

**CONSTRUCTION OF A PERMANENT MODERN BUS TERMINUS
AT G.T. ROAD NEAR ESI HOSPITAL WITH A MULTI STORIED
COMMERCIAL COMPLEX OF (B+G+5) FLOORS ALONG WITH
BASEMENT INCLUDING ALL CIVIL WORKS, SANITARY &
PLUMBING WORKS, ELECTRICAL WORKS INCLUDING LIFT
AND OTHER ANCILLARY WORKS UNDER SERAMPORE
MUNICIPALITY, HOOGHLY, WEST BENGAL**

TENDER DOCUMENTS

**Addendum No.1 to Tender Document
Dated 24.10.2013**

HOOGHLY RIVER BRIDGE COMMISSIONERS
(A Statutory Organisation under Government of West Bengal)
TRANSPORT DEPARTMENT
MUNSHI PREMCHAND SARANI
(ST. GEORGE'S GATE ROAD)
KOLKATA – 700 021

October 2013

**CONSTRUCTION OF A PERMANENT MODERN BUS TERMINUS
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**ADDENDUM TO TENDER
DOCUMENTS NO. 1**

CONTENTS

Addendum No.1 to Tender Document consists of the following documents:

1. List of corrigenda
2. Book 2, Version-2, Volume IV : Bill of Quantities etc.

List of Corrigenda

In pursuance with Clause 9 of Section 2 of Volume I (i.e. Instruction to Bidders), the following modifications are made to the Tender Documents:

Sl. No.	Location in Tender documents	Modifications
1		Henceforth, the name of work as mentioned earlier in NIP and Tender Document, wherever mentioned, viz., "Construction of a permanent modern Bus Terminus at G.T. Road near ESI Hospital with a multi storied commercial complex of (B+G+6) floors along with basement including all civil works, sanitary & plumbing works, electrical works including lift and other ancillary works under Serampore Municipality, Hooghly, West Bengal" shall be read as "Construction of a permanent modern Bus Terminus at G.T. Road near ESI Hospital with a multi storied commercial complex of (B+G+5) floors along with basement including all civil works, sanitary & plumbing works, electrical works including lift and other ancillary works under Serampore Municipality, Hooghly, West Bengal" .
BOOK – 1, Volume I, Section 1, Invitation for Bids		
2	Last line of Sl. 2 of Letter for Invitation for Bids, dt.10.10.2013 Page-7	The existing words, viz. 'at/or before 2.00 PM on 28.10.2013' are deleted and substituted by "at/or before 2.00 PM on 04.11.2013"
3	First line of Sl. 4 of Letter for Invitation for Bids, dt.10.10.2013 Page-7	The existing words, viz. 'on 28.10.2013 at 2.30 PM' are deleted and substituted by "on 04.11.2013 at 2.30 PM"
BOOK – 1, Volume I, Section 2, Instruction to Bidders		
4	Clause 12.2 and 12.3 (ii) Page-14 and wherever found	The nomenclature as mentioned earlier under Part B, viz. "f) Electrical Works, g) HVAC Works and h) Fire Protection System" shall be replaced by "f) Lift, Telephone System & Cable work for Computer system, g) Fire Protection System and h) Electrical Works" .
5	At the end of paragraph of Clause 12.4, Page-14	The following sentence shall be added: "Only the Service Tax, as applicable, will be paid by HRBC extra."
6	First sentence of Clause 15.1 Page-15	The existing sentence, viz.; "The bidder shall furnish, as part of his bid, a bid security of Rs.80,00,000.00 (Rupees eighty lacs only) at the time of submission of tender in the form of Bank Guarantee in favour of HRBC from Nationalised or Scheduled Bank of India to be acceptable to the Employer" is deleted and substituted by "The bidder shall furnish, as part of his bid, a bid security of Rs.90,00,000.00 (Rupees ninety lacs only) at the time of submission of tender in the form of Bank Guarantee in favour of HRBC from Nationalised or Scheduled Bank of India to be acceptable to the Employer"

Sl. No.	Location in Tender documents	Modifications
7	First sentence of Clause 19.1 Page-19	The existing sentence, viz.; "Bids must be received only by Director (Pl. & Dn.), HRBC in his office Tender Box at the address specified above not later than on 28.10.2013 at 14.00 hours" is deleted and substituted by " Bids must be received only by Director (Pl. & Dn.), HRBC in his office Tender Box at the address specified above not later than on 04.11.2013 at 14.00 hours "
8	First line of 2 nd paragraph of Clause 19.1 Page-19	The existing words, viz.; "At 14.30 hours on 28.10.2013" are deleted and substituted by " At 14.30 hours on 04.11.2013 "
BOOK – 2, Volume IV - Bill of Quantities		
9		The existing set of Book-2 containing Volume IV: Bill of Quantities etc. as provided in earlier volume is deleted and substituted by a new set as marked Book-2 : Version 2 in Addendum No.1 to Tender Documents.

**CONSTRUCTION OF A PERMANENT MODERN BUS
TERMINUS AT G.T. ROAD NEAR ESI HOSPITAL WITH A MULTI
STORIED COMMERCIAL COMPLEX OF (B+G+5) FLOORS ALONG
WITH BASEMENT INCLUDING ALL CIVIL WORKS, SANITARY &
PLUMBING WORKS, ELECTRICAL WORKS INCLUDING LIFT AND
OTHER ANCILLARY WORKS UNDER SERAMPORE MUNICIPALITY,
HOOGHLY, WEST BENGAL.**

TENDER DOCUMENTS

(NIP NO. HRBC/PL. & DN./07 of 2013-2014, Dated: 12.09.2013)

BOOK – 2

Version - 2

HOOGHLY RIVER BRIDGE COMMISSIONERS

(A Statutory Organisation under Government of West Bengal)

TRANSPORT DEPARTMENT

MUNSHI PREMCHAND SARANI

(ST. GEORGE'S GATE ROAD)

KOLKATA – 700 021

OCTOBER 2013

TENDER DOCUMENTS

FOR

CONSTRUCTION OF A PERMANENT MODERN BUS TERMINUS AT G.T. ROAD NEAR ESI HOSPITAL WITH A MULTI STORIED COMMERCIAL COMPLEX OF (B+G+5) FLOORS ALONG WITH BASEMENT INCLUDING ALL CIVIL WORKS, SANITARY & PLUMBING WORKS, ELECTRICAL WORKS INCLUDING LIFT AND OTHER ANCILLARY WORKS UNDER SERAMPORE MUNICIPALITY, HOOGHLY, WEST BENGAL.

BOOK – 2 : Version - 2

GENERAL CONTENTS

BOOK - 1

Volume I

- Section 1** Invitation for Bids
- Section 2** Instructions to Bidders
- Section 3**
 - Section 3A Form of Agreement
 - Section 3B Form of Performance B.G
 - Section 3C Form of B.G for Advance Payment
 - Section 3D Form of Bid Security (Bank Guarantee)
 - Section 3E Declaration
- Section 4** General Conditions of Contract

Volume II Technical Specification

Volume III Contract Drawings

BOOK - 2, Version - 2 (Separate volume)

Volume IV

- Section 1**
 - Section 1A Form of Bid
 - Section 1B Appendix to Bid
- Section 2** Bill of Quantities

BOOK - 3 (Separate volume)

Volume V Technical Submission
(To be furnished by Contractor)

VOLUME IV
SECTION 1
SECTION 1A FORM OF BID
SECTION 1B APPENDIX TO BID
SECTION 2 BILL OF QUANTITY

Vol. IV Section 1A FORM OF BID

Name of Work : Construction of a permanent modern bus terminus at G.T. Road near ESI Hospital with a multi storied commercial complex of (B+G+5) floors along with basement including all civil works, sanitary & plumbing works, electrical works including lift and other ancillary works under Serampore Municipality, Hooghly, West Bengal.

To The Vice Chairman,
Hooghly River Bridge Commissioners,
HRBC Bhawan
Munshi Prem Chand Sarani,
St George's Gate Road,
Kolkata – 700 021
West Bengal, India

Gentlemen,

1. In accordance with the Conditions of Contract, Specifications, Drawings and Bill of Quantities etc. for execution of the above named Works, we the undersigned offer to construct and install such Works and remedy any defect therein in conformity with the aforesaid contract documents at the rates quoted by us in the Summary Sheet of Bill of Quantities and in the detailed Bill of Quantities of Part B. After application of Contractual Percentage in Part A Bill of Quantities and at the rates quoted in the detailed Bill of Quantities of Part B and taking into consideration the factor of discount as applicable in our case but excluding the amount of Provisional Sums for item (i) escalation and item (j) supplementary works, the total amount of Priced Bill of Quantities being the Contract Price comes to Rs.....
(Rupees..... only).
2. We acknowledge that the Appendix to Bid forms part of the tender.
3. We undertake, if our tender is accepted, to commence the Works as stipulated in cl 34 of Instructions to Bidders after the receipt of the notice to commence work and to complete the whole of the Works comprised in the Contract within the time stated in sub-clause 27.1 of General Condition of Contract.
4. We agree to abide by this Bid and it shall remain binding upon us and may be accepted at any time before the expiration of validity as per sub-clause 14.1 of Instructions to Bidders.
5. Unless and until a formal Agreement is prepared and executed, this Bid, together with your written acceptance thereof, shall constitute a binding Contract between us.
6. We understand that you are not bound to accept the lowest or any bid you may receive.

Dated this day of201...

Signature..... in the capacity of
..... duly authorized to sign bids for and on behalf of
.....

(in block letters or typed)

Address.....

Witness.....

Address.....

Occupation.....

Vol. IV - Section 1B APPENDIX TO BID

Both the Employer and the Contractor are required to sign each page of Appendix to agreement.		
Heading	General Conditions of Contract sub-clause reference	Description
Definitions	1.9	The Employer is :- The Vice Chairman, Hooghly River Bridge Commissioners.
	1.11	The Engineer is :- The Chief Project Manager, Hooghly River Bridge Commissioners.
Contract Price (Indian Rupees)	1.4	As defined in sub-clause 1.4 of General Conditions of Contract.
Amount of Bid Security	Cl. 15 of Instructions to Bidders	Rs. 90 lac.
Performance Security	6.0	Bank Guarantee for Seven point Five (7.5) percent of the Contract Price .
Period of validity of the performance guarantee	6.1	The Bank Guarantee shall be valid up to a period of one month beyond the stipulated period of completion or the extended period.
Retention money	8.0	Ten (10) percent of the Interim Payment Certificates subject to maximum of 5 % of the contract price.
Maximum amount of Advance Payment	10.0	10% of the contract price interest free against unconditional bank guarantee to be disbursed in 2(two) instalments.
Payment mode of 1 st instalment of Advance Payment	10.0	5% of the Contract Price after adequate mobilization of men, materials, machineries and setting up of labour camp at the project sites.
Monthly Recovery of 1 st instalment of Advance Payment	10.0	@ 17 % of monthly interim payment certificate of the month during the period of payment to contractor of bill amounting to 10% and 40% of the Contract Price.
Payment mode of 2 nd instalment of Advance Payment	10.0	5% of the Contract Price after completion of Milestone – 1 (MS -1)
Monthly Recovery of 2 nd instalment of Advance Payment	10.0	@ 12.5 % of monthly interim payment certificate of the month during the period of payment to contractor of bill amounting to 40% and 80% of the Contract Price.
Work Program to be submitted	15.0	Within Ten days (10) after issue of the notice to commence work
Cash flow estimate to be submitted	16.0	Within Ten days (10) after issue of the notice to commence work
Time for Completion of Work	27.1	18 (Eighteen) months from the date of issue of the notice to commence work.
Liquidated Damages	28.0	1% percent of the contract price per week.
Limit of liquidated damages	29.0	10% of the contract price.
Engineer's authority to issue Supplementary Tender	36.0	5% of the contract price.
Defects Liability period	45.0	12(Twelve) months from date of issue of taking over certificate

Vol. IV - Section 1B APPENDIX TO BID (CONTD.)

Heading	General Conditions of Contract sub-clause reference	Description
Minimum amount of Interim payment certificates	56.0	1% of the Contract Price generally. Engineer may reduce the percentage limit under valid circumstances.
Time of Payment	59.1	75% Payment within 7 days and the remaining payment within 45 days after the contractor's monthly statement is certified by the Engineer.
Number of copies of Statement at Completion and final Statement	61.0 & 62.0	Six
Arbitration	39.0	To refer to the Arbitral Panel of three Arbitrators.

Contd....

Vol. IV - Section 1B APPENDIX TO BID (CONTD.)

Heading	General Conditions of Contract sub-clause reference	Description
Notice to Employer, Contractor and Engineers	1.1 ,1.9 & 1.11	<p>The Employer's Address is : The Vice Chairman, Hooghly River Bridge Commissioners, HRBC Bhawan St. George's Gate Road, Kolkata – 700 021, West Bengal, India. Tel : +91 + 33 2248-6587 Fax: +91 + 33 2248-7754 Email: vc.hrbc@yahoo.com</p> <p>.....</p> <p>The Contractor's Address is : </p> <p>Telephone : Fax : Email :</p> <p>.....</p> <p>The Engineer's Address is : The Chief Project Manager, Hooghly River Bridge Commissioners, HRBC Bhawan St. George's Gate Road, Kolkata – 700 021, West Bengal, India. Tel : +91 + 33 2248-5178 Fax: +91 + 33 2248-5178 Email: cpm.hrbc@yahoo.com</p>

VOLUME IV : SECTION 2

Bill of Quantities – Version 2

CONTENTS

1. Preamble
2. Summary Sheet of Bill of Quantities
3. Bill of Quantities (Part A : Priced BOQ)
4. Bill of Quantities (Part B : Non-Priced BOQ)

Bill of Quantities

A. Preamble

A.1 General

- A.1.1 This Preamble shall be read in conjunction with the Instructions to Bidders, the General Conditions of Contract, the Technical Specification, and Contract Drawings etc.
- A.1.2 The quantities given in the Bill of Quantities are estimated and provisional, and are given to provide a common basis for bidding. The basis of payment will be the actual quantities of work ordered and carried out, as measured by the Contractor and verified by the Engineer/ Engineer's Representatives and valued at the rates and prices in the priced Bill of Quantities, where applicable, and otherwise at such rates and prices as the Engineer may fix within the terms of the Contract.
- A.1.3 The whole cost of complying with the provisions of the Contract shall be included in the items provided in the priced Bill of Quantities.
- A.1.4 General directions and descriptions of Work and materials are not necessarily repeated nor summarised in the Bill of Quantities. References to the relevant technical specification as given in Vol. II of Book 1 shall be made before entering prices against each item in the priced Bill of Quantities.
- A.1.5 The Bidder shall sign all the pages of this "Bill of Quantities" as well as in "Technical Specification" apart from the pages of other tender documents.
- A.1.6 In the Bill of Quantities brief description of items of works are given. For Technical Specification in regard to each items in BOQ, Volume – II of this Tender Documents shall be referred. For items in Bill of Quantities, specification of which are neither available in this document nor in schedules of PWD (Building and S&P)/PW(Roads) of WB Govt./CPWD, those should be followed in accordance with good engineering practices.
- A.1.7 The contractors shall quote their contract price at item rate basis based on the rates of different items provided in the priced Bill of Quantities for whole cost of complying with provisions of contract comprising Instruction to Bidders, the General Conditions of Contract, the Technical Specifications and other related tender documents.

A.2 Application of Preamble to Additional Work

The Clauses of the preamble shall apply to any additional or varied work which the Contractor may be required to execute under this Contract except specifically prescribed therein.

A.3 Methods of Measurement

- A.3.1 For each item of the Bill of Quantities, the method of measurement will be followed as per PWD Schedule of rates, Govt. of West Bengal. Where the same is not mentioned, the method of measurement will be followed in accordance with good engineering practices as approved by the Engineer.
- A.3.2 Quantities will be computed net from the drawings, unless directed otherwise in the Contract and no allowance will be made for bulking, shrinkage, or waste.
- A.3.3 The works as executed will be measured for payment in accordance with the method adopted in the Schedule of PWD or PW(Roads), Government of West Bengal. The net measurement or weight of the finished work in place will always be taken, except as otherwise specified.

A.4 Rates and Sums

- A.4.1 The rates and prices in the priced Bill of Quantities shall, except insofar as it is otherwise provided under the Contract/BOQ, include all Constructional Plant, labour, supervision, materials, erection, maintenance, insurance, profit, overhead, taxes, and duties, together with all general risks, liabilities, and obligations set out or implied in the Contract.

PART C : (Provisional Sums)

- | | |
|------------------------|--------------------|
| i. Escalation | Rs. 2,00,00,000.00 |
| j. Supplementary Works | Rs. 2,00,00,000000 |

SUB TOTAL – PART C [i + j]	Rs. 4,00,00,000.00
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.....
Signature of the Contractor with seal

PRICED BILL OF QUANTITIES FOR CIVIL WORK

PART A (a) : (Refer Clause 12 of ITB, Volume I, Section 2)

SI. No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
1	2	Providing RCC cast in situ bored piles in position as per specifications in all kinds of soil except rock of any hardness including cost of boring using drilling mud to stabilize the bore and flushing the bore of excess mud with freshly prepared drilling fluid by using pumps prior to placing concrete by tremie pipe in one continuous operation and including the cost of all materials and labour for placing of concrete and also including the cost of mobilization and hire charges of all equipments necessary for boring, welding of reinforcement cage as . -riecc essary and lowering . of re-inforcement cage & steel liner (if any), preparation and placing of concrete, complete but excluding the cost of reinforcement and labour for bending binding etc. but including the cost of concrete. Work to be executed as per IS: 2911 (Part II Sec 2). (cement concrete should have an ultimate crushing strength of not less than 350 kg/cm ² on 15 cm cube after 28 days).					
		Using hydraulic piling rig with power unit and complete accessories including cost of shifting of machinery from one bore location to other, removal of excavated earth with all lifts and lead up to 1 km by tipper trucks					
		With Batch Mixed Concrete (without approved concrete pump)					
a)		600 mm dia pile	Rm	19200	4133.00	Rupees Four Thousand One Hundred Thirty Three and Paise Zero Only	79353600.00
2	4.1	Batch Mixed concrete of M30 Grade with well Graded stone chips of 20 mm nominal size containing designed quantity of cement per Cu. M of wet concrete produced in computerised batching plant under controlled condition using approved super plasticizer designing concrete mix following IS 10262 and IS 456 transporting the mix with agitation in transit mixer to work site depositing the mix on a platform erected for the purpose at required level of concreting and than placing the mix in its final location of form work compacting and curing the same complete as per specification and direction of the engineer in charge including hire charges of computerised batching plant, transit mixer with all accessories vibrators etc. inclusive of all other incidental charges in this connection complete but excluding cost of hire charges of platform and its supporting staging which would be paid through separate item. Consumption of cement will not be less than 320 Kg of cement per cubic meter of controlled concrete but actual consumption will be determined on the basis of preliminary test and job mix formula.					
a)		i) Without approved concrete pump	Cum	329	6522.18	Rupees Six Thousand Five Hundred Twenty Two and Paise Eighteen Only	2145797.22

Sl. No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
b)		ii) With approved concrete pump	Cum	2596	6771.82	Rupees Six Thousand Seven Hundred Seventy One and Paise Eighty Two Only	17579644.72
3	7.1	Brick work with 1st class bricks in cement mortar (1:6)					
a)		In foundation and Plinth (250 mm thick)	Cum	200	5248.95	Rupees Five Thousand Two Hundred Forty Eight and Paise Ninety Five Only	1049790.00
b)		Extra for basement and each additional floor over the rate for ground floor.	Cum	200	70.34	Rupees Seventy and Paise Thirty Four Only	14068.00
4	6	Reinforcement for reinforced concrete work in all sorts of structures including distribution bars, stirrups, bindings ect initial straightening and removal of loose rust (if necessary), cutting to requisit length, hooking and bending with 16 gauge black annealed wire at every intersection, complete as per drawing and direction.					
		For piling works in foundation, basement and upto roof of ground floor/upto 4 m.					
		Tor Steel/Mild Steel	MT	1310	59762.00	Rupees Fifty Nine Thousand Seven Hundred Sixty Two and Paise Zero Only	78288220.00
5	2.12	Vertical Load Test (Compression) by hydraulic jacks on Initial/Working Pile including preparation of the head of piles with concrete of required strength for receiving the jacks with all ancilliary arrangements for setting up gauges, construction of suitable platforms, keeping the loads and dismantling and removing all arrangement etc. complete as per direction of the Engineer-in-charge including cost of carriage of all materials and as per IS specification.					
a)		On single pile : Testing load 150 to 200 T	Nos	1	80000.00	Rupees Eighty Thousand and Paise Zero Only	80000.00
b)		On single pile : Testing load less than 100 T	Nos	16	45000.00	Rupees Forty Five Thousand and Paise Zero Only	720000.00
6	3.1	Surface dressing of the ground in any kind of soil including removing vegetation and in - equalities not exceeding 15 cm deep and disposal of rubbish within a lead up to 75 m as directed.	Sqm	6411	6.45	Rupees Six and Paise Forty Five Only	41350.95
7	3.1	Earth work in excavation of foundation trenches, or drains in all sorts of soil (including mixed soil but excluding laterite or sandstone) including removing, spreading or staking the spoils within a lead of 75 m as directed. The items necessary trimming the sides of trenches, levelling, dressing and ramming of bottom bailing out water as required complete.					
a)		Depth of excavation not exceeding 1500mm	Cum.	100	92.21	Rupees Ninety Two and Paise Twenty One Only	9221.00
b)		Depth of excavation for additional depth beyond 1500 mm and upto 3000 mm but not requiring shoring.	Cum.	5612	148.74	Rupees One Hundred Forty Eight and Paise Seventy Four Only	834728.88

