear panels suitable for 415 V, 3 phase, 4 wire, 50 Hz power distribution system. The panel shall be indoor, free standing, dust and vermin proof type compartmenetalized design fabricated out of 14 SWG CRCA sheet steel, complete with aluminium bus bars, seprate earth bus bar to be provided through out the length of the panel. The incoming and outgoing panel shall be accommodated a modular multitier arrangment and shall be interlocked to avoid paralleling, adequate size cable alley, painting, earthing, numbering, danger plate etc as required per specification and drawings, meter board shall be got approved by Engineer in charge before installation.				
	INCOMER:				
	1 no.125A, 30KA TPN MCCB with microprocessor based releases, ON indication, 1 no. multifunction meter (showing all power parameters), with selector switch, matching cast resin CT's.				
	BUS BAR				
	TPN Aluminium bus bar with heat Shrink Sleeve rated for 125A.				
	OUTGOING				
	4 nos 63A TPN MCB				
	Other items such as				
	1 Set of control wiring				
	1 Set of designation plates				
	All Items complete as above	40	SET		
9	**FLOOR BOARDS :-(TOWER D FLATS)**				

	Design, manufacture, suppling, fixing in position testing and commissioning of following MV switchgear panels suitable for 415 V, 3 phase, 4 wire, 50 Hz power distribution system. The panel shall be indoor, free standing, dust and vermin proof type compartmenetalized design fabricated out of 14 SWG CRCA sheet steel, complete with aluminium bus bars, seprate earth bus bar to be provided through out the length of the panel. The incoming and outgoing panel shall be accommodated a modular multitier arrangment and shall be interlocked to avoid paralleling, adequate size cable alley, painting, earthing, numbering, danger plate etc as required per specification and drawings, meter board shall be got approved by Engineer in charge before installation.				
	INCOMER:				
	1 no.100 A, 30KA TPN MCCB with microprocessor based releases, ON indication, 1 no. multifunction meter (showing all power parameters), with selector switch, matching cast resin CT's.				
	BUS BAR				
	TPN Aluminium bus bar with heat Shrink Sleeve rated for 125A.				
	OUTGOING				
	2 nos 63A TPN MCB				
	Other items such as				
	1 Set of control wiring				
	1 Set of designation plates				
	All Items complete as above	5	SET		
10	**External Lighting Panel**				
	Design, manufacture, supply, installation, testing and commissioning of cubicle type panel fabricated out of 14 SWG CRCA sheet steel , floor mounted totally enclosed switchbaord suitable for use of 415 volts , 3 phase, 50 HZ complete with aluminium bus bar and all accessories including supply and fixing of following incoming and outgoing switchgears.				
	INCOMER:				
	One no. 100A 4P MCCB with microprocessor based releases, ON indication 1 no. multifunction meter (showing all power parameters), with selector switch, matching cast resin CT's.				
	BUS BAR				
	TPN Aluminium bus bar with heat Shrink Sleeve rated for 125A.				
	OUTGOING :				
	12 nos 32 A DP MCB				
	Other items such as				
	1 set of control wiring				
	1 Set of designation plates				
	All Items complete as above	1	NO		
11	**RISING MAINS & BUS DUCTS - AIR INSULATED TYPE:**				

	Design, fabrication, supply, installaion, testing and commissioning of following capacity Rising Mains consisting of total metal clad enclosure, **4 POLE** high electrolytic conductivity **aluminium conductor** bus bars fully covered with heat shrinkable PVC coloured sleeves, suitable for operation on 415V/650V 3 phase, 4 wire 50 cycles AC supply system. The construction should be such that it will be dust and vermin proof to IP42 in 14G & front cover in 16G CRCA painted/ powder coated sheet construction rated for 45°C ambient temp. The Rising Mains should be built in convenient sections complete with fire proof barriers, thrust pads, expansion joints at intervals and straps for fixing on the wall or floor mounted arrangement duly marked with the Current carrying capacity and danger plates/sticker. The entire length should be fitted with a double run of 25 x 6mm Al earth bus. The Rising Mains should be CPRI tested for 50 KA for 1 sec. The supporting system shall be earth quake proof.				