Sl. No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
8	3.1	Earthwork in cutting to form road section in correct profile including removal of spoils not exceeding initial lead of 50m and initial lift of 1.5m.					
		In ordinary soil.	Cum	1315	32.60	Rupees Thirty Two and Paise Sixty Only	42869.00
9	3.5	Earth work in road embankment and construction of Subgrade in all sorts of soil to correct profile as per design formation level with earth obtained from land owned / arranged by the agency depositing layers of not more than 250 mm (loose) thick layer and compacting by power roller each layer of soil up to 45 cm.bellow the subgrade level at O.M.C. to 95 % proctor density the top 45 Cm upto the subgrade level at OMC to 97 % proctor density in/c breaking all clods throughly , watering dressing , cambering etc. filling depression ,making sufficient no of benches on existing embankment ,bailling out water , dressing side slope and crest to proper profile ---- in/c arrangement for quality control etc. complete as per specification and direction of the E.I.C. (Payment shall be made in Cum. on the finished work on the basis of pre work and post work level sec. measurements) The rate includes cost of earth and compaction etc. all complete at site.					
a)	a)	For lead beyond 150m upto 500 m	Cum	7702	89.00	Rupees Eighty Nine and Paise Zero Only	685478.00
10	3.5	Extra for compaction of earth work in embankment under optimum moisture conditions to give at least 95% of the maximum dry density (proctor density)	Cum	7702	9.30	Rupees Nine and Paise Thirty Only	71628.60
11	3.2	Hire & labour charges for shoring work (including necessary close plank walling, framing, Eucalyptus/ Jhou bulla piling, strutting etc) complete as per direction of the enginee in charge for foundation excavation (vertical surface are in contact with supported earth is to be measured) (This item should be executed on specific direction of the Engineer in charge).					
a)		For basement work and Depth upto 1.50 m.	Sqm	411	473.38	Rupees Four Hundred Seventy Three and Paise Thirty Eight Only	194559.18
b)		For basement work and Depth beyond 1.50 m and upto 3.00 m.	Sqm	1888	511.89	Rupees Five Hundred Eleven and Paise Eighty Nine Only	966448.32
12	3.7	Filling in foundation or plinth by silver sand in layers not exceeding 150 mm as directed and consolidating same by thorough saturation with water ramming complete. Including the cost of supply of sand. [Payment to be made on measurement of compacted quantity.]					
		With earth obtained from excavation of foundation.	Cum	1044	728.81	Rupees Seven Hundred Twenty Eight and Paise Eighty One Only	760877.64
13		Demolishing C.C /RCC work by mechanical means and stockpiling at designated locations and disposal of dismantled materials upto a lead of 1000 m,	Cum	100	1264.70	Rupees One Thousand Two Hundred Sixty Four and Paise Seventy Only	126470.00

Sl. No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
14	3.6	Removal of rubbish, earth etc from the working site and disposal of the same beyond the compound, in conformity with the Municipal/ Corporation Rules for such disposal, loading into truck and cleaning the site in all respect as per direction of engineer in charge.	Cum	7015	158.39	Rupees One Hundred Fifty Eight and Paise Thirty Nine Only	1111105.85
15	17.6	Anti termite treatment to bottom surface (in case of masonry foundation and basements) and the sides (upto a height of 300 mm. from bottom) of the excavation trenches with chemical emulsion by admixing chloropyrofos emulsifiable concentrates (1% concentration) with water by weight at the rate of 5 Litres per sq. m. area. The work shall be carried out as per specification described in 6.2.1. of code IS-6313 (part -II) 1981. (Mode of measurment will be the plan area of foundation treated.)	Sqm	2596	86.99	Rupees Eighty Six and Paise Ninety Nine Only	225826.04
16	17.7	Treatment to the back filling of R.C.C. foundation with chemical emulsion by admixing chloropyrofos emulsifiable concentrate (1% concentration) with water by weight at the rate of 7.5 lt. per sq.m. of the vertical surface of the substructure of each side of the foundation. The work shall be carried out as per specification as described in para 6.3.1 of code IS-6313 (part-II) 1981 (Mode of measurement will be per sq.m. of vertical area of foundation treated).	Sqm	1641	126.88	Rupees One Hundred Twenty Six and Paise Eighty Eight Only	208210.08
17	4	Ordinary Cement concrete (mix 1:2:4)/M15 with graded stone chips. (20 mm normal size) excluding shuttering and reinforcement, if any in ground floor as per relevent IS codes.					
		Pakur Varity	Cum	652	5251.34	Rupees Five Thousand Two Hundred Fifty One and Paise Thirty Four Only	3423873.68
18	4	Extra rate for using water proofing and plasticising admixture @ 0.2% by weight of cement (or at manufacturer's specified rate) for concrete of various grades.	Kg	100	132.65	Rupees One Hundred Thirty Two and Paise Sixty Five Only	13265.00
19	4	Providing and fixing at or near ground level precast cement concrete in kerbs, edgings etc. as per approved pattern and setting in position with cement mortar 1:3 (1 Cement : 3 coarse sand), including the cost of required centering, shuttering complete.					
		1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size)	Cum	235	5160.60	Rupees Five Thousand One Hundred Sixty and Paise Sixty Only	1212741.00

Sl. No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
20	4	Batch Mixed concrete of M35 Grade with well Graded stone chips of 20 mm nominal size containing designed quantity of cement per Cu. M of wet concrete produced in computerised batching plant under controlled condition using approved super plasticizer designing concrete mix following IS 10262 and IS 456 transporting the mix with agitation in transit mixer to work site depositing the mix on a platform erected for the purpose at required level of concreting and than placing the mix in its final location of form work compacting and curing the same complete as per specification and direction of the engineer in charge including hire charges of computerised batching plant, transit mixer with all accessories vibrators etc. inclusive of all other incidental charges in this connection complete but excluding cost of hire charges of platform and its supporting staging which would be paid through separate item. Consumption of cement will not be less than 340 Kg of cement per cubic meter of controlled concrete but actual consumption will be determined on the basis of preliminary test and job mix formula.					
		[with Batching Plant & transit mixer], In ground floor [Pakur Variety] Without approved concrete pump					
		For RCC Columns	Cum	821	6932.80	Rupees Six Thousand Nine Hundred Thirty Two and Paise Eighty Only	5691828.80
21	4	Extra over the rate of Ground Floor for basement and each additional floor above ground floor.					
		For basement upto Plinth Level	Cum	110	61.82	Rupees Sixty One and Paise Eighty Two Only	6800.64
		For 1st floor	Cum	107	61.82	Rupees Sixty One and Paise Eighty Two Only	6615.17
		For 2nd floor	Cum	107	123.65	Rupees One Hundred Twenty Three and Paise Sixty Four Only	13230.34
		For 3rd floor	Cum	107	185.47	Rupees One Hundred Eighty Five and Paise Forty Seven Only	19845.50
		For 4th floor	Cum	107	247.30	Rupees Two Hundred Forty Seven and Paise Twenty Nine Only	26460.67
		For 5th floor	Cum	107	322.31	Rupees Three Hundred Twenty Two and Paise Thirty One Only	34487.17
		Above Roof	Cum	57	397.32	Rupees Three Hundred Ninety Seven and Paise Thirty Two Only	22647.24

Sl. No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
22	4	Batch Mixed concrete of M35 Grade with well graded stone chips of 20 mm nominal size containing designed quantity of cement per Cu.M of wet concrete produced in computerrised batching plant under controlled condition using approved super plasticizer designing concrete mix following IS 10262 and IS 456 transporting the mix with agitation in transit mixer to work site depositing the mix on a platform erected for the purpose at required level of concreting and than placing the mix in its final lcation of form work complacting and curing the same complete as per specification and direction of the engineer in charge including computerised batching plant, transit mixer with all accessories vibrator etc. inclusive of all other incidental charges in this connection complete but excluding cost of hire charges of platform and its supporting staging which would be paid through separate item. [Cement to be supplied by the Manufacturer or supplier] With approved concrete pump					
		Sub-structure, upto Plinth	Cum	815	7183.62	Rupees Seven Thousand One Hundred Eighty Three and Paise Sixty Two Only	5854650.30
		Super structure	Cum	3786	7183.62	Rupees Seven Thousand One Hundred Eighty Three and Paise Sixty Two Only	27197185.32
23	4	Extra over the rate of Ground Floor for basement and each additional floor above ground floor.					
a)		For basement upto Plinth Level	Cum	815	82.82	Rupees Eighty Two and Paise Eighty Two Only	67498.30
b)		For 1st floor	Cum	704	82.82	Rupees Eighty Two and Paise Eighty Two Only	58305.28
c)		For 2nd floor	Cum	704	165.65	Rupees One Hundred Sixty Five and Paise Sixty Five Only	116617.60
d)		For 3rd floor	Cum	704	248.47	Rupees Two Hundred Forty Eight and Paise Forty Seven Only	174922.88
e)		For 4th floor	Cum	704	331.30	Rupees Three Hundred Thirty One and Paise Thirty Only	233235.20
f)		For 5th floor	Cum	704	427.31	Rupees Four Hundred Twenty Seven and Paise Thirty One Only	300826.24
g)		Above Roof	Cum	810	523.32	Rupees Five Hundred Twenty Three and Paise Thirty Two Only	423889.20
24	6	Reinforcement for reinforced concrete work in all sorts of structures including distribution bars, etirrips, bindings etc initial straightening and removal of loose rust (if necessary), cutting to requisit length, hooking and bending with 16 gauge black annealed wire at every intersection, complete as per drawing and direction.					
		Tor Steel/Mild Steel					
a)		For works in foundation, basement and upto roof of ground floor.	MT	952	59762.00	Rupees Fifty Nine Thousand Seven Hundred Sixty Two and Paise Zero Only	56893424.00

Sl. No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
25		Extra for works beyond the roof of ground floor.					
i)		For 1st floor	Qntl	1620	31.85	Rupees Thirty One and Paise Eighty Four Only	51591.33
ii)		For 2nd floor	Qntl	1620	63.69	Rupees Sixty Three and Paise Sixty Nine Only	103182.66
iii)		For 3rd floor	Qntl	1620	95.54	Rupees Ninety Five and Paise Fifty Three Only	154773.99
iv)		For 4th floor	Qntl	1620	127.39	Rupees One Hundred Twenty Seven and Paise Thirty Eight Only	206365.32
v)		For 5th floor	Qntl	1620	164.60	Rupees One Hundred Sixty Four and Paise Fifty Nine Only	266648.76
vi)		Above Roof	Qntl	1420	201.81	Rupees Two Hundred One and Paise Eighty One Only	286570.20
26	5	Hire and labour charges for shuttering with centering and necessary staging upto 4 m using approved stout props and thick hard wood planks of approved thickness with required bracing for concrete slabs, beams and columns, lintels curved or straight including fitting, fixing and skriking out after completion of works (upto roof of ground floor) (When the heoght of a particular floor is more than 4 m the equivalant floor height shall be taken as 4 m and extra for works beyond the initial 4 m ht. shall be alowed under 12 (e) for every 4 m or part thereof)					
		Steel shuttering or 9-12 mm th. Approved quality ply board shuttering in any concrete work.					
a)		Upto roof of ground floor	Sqm	26118	335.69	Rupees Three Hundred Thirty Five and Paise Sixty Nine Only	8767551.42
27		Extra for works beyond the roof of ground floor per additional floor.					
		Upto 4th (per floor) and in basement.					
i)		Basement & in 1st floor	Sqm	3532	12.04	Rupees Twelve and Paise Four Only	42532.34
ii)		For 2nd floor,	Sqm	3326	24.08	Rupees Twenty Four and Paise Eight Only	80103.38
iii)		For 3rd floor,	Sqm	3326	36.13	Rupees Thirty Six and Paise Twelve Only	120155.08
iv)		For 4th floor	Sqm	3326	48.17	Rupees Forty Eight and Paise Sixteen Only	160206.77
v)		For 5th floor	Sqm	3326	62.90	Rupees Sixty Two and Paise Eighty Nine Only	209202.74
vi)		Above Roof	Sqm	3326	77.63	Rupees Seventy Seven and Paise Sixty Three Only	258198.71

Sl. No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
28	7	Brick work with 1st class bricks in cement mortar (1:6)					
a)		In Basement	Cum	285.37	5248.95	Rupees Five Thousand Two Hundred Forty Eight and Paise Ninety Five Only	1497892.86
b)		In superstructure, ground floor	Cum	1365.42	5404.35	Rupees Five Thousand Four Hundred Four and Paise Thirty Five Only	7379207.58
29	7	Extra for basement and each additional floor over the rate for ground floor.					
a)		For 1st floor	Cum	223.79	70.34	Rupees Seventy and Paise Thirty Three Only	15741.28
b)		For 2nd floor	Cum	223.79	140.68	Rupees One Hundred Forty and Paise Sixty Seven Only	31482.55
c)		For 3rd floor	Cum	223.79	211.02	Rupees Two Hundred Eleven and Paise One Only	47223.83
d)		For 4th floor	Cum	223.79	281.36	Rupees Two Hundred Eighty One and Paise Thirty Five Only	62965.11
e)		For 5th floor	Cum	223.79	365.70	Rupees Three Hundred Sixty Five and Paise Seventy Only	81841.01
f)		For terrace & above (LMR)	Cum	90.8	450.05	Rupees Four Hundred Fifty and Paise Five Only	40864.63
30	7.3	Brick work with 1st class bricks in cement mortar (1:4) in foundation and Plinth.	Cum	1575	5568.15	Rupees Five Thousand Five Hundred Sixty Eight and Paise Fifteen Only	8769836.25
31	7.4	125 mm thick brick work with 1st class bricks in cement mortar (1:4)					
		In Ground Floor and beyond 4th floor	Sqm	557	710.85	Rupees Seven Hundred Ten and Paise Eighty Five Only	395943.45
32	7.4	Extra for each additional floor over the rate of ground floor.					
a)		For 1st floor	Sqm	146.68	7.14	Rupees Seven and Paise Fourteen Only	1047.30
b)		For 2nd floor	Sqm	75.63	14.28	Rupees Fourteen and Paise Twenty Eight Only	1080.00
c)		For 3rd floor	Sqm	75.63	21.42	Rupees Twenty One and Paise Forty Two Only	1619.99
d)		For 4th floor	Sqm	75.63	28.56	Rupees Twenty Eight and Paise Fifty Six Only	2159.99
e)		For 5th floor	Sqm	75.63	36.59	Rupees Thirty Six and Paise Fifty Nine Only	2767.30
f)		For Terrace floor	Sqm	75.63	44.62	Rupees Forty Four and Paise Sixty Two Only	3374.61
33	7	Extra for using approved H.B. netting in every third layer in any floor.	Sqm	557	39.61	Rupees Thirty Nine and Paise Sixty Only	22060.54
34	8.1	18 mm to 22 mm thick Kota stone slab set in 20 mm thick (avg) cement mortar (1:4) in floor, stair & lobby including pointing in cement slurry with admixture of pigment matching the stone shade, including griding & polishing as per direction of Engineer-in-charge to match with the existing work. [Slurry for bedding @ 4.4 kg/sqm and pointing @ 2.0 kg/sqm]	Sqm	3300	963.01	Rupees Nine Hundred Sixty Three and Paise One Only	3177933.00

Sl. No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
35	8.8	Cement concrete flooring 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate) finished with a floating coat of neat cement, including cement slurry, but excluding the cost of nosing of steps etc. complete.					
		40 mm thick with 20 mm nominal size stone aggregate	Sqm	5000	316.80	Rupees Three Hundred Sixteen and Paise Eighty Only	380862.00
36	4.17	40mm thick damp proof course with cement concrete (1:1.5:3) (with graded stone chips 20mm nominal size) with water proofing compound of approved brand @ 0.2% weight of cement including cost of materials over two coats of non toxic acrylic polymer modified cementitious waterproofing slurry coat complete [cost of water proofing compound and non toxic paint to be paid separately] for underground water retaining structures. [water proofing as per item no 60 and non toxic paint as per item NO 59 (b) of Section 'C'], [Cement to be supplied by Contractor]	Sqm	1350	282.12	Rupees Two Hundred Eighty Two and Paise Twelve Only	380862.00
37	8.8	Artificial stone in floor, dado, staircase etc with cement concrete (1:2:4) with stone chips, laid in panels as directed with topping made with ordinary or white cement (as necessary) and marble dust in proportion (1:2) including smooth finishing and rounding off corners including raking out joints or roughening of concrete surface and application of cement slurry before flooring works using cement @ 1.75 kg/sqm all complete including all materials and labour. [Cement to be supplied by Contractor]					
a)		35 mm thick artificial stone in floor, dado etc. with cement concrete (1:2:4)	Sqm	1350	293.42	Rupees Two Hundred Ninety Three and Paise Forty Two Only	396117.00
b)		25 mm thick artificial stone in floor, dado etc. with cement concrete (1:2:4)	Sqm	825	236.74	Rupees Two Hundred Thirty Six and Paise Seventy Four Only	195310.50
38	8	Supplying Glass dividing strip fitted and fixed with cement mortar (1:3) in mosaic or patent stone floor, dado etc. complete as per direction of the Engineer-in-charge. (Glass-3mm thick 25mm wide strip	Rm	600	13.94	Rupees Thirteen and Paise Ninety Four Only	8365.68
39	8.1	Extra cost of labour for prefinished and premoulded Nosing to treads of steps, railing, window sill etc. of kota stone.	Rm	5307	139.21	Rupees One Hundred Thirty Nine and Paise Twenty One Only	738787.47
40	8.6.3	Supplying fitting and fixing 15 to 18 mm thick Marble slab /Tile inriser of steps or skirting (upto 300 mmht) over 15mm avg. thick base of cement mortar (1:2) laid with white cement slurry @ 4.4 kg/Sq. m at back side of marble and jointed with white cement slurry @ 2.2 kg/sqm with necessary pigments including grinding and Granite polishing. [White cement and pigment to be supplied by the agency]					
		With Chawk Doongri. Area of each tile exceeding 0.3 sqm. But not exceeding 0.6 sqm.	Sqm	967	1834.60	Rupees One Thousand Eight Hundred Thirty Four and Paise Sixty Only	1774058.20

Sl. No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
41	8.8	52 mm thick cement concrete flooring with concrete hardener topping, under layer 40 mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) and top layer 1mm thick cement hardener consisting of mix 1:2 (1 cement hardener mix : 2 graded stone aggregate 6 mm nominal size) by volume, hardening compound mixed @ 2 litre per 50 kg of cement or as per manufacturer's specifications. This includes cost of cement slurry, but excluding the cost of nosing of steps etc. complete.	Sqm	32281	480.10	Rupees Four Hundred Eighty and Paise Ten Only	15498108.10
42	8.4.1	Supplying & laying true to line & level vitrified tiles of approved brand (size not less than 600mm x 600mm x 10 mm thick) in floor, skirting etc. set in 20mm sand cement mortar (1:4) and 2mm thick cement slurry back side of tiles using cement @ 2.91 kg/sqm or using polymerised adhesive (6mm thick layer applied directly over finished artificial stone floor/Mosaic etc without any backing course) laid after application slurry using 1.75 kg of cement per sqm below mortar only, joints grouted with admixture of white cement and colouring pigment to match with colour of tiles / epoxy grout materials approved make as directed and removal of wax coating of top surface of tiles with warm water and polishing the tiles using soft and dry cloth upto mirror finish complete including the cost of materials, labour and all other incidental charges complete true to the manufacturer's specification and direction of Engineer-in-charge. (White cement, synthetic adhesive and grout material to be supplied by the contractor) With application slurry @ 1.75 kg/sqm, 20mm sand cement mortar (1:4) & 2mm thick cement slurry at back side of tiles, 0.2 kg/sqm white cement for joint filling with pigment. Deep colour & White	Sqm	16000	1450.03	Rupees One Thousand Four Hundred Fifty and Paise Three Only	23200480.00
43	8.1	Kota stone slabs 25 mm thick in risers of steps, skirting, dado and pillars laid on 12 mm (average) thick cement mortar 1:3 (1 cement 3 coarse sand) and jointed with grey cement slurry mixed with pigment to match the shade of the slabs, including rubbing and polishing complete.	Sqm	2616	1100.85	Rupees One Thousand One Hundred and Paise Eighty Five Only	2879823.60
44	8.1	Extra for Kota stone/ sand stone in treads of steps and risers using single length up to 1.05 metre .	Sqm.	2616	15.30	Rupees Fifteen and Paise Thirty Only	857734.50
45	8.5	Supplying, fitting & fixing Granite slabs 15mm to 18 mm thick with uniform texture & without decorative veins in columns, wall, fascia etc. with 15mm thick [avg] cement mortar (1:2) including making suitable arrangements to hold the stone properly by brass/copper hooks including pointing in cement mortar (1:2) (1 white cement : 2 marble dust) with admixture of pigment matching the stone shades all complete as per direction of the Engineer-in-charge including cost of all materials, labours, scaffolding, staging, curing and roughening of concrete surface complete. [Using cement slurry at back side of granite @ 4.4 kg/sqm & white cement slurry for joint filling @ 1.8 kg/sqm]	Sqm	350	2450.67	Rupees Two Thousand Four Hundred Fifty and Paise Sixty Seven Only	

Sl. No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
46	8.11	Supplying & laying interlocking designer paver block of any shade and of approved quality as per IS: 1237-1980 laid in pattern as directed in pavement, footpath, driveway, etc including necessary underlay complete in all respect with all labour and material. [Border concrete if necessary to be paid separately] (c) 60 mm thick block (over 150 mm medium sand bed including cost of sand but excluding cost of earthwork in excavation or dismantling of existing hard surface if necessary)					
(i)		Grey	Sqm	560	1252.05	Rupees One Thousand Two Hundred Fifty Two and Paise Five Only	701148.00
(ii)		Coloured Decorative	Sqm	250	1411.97	Rupees One Thousand Four Hundred Eleven and Paise Ninety Seven Only	352992.50
	10.2	Water proofing Treatment at Roof surface.					
47		Grading roof for water proofing treatment with cement concrete 1:2:4 (1 cement :2 coarse sand :4 graded stone aggregate 20 mm nominal size)	Cum	30	5021.05	Rupees Five Thousand Twenty One and Paise Five Only	150631.50
48		Supplying and laying true to line and level 25mm thick precast roof tiles made of cement conc. With stone chips as per approved strength and density set in 25mm avg. thick cement mortar (1:3) and filling up joint (3mm wide) with cement sand mortar (1:1) applying cement slurry @ 1.75 kg per sqm back of tiles and then setting close the precast tiles, finishing up the joints with slurry already laid and finally finishing the top surface including providing 150 mm high skirting with the same tiles flushed with the inside surface of parapet wall, finishing the mouth of rain water pipes, curving etc. as necessary complete as per direction of the Engineer-in-charge. (Levelling if necessary may be paid separately) For 25 mm thick precast tiles (cement 14.6 kg/sm underlayer)	Sqm	800	466.14	Rupees Four Hundred Sixty Six and Paise Fourteen Only	372912.00
49	7	Labour for Chipping of concrete surface before taking up Plastering work.	Sqm	25000	14.40	Rupees Fourteen and Paise Thirty Nine Only	359975.00
50	7.7	Plaster (to wall, floor, ceiling etc.) with sand and cement mortar including rounding off or chamfering corners as directed and raking out joints including throating, nosing and drip course, scaffolding/staiging where necessary (Ground floor). [Excluding cost of chipping over concrete surface] With 1:6 cement mortar 15mm internal cement plaster					
		Ground floor	Sqm	50000	116.35	Rupees One Hundred Sixteen and Paise Thirty Five Only	5817500.00
51	7.7	Extra for each additional floor over the rate for ground floor.					
a)		For 1st floor	Sqm	5500	2.45	Rupees Two and Paise Forty Five Only	13491.50
b)		For 2nd floor	Sqm	8300	4.91	Rupees Four and Paise Ninety Only	40719.80
c)		For 3rd floor	Sqm	8300	7.36	Rupees Seven and Paise Thirty Five Only	61079.70
d)		For 4th floor	Sqm	8300	9.81	Rupees Nine and Paise Eighty One Only	81439.60

Sl. No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
e)		For 5th floor	Sqm	8300	12.76	Rupees Twelve and Paise Seventy Six Only	105908.00
f)		Above Roof	Sqm	4300	15.71	Rupees Fifteen and Paise Seventy Only	67544.40
52	7.7	Plaster (to wall, floor, ceiling etc.) with sand and cement mortar including rounding off or chamfering corners as directed and raking out joints including throating, nosing and drip course, scaffolding/staging where necessary (Ground floor) Excluding cost of chipping over concrete surface.					
		ii) With 1:4 cement mortar of 15 mm thick.	Sqm	15046	135.84	Rupees One Hundred Thirty Five and Paise Eighty Four Only	2043848.64
53	7.7	With 1:4 cement mortar 20 mm thick external cement plaster					
		Ground floor to beyond roof of 4th floor	Sqm	30000	161.33	Rupees One Hundred Sixty One and Paise Thirty Three Only	4839900.00
54	7.7	Including Extra for each additional floor over the rate for ground floor.					
a)		For 1st floor	Sqm	3000	2.95	Rupees Two and Paise Ninety Four Only	8844.00
b)		For 2nd floor	Sqm	3000	5.90	Rupees Five and Paise Eighty Nine Only	17688.00
c)		For 3rd floor	Sqm	3000	8.84	Rupees Eight and Paise Eighty Four Only	26532.00

Sl. No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
d)		For 4th floor	Sqm	3000	11.79	Rupees Eleven and Paise Seventy Nine Only	35376.00
e)		For 5th floor	Sqm		15.22	Rupees Fifteen and Paise Twenty Two Only	0.00
f)		Above Roof	Sqm	2000	18.66	Rupees Eighteen and Paise Sixty Five Only	37312.00
55	7.7	10 mm thick plaster to ceiling including double scaffolding of mix 1:4 (1 cement : 4 fine sand)					
		Ground floor to beyond roof of 4th floor	Sqm	20000	105.41	Rupees One Hundred Five and Paise Forty One Only	2108200.00
56	7.7	Including Extra for each additional floor over the rate for ground floor.					
a)		For 1st floor	Sqm	3000	2.45	Rupees Two and Paise Forty Five Only	7359.00
b)		For 2nd floor	Sqm	3000	4.91	Rupees Four and Paise Ninety Only	14718.00
c)		For 3rd floor	Sqm	3000	7.36	Rupees Seven and Paise Thirty Five Only	22077.00
d)		For 4th floor	Sqm	3000	9.81	Rupees Nine and Paise Eighty One Only	29436.00
e)		For 5th floor	Sqm	3000	12.76	Rupees Twelve and Paise Seventy Six Only	38280.00
f)		Above Roof	Sqm	1800	15.71	Rupees Fifteen and Paise Seventy Only	28274.40
57	7.7	Forming groove of uniform size from 12x 12 mm and upto 25x 15 mm in plastered surface as per approved pattern using wooden battens nailed to the under layer including removal of wooden battens , repairs to the edges of plaster panels and finishing the groove complete as per specification and direction of the E-in-charge.	Rm	2230	26.07	Rupees Twenty Six and Paise Seven Only	58136.10
58	11.8	Supplying profiles of required section made of Aluminium alloy Extrusions conforming to IS:732-1983 and IS: 1285-1975; Anodized (with required film thickness and specified colour/ natural) matt finished conforming to IS:1868-1983 for fabrication of composit door, sliding & casement windoes, partitions, formed of basic sections of any ISI embossed / certified make and brand as per direction of Engineer-in-charge. (Payment will be made on finished length of the work).					
		Sliding & casement windows:-					
a)		2- track sliding window					
i)		Bottom frame	Rm	25	290.38	Rupees Two Hundred Ninety and Paise Thirty Eight Only	7259.50
ii)		Top & side frame	Rm	70	260.58	Rupees Two Hundred Sixty and Paise Fifty Eight Only	18240.60
b)		3- track sliding window					
i)		Bottom frame	Rm	225	419.15	Rupees Four Hundred Nineteen and Paise Fifteen Only	94308.75
ii)		Top & side frame	Rm	650	365.52	Rupees Three Hundred Sixty Five and Paise Fifty Two Only	237588.00

Sl. No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
d)	11.8	Shutter for all track sliding window.					
i)		Bottom & Top member.	Rm	1000	156.55	Rupees One Hundred Fifty Six and Paise Fifty Five Only	156550.00
ii)		Style side member	Rm	400	152.51	Rupees One Hundred Fifty Two and Paise Fifty One Only	61004.00
iii)		Interlock member	Rm	400	191.90	Rupees One Hundred Ninety One and Paise Ninety Only	76760.00
59	11.8	Labour charges for fabrication & installation of composite door, window, partition made from anodized extruded alloy aluminium section for the following units:- Glazed aluminium sliding windows made of extruded and anodized alloy aluminum sections, fabrications, including cutting to proper shape and size, drilling and aligning of window shutter frame fitted with in built locking arrangements, sliding rollers and other necessary fittings, fixture, adhesives and joineries along with extruded neoprene or EPDM gasketing in between window frame and masonry work (walls, columns, beam, lintel etc.) as well as between glass and shutter frame for fixing glass and poly Sulphate sealant and in between shutter and window frame where necessary including cutting to requisite size and fixing glass as per drawing, specification and direction of EIC.					
		The rate includes the hire charge of all tools and plants, including all incidental charges, adhesive, joineries such as screw, cleate angle etc. but excluded the cost of extruded aluminium section glass, neopene /EPDM gasketing, locking arrangement and rollers.					
i)		2-track sliding window (in ground floor Lv.)	Sqm	25	518.95	Rupees Five Hundred Eighteen and Paise Ninety Four Only	12973.68
		In 1st floor (including extra charges for additional Floor)	Sqm	25	532.15	Rupees Five Hundred Thirty Two and Paise Fourteen Only	13303.68
		In 2nd floor (including extra charges for additional Floor)	Sqm	25	545.35	Rupees Five Hundred Forty Five and Paise Thirty Five Only	13633.75
		For 3rd floor (including extra charges for additional Floor)	Sqm	25	558.55	Rupees Five Hundred Fifty Eight and Paise Fifty Five Only	13963.75
ii)		3-track sliding window (In ground Floor)	Sqm	0	706.16	Rupees Seven Hundred Six and Paise Sixteen Only	
		In 1st floor (including extra charges for additional Floor)	Sqm	300	719.36	Rupees Seven Hundred Nineteen and Paise Thirty Six Only	215808.00
		In 2nd floor (including extra charges for additional Floor)	Sqm	300	732.56	Rupees Seven Hundred Thirty Two and Paise Fifty Six Only	219768.00
		For 3rd floor (including extra charges for additional Floor)	Sqm	300	745.76	Rupees Seven Hundred Forty Five and Paise Seventy Six Only	223728.00
		For 4th floor (including extra charges for additional Floor)	Sqm	300	758.96	Rupees Seven Hundred Fifty Eight and Paise Ninety Six Only	227688.00
		For 5th floor (including extra charges for additional Floor)	Sqm	300	776.56	Rupees Seven Hundred Seventy Six and Paise Fifty Six Only	232968.00

Sl. No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
60	11.8.1	Partly glazed partly panelled or fully glazed single leaf aluminium swing door made of extruded and anodized alloy aluminium sections, fabrication including cutting to proper shape and size, drilling and aligning, fitted with mending damages, with top pin assembly of approved make and brand, fitted with in built locking arrangement, flush bolt, glazing clips and all other necessary fittings, fixtures, adhesives and joineries, cutting glass of approved make to requisite shape and size fitting with dry set neoprene or EPDM gasketing, cutting to requisite shape and size panel board (prelaminated particle block) fixing them with galzing clips as per drawing, specification and direction of Engineer-in-charge.					
		In Ground Floor	Sqm	38	1043.12	Rupees One Thousand Forty Three and Paise Eleven Only	39638.52
		In 1st. Floor	Sqm	30	1056.32	Rupees One Thousand Fifty Six and Paise Thirty Two Only	31689.60
		In 2nd. Floor	Sqm	30	1069.52	Rupees One Thousand Sixty Nine and Paise Fifty Two Only	32085.60
		In 3rd. Floor	Sqm	5	1082.72	Rupees One Thousand Eighty Two and Paise Seventy Two Only	5413.60
61	11.6	Supplying EPDM gasket of approved make and brand as per direction of Engineer in charge					
i)		For Sliding window					
b)		U - shaped gasket for frame	Rm	1580	14.42	Rupees Fourteen and Paise Forty Two Only	22783.60
ii)		For openable/casement windows					
a)		Weather gasket for outer frame and mullion	Rm	10260	14.42	Rupees Fourteen and Paise Forty Two Only	147949.20
iii)		Weather gasket for door (vertical)	Rm	93	18.03	Rupees Eighteen and Paise Three Only	1676.79
62	11.8	Supplying bubble free float glass of approved make and brand conforming to IS : 2835-1987					
iii)	11.9	6 mm thick clear glass	Sqm	1091	709.02	Rupees Seven Hundred Nine and Paise Two Only	773540.82
63	11.9	Providing and fixing pressed steel door frames conforming to IS: 4351, manufactured from commercial mild steel sheet of 1.60 mm thickness, including hinges, jamb, lock jamb, bead and if required angle threshold of mild steel angle of section 50x25 mm, or base ties of 1.60 mm, pressed mild steel welded or rigidly fixed together by mechanical means, including M.S. pressed butt hinges 2.5 mm thick with mortar guards, lock strike plate and shock absorbers as specified and applying a coat of approved steel primer after pre-treatment of the surface as directed by Engineerin-charge: [Profile B]					
		Fixing with adjustable lugs with split end tail to each jamb	Rm	50	493.72	Rupees Four Hundred Ninety Three and Paise Seventy Two Only	24686.00

Sl. No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
64	11.1.3	Supplying solid flush type doors of commercial quality, the timber frame consisting of top and bottom rails and side styles of well seasoned timber 65mm wide each and the entire frame fitted with 37.5mm wide battens places both ways in order to make the door of solid core and internal lipping with Garjan or similar wood veneers using phenol formaldehyde as glue etc. complete including fitting, fixing shutters in position but excluding the cost of hinges and other fittings in ground floor.					
		32 mm thick shutters (single leaf)/ (in ground floor)	Sqm	171	2284.63	Rupees Two Thousand Two Hundred Eighty Four and Paise Sixty Three Only	390671.73
		In 1st floor (including extra charges for additional Floor)	Sqm	143	2293.56	Rupees Two Thousand Two Hundred Ninety Three and Paise Fifty Six Only	327979.08
		In 2nd floor (including extra charges for additional Floor)	Sqm	141	2302.49	Rupees Two Thousand Three Hundred Two and Paise Forty Nine Only	324651.09
		For 3rd floor (including extra charges for additional Floor)	Sqm	179	2311.42	Rupees Two Thousand Three Hundred Eleven and Paise Forty Two Only	413744.18
		For 4th floor (including extra charges for additional Floor)	Sqm	153	2320.35	Rupees Two Thousand Three Hundred Twenty and Paise Thirty Five Only	355013.55
		For 5th floor (including extra charges for additional Floor)	Sqm	153	2331.51	Rupees Two Thousand Three Hundred Thirty One and Paise Fifty One Only	356721.03
		Above Roof (including extra charges for additional Floor)	Sqm	30	2376.15	Rupees Two Thousand Three Hundred Seventy Six and Paise Fifteen Only	71284.50
65	11.1.3	Extra for providing lipping with 2nd class teak wood battens 25 mm minimum depth on all edges of flush door shutters (over all area of doorshutter to be measured).	Sqm	350	557.72	Rupees Five Hundred Fifty Seven and Paise Seventy Two Only	195202.00
66	11.1.3	Extra for providing vision panel not exceeding 0.1 sqm in all type of flush doors (cost of glass excluded) (overall area of door shutter to be measured) :					
		Rectangular or square	Sqm	60	195.80	Rupees One Hundred Ninety Five and Paise Eighty Only	11748.00
67	11.1.3	Supplying fitting, fixing decorative Lamination conforming to IS:2046 : 1995 as per approved make, brand, finish and thickness with fitting, fixing the same on Partical/MDF/Ply Boards with recommended/ approved adhesive with proper clipping the sides for better attachment as per direction of Engineer-in-charge. The rate includes the cost of labour, adhesive and all incidental charges thereof. In Ground floor (Thickness of Laminate 1.5 mm	Sqm	600	1673.12	Rupees One Thousand Six Hundred Seventy Three and Paise Twelve Only	1003872.00
68	11.9.3.3	Supplying "Godrej" mortice lock chromium plated with keys 6 levers including fitting & fixing complete.	Each	35	1,407.04	Rupees One Thousand Four Hundred Seven and Paise Four Only	49246.40
69	11.9.3.3	Anodised aluminium floor door stopper.	Each	35	67.91	Rupees Sixty Seven and Paise Ninety One Only	2376.85

Sl. No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
70		Godrej' Hydraulic door closer including fitting & fixing complete.	Each	12	2,150.70	Rupees Two Thousand One Hundred Fifty and Paise Seventy Only	25808.40
71	11.9.3.3	Anodised aluminium barrel/tower/socket bolt (full covered) of approved manufactured from extruded section conforming to IS 204/74 fitted and fixed with cadmium plated screws : 225mm long x 10mm dia. Bolt.	Each	600	92.29	Rupees Ninety Two and Paise Twenty Nine Only	55374.00
72	11.8	Anodised aluminium Aldrop/sliding bolts of approved quality manufactured from extruded section conforming to IS specification (IS 2681/66)fitted and fixed complete. 300mm x 16mm dia bolt.	Each	100	254.37	Rupees Two Hundred Fifty Four and Paise Thirty Seven Only	25437.00
73	11.8	Providing and fixing chromium plated brass Handles (125 mm) with necessary screws etc. complete.	Each	100	219.03	Rupees Two Hundred Nineteen and Paise Three Only	21903.00
74	11.8	Supplying heavy duty hydrilic double action floor spring along with top pin/set of pivots conforming to IS: 6315 or any approved make as per direction of Engineer in charge.	Each	12	2,043.23	Rupees Two Thousand Forty Three and Paise Twenty Three Only	24518.76
75	19	(a) M.S.or W.I. ornamental grill of approved design joints continously welded with M.S. W.I. Flats and bars of windows, railing etc. fitted and fixed with necessary screws and lugs in ground floor. Grill weighing above 16 Kg./Sq.Mtr and above	Qntl.	327	6,550.71	Rupees Six Thousand Five Hundred Fifty and Paise Seventy One Only	2142082.17
76		In 1st. Floor. (add extra for each addl. Floor)	Qntl.	88	6,616.22	Rupees Six Thousand Six Hundred Sixteen and Paise Twenty Two Only	582227.36
		In 2nd. Floor.	Qntl.	86	6,681.72	Rupees Six Thousand Six Hundred Eighty One and Paise Seventy Two Only	574627.92
		In 3rd. Floor.	Qntl.	37	6,747.23	Rupees Six Thousand Seven Hundred Forty Seven and Paise Twenty Three Only	249647.51
		In 4th. Floor.	Qntl.	36	6,812.74	Rupees Six Thousand Eight Hundred Twelve and Paise Seventy Four Only	245258.64
		In 5th. Floor.	Qntl.	25	6,894.62	Rupees Six Thousand Eight Hundred Ninety Four and Paise Sixty Two Only	172365.50
77	19	Supplying 1.5mm thick M.S. sheet fitted and fixed on one or both faces of M.S. / W.I. gate etc. with point welding at not more than 150mm apart complete in all respect as per design including cost of all labour and materials.	Sqm	17	1,052.39	Rupees One Thousand Fifty Two and Paise Thirty Nine Only	17890.70
78	14.1	Supplying fitting and fixing steel rolling grills link type, shutter with 18 G.B of approved type steel to the section 75mm wide, fitted with coil wire spring to necessiate the fitting of required Nos. of C.I. Pulleys on heavy type solid drawn seamless steel tube complete with locking arrangements both inside and outside specially builtup side guide channels including providing a hood for the steel rolling shutter in the room, painting two coats of approved aluminium paint over a coat of red lead primer complete.	Sqm	125	3,925.97	Rupees Three Thousand Nine Hundred Twenty Five and Paise Ninety Seven Only	490746.38