	The supporting system shall be fail proof even in earth quake situation.				
	500A/50 KA, **4Pole,** Aluminium	79	RM		
	315A/50 KA, **4Pole,** Aluminium	88	RM		
	200A/50 KA, **4Pole,** Aluminium	9	RM		
12	**ADAPTOR BOX - INDOOR:**				
	Design, fabrication, supply, installation, testing and commissioning of following adaptor box housings fabricated out of 14G CRCA painted or powder coated (as approved) sheet steel for the Rising Mains fitted with following MCCB. The adaptor box shall be totally factory assembled complete with solid aluminium busbar links of rated capacity of MCCB to Risings Mains. The adaptor box should be complete with suitable size of glands plate for incoming cables, including shrouding of terminal ends. The construction shall be dust and vermin proof to IP42.				
	500 Amp/50KA, 4P MCCB with rotary operating mechanism with door interlock & a set of 3 Nos. phase indicating lights, voltmeter, ammeter along with selector switch, CT's and control fuses.	5	NO		
	315Amp/50KA, 4P MCCB with rotary operating mechanism with door interlock & a set of 3 Nos. phase indicating lights, voltmeter, ammeter along with selector switch, CT's and control fuses.	0	NO		
13	**REDUCING UNITS**				
	supply of redusing boxes with termination on both ends				
	315 amp , 50KA	5	NO		
	200 amp , 50KA	1	NO		
14	**TAP-OFF BOXES - INDOOR:**				

	Supply and installation of following **4P MCCB** of breaking capacity as called for, for fixing in the incoming **Tap-off box.** Tap-off box housing shall be fabricated out of 14G CRCA painted or powder coated (as approved) sheet steel. The tap-off box should be factory fabricated and complete with solid aluminium links of rated capacity from MCCB to rising mains and suitable size of gland plate etc.The tap-off box shall be suitable for termination of XLPE insulated Al. conductor armoured cable including shrouding of terminal ends. as required. The construction shall be dust and vermin proof to IP42.				
	125Amp, **4P MCCB, 25KA**	45	NO		
	100Amp, **4P MCCB, 25KA**	5	NO		
	Total (MR)				
15	**LT CABLE AND ACCESSORIES**				
	SUPPLY OF L.T. CABLE:				
	Supplying of following sizes of 1.1 KV grade multicore aluminium conductor XLPE insulated armoured cable conforming to IS:7098 (Part - I) complete with all amendments etc. as required				
	3.5 C X 300 Sq.mm Al. XLPE arm.	400	Mtrs.		
	3.5 C X 240 Sq.mm Al. XLPE arm.	240	Mtrs.		
	3.5 C X 185 Sq.mm Al. XLPE arm.	100	Mtrs.		
	3.5 C X 150 Sq.mm Al. XLPE arm.	150	Mtrs.		
	3.5 C X 120 Sq.mm Al. XLPE arm.	50	Mtrs.		
	3.5 C X 95 Sq.mm Al. XLPE arm.	60	Mtrs.		
	3.5 C X 70 Sq.mm Al. XLPE arm.	50	Mtrs.		
	3.5 C X 50 Sq.mm Al. XLPE arm.	60	Mtrs.		
	3.5 C X 35 Sq.mm Al. XLPE arm.	80	Mtrs.		
	3.5 C X 25 Sq.mm Al. XLPE arm.	100	Mtrs.		
	TOTAL(MR)				
	MV CABLE LAYING				
	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc as required.				
	Upto 35 sq. mm	180	Mtrs		
	Above 35 sq. mm and upto 95 sq. mm	170	Mtrs		
	Above 95 sq. mm and upto 185 sq. mm	300	Mtrs		
	Above 185 sq. mm and upto 400 sq. mm	640	Mtrs		
	TOTAL (DSR)				
	MV CABLE JOINTING & END TERMINATION				
	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.				