Sl. No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
79	14.1	Supplying, fitting and fixing steel rolling shutter profile type with 18 BG of approved type steel latch section 75mm wide, fitted with coil wire spring to necessitate the fitting of required Nos. of C.I. Pulleys on heavy type solid drawn seamless steel tube complete with locking arrangements both inside and outside specially builtup side guide channels including providing a hood for the steel rolling shutter in the room, painting two coats of approved aluminium paint over a coat of red lead primer complete.	Sqm	27	3,020.13	Rupees Three Thousand Twenty and Paise Twelve Only	81543.39
80	9.1	White washing including cleaning and smoothening surface thoroughly. Three coats (to be done on specific instruction).	Sqm	12000	13.93	Rupees Thirteen and Paise Ninety Three Only	167184.00
81	9.1	Colour washing with any shade with stainers, as required including cleaning and smoothening surface thoroughly: Two coats (on new works only) Yellow, pink	Sqm	12000	15.49	Rupees Fifteen and Paise Forty Eight Only	185846.40
82	9	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.	Sqm	50000	92.51	Rupees Ninety Two and Paise Fifty One Only	4625500.00
83	9.4	Acrylic Distemper to interior wall, ceiling with a coat of solvent based interior grade acrylic primer (as per manufacturer's specification) including cleaning and smoothing of surface. Two Coats	Sqm	35000	62.13	Rupees Sixty Two and Paise Thirteen Only	2174634.00
84	9.8	Applying Interior grade Acrylic Primer of approved quality and brand on platered or concrete surface old or new surface to receive Distemper / Acrylic emulsion paint including scraping and preparing the surface throughly, complete as per manufacturer's specification and as per direction of the EIC. (In ground Floor) Water based interior grade Acrylic Primer	Sqm	24783	27.49	Rupees Twenty Seven and Paise Forty Eight Only	681185.54
85	9.1	Applying Acrylic Emulsion Paint of approved make and brand on walls and ceiling including sand papering in intermediate coats including putty (to be done under specific instruction of superintending Engineer): (2 coats) Standard Quality	Sqm	24592	53.56	Rupees Fifty Three and Paise Fifty Five Only	1317078.66
86	9.8.2	Priming one coat on steel or other metal surface with synthetic oil bound primer of approved quality including smoothening surfaces by sand papering etc.	Sqm	3000	24.98	Rupees Twenty Four and Paise Ninety Eight Only	74941.20
87	9.12	Painting with best quality Synthetic Enamel Paint of approved make and brand including smoothening surface by sand papering etc. including using of approved putty etc. on the surface, if necessary: On steel or other metal surface: With super gloss (hi-gloss)- Two coats (with any shade except white)	Sqm	3000	64.79	Rupees Sixty Four and Paise Seventy Eight Only	194367.60

Sl. No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
88	9.8	Applying Exterior grade Acrylic primer of approved quality and brand on plastered or concrete surface old or new surface to receive decorative textured (matt finish) or smooth finish acrylic exterior emulsion paint including scraping and prepaing the surface throughly, complete as per manufactuer's specification and as per direction of the EIC. (One coat)					
		In Ground floor	Sqm	4000	27.93	Rupees Twenty Seven and Paise Ninety Two Only	111715.20
89	9	Add extra for each additional floor over the rate for ground floor.					
		For 1st floor	Sqm	450	0.64	Paise Sixty Four Only	289.61
		For 2nd floor	Sqm	800	1.29	Rupees One and Paise Twenty Eight Only	1029.72
		For 3rd floor	Sqm	800	1.93	Rupees One and Paise Ninety Three Only	1544.57
		For 4th floor	Sqm	800	2.57	Rupees Two and Paise Fifty Seven Only	2059.43
		For 5th floor	Sqm	800	3.35	Rupees Three and Paise Thirty Four Only	2679.00
		Above Roof	Sqm	110	6.44	Rupees Six and Paise Forty Four Only	
90	21.1.12	Structural Steel for fencing for tree guard protection	Kg	5000	100.35	Rupees One Hundred and Paise Thirty Five Only	501750.00
91	9	Coal tarring two coats on new work using 0.16 Litre and 0.12 litrecoal tar per sqm in the first coat and second coat respectively.(for tree guard structure)	Sqm	122	28.71	Rupees Twenty Eight and Paise Seventy One Only	3502.62
92		Supplying, fitting and fixing Fan Hook for ceiling with 1 metre long 16mm dia rod complete including mending damages. Payment for damage and repair to be made separately	Each	600	86.99	Rupees Eighty Six and Paise Ninety Nine Only	52194.00
93		Cutting hole and subsiquent mending good damage for Exhaust Fan					
a)		Diameter excddding 150mm but not exceeding 300mm					
i)		In brick work [cement-6.0 kg/Mtr] (53 nos)	Mtr	2	134.76	Rupees One Hundred Thirty Four and Paise Seventy Six Only	269.52
ii)		In concrete work (plain or [cement-7.5 kg/mtr]	Mtr	16	295.19	Rupees Two Hundred Ninety Five and Paise Nineteen Only	4723.04
94	22.6.2	560 mm diameter C.I. cover (heavy duty) the weight of the cover to be not less than 108 kg	Each	20	8414.87	Rupees Eight Thousand Four Hundred Fourteen and Paise Eighty Seven Only	168297.40
95	22.8	Making plinth protection 50 mm thick of cement concrete 1:3:6 (1 cement:3 coarse sand : 6 graded stone aggregate 20 mm nominal size) over 75mm thick bed of dry brick ballast 40 mm nominal size, well rammed and consolidated and grouted with fine sand, including finishing the top smooth.	Sqm	300	436.394	Rupees Four Hundred Thirty Six and Paise Thirty Nine Only	130918.20

Sl. No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
96	22.3	Supplying, fitting & fixing UPVC pipes A-Type and fittings conforming to IS: 13592-1992 with all necessary clamps, nails, including making holes in walls, floor etc. cutting trenches in any soil through masonry concrete structure etc if necessary and mending good damages including joining with jointing materials (Spun Yarn, Valamoid/bitumen/M-Seal etc) complete. 110 mm Dia.	Rm	185	260.48	Rupees Two Hundred Sixty and Paise Forty Eight Only	48188.80
97	20	Supplying materials and spreading for construction of Granular Sub-base using approved quality of coarse aggregates and sand, including screening aggregates, mixing the graded aggregates using rotavator as per mix design, adding water to achieve the required OMC, spreading the mix in uniform layer using motor grader over prepared surface in proper grade and camber, compacting the layer to achieve the desired density including lighting, guarding, barricading, as per specification.					
		a) Close Graded GSB					
		i) Grading - I (75 mm th.bottom layer)	Cum	675	1725.9	Rupees One Thousand Seven Hundred Twenty Five and Paise Ninety Only	1164982.50
		ii) Grading - II (75 mm th. Top layer)	Cum	675	1524.89	Rupees One Thousand Five Hundred Twenty Four and Paise Eighty Nine Only	1029300.75
98	20	Bituminous fillet of approved type in expansion joints of dummy joints including finishing the top surface as directed.	Cum	3	51498.18	Rupees Fifty One Thousand Four Hundred Ninety Eight and Paise Eighteen Only	154494.54
99	22	Supplying, fitting & fixing UPVC pipes A- Type and fittings conforming to IS:13592-1992 with all necessary clamps nails, including making holes in walls, floor etc. cutting trenches in any soil through masonry concrete structures etc if necessary and mending good damages including joining with jointing materials (Spun Yarn, Valamoid / Bitumen / M-Seal etc) complete.					
		i) 75 mm Dia.	RM	0	163.12	Rupees One Hundred Sixty Three and Paise Twelve Only	0.00
100	20.7	Providing and laying non-pressure NP2 class (light duty) R.C.C. 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 :					
		150 mm dia. R.C.C. pipe	RM	150	397.59	Rupees Three Hundred Ninety Seven and Paise Fifty Nine Only	59638.50
		300 mm dia. R.C.C. pipe	RM	400	663.95	Rupees Six Hundred Sixty Three and Paise Ninety Five Only	265580.00
	21	HORTICULTURE & LANDSCAPING					
101	21.1.4	Rough dressing the trenched ground including breaking clods.	Sqm	1500	0.65	Paise Sixty Five Only	975.00
102	21.1.6	Fine dressing the ground	Sqm	1500	1.57	Rupees One and Paise Fifty Seven Only	2355.00
103	21.1.8	Mixing earth & sludge or manure in proportion specified or directed	Cum	450	15.39	Rupees Fifteen and Paise Thirty Nine Only	6925.50

Sl. No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
104	21.1.9	Grassing with "Doob" grass including watering and maintenance of lawn for 30 days or more till the grass forms a thick lawn free from weeds and fit for mowing including supplying good earth if needed (the good earth shall be paid for separately).					
		In rows 7.5 cm apart in either direction.	Sqm	1500	4.92	Rupees Four and Paise Ninety Two Only	7380.00
105	22	Supplying, fitting, fixing, Chain link fencing of approved quality with R.C.C posts wooden posts or iron posts by means of galvanised "C" clips to grid of horizontal strands of galvanised high tensile spring steel wire of 12 S.W.G which have to be tensioned and fixed to the vertical posts by means of galvanised special clips, bolts and nuts etc. (The rate is exclusive of the cost of posts)					
		(I) 50 mm. x 50 mm. x 8 g.	Sqm	25	476.62	Rupees Four Hundred Seventy Six and Paise Sixty Two Only	11915.50
106		Boring/drilling bore well of required dia for casing/ strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/ bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer -in-charge, upto 90 metre depth below ground level.					
		All types of soil					
a)		300 mm dia.	Rm	180	472.10	Rupees Four Hundred Seventy Two and Paise Ten Only	84978.00
b)		Boring/drilling bore well, beyond 90 metre & upto 150 metre depth below ground level.					
		300 mm dia.	Rm	64	550.82	Rupees Five Hundred Fifty and Paise Eighty Two Only	35252.48
107		Supplying, assembling, lowering and fixing in vertical position in bore well, unplasticized PVC medium well casing (CM) pipe of required dia, conforming to IS: 12818, including required hire and labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer -in-charge.					
		150 mm nominal size dia	Rm	192	716.83	Rupees Seven Hundred Sixteen and Paise Eighty Three Only	137631.36
108		Supplying, assembling, lowering and fixing in vertical position in bore well unplasticized PVC medium well screen (RMS) pipes with ribs, conforming to IS: 12818, including hire & labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer-in-charge.					
		150 mm nominal size dia	Rm	60	544.95	Rupees Five Hundred Forty Four and Paise Ninety Five Only	32697.00

Sl. No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
109		Supplying, assembling, lowering and fixing in vertical position in bore well, ERW (Electric Resistance Welded) FE 410 plain slotted (having slot of size 1.6/3.2 mm) mild steel threaded and socketed / plain bevel ended pipe (type A) of required dia, conforming to IS: 8110, of reputed and approved make, having wall thickness not less than 5.40 mm, including painted with outside surface with two coats of anticorrosive bitumestic paint of approved brand and manufacture, including hire & labour charges, fittings & accessories, all complete, for all depths, as per direction of Engineer -in-charge.					
		150 mm nominal size dia	Rm	2	1806.57	Rupees One Thousand Eight Hundred Six and Paise Fifty Seven Only	3613.14
110		Gravel packing in tubewell construction in accordance with IS: 4097, including providing gravel fine/ medium/ coarse, in required grading & sizes as per actual requirement, all complete as per direction of Engineer-in-charge.	Cum	13	1108.62	Rupees One Thousand One Hundred Eight and Paise Sixty Two Only	14412.06
111		Supplying and stacking at site.					
		90 mm to 45 mm size stone aggregate	Cum	140	1454.91	Rupees One Thousand Four Hundred Fifty Four and Paise Ninety One Only	203687.40
112		Labour for stone or Brick-bat filling on the back side of the abutment, wing walls etc. include hand packing and carriage of stone or brick-bats from road side stacks.	Cum	140	56.00	Rupees Fifty Six and Paise Zero Only	7840.00
113		Supplying, filling, spreading & leveling gravels of size range 5 mm to 10 mm, in the recharge pit, over the existing layer of boulders, in required thickness, for all leads & lifts, all complete as per direction of Engineer-in-charge.	Cum	110	1089.74	Rupees One Thousand Eighty Nine and Paise Seventy Four Only	119871.40
114		Supplying, filling, spreading & leveling coarse sand of size range 1.5 mm to 2 mm in recharge pit, in required thickness over gravel layer, for all leads & lifts, all complete as per direction of Engineer -in-charge.	Cum	110	1051.53	Rupees One Thousand Fifty One and Paise Fifty Three Only	115668.30
PART A (a) : SUB-TOTAL							407322246.69
Say,							407322247.00

PRICED BILL OF QUANTITIES FOR WATER SUPPLY, SANITARY & DRAINAGE WORKS

PART A(b) :(Refer Clause 12 of ITB, Volum I, Section 2)

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
1	5	Supplying, fitting and fixing G.I. pipes of TATA make with all necessary accessories, specials, viz. socket, bend, tee, union, cross, llbo, nipple, longscrow, reducing socket, reducing tee, short piece etc. fitted with holder bat clamps, including cutting pipes, making threads, fitting, fixing, etc. complete in all respect including cost of all necessary fittings as required, jointing materials and two coats of painting with approved paint in any position above ground . (Payment will be made on the centre line measurements of total pipe line including all specials. No separate payment will be made for accessories, specials. Payment for painting will be made separately).					
		For Exposed Work :-					
		15mm dia medium quality	Mtr.	75.0	194.00	Rupees One Hundred Ninety Four and Paise Zero Only	14550.00
		20mm dia medium quality	Mtr.	375.0	221.00	Rupees Two Hundred Twenty One and Paise Zero Only	82875.00
		25mm dia medium quality	Mtr.	133.3	300.00	Rupees Three Hundred and Paise Zero Only	40000.00
		32mm dia medium quality	Mtr.	120.0	343.00	Rupees Three Hundred Forty Three and Paise Zero Only	41160.00
		40mm dia medium quality	Mtr.	164.0	399.00	Rupees Three Hundred Ninety Nine and Paise Zero Only	65436.00
		50mm dia medium quality	Mtr.	60.0	520.00	Rupees Five Hundred Twenty and Paise Zero Only	31200.00
		65mm dia medium quality	Mtr.	6.0	653.00	Rupees Six Hundred Fifty Three and Paise Zero Only	3918.00
		80mm dia medium quality	Mtr.	54.0	841.00	Rupees Eight Hundred Forty One and Paise Zero Only	45414.00
		For Concealed Work :-					
		15mm dia medium quality	Mtr.	200.0	224.00	Rupees Two Hundred Twenty Four and Paise Zero Only	44800.00
		20mm dia medium quality	Mtr.	80.0	246.00	Rupees Two Hundred Forty Six and Paise Zero Only	19680.00
		25mm dia medium quality	Mtr.	60.0	337.00	Rupees Three Hundred Thirty Seven and Paise Zero Only	20220.00
2	6	Supplying, fitting, and fixing Gun-metal Wheel valve of approved Brand and make tested to 21 kg per sq. cm. (for water lines only).					
		100mm	each	4.0	9270.00	Rupees Nine Thousand Two Hundred Seventy and Paise Zero Only	37080.00
		80mm	each	4.0	4842.00	Rupees Four Thousand Eight Hundred Forty Two and Paise Zero Only	19368.00
		65mm	each	18.0	3175.00	Rupees Three Thousand One Hundred Seventy Five and Paise Zero Only	57150.00
		50mm	each	15.0	1824.00	Rupees One Thousand Eight Hundred Twenty Four and Paise Zero Only	27360.00

Sl. No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
		40mm	each	5.0	1250.00	Rupees One Thousand Two Hundred Fifty and Paise Zero Only	6250.00
		32mm	each	5.0	1015.00	Rupees One Thousand Fifteen and Paise Zero Only	5075.00
		25mm	each	5.0	708.00	Rupees Seven Hundred Eight and Paise Zero Only	3540.00
		20mm	each	12.0	550.00	Rupees Five Hundred Fifty and Paise Zero Only	6600.00
3	29.7	Supplying, fitting and fixing approved brand P.V.C. CONNECTOR white flexible, with both ends coupling with heavy brass C.P. nut, 15mm dia.					
		(ii) 450 mm long	Each	115.0	56.00	Rupees Fifty Six and Paise Zero Only	6440.00
4	21.1 & 21.5.1	Supplying, fitting and fixing waste fittings complete.					
		(a) C.P. over brass					
		(iii) 40 mm	Each	77.0	274.00	Rupees Two Hundred Seventy Four and Paise Zero Only	21098.00
5		Supplying, fitting and fixing C.I. bracket including two coats of painting.					
		(b) Sink, Drain board	Each	77.0	133.00	Rupees One Hundred Thirty Three and Paise Zero Only	10241.00
6		Supplying, fitting and fixing C.P. Extension pipe	Each	77.0	101.00	Rupees One Hundred One and Paise Zero Only	7777.00
7	4	Supplying, fitting and fixing cast iron soil pipe only conforming to IS:3989/1970 and IS: 1729/1964 with bobbins, nails etc. including making holes in the wall, floor etc. and cutting trenches etc. in any floor through masonry concrete, if necessary, and mending good damages with necessary jointing materials and painting two coats of the exposed surface with approved paint complete. (Measurement will be made along the center line of the total pipe line in fitted condition including specials, payment for specials & painting will however be paid seperately).					
		(b) With lead caulked joints.					148810.00
		(i) 150 mm dia (internal)	Metre	115.0	1294.00	Rupees One Thousand Two Hundred Ninety Four and Paise Zero Only	153600.00
		100 mm dia (internal)	Metre	200.0	768.00	Rupees Seven Hundred Sixty Eight and Paise Zero Only	65400.00
		75 mm dia (internal)	Metre	100.0	654.00	Rupees Six Hundred Fifty Four and Paise Zero Only	
8	4	Supplying, fitting and fixing H.C.I. bend with door conforming to I.S.S. including jointing complete and painting two coats to the exposed surface with approved paint complete. (payment of painting will however be paid seperately).					
		(b) With lead caulked joints					
		(i) 150 mm dia	Metre	25.0	1082.00	Rupees One Thousand Eighty Two and Paise Zero Only	27050.00
		(ii) 100 mm dia	Each	100.0	593.00	Rupees Five Hundred Ninety Three and Paise Zero Only	59300.00

Sl. No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
9	DO	Supplying, fitting and fixing H.C.I. bend without door conforming to I.S.S. including jointing complete and painting two coats to the exposed surface with approved paint complete. (payment of painting will however be paid seperately).					
		(ii) 100 mm dia	Each	38.0	530.00	Rupees Five Hundred Thirty and Paise Zero Only	20140.00
10	DO	(B) Supplying, fitting and fixing H.C.I. offset conforming to I.S.S. including jointing complete with or without ear (150 mm projection) and painting two coats to the exposed surface with approved paint complete. (payment of painting will however be paid seperately).					
		(b) With lead caulked joints					
		(i) 150 mm dia	Each	44.0	1299.00	Rupees One Thousand Two Hundred Ninety Nine and Paise Zero Only	57156.00
11	4	Supplying, fitting and fixing approved patent Vent Cowl I.C.I conforming to I.S.S. and painting two coats to the exposed surface with approved paint complete. (Payment of painting will however be paid seperately).					
		(ii) 75 mm dia	Each	30.0	237.00	Rupees Two Hundred Thirty Seven and Paise Zero Only	7110.00
12		Supplying, fitting and fixing Aluminium domical grating.					
	(ii)	(ii) 125 mm	Each	200.0	54.00	Rupees Fifty Four and Paise Zero Only	10800.00
13	4	Supplying, fitting and fixing cast iron 'P' or 'S' trap conforming to IS: 3989/1970 and 1729/1964 including lead caulked joints painting two coats to the exposed surface. (painting to be paid seperately).					
		(A) 'P' Trap					
		(iii) 100 mm	Each	70.0	943.00	Rupees Nine Hundred Forty Three and Paise Zero Only	66010.00
14	4	Supplying, fitting and fixing cast iron extension pipes for using in Traps only (connector) conforming to IS: 3989/1970 and 1729/1964 including lead caulked joints complete and painting two coats to the exposed surface with approved paint complete. (payment of painting will however be paid seperately).					
		(i) 100 mm x 150 mm	Each	140.0	384.00	Rupees Three Hundred Eighty Four and Paise Zero Only	53760.00
		(iii) 100 mm x 300 mm	Each	20.0	502.00	Rupees Five Hundred Two and Paise Zero Only	10040.00
		(i) 100 mm x 525 mm	Each	20.0	628.00	Rupees Six Hundred Twenty Eight and Paise Zero Only	12560.00
15	25	<u>Rain Water Pipes</u>					

Sl. No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
		Supplying, fitting and fixing cast iron soil pipe only conforming to IS: 3989/1970 and IS: 1729/1964 with bobbins, nails etc. including making holes in the wall, floor etc. and cutting trenches etc. in any floor through masonry concrete, if necessary, and mending good damages with necessary jointing materials and painting two coats of the exposed surface with approved paint complete. (Measurement will be made along the center line of the total pipe line in fitted condition including specials, payment for specials & painting will however be paid seperately).					
		(b) With lead caulked joints.					
		(i) 150 mm dia (internal)	Metre	200.0	1294.00	Rupees One Thousand Two Hundred Ninety Four and Paise Zero Only	258800.00
16	4	For Rain Water Pipe Fittings					
		Supplying, fitting & fixing Cast Iron Single Branch equal with door conforming to IS: 1729/1970 including jointing and fitting and fixing in position and painting two coats to the exposed surface with approved paint complete. (payment of painting will be paid seperatly).					
		(b) With lead caulked joints					
		(i) 150mm dia	Each	70.0	1705.00	Rupees One Thousand Seven Hundred Five and Paise Zero Only	119350.00

Sl. No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
17	4	For Rain Water Pipe Fittings					
		Supplying, fitting and fixing H.C.I. bend with door conforming to I.S.S. including jointing complete and painting two coats to the exposed surface with approved paint complete. (payment of painting will however be paid seperately).					
		(b) With lead caulked joints					
(i)		(i) 150 mm dia	Metre	70.0	1082.00	Rupees One Thousand Eighty Two and Paise Zero Only	75740.00
18	4	For Rain Water Pipe Fittings					
		(B) Supplying, fitting and fixing H.C.I. offset conforming to I.S.S. including jointing complete with or without ear (150 mm projection) and painting two coats to the exposed surface with approved paint complete. (payment of painting will however be paid seperately).					
		(b) With lead caulked joints					
		(i) 150 mm dia	Each	120.0	1299.00	Rupees One Thousand Two Hundred Ninety Nine and Paise Zero Only	155880.00
		N.B. For any junction without door the rate for above items will be reduced by Rs. 50.00					
SANITARY FIXURES AND FITTINGS							
19	23.1	Supplying, fitting and fixing E.W.C. in white glazed vitreous chinaware of approved make complete in position with necessary bolts, nuts etc.					
		(Excluding Cistern)					
		(a) With 'P' trap	Each	10.0	1279.00	Rupees One Thousand Two Hundred Seventy Nine and Paise Zero Only	12790.00
		(b) With 'S' trap	Each	65.0	1372.00	Rupees One Thousand Three Hundred Seventy Two and Paise Zero Only	89180.00
		N.B. For W.C. with trap without vent the rate will be reduced by Rs. 25.00					
20	19	Supplying, fitting and fixing Flat back urinal (half stall urinal) in white vitreous chinaware of approved make in position with brass screws on 75 mm X 75 mm X 75 mm wooden blocks complete.					
		(ii) 465 mm X 355 mm X 265 mm	Each	65.0	766.00	Rupees Seven Hundred Sixty Six and Paise Zero Only	49790.00
21	23.6	Supplying, fitting and fixing Closet seat of approved make with lid and C.P. hinges, rubber buffer and brass screws complete.					
		(a) E.W.C					
		(i) Plastic (hollow type) black	Each	77.0	298.00	Rupees Two Hundred Ninety Eight and Paise Zero Only	22946.00
22							
		(ii) C. P. Flush Pipe	Each	77.0	276.00	Rupees Two Hundred Seventy Six and Paise Zero Only	21252.00
23	19	Supplying, fitting and fixing urinal flush pipe fittings of approved brand.					

Sl. No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
		(a) C. P. urinal flush pipe fittings range of one	Each	20.0	448.00	Rupees Four Hundred Forty Eight and Paise Zero Only	8960.00
		(b) C. P. urinal flush pipe fittings range of two	Each	45.0	1043.00	Rupees One Thousand Forty Three and Paise Zero Only	46935.00
24		Supplying, fitting and fixing 25 mm thick marble partition slab with chawk doongri marbel square cut, both sides polished with two front corners rounded and edges polished. (900mm x 700mm size each) - Urinal Partition	Sq.m	40.0	2753.00	Rupees Two Thousand Seven Hundred Fifty Three and Paise Zero Only	110120.00
25	22.1	Supplying, fitting and fixing bevelled edged mirror 5.5 mm thick silver red as per I.S. 3438/1965 together with brass C. P. hinges.					
		(ii) 600 mm X 450 mm	Each	80.0	441.00	Rupees Four Hundred Forty One and Paise Zero Only	35280.00
26		Supplying, fitting and fixing liquid Soap Container.					
		(b) PTMT	Each	80.0	196.00	Rupees One Hundred Ninety Six and Paise Zero Only	15680.00
27	21	Supplying, fitting and fixing Stainless Steel Sink complete with waste fittings and two coats of painting of C.I. brackets.					
		(b) Sink with drain board 1050mm x 450mm x 180mm (In Kitchen)	Each	3.0	5993.00	Rupees Five Thousand Nine Hundred Ninety Three and Paise Zero Only	17979.00
28	7.2	Supplying, fitting and fixing pillar cock of approved make.					
		(a) (ii) CP pillar Cock Super Deluxe with Aerator - 15 mm (Equivalent to Code No. 508 & Model - Tropical / Sumthing Special of ESSCO or similar brand)	Each	80.0	617.00	Rupees Six Hundred Seventeen and Paise Zero Only	49360.00
29	20.3	Supplying, fitting and fixing complete Bottle waste trap (Heavy Quality)					
		(a) Chromium plated Bottle trap 32 mm with 190 mm long connecting pipe and wall flange (Equivalent to Code No. 545 & Model - Tropical / Sumthing Special of ESSCO or similar brand).	Each	80.0	677.00	Rupees Six Hundred Seventy Seven and Paise Zero Only	54160.00
30	23.3	Supplying, fitting and fixing 10 litre P.V.C. low-down cistern conforming to I.S. specification with P.V.C. fittings complete, C.I. brackets including two coats of painting to bracket etc.	Each	77.0	1129.00	Rupees One Thousand One Hundred Twenty Nine and Paise Zero Only	86933.00
31	20	Wash Basin white vitreous china best quality approved make Wash Basin with CI Brackets on 75mm x 75mm wooden blocks, CP Waste fittings of 32mm dia, one approved quality brass CP Pillar cock of 15mm dia, CP chain with rubber plug of 30mm dia, approved quality PVC Waste pipe with CP nut and 32mm dia, 900mm long approved quality PVC connection Pipe with heavy brass CP nut, including mending good all damages and painting the brackets with two coats of approved paint. 550mm x 400mm size	Each	3300	2038.00	Rupees Two Thousand Thirty Eight and Paise Zero Only	132470.00
32		Supplying, fitting and fixing of Soap Holder	Each	65.0	164.00	Rupees One Hundred Sixty Four and Paise Zero Only	10660.00
		PTMT					

Sl. No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
33	5	Supplying, fitting and fixing G.I. pipes of TATA make for underground works with all necessary accessories, specials, viz. socket, bend, tee, union, cross, lbo, nipple, long screw, reducing socket, reducing tee, short piece etc. fitted with holder bat clamps, including cutting pipes, making threads, cutting trenches upto 1.5 metre below surface in all sorts of soil and re-filling the same as directed with two coats of painting on GI pipes and specials with bituminous paint complete in all respect. (Payment will be made on the centre-line measurement of the total pipe line including all specials. No separate payment will be made for accessories, specials. Payment for painting will be made separately).					
		80mm dia medium quality	Mtr.	80.0	829.00	Rupees Eight Hundred Twenty Nine and Paise Zero Only	66320.00
		Pipe to the Library Toil.					
		100mm dia medium quality	Mtr.	12.0	1184.00	Rupees One Thousand One Hundred Eighty Four and Paise Zero Only	14208.00
		150mm dia medium quality	Mtr.	150.0	1788.00	Rupees One Thousand Seven Hundred Eighty Eight and Paise Zero Only	268200.00
34	5	Supplying, fitting and fixing G.I. pipes of TATA make with all necessary accessories, specials, viz. socket, bend, tee, union, cross, elbo, nipple, long screw, reducing socket, reducing tee, short piece etc. fitted with holder bat clamps, including cutting pipes, making threads, fitting, fixing, etc. complete in all respect including cost of all necessary fittings as required, jointing materials and two coats of painting with approved paint in any position above ground . (Payment will be made on the centre line measurements of total pipe line including all specials. No separate payment will be made for accessories, specials. Payment for painting will be made separately).					
		For Exposed Work :-					
		15mm dia medium quality	Mtr.	20.0	194.00	Rupees One Hundred Ninety Four and Paise Zero Only	3880.00
		20mm dia medium quality	Mtr.	30.0	221.00	Rupees Two Hundred Twenty One and Paise Zero Only	6630.00
		25mm dia medium quality	Mtr.	15.0	300.00	Rupees Three Hundred and Paise Zero Only	4500.00
		40mm dia medium quality	Mtr.	100.0	399.00	Rupees Three Hundred Ninety Nine and Paise Zero Only	39900.00
		50mm dia medium quality	Mtr.	150.0	520.00	Rupees Five Hundred Twenty and Paise Zero Only	78000.00
		80mm dia medium quality	Mtr.	50.0	841.00	Rupees Eight Hundred Forty One and Paise Zero Only	42050.00
		100mm dia medium quality	Mtr.	144.0	1184.00	Rupees One Thousand One Hundred Eighty Four and Paise Zero Only	170496.00
		150mm dia medium quality	Mtr.	345.0	1788.00	Rupees One Thousand Seven Hundred Eighty Eight and Paise Zero Only	616788.48

Sl. No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
35	6	Supplying, fitting, and fixing Gun-metal Wheel valve of approved Brand and make tested to 21 kg per sq. cm. (for water lines only).					
		(Inside the Basement)					
		100mm	each	6.0	9270.00	Rupees Nine Thousand Two Hundred Seventy and Paise Zero Only	55620.00
		80mm	each	4.0	4842.00	Rupees Four Thousand Eight Hundred Forty Two and Paise Zero Only	19368.00
		50mm	each	4.0	1824.00	Rupees One Thousand Eight Hundred Twenty Four and Paise Zero Only	7296.00
		<u>Sewerage Inspection Pit</u>					
36	43.11	Constructing Inspection pit of inside measurement 600mm X 600mm X upto 600mm (depth) with 250 mm thick 1st. class brick work in cement mortar (1:4) on all sides, bottom of the pit consisting of 100 mm thick cement concrete (1:3:6) with stone chips over a layer of jhama brick flat soling, 15 mm thick (1:4) cement plaster to inside walls and out-side walls upto G.L. and 20mm thick (1:4) plaster to bottom of the pit, providing necessary invert with cement concrete (1:3:6) with stone chips as per direction, neat cement finishing to entire internal surfaces, top of the pit covered with 100mm thick R.C.C. slab (1:1:5:3) with stone chips and necessary reinforcements upto 1% and shuttering including 6mm thick cement plaster (1:4) in all external surfaces of the slab and one 560 mm dia. R.C.C. manhole cover of approved make supplied, fitted and fixed in the slab with necessary fittings, necessary earthwork in excavation in all sorts of soil, filling sides of the pit with earth and removing spoils after work					
		complete in all respect with all costs of labour and materials.					168504.56
		i) With Pakur variety.	Each	28.0	6018.02	Rupees Six Thousand Eighteen and Paise Two Only	16077.88
		iii) Extra for each additional depth of 150mm or part thereof beyond initial 600mm depth.	Each	14.0	1148.42	Rupees One Thousand One Hundred Forty Eight and Paise Forty Two Only	
		<u>Sewerage Inspection Pit</u>					
37	43.12	Constructing (Inspection pit) Brick masonry manhole 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 of 40mm nominal size) inside plastering 12mm 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 20mm nominal size) finished with a floating coat of neat cement complete as per standard design.					

Sl. No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
		iv) 120cm X 90cm (inside) and 90cm deep including CI Cover with frame (Heavy Duty) 560mm internal diameter, total weight of Cover and frame to be not less than 208 kg (weight of Cover 108 Kg and weight of Frame 100 Kg)					
		With FPS bricks class designation 75	Each	1.0	15673.85	Rupees Fifteen Thousand Six Hundred Seventy Three and Paise Eighty Five Only	15673.85
		v) Extra for any depth beyond 0.9 metres.					
		(b) For (iv)	Per M Depth	0.8	3179.95	Rupees Three Thousand One Hundred Seventy Nine and Paise Ninety Five Only	2543.96
		<u>Sewerage Inspection Pit</u>					
38	43.13	Constructing brick masonry circular manhole 1.52 m internal dia at bottom and 0.56 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.					
		2.30m deep with SFRC cover and frame (heavy duty HD-20 grade designation) 560mm internal diameter conforming to IS : 12592, total weight of cover and frame to be not less than 182 kg. fixed in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) including centering shuttering all complete. (Excavatio, foot rests and 12mm thick cement plaster at the external surface shall be paid for separately).					
		With F.P.S. bricks class designation 75	Each	8.0	18281.60	Rupees Eighteen Thousand Two Hundred Eighty One and Paise Sixty Only	146252.80
		<u>Sewerage Manhole</u>					
39	43.12	Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 coarse sand) R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40mm nominal size) inside plastering 12mm 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 20mm nominal size) finished with a floating coat of neat cement complete as per standard design of CPHEEO Manual					
		Inside size 120x90 cm and 90 cm deep including C.I. cover with frame (heavy duty) 560 mm internal diameter, total weight of cover and frame to be not less than 208 kg (weight of cover 108 kg and weight of frame 100 kg).					

Sl. No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
		With F.P.S. bricks class designation 75	Each	44.0	15673.85	Rupees Fifteen Thousand Six Hundred Seventy Three and Paise Eighty Five Only	689649.40
40		Extra for depth for manholes Size 120x90 cm					
		With F.P.S. bricks class designation 75	Metre	33.5	3179.95	Rupees Three Thousand One Hundred Seventy Nine and Paise Ninety Five Only	106528.33
		External Sewerage Pipe					
41		Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars joints with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete.					
		450 mm dia. R.C.C. pipe	Meter	0.0	499.55	Rupees Four Hundred Ninety Nine and Paise Fifty Five Only	0.00
		800 mm dia. R.C.C. pipe	Meter	0.0	1167.40	Rupees One Thousand One Hundred Sixty Seven and Paise Forty Only	0.00
42	42	Providing and fixing square-mouth S.W. gully trap grade "A" complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design.					
		180x150 mm size P type					
		With F.P.S. Bricks class designation 75	Each	120.0	1036.75	Rupees One Thousand Thirty Six and Paise Seventy Five Only	124410.00
43	43.9	Providing MS Foot Rests including fixing in Manholes with 20x20x10 cm cement concrete blocks 1:3:6(1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size),as per standard design					
		with 20x20mm Sq. bars	Each	20	227.95	Rupees Two Hundred Twenty Seven and Paise Ninety Five Only	4559.00
44		Making connection of drain or sewer line with existing manhole including breaking into and making good the walls floors with cement concrete 1:2:4(1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size) cement plastered on both sides with cement mortar 1:3(1 cement : 3 coarse sand) finished with a floating coat of neat cement and making necessary channels for the drain etc. complete.					
		For pipes 100 to 250 mm dia	Each	4.0	275.00	Rupees Two Hundred Seventy Five and Paise Zero Only	1100.00
		For pipes 250 to 300 mm dia	Each	2.0	333.15	Rupees Three Hundred Thirty Three and Paise Fifteen Only	666.30
		For pipes >300 mm dia	Each	1.0	487.20	Rupees Four Hundred Eighty Seven and Paise Twenty Only	487.20
45	43.8	Supplying, fitting and fixing in position R.C.C. Manhole / pit cover of approved make with rim of approved make (Heavy type)					
		(ii) 560 mm dia	Each	1.0	308.00	Rupees Three Hundred Eight and Paise Zero Only	308.00
		(On Manholes)					
		External Drainage system					

Sl. No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
46		Supplying, fitting and fixing yard gully with approved H.C.I. grating complete.					
		(i) 225 mm x 150 mm with 230 mm gratings	Each	25.0	514.00	Rupees Five Hundred Fourteen and Paise Zero Only	12850.00
47	33.1	Supplying, fitting and fixing with cement jointing (3:1) salt glazed stoneware pipe including excavation of earth upto 1.50 metre depth in all sorts of soil both mixed or unmixed and refilling (but excluding concreting at bottom and sides).					
		(i) 300 mm	Meter	25.0	925.00	Rupees Nine Hundred Twenty Five and Paise Zero Only	23125.00
		(ii) 225 mm	Meter	25.0	502.00	Rupees Five Hundred Two and Paise Zero Only	12550.00
		(iii) 150 mm	Meter	35.0	300.00	Rupees Three Hundred and Paise Zero Only	10500.00
48		Providing & laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate of of 40mm nominal size) around the Stoneware pipes including bed concrete as per standard design.					
		150mm diameter	Meter	150.0	405.05	Rupees Four Hundred Five and Paise Five Only	60757.50
		230mm diameter	Meter	25.0	516.90	Rupees Five Hundred Sixteen and Paise Ninety Only	12922.50
		300mm diameter	Meter	25.0	604.35	Rupees Six Hundred Four and Paise Thirty Five Only	15108.75

Sl. No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
		<u>Rain Water Manhole</u>					
49	43.12	Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 coarse sand) R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40mm nominal size) inside plastering 12mm 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 20mm nominal size) finished with a floating coat of neat cement complete as per standard design.					
		Inside size 120x90 cm and 90 cm deep including C.I. cover with frame (heavy duty) 560 mm internal diameter, total weight of cover and frame to be not less than 208 kg (weight of cover 108 kg and weight of frame 100 kg).					
		With F.P.S. bricks class designation 75	Each	56.0	15673.85	Rupees Fifteen Thousand Six Hundred Seventy Three and Paise Eighty Five Only	877735.60
50		Extra for depth for manholes					
		Size 120x90 cm					
		With F.P.S. bricks class designation 75	Metre	31.0	3179.95	Rupees Three Thousand One Hundred Seventy Nine and Paise Ninety Five Only	98578.45
		<u>External Rain Water Pipe</u>					
51	41.1	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars joints with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete.					
		450 mm dia. R.C.C. pipe	Meter	20.0	499.55	Rupees Four Hundred Ninety Nine and Paise Fifty Five Only	9991.00
52		Labour for Boring through any type of soil for sinking Tubewell of required dia with top enlargement by Rig Boring system (Direct Circulation method) including hire charges and labour for Rig machine, Tools and plants, Staging, force Pumping sets and making arrangement for water required for Boring etc. complete and lowering of pipes, Strainers, Blind pipes etc. complete.					
		(a) For depth upto 150 metres for 150 mm dia Tube well with Top Enlargement of 250mm dia (upto 36 metres).					
		i) First 50 Metres	Metre	50	957	Rupees Nine Hundred Fifty Seven and Paise Zero Only	47850.00
		ii) Next 50 Metres	Metre	50	937	Rupees Nine Hundred Thirty Seven and Paise Zero Only	46850.00
		iii) Next 50 Metres and above	Metre	50	1119	Rupees One Thousand One Hundred Nineteen and Paise Zero Only	55950.00

Sl. No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
53		Packing the annular space between the outside of the Tubewell pipes & Strainers and the bore with Pea size washed (at Site) gravel of approved quality having size from 2mm to 5mm or the size approved by the Engineer-in-charge including cost of all materials labour & Equipment complete. (96m)	Cum	60.0	1824.00	Rupees One Thousand Eight Hundred Twenty Four and Paise Zero Only	109440.00
		(Initial 10M of the annular space between the Housuing Pipe and the bore should not be shrouded with Pea size gravel to avoid contamination with the surface water).					
54		Geophysical Investigation of acquifer by electro logging system with all tools and plants as necessary including supply of necessary Report with chart duly signed by a qualified Geophysicist.	Each	1.0	6544.00	Rupees Six Thousand Five Hundred Forty Four and Paise Zero Only	6544.00
55		Washing & Developing Tube well with air compressor for 8 hours minimum continuous pumping per day with necessary arrangements for Testing the Yield in litres per hour with "V" Notch/orifice tube/flow meter, including hire and labour charges for all tools and plants and scaffolding as required.	Days	5.0	6712.00	Rupees Six Thousand Seven Hundred Twelve and Paise Zero Only	33560.00
56	9.1	Collecting Sample of Water for Bacteriological and Chemical tests as per IS 10500 and conducting tests and analysis including presence of Arsenic from any depth at any time during execution of work including hire and labour charges for tools and plants and sterilising the equipments, paying all charges and fees, testing etc, complete in all respect as per direction.	L.S.	1.0	1130.00	Rupees One Thousand One Hundred Thirty and Paise Zero Only	1130.00
57		Providing and fixing Bell Plug as required for 150 mm (internal) dia PVC pipe including cost of materials and labour complete.	Each	1.0	463.00	Rupees Four Hundred Sixty Three and Paise Zero Only	463.00
58		Supplying, fitting and fixing MS. Housing Clamp (250 mm dia) made out of 100 mm x 12 mm. MS flat including necessary Nuts and Bolts, Washers and top covered with 6 mm thick M.S.sheet well cover having slots for Column pipe, Electrical Cable, Probes for level control and including painting etc. all complete as per direction.	Set	2.0	2621.00	Rupees Two Thousand Six Hundred Twenty One and Paise Zero Only	5242.00
59		Providing Centre Guide for 150mm dia with clamp as per sample approved	Set	6.0	145.00	Rupees One Hundred Forty Five and Paise Zero Only	870.00
60		Supplying, fitting and fixing heavy type Bell mouth PVC Reducing Socket female threaded to match with the PVC threaded pipes .					
		(v) 250 x 150mm	Each	1.0	1791.00	Rupees One Thousand Seven Hundred Ninety One and Paise Zero Only	1791.00
PART A (b) : SUB-TOTAL							6797059.56
							Say, 6797060.00