	3½ X 25 sq. mm (28mm)	2	Each		
	3½ X 35 sq. mm (32mm)	2	Each		
	3½ X 50 sq. mm (35mm)	2	Each		
	3½ X 70 sq. mm (38mm)	1	Each		
	3½ X 95 sq. mm (45mm)	1	Each		
	3½ X 120 sq. mm (45mm)	2	Each		
	3½ X 150 sq. mm (50mm)	2	Each		
	3½ X 185 sq. mm (57mm)	4	Each		
	3½ X 240 sq. mm (62mm)	4	Each		
	3½ X 300 sq. mm (70mm)	8	Each		
	TOTAL(DSR)				
16	**HT CABLE AND ACCESSORIES**				

	Supply of H.T. Cable				
	Supply of following 11 KV(UE) grade multicore Aluminium conductor XLPE insulated cable, insulation screening with extruded semi conducting compound in combination with copper tape armoured cores laid up, inner sheath of PVC tape, galvanised steel flat strip armoured and overall PVC sheathed cable conforming to IS: 7098 (Part - II) and complete with all latest amendments etc. complete as required.				
	3 C x 240 Sq. mm 11 KV (UE)	110	Mtrs.		
	TOTAL(MR)				
	H.T. Cable Laying-DSR ITEM				
	H V CABLE LAYING				
	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 11 KV grade of following size direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc as required.				
	Above 120 sq. mm and upto 400 sq. mm	110	Meter		
	H.T Termination: DSR ITEM				
	Supply and making Indoor cable end jointing with cast resin compund, including lugs and other jointing materials for following size of 3 core, XLPE aluminium conductor cable of 11KV (UE) grade as required.				
	3 C x 240 Sq.mm (11KV UE)	1	Sets		
	Supply and making Outdoor cable end jointing with cast resin compund, including lugs and other jointing materials for following size of 3 core, XLPE aluminium conductor cable of 11KV (UE)grade as required.				
	3 C x 240 Sq.mm (11KV UE)	2	Sets		
	Total (DSR)				
17	**CABLE TRAY**				
	Supplying and installing following size of perforated pre-painted M.S. cable trays with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc as required.				
	100 mm width X 50 mm depth X 1.6 mm thickness	25	Metre		
	150 mm width X 50 mm depth X 1.6 mm thickness	25	Metre		
	300 mm width X 50 mm depth X 1.6 mm thickness	25	Metre		
	450 mm width X 50 mm depth X 2.0 mm thickness	25	Metre		
	600 mm width X 50 mm depth X 2.0 mm thickness	30	Metre		
	750 mm width X 62.5 mm depth X 2.0 mm thickness	30	Metre		
	900 mm width X 62.5 mm depth X 2.0 mm thickness	45	Metre		
	Total (DSR)				
18	**MISCELLANEOUS ITEMS - DSR**				
	Providing and fixing **M.V. danger notice** plate of 200 mm x 150 mm made of mild steel, at least 2 mm thick and vitreous enamelled white on both sides, and with inscription in single red colour on front side as required .	10	NOS		
	Providing and fixing **H.T. danger notice** plate of 250 mm x 200 mm made of mild steel, at least 2 mm thick and vitreous enamelled white on both sides, and with inscription in single red colour on front side as required .	2	NOS		
	Total(DSR)				
19	**MISCELLANEOUS ITEMS - NON DSR**				

	S/F of **shock treatment chart** (prescribed under I.E.rules) duly framed with glass and supported from back with hard board with supply of all material labour T & P etc for proper completion of work. (Approx front area = 1.20 sq M)	3	NOS		
	Supply and fixing of **First aid box** as approved by Indian red cross conforming to IS : 2217.	1	NOS		
	CO2 Fire Extinguishers 4.5 kg capacity complete in all respect ISI : 15683 marked	1	NOS		