PRICED BILL OF QUANTITIES FOR ELECTRICAL WORKS

PART A (c) : (Refer Clause 12 of ITB, Volume I, Section 2)

SI . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
1.0		Fixing only 500 V MCB PBDB (4 to 12 way) on flat iron legs on wall	Each	38	112.05	Rupees One Hundred Twelve and Paise Five Only	4257.90
2.0		Fixing only lamp	Each	200	6.75	Rupees Six and Paise Seventy Five Only	1350.00
3.0		FITTINGS					
3.1		Fixing only bulk/head ceiling fitting on wall/ceiling	Each	50	36.45	Rupees Thirty Six and Paise Forty Five Only	1822.50
3.2		Fixing only single/twin florescent light fitting complete with tube lamp Directly on wall/ceiling with HW block and suitable size MS fastener, Ceiling plate, nipples etc. as required	Each	3500	179.55	Rupees One Hundred Seventy Nine and Paise Fifty Five Only	628425.00
3.3		Fixing only Floodlight Fitting with suitable clamps for mounting on Pole/Tower or similar structure	Each	20	751.95	Rupees Seven Hundred Fifty One and Paise Ninety Five Only	15039.00
3.4		Fixing only flood light fittings on top of masonry structure by 3 Nos. 10 mm dia x 87 mm long rag bolts, nuts & double washers complete either 37 mm x 10 mm MS flat support/or by other means as required.	Each	10	232.20	Rupees Two Hundred Thirty Two and Paise Twenty Only	2322.00
3.5		Fixing only ceiling fan complete with blades, canopy, fork, rubber bush etc. incl. S&F connecting wire for down rod upto 30 cm incl. painting the rod with approved paint and making necessary connection as required by					
		2x1.5 sqmm flexible copper wire	Each	1000	67.50	Rupees Sixty Seven and Paise Fifty Only	67500.00
		Extra for supplying additional wire for down rod & painting the rod exceeding 30 cm					
3.6		2x1.5 sqmm flexible copper wire	RM	300	56.70	Rupees Fifty Six and Paise Seventy Only	17010.00
		Fixing cabin fan on wall/ceiling by S&F rag bolts, nuts & washers (6 mm dia x 62 mm long) or as reqd. incl. S&F 24/0.20 PVC insulated flexible copper wire 0.5 mt. length	Each	10	109.35	Rupees One Hundred Nine and Paise Thirty Five Only	1093.50
3.7		Distribution wiring in 1.1 KV single core stranded 'FR' PVC insulated & unsheathed copper wire (approved make) in 20mm size PVC rigid conduit 'FR' (Precision make) incl. necy. fittings as required					
3.8		2 x 22/0.3 (1.5 sqmm) + 1 x 22/0.3 (1.5 sqmm) ECC	RM	1000	113.75	Rupees One Hundred Thirteen and Paise Seventy Five Only	113750.00
3.9		LAYING ON WALL / SURFACE WITH SADDLES / CLAMPS					
3.9.1		Laying of cable upto 3/4 core 25 sqmm on wall/surface incl. S & F MS saddles with earthing attachment in 10 SWG GI (Hot Dip) Wire, making holes etc. as necy. mending good damages and painting					
3.9.1.1		3C X 10sq.mm. Cu. PVC Insulated cable	RM	50	51.00	Rupees Fifty One and Paise Zero Only	2550.00
3.9.1.2		4C X 4sq.mm. Cu. PVC Insulated cable	RM	1000	51.00	Rupees Fifty One and Paise Zero Only	51000.00
3.9.1.3		4C X 6sq.mm. Cu. PVC Insulated cable	RM	1600	51.00	Rupees Fifty One and Paise Zero Only	81600.00
3.9.1.4		4C X 10sq.mm. Cu. PVC Insulated cable	RM	400	51.00	Rupees Fifty One and Paise Zero Only	20400.00

SI . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
3.9.1.5		4C X 16sq.mm. Al. Ar. XLPE cable	RM	400	51.00	Rupees Fifty One and Paise Zero Only	20400.00
3.9.1.6		4C X 25sq.mm. Al. Ar. XLPE cable	RM	250	51.00	Rupees Fifty One and Paise Zero Only	12750.00
3.9.2		Laying of cable from 3/3½ core 35 sqmm to 50 sqmm on wall/surface incl. S & F MS saddles with earthing attachment in 2 x 10 SWG GI (Hot Dip) Wire, making holes etc. as necy., mending good damages and painting					
3.9.2.1		3.5C X 35sq.mm. Al. Ar. XLPE cable	RM	100	60.00	Rupees Sixty and Paise Zero Only	6000.00
3.9.2.2		3.5C X 50sq.mm. Al. Ar. XLPE cable	RM	50	60.00	Rupees Sixty and Paise Zero Only	3000.00
3.9.3		Laying of cable above 3½ core 90 sqmm and upto 3½ core 150 sqmm on wall/surface including S & F MS clams with earthing attachment in 2 x 10 SWG GI (Hot Dip) Wire, making hole etc. as necy., mending good damages and painting					
3.9.3.1		3.5C X 95sq.mm. Al. Ar. XLPE cable	RM	100	79.50	Rupees Seventy Nine and Paise Fifty Only	7950.00
3.9.3.2		3.5C X 150sq.mm. Al. Ar. XLPE cable	RM	2000	79.50	Rupees Seventy Nine and Paise Fifty Only	159000.00
3.10		LAYING THROUGH RCC / HUME / GI PIPE					
3.10.1		Laying only Cable upto 50 sqmm through existing RCC/Hume/ GI Pipe/open masonry trench for single, 2, 3, 3½ & 4 core					
3.10.1.1		4C X 25sq.mm. Al. Ar. XLPE cable	RM	30	31.50	Rupees Thirty One and Paise Fifty Only	945.00
3.10.2		Laying only Cable above 50 sqmm but not exceeding 400sqmm through existing RCC/ Hume/GI Pipe/open masonry trench for single, 2, 3, 3½ and 4 core					
3.10.2.1		3.5C X 150sq.mm. Al. Ar. XLPE cable	RM	2000	45.00	Rupees Forty Five and Paise Zero Only	90000.00
3.10.2.2		3.5C X 240sq.mm. Al. Ar. XLPE cable	RM	1000	45.00	Rupees Forty Five and Paise Zero Only	45000.00
3.10.2.3		3.5C X 300sq.mm. Al. Ar. XLPE cable	RM	50	45.00	Rupees Forty Five and Paise Zero Only	2250.00
		LAYING THROUGH UNDERGROUND TRENCH					
3.11		Laying of one No. cable upto 35 sqmm in underground trench 460 mm wide x 760 mm average depth, with brick protection on the top of the cable with 8 (eight) Nos. bricks per metre, including filling the space between the brick & cable and also the trench with shifted soil, leveling up and restoring surface duly rammed					
3.11.1		4C X 25sq.mm. Al. Ar. XLPE cable	RM	250	136.50	Rupees One Hundred Thirty Six and Paise Fifty Only	34125.00
3.12		Laying of two cables above 35 sqmm and upto 185 sqmm in an underground trench in single tier formation (horizontal), the trench size : 680 mm x 760 mm average depth, with brick protection on the top of each cable 8 (eight) Nos. bricks per Mtr. and 4 (four) Nos. bricks per Mtr. as separator between the bricks and cables and also trench to be filled up with shifted soil, levelling up and restoring surface duly rammed					
3.12.1		3.5C X 150sq.mm. Al. Ar. XLPE cable	RM	1600	282.00	Rupees Two Hundred Eighty Two and Paise Zero Only	451200.00

SI . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
3.13		Laying of two cables above 185 sqmm in an underground trench in single tier formation (horizontal), the trench size : 680 mm x 760 mm average depth, with brick protection on the top of each cable 8 (eight) Nos. bricks per Mtr. and 4 (four) Nos. bricks per Mtr. as separator between the bricks and cables and also trench to be filled up with shifted soil, levelling up and restoring surface duly rammed					
3.13.1		3.5C X 240sq.mm. Al. Ar. XLPE cable	RM	1500	103.50	Rupees One Hundred Three and Paise Fifty Only	155250.00
3.13.2		3.5C X 300sq.mm. Al. Ar. XLPE cable	RM	2000	103.50	Rupees One Hundred Three and Paise Fifty Only	207000.00
3.14		Supplying and fixing compression type gland complete with brass gland, brass ring & rubber ring for dust & moisture-proof entry of XLPE/PVC armoured cables as below :					
3.14.1		3C X 10sqmm LT Al. XLPE	Each	10	103.50	Rupees One Hundred Three and Paise Fifty Only	1035.00
3.14.2		4C X 4sqmm LT Al. XLPE	Each	12	103.50	Rupees One Hundred Three and Paise Fifty Only	1242.00
3.14.3		4C X 6sqmm LT Al. XLPE	Each	60	103.50	Rupees One Hundred Three and Paise Fifty Only	6210.00
3.14.4		4C X 10sqmm LT Al. XLPE	Each	8	103.50	Rupees One Hundred Three and Paise Fifty Only	828.00
3.14.5		4C X 16sq.mm. Al. Ar. XLPE cable	Each	160	103.50	Rupees One Hundred Three and Paise Fifty Only	16560.00
3.14.6		4C X 25sq.mm. Al. Ar. XLPE cable	Each	8	159.00	Rupees One Hundred Fifty Nine and Paise Zero Only	1272.00
3.14.7		3.5C X 35sq.mm. Al. Ar. XLPE	Each	10	159.00	Rupees One Hundred Fifty Nine and Paise Zero Only	1590.00
3.14.8		3.5C X 50sq.mm. Al. Ar. XLPE	Each	2	205.50	Rupees Two Hundred Five and Paise Fifty Only	411.00
3.14.9		3.5C X 95sq.mm. Al. Ar. XLPE	Each	2	321.00	Rupees Three Hundred Twenty One and Paise Zero Only	642.00
3.14.10		3.5C X 150sq.mm. Al. Ar. XLPE cable	Each	16	321.00	Rupees Three Hundred Twenty One and Paise Zero Only	5136.00
3.14.11		3.5C X 185sq.mm. Al. Ar. XLPE cable	Each	4	465.00	Rupees Four Hundred Sixty Five and Paise Zero Only	1860.00
3.14.12		3.5C X 240sq.mm. Al. Ar. XLPE	Each	12	465.00	Rupees Four Hundred Sixty Five and Paise Zero Only	5580.00
3.14.13		3.5C X 300sq.mm. Al. Ar. XLPE	Each	64	465.00	Rupees Four Hundred Sixty Five and Paise Zero Only	29760.00
3.15		Finishing the end of following XLPE/PVC armoured cables by crimping method incl. supplying and fixing solderless socket (Dowels make), tapes, anticorrosive paste & jointing materials :					
3.15.1		4C X 4sqmm LT Al. XLPE	Set	32	60.00	Rupees Sixty and Paise Zero Only	1920.00
3.15.2		4C X 6sqmm LT Al. XLPE	Set	128	63.00	Rupees Sixty Three and Paise Zero Only	8064.00
3.15.3		4C X 10sqmm LT Al. XLPE	Set	8	72.00	Rupees Seventy Two and Paise Zero Only	576.00
3.15.4		4C X 16sq.mm. Al. Ar. XLPE cable	Set	260	99.00	Rupees Ninety Nine and Paise Zero Only	25740.00
3.15.5		4C X 25sq.mm. Al. Ar. XLPE cable	Set	8	133.50	Rupees One Hundred Thirty Three and Paise Fifty Only	1068.00

SI . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
3.15.6		3.5C X 35sq.mm. Al. Ar. XLPE	Set	96	165.00	Rupees One Hundred Sixty Five and Paise Zero Only	15840.00
3.15.7		3.5C X 50sq.mm. Al. Ar. XLPE	Set	2	213.00	Rupees Two Hundred Thirteen and Paise Zero Only	426.00
3.15.8		3.5C X 95sq.mm. Al. Ar. XLPE	Set	2	346.50	Rupees Three Hundred Forty Six and Paise Fifty Only	693.00
3.15.9		3.5C X 150sq.mm. Al. Ar. XLPE cable	Set	16	526.50	Rupees Five Hundred Twenty Six and Paise Fifty Only	8424.00
3.15.10		3.5C X 185sq.mm. Al. Ar. XLPE cable	Set	4	700.50	Rupees Seven Hundred and Paise Fifty Only	2802.00
3.15.11		3.5C X 240sq.mm. Al. Ar. XLPE	Set	12	969.00	Rupees Nine Hundred Sixty Nine and Paise Zero Only	11628.00
3.15.12		3.5C X 300sq.mm. Al. Ar. XLPE	Set	64	1243.50	Rupees One Thousand Two Hundred Forty Three and Paise Fifty Only	79584.00
3.16		Supplying & fixing medium gauge GI Pipe (TATA-Medium or ISI-Medium) Protection with necessary fittings and jointing materials as required					
3.16.1		40 mm dia (ISI-M)	RM	15	405.00	Rupees Four Hundred Five and Paise Zero Only	6075.00
3.17		Erection of Single Steel tubular pole of length as given below with/without sole plate & Cap etc. in CC foundation (Proportion and dimension indicated below), having 600x600x150 mm thick CC (4:2:1) base block below sole plate/pole with hard jhama metal including CC (6:3:1) muffing 0.30 mts. dia and 0.30 mts. above ground level including 3 mm thick neat cemented finish and GI earth bolt after making drilled holes etc. on pole & carriage of pole upto 1.6 Km from Store to work-site including filling up the excavated earth pit with shifted soil and ramming properly					
		Above 9.0 mtr. Size 0.6x0.6x1.91 mts	RM	45	3285.10	Rupees Three Thousand Two Hundred Eighty Five and Paise Ten Only	147829.50
4.0		Earthing Installation - with Pipe Electrode					
4.1		Earthing with 65 mm dia GI pipe (TATA-Medium)x 3.0 Mts. long and 1 No. 50 mm x 6 mm galvanized (Hot Dip) steel strip (4 Mts. long), 20 mm dia x 125 mm long galvanized bolt, double nuts, double washers including finishing both ends by making holes etc. and S & F 65 mm dia GI pipe (ISI-Medium) protection (3 Mts. long) to be filled with bitumen partly under the ground level and partly above ground level to an average depth of 3.65 Mts					
4.1.1		For Soft Soil	Set	10	4578.00	Rupees Four Thousand Five Hundred Seventy Eight and Paise Zero Only	45780.00
4.2		Extra for providing masonry enclosure on the top of the earth electrode of overall size 86.36 cm x 86.36 cm x 46 cm deep (below Ground level) complete with cemented brick work(1:6) of 25 cm width duly plastered with cement mortar (inside) CI hinged inspection cover of size 36.56 cm x 35.56 cm with locking arrangement, GI reducer including drilling of 46 nos. 12 mm dia holes on the GI pipe	item	10	1542.00	Rupees One Thousand Five Hundred Forty Two and Paise Zero Only	15420.00
4.3		Extra for treatment of soil by using salt & charcoal or coke for pipe electrode (for soft soil)	item	10	670.80	Rupees Six Hundred Seventy and Paise Eighty Only	6708.00

Sl. No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
4.4		Supplying & fixing earth busbar of galvanized (Hot Dip) MS flat 50 mm x 6 mm on wall having clearance of 6 mm from wall including providing drilled holes on the busbar complete with GI bolts, nuts, washers, spacing insulators etc. as required	mtr.	5	232.80	Rupees Two Hundred Thirty Two and Paise Eighty Only	1164.00
4.5		Connecting the equipments to earth busbar including S & F GI (Hot Dip) wire of size as below on wall/floor with staples buried inside wall/floor as required and making connection to equipments with bolts, nuts, washers, cable lugs etc. as required and mending good damages					
4.5.1		No. 4 SWG	mtr.	250	22.80	Rupees Twenty Two and Paise Eighty Only	5700.00
4.6		Connecting the equipments body to earth busbar including S & F 25 mm x 6 mm galvanised (Hot Dip) MS flat on wall/floor with GI saddles as required and connection to equipments incl. drilling holes, with bolts, nuts, washers etc.	mtr.	100	136.80	Rupees One Hundred Thirty Six and Paise Eighty Only	13680.00
4.7		Extra for connecting the neutral of Transformer/Earth busbar to earth electrode including S & F 50 mm x 6 mm Galvanized (Hot Dip) steel strip on wall/floor with GI saddles & insulating the same by one layer of PVC strip over one layer of ampere tape	mtr.	200	231.60	Rupees Two Hundred Thirty One and Paise Sixty Only	46320.00
4.8		Earthing with Copper plate (610x610x3mm size) having weight of 9.84 Kg and 1 No. 25x5mm Copper strip (3.20 mt long) & 1 no. 6 sqmm PVC insulated stranded Copper wire (4 Mt long) incl. S & F 15 mm dia GI pipe (ISI-Medium) protection (4 mt. long) to be filled with bitumen, partly under the ground level & partly above ground level to an average depth of 3.65 Mts. below the ground level and restoring the surface duly rammed incl. providing 3.0 mt long, 25 mm dia GI pipe (ISI-Medium) for periodic treatment, incl. providing masonry enclosure on the top of the earth electrode of overall size 86.36x86.36x46cm deep (below Ground level) complete with cemented brick work (1:6) of 25 cm width, duly plastered with cement mortar (inside) CI hinged inspection cover of size 36.56x35.56cm with locking arrangement, GI reducer and treatment of soil by using salt & charcoal or coke for plate electrode (for soft soil / morrum soil)	Set	16	12430.80	Rupees Twelve Thousand Four Hundred Thirty and Paise Eighty Only	198892.80
6.0	7.0	MV CABLE LAYING					
6.1		Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1KV grade of the following size on wall surface as required.					
6.1.1		3.5C X 185sq.mm. Al. Ar. XLPE cable (clamped with 40/25X3mm MS flat clamp)	metre	50	69.00	Rupees Sixty Nine and Paise Zero Only	3450.00
6.1.2		3.5C X 240sq.mm. Al. Ar. XLPE cable (clamped with 40X3mm MS flat clamp)	metre	400	95.00	Rupees Ninety Five and Paise Zero Only	38000.00
6.1.3		3.5C X 300sq.mm. Al. Ar. XLPE cable (clamped with 40X3mm MS flat clamp)	metre	20	95.00	Rupees Ninety Five and Paise Zero Only	1900.00
7.0	19.0	EARTHING					
		Supply and laying 25mm X 5mm G.I. strip at 0.50 meter below ground as strip earth electrode, including connection/terminating with G.I. nut, bolt spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of G.I. nut bolt & spring washer spaced at 50mm).	metre	80	97.50	Rupees Ninety Seven and Paise Fifty Only	7800.00

SI . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
8.0	10.0	LIGHTNING CONDUCTOR					
8.1		Providing and fixing of lightning conductor finial, made of 25 mm dia 300 mm long, copper tube, having single prong at top, with 85 mm dia 3 mm thick copper base plate including holes etc. complete as required.	Each	50.00	701.00	Rupees Seven Hundred One and Paise Zero Only	35050.00
8.2		Jointing copper / G.I. tape (with another copper/ G I tape, base of the finial or any other metallic object) by riveting / nut bolting/ sweating and soldering etc as required.	Each	800.00	60.50	Rupees Sixty and Paise Fifty Only	48400.00
8.3		Providing and fixing G.I. tape 20 mm X 3 mm thick on parapet or surface of wall for lightning conductor complete as required.(For horizontal run)	Metre	400.00	58.00	Rupees Fifty Eight and Paise Zero Only	23200.00
8.4		Providing and fixing G.I. tape 20 mm X 3 mm thick on parapet or surface of wall for lightning conductor complete as required.(For vertical run)	Metre	2000.00	81.50	Rupees Eighty One and Paise Fifty Only	163000.00
8.5		Providing and laying G.I. tape 32 mm X 6 mm from earth electrode directly in ground as required.	Metre	100.00	125.00	Rupees One Hundred Twenty Five and Paise Zero Only	12500.00
9.0		MV Danger notice plate					
9.1		Providing and fixing MV danger notice plate of 200mm X 150mm made of mild steel at least 2mm thick and vitrious enamelled white on both sides and with inscriptin in single red colour on front side as required.	each	10	12.00	Rupees Twelve and Paise Zero Only	120.00
9.2		Providing and fixing HT danger notice plate of 250mm X 200mm made of mild steel at least 2mm thick and vitrious enamelled white on both sides and with inscriptin in single red colour on front side as required.	each	5	135.00	Rupees One Hundred Thirty Five and Paise Zero Only	675.00
10.0	21.0	Pre-wired MCB Distribution Boards					
10.1		Supplying and fixing following way prewired vertical type TP&N MCB distribution board of steel sheet for 415 volts on surface/recess complete with loose wire box of sheet steel, dust protected, duly powder painted, inclusive of 200 amps tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCB's, terminal connectors for all incoming and outgoing circuits, duly prewired with adequate size of FR PVC insulated copper conductor upto the terminal connector/neutral link, earthing etc as required (But without MCB/RCCB/Isolator). (Note : Prewired vertical type MCB TPDB is normally used where 3 phase outlets are required)					
10.1.1		4Way (4 + 12), Single Door	each	100	5956.00	Rupees Five Thousand Nine Hundred Fifty Six and Paise Zero Only	595600.00
10.1.2		6Way (4 + 18), Single Door	each	40	7694.00	Rupees Seven Thousand Six Hundred Ninety Four and Paise Zero Only	307760.00
10.1.3		8Way (4 + 24), Single Door	each	20	8746.00	Rupees Eight Thousand Seven Hundred Forty Six and Paise Zero Only	174920.00
10.1.4		12Way (4 + 36), Single Door	each	5	11618.00	Rupees Eleven Thousand Six Hundred Eighteen and Paise Zero Only	58090.00

SI . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
11.0	18	WIRING IN PVC CONDUIT		3300			
11.1		Wiring for light point / fan point / exhaust fan point / call bell point with 1.5sqmm. FR PVC insulated copper conductor single core cable in surface medium class PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq. mm. FR PVC insulated copper conductor single core cable etc as required.					
11.1.1		Group B	point	10000	544.00	Rupees Five Hundred Forty Four and Paise Zero Only	5440000.00
11.2		Wiring for light/ power plug with 2X4 sq. mm FR PVC insulated copper conductor single core cable in surface/ recessed medium class PVC conduit alongwith 1 No 4 sq. mm FR PVC insulated copper conductor single core cable for loop earthing as required.	metre	10000	162.00	Rupees One Hundred Sixty Two and Paise Zero Only	1620000.00
11.3		Wiring for light/ power plug with 4X4 sq. mm FR PVC insulated copper conductor single core cable in surface/ recessed medium class PVC conduit alongwith 2 Nos 4 sq. mm FR PVC insulated copper conductor single core cable for loop earthing as required.	metre	100	268.00	Rupees Two Hundred Sixty Eight and Paise Zero Only	26800.00
11.4		Wiring for circuit / submain wiring alongwith earth wire with the following sizes of FR PVC insulated copper conductor, single core cable in surface, medium class PVC conduit as required					
11.4.1		2 X 2.5 sq. mm. + 1 X 2.5 sq. mm earth wire	metre	1000	131.00	Rupees One Hundred Thirty One and Paise Zero Only	131000.00
12.0	18.11	SWITCH & ACCESSORIES					
12.1		Supplying and fixing following modular switch / socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.					
12.1.1		5 / 6 amps switch	each	1000	75.00	Rupees Seventy Five and Paise Zero Only	75000.00
12.1.2		15 / 16 amps switch	each	100	109.00	Rupees One Hundred Nine and Paise Zero Only	10900.00
12.1.3		3 pin 5 / 6 amp socket outlet	each	1000	96.00	Rupees Ninety Six and Paise Zero Only	96000.00
12.1.4		6 pin 15 / 16 amp socket outlet	each	100	147.00	Rupees One Hundred Forty Seven and Paise Zero Only	14700.00
12.2		Supplying and fixing stepped type electronic fan regulator on the existing modular plate & switch box including connections but excluding modular plate etc. as required.	each	1000	322.00	Rupees Three Hundred Twenty Two and Paise Zero Only	322000.00
13.0	23	METAL ENCLOSED INDUSTRIAL TYPE SOCKET OUTLET WITH MCB					
13.1		Supplying and fixing 20 amps, 240 volts, SPN industrial type, socket outlet, with 2 pole and earth, metal enclosed plug top along with 20 amps 'C' curve, SP, MCB, in sheet steel encloser, on surface or in recess, with chained metal cover for the socket outlet and complete with connections, testing and commissioning etc. as required.	each	100	693.00	Rupees Six Hundred Ninety Three and Paise Zero Only	69300.00
13.2		Supplying and fixing 30 amps, 415 volts, TPN industrial type, socket outlet, with 4 pole and earth, metal enclosed plug top along with 30 amps 'C' curve, TPMCB, in sheet steel encloser, on surface or in recess, with chained metal cover for the socket outlet and complete with connections, testing and commissioning etc. as required.	each	10	1983.00	Rupees One Thousand Nine Hundred Eighty Three and Paise Zero Only	19830.00

SI . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Word	
14.0	20.0	INSTALLATION OF LIGHT FITTINGS, CEILING AND EXHAUST FAN					
14.1		Installation, testing and commissioning of pre-wired, fluorescent fitting / compact fluorescent fitting of all types, complete with all accessories and tube etc. directly on ceiling / wall, including connection with 1.5 sq.mm FR PVC insulated, copper conductor, single core cable and earthing etc. as required.	each	1000	69.50	Rupees Sixty Nine and Paise Fifty Only	69500.00
14.2		Installation of exhaust fan in the existing opening, including making good the damage, connection, testing, commissioning etc. as required.					
14.2.1		Upto 450 mm sweep	Each	40	163.00	Rupees One Hundred Sixty Three and Paise Zero Only	6520.00
14.3		Extra for fixing the louvers / shutters complete with frame for a exhaust fan of all sizes.	Each	40	68.50	Rupees Sixty Eight and Paise Fifty Only	2740.00
15.0	Civil Tech Spec	EARTH WORK					
15.1		Earth Work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5m in width or 10 sq.mm on plan) including dressing of sides and raming 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.					
15.1.1		All kinds of soil	cum	100	130.80	Rupees One Hundred Thirty and Paise Eighty Only	13080.00
PART A (c) : SUB-TOTAL							12307285.20
							Say, 12307285.00

NON-PRICED BILL OF QUANTITIES (Rate and Amount to be provided by the bidder)
FOR CIVIL WORK

PART B (d) : (Refer Clause 12 of ITB, Volume I, Section 2)							
Sl. No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
1	3	Removal of sludge, garbages etc from the working site upto desired depth and disposal of the same in conformity with the Municipal/ Corporation Rules for such disposal including loading, unloading and transportation in all respect as per direction of engineer in charge.	Cum	12822			
2	3	Shoring work with ISMB 150 spaced at 1200 mmc/c with horizontal bracing and diagonal bracing at four corners of ISMB 250 driven into the soil length 8M with in fill 8mm M.S. plate wall plate between the two ISMBs complete in all respect including extraction.	MT.	150			
3	18.3	Providing and fixing of epoxy bonded 3R100 - EVA based 3R brand compression seal system of standard colour for gap (width of 50 mm to 75 mm) with help of epoxy glue and squeezing the seal into the joint completely as per the standard joint fixing methodology.(Thermal expansion joint in floor)	Rm.	400			
4	18.3	Providing and fixing of 1.2mm thick EPDM/PVC waterbarrier membrane over the joint profile with special epoxy adhesive before fixing of the joint system to ensure water tight joints, complete(Basement raft & wall)	Rm.	220			
6	18.4	Providing and fixing of 3R joints and seals (of joint width not less than 300 mm) in floors, product 3R SFFS/ 3R MSDSZJ granite/vitrified top finish expansion /seismic joint system with +/- 25mm joint movement design for system requiring medium to heavy duty load as per the DIN 1055 load rated and conforming to ASTM T6063 standards and cover concealment having superior finish and seismic movement including preparing of necessary block out in PCC or nonshrink grout over the joint profile as per the joint manufacturer specification and the joint design and drawing complete	Rm.	270			
7	18	Providing and fixing of 3R MSWGZ/3R RMF/RM terrace coping system with full expansion / Seismic movement of +/-50% design for roof finishes as per the joint design and design width over the joint profiles as per the joint manufacturer specification and the joint design and drawing complete. (in roof)	Rm	250.00			
	10	Water Proofing Treatment for Toilet Floor					
8		Cleaning of RCC to remove dust and loosely adhering particles completely.	Sqm	2434			

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
9		Supply and application of 1:3 cement – sand mortar, mixed with SikaTop 77 – the polymer modified high quality emulsion, as a coving at the corners of floor and the vertical surface in the sunken area, and between floor and walls in the remaining area.	Rm	1920			
10		Supply and application of SikaTop Seal 107 – the cementitious, flexible waterproof coating onto the prepared surface in a continuous film on the floor of the sunken area, taking the coating over the vertical surfaces on to the floor and over the coving on to the wall (before tiling) to at least 300mm above the final finished floor level. The coating shall also be continued on to the inner surfaces of the pipe penetration holes. Two coats shall be applied.	Sqm	250			
11		Providing a 15mm thick plaster on the waterproof coating by mixing an integral waterproofing compound, Plastocrete Plus @ 100gms per bag of cement	Sqm	250			
12		Providing Sikagard 694F(I) , a moisture insensitive epoxy putty in a continuous, 10mm thick gasket around the pipes to a width of approximately 15mm.	Nos	432			
	10	Water proofing Treatment at Roof surface.					
13		Labour for cleaning of concrete surface to remove dust, oil, grease including removal of existing loose paint / coating, and cement laitance by cleaning with compressed air, including all materials, labour, tools and tackles complete Repairing surface irregularities, damaged concrete in base slab, if any, with a styrene butadiene polymer, Sika Latex or equivalent modified repair mortar including a coat of bonding agent of the same with cement slurry including all material, labour, tools and tackles complete	Sqm	350			
14		The prepared substrate shall be treated with SikaTop Seal 107 , a two component acrylic polymer modified, cementitious, ready to use waterproofing slurry in two coats at right angles to each other and taking the coatings over the vertical parapet up to at least 300mm on the exterior surface of the parapet.	Sqm	350			
	10	Water proofing treatment at UG Basement for floor					

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
15		<p>Providing and laying geotextile of 500gsm as correction / slippage layer horizontally, over top of the laid, float finished PCC, before laying Masterpren BG / FR - PVC waterproofing membrane with Fire Retarding properties. Providing and Installing 2mm thick synthetic membrane of plasticized PVC, Masterpren BG/FR manufactured by co-extrusion process, which enables the production of a single membrane of twin coloured surfaces to form a signal layer of light green on upper surface and lower surface in black colour. Material shall conform to the physical and chemical properties given in the Masterpren BG /FR technical properties datasheet or as mentioned in the specification above and shall have the following features such as: Elongation at break (300%) UNI EN ISO 527-3,Ultimate Tensile Strength (>16.7 N/mm²), Puncture resistance (>1100mm) DIN 16726-5.12, Hydrostatic pressure Waterproof UNI EN 1928 resistance(6 hours at 5 bar), Fire Behaviour EN ISO 11925-2 Class E</p> <ul style="list-style-type: none"> • Signal layer • High mechanical resistance. • Resistance to wash-out waters action • Resistance to bursting <p>•UNI EN ISO 9001 &UNI ENI 14001 certified plant. Double seam welding of PVC waterproofing membrane joints where possible and pressure testing of the same to 2 bars up to 10 minutes max. Provision of suitable QA/QC system for the entire waterproofing works Compartmentalization by welding PVC water stop with welding fins at all construction joints and at strategic locations to make a compartment. The compartment shall be atleast 200sqmts or as and where required. As a fall back grouting option minimum 2 no's of pipetas injection socket shall be placed in each compartment. The membrane system shall be of BASF</p>	Sqm	2700			
16		<p>Providing and laying a protection layer of non-woven 300gsm geotextile over the laid (Masterpren BG/FR) PVC waterproof membrane system, followed by a cement mortar screed of 50 mm thick over the geotextile. The protection mortar screed is provided to facilitate the placing and tying of reinforcement bars of raft. Concrete for screed to be provided by client</p>	Sqm	2700			

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
17		<p>Watertight treatment to pile head cap Provision of epoxy required terminating PVC waterproofing membrane at locations to be determined at site in conjunction with the designer Providing and encasing the Masterpren BG/FR PVC waterproof membrane using Masterflow 410 epoxy free flow grout at the point, at junction interface of installaton and Masterpren BG/FR PVC waterproof membrane. Encapsulation shall be done with Masterflow 410 series an epoxy grout shall be filler-extended, high strength, flowable The encapsulation shall be done using Materflow 410 PCT. The impermeable epoxy mortar shall be Masterflow 410 PCT filler-extended, high strength, flowable. The grout shall exhibit high early strengths by exceeding compressive strength of 80 MPa at 1 day and 100 MPa at 7 days. The formulation shall be free of VOC and designed for application of up to 150mm thick layer in single pour with details out any cracking due to exothermic reaction. The detailing of the pile head encapsulation shall be as per the detailing mentioned in the drawing for pile head encapsulation treatment to make the interface between the pile head and the membrane watertight .</p>	No.	1200			
	10	Water proofing treatment at UG Basement for wall					

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
18		<p>Providing and Installation (Masterpren BG/FR) - PVC membrane waterproof system over the vertical side for retaining wall waterproofing. Installing geotextile of 300gsm as correction layer, over the vertical side of the wall, before installation (Masterpren BG/FR) - PVC membrane on vertical side.</p> <p>Providing and fixing of Rondels - PVC discs of 100 mm diameter of approved round shape, should be fixed mechanically onto the vertical wall and it should be welded to the membrane to hold the membrane in vertical position against sagging due to self weight of the membrane. The Rondel to be placed in grid pattern as per the site situation. Providing and Installing 2mm thick synthetic membrane of plasticized PVC, (Masterpren BG/FR) manufactured by co-extrusion process, which enables the production of a single membrane of twin coloured surfaces to form a signal layer of light green on upper surface and lower surface in black colour. Material shall conform to the physical and chemical properties given in the (Masterpren BG/FR) technical properties datasheet or as per the specification above and shall have the following features such as Elongation at break (300%) UNI EN ISO 527-3, Puncture resistance (>1100mm) DIN 16726-5.12, Ultimate Tensile Strength (>16.7 N/mm²), Hydrostatic pressure Waterproof UNI EN 1928 resistance(6 hours at 5 bar), Fire Behavior EN ISO 11925-2 Class</p> <ul style="list-style-type: none"> • Signal layer • High mechanical resistance. • Resistance to wash-out waters action • Resistance to bursting • UNI EN ISO 9001 & UNI ENI 14001 certified plant. <p>Double seam welding of PVC waterproofing membrane joints where possible and pressure testing of the same to 2 bars up to 10 minutes Provision of suitable QA/QC system for the entire waterproofing works Compartmentalization by welding PVC water stop with welding fins at all construction joints and at strategic locations to make a compartment. membrane to be of approved make and system to be installed by a approved</p>	Sqm	900			
19		<p>Providing and Installing a minimum protection layer of 500 gsm over the vertically installed (Masterpren BG/FR) PVC waterproofing membrane, on the vertical face of the retaining wall. This shall act as a protection layer against backfill.</p> <p>(Note: The alternate protection layer can be boards or brick masonry wall depending on the site condition and the type of backfill material and as agreed by the client and the project team)</p>	Sqm	500			
	10	Construction Joint					

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
20		Providing and Installing Masterflex 610 hydro swelling bar in all construction joints in raft and retaining wall of the underground basement structure. All construction joints, shall be installed with Masterflex 610, (20mm x 10mm) cross-sectional sized hydro-swelling water bar based on advance vinyl acrylate polymers. The water bar shall be formulated to exhibit low pre-mature swelling (less than 50% with in 12 hours) and shall not be based on super absorbents. The water bar shall have low swelling pressure; not exceeding 0.25 MPa at full swelling capacity. The water bar shall be installed with special adhesive, Masterflex 610 adhesive glue and not to be fixed using nails.	Rm	250			
	10	Pressure Release Pipe Treatment					
21		Providing openings in 2mm thick Masterpren BG/FR (PVC membrane) at the pipe sleeve locations. 2mm thick Masterpren BG/FR (PVC membrane) shall be welded to the horizontal membrane with an overlap of 200mm by Hot Air gun as per manufacture's specifications. The PVC membrane shall be held in position using Jubilee Clips. The entire set up is encapsulated using 50mm thick Masterflow 410 PCT (Low Exothermic, epoxy grout) or equivalent make for a height of 300mm above protection screed for water tightness as per manufacturer's specifications.	No.	50			
	16	ACP cladding system					
22		Supply and fixing PVDF-Exterior grade 4 mm thick aluminium composite panel of approved make as per approved manufacturer's specification fixed on aluminium frame work with necessary bolts, nuts, washers & foil coating of 0.5 mm thick fixed to the wall as certified by Engineer-in-charge complete in all respect.	Sqm	120			
		Fire Closing Door					
23	11	Supply & installation of fire closing door of "SHAKTI MET-DOR" or equivalent of Two hour fire rating as per manufacturer's specification.	Sqm	100			
24	11	Brush/matt finish stainless steel handle with screws etc. complete.					
		SS Pull handle - D type (25 dia. X 300mm)	Each	35			

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
25	11	Providing & fixing Luxalon 8 ₄ R plain panel aluminium Sun Louver System as manufactured by Hunter Douglas India Pvt. Ltd. Of approved colour (as per Luxalon colour chart). The system shall consist of panel 84mm wide x 16mm deep x 0.6mm thick in standard length of up to 6mm. The panels shall be coil coated in a continuous paint line, double baked & roll formed from stove enameled corrosion resistant Aluminium Alloy AA 3005 for higher strength & roll forming characteristics. The panels shall be clipped on to a baked and enameled aluminium SL2 stringer 38 mm wide x 98mm deep made from 0.95 mm thick baked and enameled Aluminium alloy AA 5050 (AL. MG) in standard length of 5 m in white color with cutouts to hold the panels in a module of 74 mm c/c the 1st. stringers shall be fixed at 150 mm from both end and there after at a distance of 750 mm to 100 mm depending on wind load. The stringer shall be fixed to suitable sub structure/wall with nut/bolt and washer, complete as per manufacturer's specification	Sqm	15			
26		Providing & fixing Luxalon 84 R plain panel aluminium Sun Louver System as manufactured by Hunter Douglas India Pvt. Ltd. Of approved colour (as per Luxalon colour chart). The system shall consist of panel 84mm wide x 16mm deep x 0.6mm thick in standard length of up to 6mm. The panels shall be coil coated in a continuous paint line, double baked & roll formed from stove enameled corrosion resistant Aluminium Alloy AA 3005 for higher strength & roll forming characteristics. The panels shall be clipped on to a baked and enameled aluminium SL4 stringer 38 mm wide x 98mm deep made from 0.95 mm thick baked and enameled Aluminium alloy AA 5050 (AL. MG) in standard length of 5 m in white color with cutouts to hold the panels in a module of 74 mm c/c the 1st. stringers shall be fixed at 150 mm from both end and there after at a distance of 750 mm to 1000 mm depending on wind load. The stringer shall be fixed to suitable sub structure/wall with nut/bolt and washer, complete as per manufacturer's specification	Sqm	15			
27	9	Providing and applying texture paint including preparing surface, using roller to get approved texturised surface. Job to include making required surface preparation, to receive texture paint finishe etc. all complete as per detail drawing, as specified and as directed by architect or EIC.	Sqm	190			

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
28	8.4.2	Supply and fixing ceramic unglazed SHON or equivalent make mosaic tiles in size of 25x25x4 mm thick (+/-) 1% in white colour matt finish fixed over smooth cement plaster surface with white tile adhesive and joint filling with white cement and acid cleaning the surface including double scaffolding etc. complete in all respects as per the instruction of EIC, and as per manufacturer's specification	Sqm	10			
29	9	Painting with plastic emulsion paint of approved brand and manufacture of required with white to given an even shade : two or more coats on new work	Sqm	230			
30	15	Providing and fixing aluminium Curtain glazing system with single glass vision panel and spandrel panel of approved make having main frame of verticals and horizontals made out of specially designed extruded aluminium sections to withstand wind pressure of 175 kg/sq.m at a height of 40m and fabricated, fixed at all levels, elevation and heights to the Masonry / RC walls with necessary clamps, brackets and anchor fasteners. All clamps and brackets shall be Mild Steel Hot dip galvanized minimum 80 microns thick and shall conform to IS: 4759-1996. The extruded aluminium section shall be anodised in approved colour with a anodic coating of minimum 15-20 microns.Extruded section shall be of 6063 T5 or T6 alloy conforming to ASTM B 221. Any other fastening straps, nuts, bolts, rivets, washers, etc. shall be in stainless steel SS 304 grade. All tapes shall be of Norton make.					
		For Spandrel Panel with spandel insulation:(Without Glass)	Sq.m	260			
31	15	Providing Fire stops at all floor levels. Rate including EPDM gaskets, open cell polyethylene backer rods etc. The curtain glazing weather sealant shall be Dow Corning 789. All sealants shall be black in colour etc., complete all as directed.					
(a)		SOFFIT & CILL LEVEL FLASHINH (IN RMT.)	Rmt.	300			
(b)		SMOKE SEAL (IN RMT.)	Rmt.	300			
32	15	Providing and fixing in position 15 microns colour anodized Aluminum framed Single Glazed windows.Complete with all standard hardware like Ebco Friction Stay & Handle ,EPDM gasket, Sliding roller, weather strip & S.S. Screw etc. as per drawing & spec. (Without Glass)	Sq.m	110			
33		Providing and fixing 200 mm dia , 600 mm length puddle piece with IS:3589 (M.S. ERW) pipe during casting of concrete shall be a coat of synthetic oil bound Primer and remaining surface of pipe (inside & outside) shall be painted with two coats of Synthetic Enamel paint.	Nos	10			
34		Providing and fixing 150 mm dia (GI/Jindal/Medium), 600 mm length puddle piece with IS:1239 (Part 1) pipe during casting of concrete shall be a coat of synthetic oil bound Primer and remaining surface of pipe(inside & outside) shall be painted with two coats of Synthetic Enamel paint.	Nos	16			