	ABC FIRE EXTINGUISHER 4 KG capacity complete in all respect ISI : 15683 marked	1	NOS		
	Fire Bucket stand made of M S angle suitable for and with 4 Nos Fire Buckets of 9.5 Ltrs capacity	1	NOS		
	Supply of **rubber gloves** of 11 KV grade as per IS : 4770.	3	Set		
	Supply and fixing of **cable route maker**	2	NOS		
	ANTI SKID RUBBER MAT 1 mtr x 2 mtr. 3mm thick ISI - 15652 marked	3	M		
	Total (MR)				
20	**EARTHING**				
	Earthing with **G.I.** earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required. **(BODY EARTHING)**	22	Set		
	Earthing with **copper** earth plate 600 mm X 600 mm X 3 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required. **(NEUTRAL EARTHING)**	4	Set		
	Providing and fixing 25 mm X 5 mm G.I. strip on surface or in recess for connections etc. as required.	200	Mts		
	Providing and fixing 6 SWG dia G.I. wire on surface or in recess for loop earthing as required.	900	Mts		
	Providing and fixing earth bus of 50 mm X 5 mm copper strip on surface for connections etc. as required.	40	Mts		
	Earthing with G.I. earth pipe 4.5 metre long, 40 mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal/ coke and salt as required.	3	Each		
	Total(DSR)				
21	**11KV SINGLE PANEL BOARD (NEAR METER) :-**				
	Supply, Delivery, Assembly, Installation, Testing and Commissioning of one no. out going type Vacuum circuit breakers fully draw out type 50HZ A.C. Suitable for fault level 350 MVA 630 AMP with current transformation ratio 50/25/5A Comlete with 630AMP. AL. BUS bars power pack and relays and other metering arrangements including floor steel and minor civil work etc. as per required for proper completion of work.	1	Nos		
22	**11KV HT PANEL: CONSISTING OF THREE VCB BREAKERS**				
	Supply, Installation, Testing and Commissioning of one incoming, two outgoing, indoor type, 800 A, 11KV, 3 Phase, 50 Hz, earthed, 350 MVA fault level Vacuum Circuit Breaker motor operated, expendable type as per IS: 13118, IEC-56, totally steel sheet enclosed, fully Interlocked, Indoor industrial pattern, Metal clad, Horizontal drawout, floor mounting, earthed bus bar, copper bus bar with heat shrink sleeve.				
	INCOMER				
	1No-Incoming each equipped with the following:				
	Vacuum Circuit Breaker-800 Amp Three Phase				

	Current Transfomer-				
	Ratio: 50/5A				
	CL:1 & 5P10, 15VA				
	Potential Transformer-				
	Ratio: 11KV/110V				
	CL:1,100VA				
	Relays-				
	IDMT 3 O/C + 1 E/F RELAY				
	METERS-				
	Digital Ammeter with selector switch				
	Digital Voltmeter with selector switch				
	PF meter				
	Set of indication Lamps-				
	Red-ON				
	Green-OFF				
	White-Trip Circuit Healthy				
	Amber-Trip Condition				
	Set of wiring, Ferrules & Fuses Power-Pack 110/24V DC Supply for simultaneous tripping of three breakers.				
	BUSBAR-				
	800A copper bus bar with heat Shrink Sleeve.				
	OUTGOING-				
	2 Nos-11KV BUS each equipped with the following:				
	Vacuum Circuit Breaker - 630 Amp Three Phase				
	Current Transfomer-				
	Ratio: 50/5A				
	CL:1 & 5P10, 15VA				
	Potential Transformer-				
	Ratio: 11KV/110V				
	CL:1,100VA				
	Relays-				
	IDMT 3 O/C + 1 E/F RELAY				
	METERS-				
	Digital Ammeter with selector switch				
	Digital Entergy meter				
	Set of indication Lamp-				
	Red-ON				
	Green-OFF				
	White-Trip Circuit Healthy				
	Amber-Trip Condition				
	Set of wiring, Ferrules & Fuses.				
	ALL ITEMS COMPLETE AS ABOVE	1	NO		
23	**OIL COOLED TRANSFORMER:**				
	Supply, Installation, Testing and Commissioning of Outdoor type oil cooled ONAN, 1000 KVA, 11/0.433 KV, 3 Phase, 50Hz, Dyn11 vector group, copper wound, Transformer with metal enclosure , lockable doors switches and ON LOAD Tap Changer with RTCC arrangement on HV + 5 to - 15 in steps of 1.25% having cable end box on HV side suitable of 3C x 240 sq. mm. XLPE cable of 11 KV grade and 6 Runs. 3-1/2 core 300 sq mm on LV side complete with all accessaries i.e. OTI, WTI, MOG, Buchholz Relay etc. including supply, laying, terminating control cable between transformer and HT panel and complete test prior to handing over shall be conducted at site.				
	All instruments contact wiring to be done up to Marshalling box.				
	ALL ITEMS COMPLETE AS ABOVE	1	NO		
24					
25	**DIESEL GENERATOR SET:**				

	Supply, Intastallation, Testing & Commissioning of **500KVA** Capacity water cooled DG Set with suitable capacity engine directly coupled with alternator for 415 volt, 3 phase, 50 Hz, 4 wire, generation system complete with accessories, fuel oil tank & control panel etc as required and sound proof acquastic enclosure approved by CPCB for the DG SET, including supply, fixing of antivibration pads suitable for **500KVA DG Set**, provision of conrol cable from engine to control panel. Provision of fuel pipe line of suitable size from fuel tank to engine and over flow pipe from engine to fuel tank complete with all fittings. Supply, Intallation of starting batteries of suitable AH as recommended by manufecturer heavy duty complete as required at site complete with stand and battery charger residentials silenser suitabe for diesel engine exhaust pipe line complete flange, bend, flexible pipe all as required and as directed by Engineer-incharge.				
	Base frame and DG radiator.				
	Resistoflex antivibration pads or manufecturer standard pads.				
	990 Ltrs Day tank for fuel with markings				
	ECP Panel mounted on a separate frame.				
	Suitable space heater for alternators.				
	Lub oil drain arrangement.				
	Suitable amended arrangement for cable or bus duct and arrangement for mounting differential /REF CTs.				
	DG shall be completely filled with oil for 10 hours running.				
	ALL ITEMS COMPLETE AS ABOVE	1	NO		
	TOTAL(MR)				
26	**POLE ERECTION**				
	Erection of RCC/ PCC pole of following length in brick ballast and ramming the foundation, finishing with 150mm thick cement concrete (1:3:6) layer on top with including excavation and refilling etc as required.				
	Above 4.5 metre and upto 6.5 metre	26	Each		
	Above 6.5 metre and upto 8.0 metre	19	Each		
	Supplying and embedding following dia G.I. pipe (medium class) in pole collar/ foundation (during casting) for cable entry including bending the pipe to the required shape complete as required.				
	32 mm dia	125	metre		
	40 mm dia	107	metre		
	Total(DSR)				
27	**EXTERNAL LIGHTING SYSTEM**				
	SUPPLY OF EXTERNAL LIGHTING SYSTEM				
	Supply of pole mounted **post top lantern** for external lighting complete with required nos. lamps and control gears etc. complete as required as per the standard catalogue item.				
	70 watt HPSV (Philips HPS 360 / 70 (E) watt HPF) Sonora/Bajaj/Surya	2	Nos		
	ERECTION OF EXTERNAL LIGHTING FIXTURES				
	Installation, testing and commissioning of CFL / HPSV / MH / CDMT type **post top lantern** with required lamps complete with, control gears, ballast, capacitor etc. including connection with 3x1.5 sqmm flexible fire retardant copper connecting wire of required length complete as required.	2	Nos		
28	**LED & SOLAR LIGHTING**				
	Supply of LED Lights				

	Supply, installation, testing and commissiong of Street light luminaire having IP66 level of ingress protection for both LED compartment and control gear compartment, LEDSafe© optic compartment with **19W LED** at 530mA, equipped with the Lensoflex photometric system with PMMA lenses, body made of an extruded aluminium, a toughened glass protector, end covers made of injection moulded polycarbonate, safety plug and socket system, a high pressure die cast aluminium painted mounting spigot suitable for horizontal mounting, having a surge protection of 10 kV of Schreder make Brika-19W LED or equivalent.	17	Nos		
	Supply, installation, testing and commissiong of Street light luminaire having IP66 level of ingress protection for both LED compartment and control gear compartment, LEDSafe© optic compartment with 24 LEDs and a total wattage of **78W** at 530mA, equipped with the Lensoflex photometric system with PMMA lenses, body made of an extruded aluminium, a toughened glass protector, end covers made of injection moulded polycarbonate, safety plug and socket system, a high pressure die cast aluminium painted mounting spigot suitable for horizontal mounting, having a surge protection of 10 kV of Schreder make Brika-24 LED or equivalent.	5	Nos		
	Supply, installation, testing and commissiong of Street light luminaire having IP66 level of ingress protection for both **LED** compartment and control gear compartment, LEDSafe© optic compartment with **24 LEDs and a total wattage of 78W** at 530mA, equipped with the Lensoflex photometric system with PMMA lenses, body made of an extruded aluminium, a toughened glass protector, end covers made of injection moulded polycarbonate, safety plug and socket system, a high pressure die cast aluminium painted mounting spigot suitable for horizontal mounting, having a surge protection of 10 kV, with independent standalone solar street lighting system, having dust to dawn operation (10hrs duty cycle) powered by a 180Wp or solar array, a **12V 150Ah battery backup providing 2 days** autonomy (10hrs + 10hrs), high efficiency mono/multi crystalline silicon cells battery - 12-110 Ah, capacity 12V, 150 Ah, of **Schreder make Solar Brika-24 LED** or equivalent with 6m Brika Pole with an arrangment to mount the Solar Panel, battery and charge controller	5	Nos		
29	**Supply of Poles**				
	Supply, installation, testing and commission of **8/4m high Galvanised Octagonal (bajaj make)** with base plate, made out of **GI tubular pole**, primered and PU painted factory finish. The column shall also be provided with flush door at the bottom with proper strengthening to the cutout of the door opening. A junction/ looping box with Heavy duty 3 phase connector shall be suitable into the pole along with 500mm single side bracket.				
	8m High Galvanised Octagonal Pole	10	Nos		
	4m High Galvanised Octagonal Pole	17	Nos		
	Erection of Poles				
	Erection of 8/4 meter high street light GI octagonal pole including providing and casting in position 'M20' grade reinforced cement concrete pole foundation i/c excavation of earth in all kind of soils including foundation.	27	Nos		
	Supplying, drawing, connecting and testing of following size of PVC insulated FRLS copper conductor (as per IS : 694) flexible multicore wire in the existing poles and bracket from cable termination connector / MCB to the fitting i/c providing suitable connectors				
	3 core 2.5 sq.mm (for 7.5Mtr Poles)	216	Nos		
	Total				

Fire Alarm Work					
MR	**DESCRIPTION**	**QTY**	**UNIT**	**RATE**	**AMOUNT**
	ADDRESSABLE FIRE DETECTION AND ALARM SYSTEM				
MR	(a) **Optical**/Photoelectric type **smoke detectors** of photo-optic sensing chamber, 12 / 24 volt D.C., visual alarm indicator (LED's) "Blink - green" in stand by and "Steady - red" in alarm complete in all respects with base as required.(Make:- Siemens, Tyco, Edward)	225	NOS		
MR	(b) Fixed cum rate of rise temprature type **heat detectors**, 12 / 24 volt D.C., visual alarm indicators (LED's) "Blink - green" in stand by and "Steady - red" in alarm complete in all respects with base as required. (Make:- Siemens, Tyco, Edward)	150	NOS		
MR	Providing, fixing, testing and commissioning of resettable type **manual call points** break glass type housed in sheet steel / Polymer housing in surface/recess including making connections with wires complete in all respects and as per specifications. The manual call point should have an indicator, which should "blink" in stand by condition. (Make : Siemens, Tyco, Edward)	175	NOS		
MR	Providing, fixing, testing and commissioning of electronic **hooters** with LMT (hooters shall also be able to work as public address system sounders) housed in sheet steel / Polymer housing suitable for wall / ceiling and surface / recess mounting including making connections with wires complete in all respects and as per specifications. (Make : Siemens, Tyco, Edward)	173	NOS		
	Providing, fixing, testing and commissioning of **fire alarm main control and indicating panel, Addressable microprocessor based** to monitor all local/zonal control panels on each floor or directly detectors as per the case, pulser, timer for dual stage alarm facility complete with indicators, floor selector switches, stand by SMF battery, battery charger, battery box, connections to building automation system / Fire fighting pump panel etc. including Public Address System complete in all respect and as per specifications and requirements. The panel shall have facility of automatic dialling to 5 telephone numbers in case of alarm. The main control panel should give a distinct visual signal of the isolation of loop from the local indication panel. If all the loops at the local panel are isolated or if the fuse of the LCP gets blown, it should result in an open circuit fault indication at the Main Panel. Each loop should have provision of activation of hooter. (MAKE : Siemens, Tyoc, Edward)				
	6 loop main control panel	2	SET		
MR	**Providing, installing, testing and commissioning of repeater panel suitable** for common fire / fault indication of 5 nos main Fire Alarm panels with sounder, stand by SMF battery, battery charger, battery box, LCD alpha numeric character display with accept / reset buttons for alarm. The panel shall be connected to the main fire alarm panel.	5	SET		
	TOTAL SUB HEAD I				

	CABLES AND ACCESSORIES				
	Supply and fixing of ISI marked (IS:3419 & 2509) 2 mm thick **PVC conduit** in concealed / exposed system in wall, ceiling or on floor including cutting of brick work, laying of conduit and fixing it with M.S. hooks and then plastering with cement, sand motar finished to the level, on floor the conduit shall be covered in PCC 1:2:4 for protection, including cost of threading of conduit and providing necessary sockets, bends, tees etc as directed at site by the engineer-in-charge with supply of all material labour and T & P required for proper completion of work. conduit being laid either in concealed system in ceiling slab or wall or on surface or under the frame of false ceiling including flexible conduits or through wooden partition including clamping arrangements as required (Make : B.E.C. / AKG / Finolex / Atul)				
MR	25 mm dia. conduit	2000	M		
	Supplying, receiving, storing, handling, fixing, wiring for fire alarm system wiring using ISI marked (IS 694) 1100 Volts grade, PVC insulated, flexible, flame retardant low smoke (FRLS) **copper conductor wire**, drawn in existing solid / flexible conduits / casing caping including connections to the detectors, manual call points, hooters, response indicators, accessories, fire alarm control panel etc. including termination with bottle type copper lugs, connectors etc as required to complete the system. (Make : FINOLEX / RR / Polycab / Skytone)				
	2 x 1.5 sq mm	4450	M		
	Supply and laying of ISI marked Copper conductor PVC insulated FRLS **control cable** as per IS 1554 or XPLE insulated as per IS 7098 PVC sheathed 1100 volts grade. On surface the cable run shall be fixed by GI clamps etc. of suitable size or on existing cable tray complete in all respect .The armouring of the cable shall be properly connected with the earth conductor including fixing of palm or pin type copper tin plated cable socket (lug) to the cable leads, connectors, terminal blocks, connectors, insulating with tape and making connections complete in all respect including supply of clamps, lugs, tape etc complete upto the satisfaction of Engineer-in-charge.				
	(Make : Universal (Satna) / CCI / Nicco / Finolex / Polycab / Skytone RR)				
MR	8 x 1.5 sq mm armoured	150	M		

Swimming Pool					
S.No.	**Description**	**Unit**	**Qty**	**Rate**	**Amount**
1	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.	Cum	845.94		
	Disposal Of Excavated Earth By truck upto 10 Km.	Cum	845.94		
2	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level : 1:4:8 (1 cement : 4 fine sand : 8 graded stone aggregate 40 mm nominal size)	Cum	50.74		
3	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts etc. up to floor five level, excluding cost of centering, shuttering, finishing and reinforcement : 1:1:2 (1 cement : 1 coarse sand : 2 graded stone aggregate 20 mm nominal size)	Cum	157.53		
4	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth in: Cement mortar 1:6 (1 cement : 6 coarse sand)	Cum	6.72		
5	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in Superstructure in: Cement mortar 1:6 (1 cement : 6 coarse sand)	Cum	7.63		
6	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete above plinth level.	Kg	28024.50		
7	Centering and shuttering including strutting, propping etc. and emoval of form work for :				
8	Retaining walls, return walls, walls (any thickness) including attached pilasters, buttresses, plinth and string courses fillets, kerbs and steps etc.	Sqm	260.52		

9	Providing and laying water proofing treatment to vertical and horizontal surfaces of depressed portions of W.C., kitchen and the like consisting of: (i) Ist course of applying cement slurry @ 4.4 kg/sqm mixed with water proofing compound conforming to IS 2645 in recommended proportions including rounding off junction of vertical and horizontal surface. (ii) IInd course of 20 mm cement plaster 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound in recommended proportion including rounding off junction of vertical and horizontal surface. (iii) IIIrd course of applying blown or residual bitumen applied hot at 1.7 kg. per sqm of area. (iv) IVth course of 400 micron thick PVC sheet. (Overlaps at joints of PVC sheet should be 100 mm wide and pasted to each other with bitumen @ 1.7 kg/sqm).	Sqm	491.00		
10	Providing and laying Ceramic glazed floor tiles of size 300x300 mm (thickness to be specified by the manufacturer), of 1st quality conforming to IS : 15622, of approved make, in all colours, shades, except White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick bed of cement mortar 1:4 (1 Cement : 4 Coarse sand), including pointing the joints with white cement and matching pigments etc., complete.	Sqm	491.04		
11	Providing and fixing Ist quality ceramic glazed wall tiles conforming to IS: 15622 (thickness to be specified by the manufacturer), of approved make, in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge, in skirting, risers of steps and dados, over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm, including pointing in white cement mixed with pigment of matching shade complete.	Sqm	117.00		

12	Providing and fixing T-iron frames for doors, windows and ventilators of mild steel Tee-sections, joints mitred and welded, including fixing of necessary butt hinges and screws and applying a priming coat of approved steel primer. Fixing with 15x3 mm lugs 10 cm long embedded in cement concrete block 15x10x10 cm of C.C. 1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)	Kg	60.00		
13	Filtration Plant electrical Plumbing work,S leader under ground lighting.				

LIFT WORK				
S.NO	**DESCRIPTION**	**QTY**	**UNIT RATE**	**TOTAL AMOUNT**
1	**8 Passenger,11 Floor,11 Opening SS Finish with SS mirror finish center panel and all corners in SS finish, center opening Doors, with SH 300 OP and SH 250 COP controls Lift with Machine Room on top, (09 Stops) SS Finished Cabins, Automatice door with ARD Panel etc. complete in 154 Beam sensor,Fire man Switch and Emergency Alarm SH 110 Control Panel and ARD complete in all respects, Make-KONE**	10		