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
35		Providing and fixing 100 mm dia , 600 mm length puddle piece with a plate and length of pipe IS 1239(Part1)(varies as per requirement) during casting of concrete and a shop coat of zinc primer.	No.	6			
36		Providing and fixing 100 mm dia, 300 mm length puddle piece with a plate and length of pipe IS 1239(Part1)(varies as per requirement) during casting of concrete and a shop coat of zinc primer.	No.	2			
37		Providing and fixing 50 mm dia, 400 mm length puddle piece with a plate and length of pipe IS 1239(Part1)(varies as per requirement) during casting of concrete and a shop coat of zinc prime	No.	12			
38		Providing and fixing 50 mm dia, 300 mm length puddle piece with a plate and length of pipe IS 1239(Part1)(varies as per requirement) during casting of concrete and a shop coat of zinc prime	No.	2			
39	12	Supplying & fixing bearing box & bearing for gate embeded in concrete.	Nos	4			
40	22	Supplying , fitting & fixing PVC pipes of 25 mm dia. to expation joint of Pave concrete.	Rm	150			
41	22	Supplying and fixing 10 MT load bearing capacity Polyelastomer grating with RCC frame, fixed on RCC Box drain per drawing and direction of Engineer-in-Charge					
		Cover Size approx 450mm X 450mm X 50mm thick, approx Frame size of 550mm X 550mm X 160mm	Each	100			
42		Providing and fixing 20 mm dia Tor steel U shaped 150mm wide Steps fixed in R.C.C. wall	Nos	88			
43		Injection type water proofing at raft & wall of basement on fixing M. S. threaded nozzles and grouting the same and on application of two coats of waterproofing paint and plaster as per manufacturer's specification as mentioned in technical specification.	Sqm	182			
PART B (d) : SUB-TOTAL							

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
NON-PRICED BILL OF QUANTITIES (Rate and Amount to be provided by the bidder) FOR INTERNAL WATER SUPPLY, SANITARY , DRAINAGE & BORE WELL							
PART B (e) : (Refer Clause 12 of ITB, Volume I, Section 2)							
INTERNAL WATER SUPPLY WORKS							
		Pump Sets - for Domestic water					
1	9.4	HYDRO-PNEUMATIC PUMPING SYSTEM - :- For Kitchen/Canteen & LAB uses :					
		It shall be of Hydro-pneumatic type 2-stage pumps in a single Skid with (3- working + 1-standby) for transfer of water from U/G Domestic Water Reservoir to directly to individual Toilets Kitchen etc, with an extra provision to connect with the terrace Domestic tank to store the water suitable to suit the drinkable water quality (as per IS-10500).					
		(Pumps should be with C.I. Impeller, integrally coupled with 3 – phase 2900 R.P.M., 415 Volts, A.C. Motor, capable to withstand a voltage variation of (+/) 10% and frequency variation of (+/-) 3%, including Pump Control Panel with "Auto" Start / Stop 3nos. "Indfoss" make Pressure switch with each sets of Pump .					
		Pump of Capacity – 3000.0 LPM @ 60.0 M head – with 45 KW Motor input under peak load condition, 3-phase integrally coupled Motor with 1 motor VFD drive out of 3 motors.	Each	1.0			
		(To be located inside the Basement)					
INTERNAL DRAINAGE WORKS							
	4	Sewerage & Waste Pipes -(for Horizontally along Basement Ceiling to outside building)					
2		Supplying, fitting and fixing "Centri" cast iron soil pipe conforming to IS:3989/1970 with bobbins, nails etc. including "Centri" Cast iron Pipe Fittings (i.e., Bends with door or without door, Equal or unequal Tees, junctions with door or without door, Expandres, equal or unequal "Y" double junctions, Collars, Cows, etc); also including making holes in the wall, floor etc. and cutting trenches etc. in any floor through masonry concrete, if necessary, and mending good damages with necessary jointing materials and painting two coats of the exposed surface with approved paint complete. (Measurement will be made along the center line of the total pipe line in fitted condition including specials, payment for specials & painting will however be paid seperately).					
		(b) With lead caulked joints.					
		(i) 200 mm dia (internal)	Metre	200.00			
SANITARY FIXTURES AND FITTINGS							

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
3	19.1 & 20.2	Supplying, fitting and fixing of approved Make Rigid PVC Schedule-40 Pipes (as per ASTM -D - 1785, Schdl. 40) with threaded & socket ends, of following sizes with all necessary Galvanised Malleable cast iron "Heavy" (IS-1879) pipe Fittings / or threaded uPVC pipe fittings such as bend, tee, elbow, reducer, plug, nipple long screw, fitting clamps etc. complete at all levels including below F.F.L. / G.L. as directed and specified.					
		(For Basin / Urinal / Sink - Concealed Waste Pipes)					
		32 mm dia	M	134.0			
		40 mm dia	M	260.0			
4	7.1	Providing and fixing C.P. Brass Bib cock of approved quality conforming to IS : 8931 (as WC Ablution Tap)					
		15 mm nominal bore	Each	80.0			
5	7.1	Providing and fixing C.P. Brass 2-way Bib cock of approved quality conforming to IS : 8931					
		15 mm nominal bore	Each	10.0			
6	7.3	Providing and fixing C.P. Brass "Health Faucet" with 8mm dia 1.0 meter long flexible tube & wall hook of approved quality conforming to IS : 8931					
		15 mm nominal bore	Each	10.0			
7	7.4	Providing and fixing C.P. brass Sink Cock - "Jaquar", 'Clarion', cat. no.- 23321 B, Sink Mixer with extended Spout (Table mounted model) with 450mm long Braided Hoses, for Kitchens of approved quality conforming to IS : 8931					
		15 mm nominal bore	Each	3.0			
		(In 6nos. Pantry with 2nos. Sinks only)					
8	23.1	Providing and fixing white vitreous china "Floor mounted" type Composite Water closet (European type W.C. pan) with seat and lid, conforming to IS : 2556; including with white Vitreous Chinaware matching Cistern complete with all accessories i.e., Grab Bar (in horizontal & vertical grabbing), also including with matching Wash Basin & its accessories etc, also with all fittings and fixtures complete including cutting and making good the wals and floors wherever required.					
		(for Handicapped person's Toilets)					
		(colour- Star White) - "S" Trap type					
		W.C. Pan with ISI marked white/Black solid plastic seat and lid.	Each	5.0			

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
9	21.5	Providing & fixing of "Lab" Sink of white vitreous china best quality approved make with CI Brackets on 75mm x 75mm wooden blocks, CP Waste fittings of 32mm dia, CP chain with rubber plug of 30mm dia, approved quality PVC Waste pipe with CP nut and 32mm dia, 900mm long approved quality PVC connection Pipe with heavy brass CP nut, including mending good all damages and painting the brackets with two coats of approved paint.	Each	2.0			
EXTERNAL WATER SUPPLY WORKS							
		<u>Pump Sets - for Domestic water</u>					
10	9.3	<u>HYDRO-PNEUMATIC PUMPING SYSTEM - for Toilets in (B +G+ 5 floors)</u>					
		It shall be of Hydro-pneumatic type 2-stage pumps in a single Skid with (3-working + 1-standby) for transfer of water from U/G Domestic Water Reservoir to directly to individual Toilets Kitchen etc, with an extra provision to connect with the terrace Domestic tank to store the water suitable to suit the drinkable water quality (as per IS-10500).					
		(Pumps should be with C.I. Impeller, integrally coupled with 3 – phase 2900 R.P.M., 415 Volts, A.C. Motor, capable to withstand a voltage variation of (+/-) 10% and frequency variation of (+/-) 3%, including Pump Control Panel with "Auto" Start / Stop 3nos. "Indfoss' make Pressure switch with each sets of Pump .					
		Pump of Capacity – 3000.0 LPM @ 60.0 M head – with 45 KW Motor input under peak load condition, 3-phase integrally coupled Motor with 1 motor VFD drive out of 3 motors.	Each	2.0			
		(To be located inside the Basement)					
		<u>Valve Pit for Water Pipes</u>					
11		Constructing Valve Pit (masonry Chamber) with 900x800x1000 mm, inside with 75 class designation brick work in cement mortar 1:5 (1 cement : 5 five sand) for C.I. Sluice / Bronze body Gate valve, with C.I. surface box 100mm top diameter, 160mm bottom diameter and 180mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 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, including one no. 600 X 600mm rectangular C.I. Pit Cover with double Seal Rim- ("Light" duty- of weight 75 Kg. at least, as per IS- 1726)					

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
		With F.P.S. bricks	each	3.0			
12	14	Providing & fixing CI body "HORIZONTL -LIFT" type Non-Return ("Check") valve (PN10), with, two-piece design, Flanged end type, with necessary 'CAF' gasket of 3mm thick atleast, including accessories ie., pair of matching Flanges, all complete.					
		200mm dia	each	2.0			
		(at the "Discharge" side of the Domestic water Hydro-pneumatic Pump)					
		80 mm dia	each	4.0			
13	10	Providing & fixing Gate valve, C.I. body, flanged end with necessary 'CAF' gasket of 3mm thick atleast, including nuts, bolts etc. accessories ie., pair of matching Flanges, all complete.			3300.00		
		150mm dia	each	2.0			
		80 mm dia	each	4.0			
14		<u>Water supply Pipe from Domestic water supply Pump upto the Wet Riser of the furthest Toilet point</u>					
		Supplying, fitting and fixing G.I. / MS-Black pipes of approved make for underground works with all necessary accessories, specials, viz. socket, bend, tee, union, cross, llbo, nipple, longscrow, reducing socket, reducing tee, etc. fitted with welding joints with the pipes including necessary welding works, including cutting pipes, making welding, cutting trenches upto 1.0 metre below surface in all sorts of soil and re-filling the same as directed with two coats of painting on pipes and specials with bituminoustic paint complete in all respect. (Payment will be made on the centre-line measurement of the total pipe line including all specials. No separate payment will be made for accessories, specials. Payment for painting will be made separately).					
		Pipes as per IS-3589, 6mm thick at-least					
		200 mm dia	Mtr.	30.0			
<u>EXTERNAL SEWERAGE WORKS</u>							
15	9.5	<u>BASEMENT DE-WATERING PUMP</u>					
		Supplying, installation, testing and commissioning of Basement "De-watering Pump" with matching Motor Control Panel of Mono-set fully submersible Vertical mounting type reservoir pumps for transfer of logged water from Basement to the adjacent outside building Yard Gully Chamber / Storm water Manhole.					

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
		Pump should be with CI 'Mixed Flow' / 'Radial Flow' type Impellers, integrally coupled with submersible type 3 – phase 2900 RPM 415volts, AC motor capable to withstand a voltage variation of (+/-) 10% and frequency variation of (+/-) 3%, but excluding pump control panel.					
		Pump of capacity – approximate - 200.0 LPM @ 8.0 M head with KW (HP) Motor input, 3 phase integrally coupled "Submersible" type Motor.					
		(To be located inside the BASEMENT)					
		[1-working + 1-Standby]	sets	4.0			
16	31	ETP cum STP- 100 cum/day					
		PRICES FOR SUPPLY, ERECTION, TESTING & COMMISSIONING OF SEWAGE TREATMENT PLNT (100.0 CUM / DAY) :	Unit	1.0			
17	24.1.1	Rain Harvesting Pump : Hydro-pneumatic type					
		It shall be of Hydro-pneumatic type 2-stage pumps in a single Skid with (2-working + 1-standby normally) for transfer of Harvested Rain water from U/G covered Rain Water Harvesting Tank to the Terrace Tanks of both to cater to the Landscaping uses, also to the Car washing water for the Car Parking Zone & Lab Floor washing. The Water from the U/G Tank shall be directly distributed directly from Hydro-pneumatic Pump.					
		(Pumps should be with C.I. Impeller, integrally coupled with 3 – phase 2900 R.P.M., 415 Volts, A.C. Motor, capable to withstand a voltage variation of (+/-) 10% and frequency variation of (+/-) 3%, including Pump Control Panel with "Auto" Start / Stop 3nos. "Indfoss" make Pressure switch with each sets of Pump .					
		Pump of Capacity – 900.0 LPM @ 35.0 M head with 1 pump working and 1800 LPM @ 35.0 M head with 2 pumps working maximum. 8 KW Motor for each pump with maximum 16 KW working load. Each motor of 3-phase integrally coupled Motor with 1 motor VFD drive out of 3 motors.	Each	2.0			
		(To be located inside the Basement)					
18		Provision of Pressure Filtration unit consisting of multigrade filtration unit of capacity 80 Cu.M per day for purification of Accumulated Rainwater before putting into use	Each	2.0			
BORE-WELL							
19		Packing annular space between the outside of the housing pipe and the bore with coarse gravel as per direction of the Engineer in charge with cost of all materials and labour complete (10 m to 36 m depth)	Cum	9.0			

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
20		Packing annular space between the outside of the housing pipe and the bore with puddle clay balls as per direction of the Engineer -in- charge with cost of all materials and labour complete (Top 10 m depth)	Cum	3.0			
21		PAINTING:					
		Finishing with Epoxy paint (two or more coats) at all locations prepared and applied as per manufacturer's specifications including appropriate priming coat, preparation of surface, etc. complete - on steel works.	Sqm	2			
		Non-Schedule Items (against Supply only) :-					
		Supply of Materials ('Ori Plast'or equivalent)					
22		Supplying of MS ERW pipe nipple (heavy quality) of approved make for above ground installation including connection with PVC threaded pipe at top of casing pipe assembly.					
		Wall thickness not less than 8 mm. -250 mm.dia.	Mtr	2			
23		Supplying of PVC Housing Pipes (Oriplast /Supreme or approved Make) conforming to IS : 12818 / 92 and threaded to match with M.S G.I.pipes.					
		250 mm.dia - Medium Casing (Wall thickness 12.5 mm),	Mtr	36			
24		Supplying of PVC Well Pipes (Oriplast / Supreme or approved Make) conforming to LS. : 12818 /92 and threaded to match with MS / GI pipes					
		150 mm.dia - Medium Casing (Wall thickness 10 mm).	Mtr	66			
25		Supplying of PVC Ribbed Strainer (Oriplast /Supreme Make or approved make) conforming to I.S. : 12818 /92 and threaded to match with M.S / G I.pipes.					
		150 mm.dia - Wall thickness under ribs 10 mm and Slot size to suit aquifer.	Mtr	30			
26		Supplying, fitting and fixing M.S.Top Cap (To be removed before lowering of pump set and accessories).					
		250 mm	Each	1			
27	9.0	Supplying, fitting, fixing and lowering inside the tubewell Submersible pump set having spring loaded non return valve capable of discharging 45,000 Ltrs per hour (min.) against a total pumping head of approx. 40 mtrs. directly coupled with submersible motor of suitable HP capable to give required discharge suitable for operation within 340 - 400 volts (\pm 8%), 3 phase, 50 cycles, AC supply, Including cost of stranded wire suspension from clamps at top of well to safety support below Submersible pump . The materials of pump - CI Casing ,Chromium Steel Pump Shaft, Bronze Impeller, KSB or other approved make Pump and Motor set of same duty conditions.	Set	1.0			

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
28	9.0	Supplying, fitting and fixing Electrical Control Panel Board Set suitable for outdoor installation of adequate size made out of 2mm thick CRCA MS. sheet and M.S. flat painted with suitable enamel paint fitted with required electrical accessories of L & T / SIEMENS / CROMPTON or equivalent approved make suitable for submersible pump - motor set, described above, including Automatic Star Delta Starter, Main Switch, Single Phase Preventor, ACB, Overload Protection Device, Water Level Controller with two probes, one for low level audible warning and one for very low level for tripping of the motor with all required electrical works, AMP Meter, Volt Meter With Selector Switch, Indicator Lamp, on & off push button, Danger Board etc. as required.	Set	1.0			

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
29		Supplying, fitting & fixing Water Level Guard including electrical wire 1 sq.mm x 250 Mtr.	Set	1.0			
30		Supplying, fitting & fixing PVC flat finolex water proof cable 1x3x2.5 sq.mm for submersible pump	Metre	60.0			
31		Supplying, fitting and fixing M.S.Column Pipe (heavy quality) including flanges with Nuts, Bolts and Washers at both ends. threading where required, coupling, painting etc. all complete (Length of the pipe coupled with pump motor set to be approx. 600 mm, topmost pipe to be approx.1500 mm long and rest of the pipes to be approx 3 metres tong each) 100 mm dia..	Meter	36.0			
32		Supplying, fitting and fixing CI Valves with double flanged ends including necessary Nuts and Bolts, Rubber insertion (Approved quality) etc complete					
		a) CI. Non Return Valve 100 mm dia	No.	1.0			
		b) CI. Sluice Valve -100 mm dia	No.	1.0			
		c) CI. Sluice Valve -80 mm dia	No.	1.0			
33		Supplying, fitting and fixing M.S. fittings fitted with suitable Flanges at both ends with necessary Nuts, Bolts and Washers (approved quality):					
		a) 100 mm dia M.S. 90° bend with arrangement for fixing Pressure guage	No.	1.0			
		b) 100 mm dia M.S. 90° plain bend.	No.	1.0			
		c) 100 mm dm M.S. 90° duck-foot bend.	No.	1.0			
		d) 100 mm x 80 mm die M.S reducing tee	No.	1.0			
		(xii) 80 mm x 300 mm G.I. Short Piece	No.	1.0			
34		Earth cutting, laying 40 mm dia PVC conduit Pipe for submersible Pump cable & water level guard wire	Metre	120.0			
PART B (e) : SUB-TOTAL							

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
PART B (f) : LIFT, TELEPHONE SYSTEM & CABLE WORK FOR COMPUTER SYSTEM (Refer Clause 12 of ITB, Volume I, Section 2)							
35.0	13	LIFT					
35.1		Supply, installation, testing and commissioning of lifts of maximum rated load 1150kg, speed 1.0mps, with machine room and conventional operation system for G+3 floors maximum of height not more than 25meters, hair line stainless steel finish, automatic fire retardent centre opening doors inclusive of all accessories, devices, signalling related to operation, fire safety, emergency evacuation, handicapped and braille COP and button, PVC floor finish, starlight ceiling, etc. complete in all respect with electrical and inclusive of lift inspectors clearance, taxes, duties etc.	each	0			
35.2		Supply, installation testing and commissioning of lifts (preferably as per EN81) of maximum rated load 1150kg, speed 2.00mps of triplex and quadruplex system, car priority operation travelling for G + 8 floors of travel height not more than 90meter and not less than 75meter, hair line stainless steel finish, centre opening automatic door of fire retardent capacity not less than 2hours with machine room, gear less system inclusive of all accessories, gadgets, emergency light car operating panel indicator door close and open button alarms, colour LCD display, emergency phone, handicapped COP, braille push buttons, star light ceiling finish inside the car, PVC floor finish, and all other devices complying to fire escape, emergency evacuation control etc. complete in all respect inclusive of taxes duties etc.	EACH	5			
36.0	26	TELEPHONE SYSTEM					
36.1		Supplying and fixing of Krone Module telephone DB with acrylic cover & stand suitable for 10 pair.	each	20			
36.2		Supplying and fixing of Krone Module telephone DB with acrylic cover & stand suitable for 20 pair.	each	20			
36.3		Supplying and laying of Unarmoured 10 pair telephone cable (0.5 dia.) with all necessary accessories on wall / floor / ceiling / beam / column / in Ply partition in existing conduits and mending good all the damages.	Mtr.	850			
36.4		Supplying and laying of Unarmoured 20 pair telephone cable (0.5 dia.) with all necessary accessories on wall / floor / ceiling / beam / column / in Ply partition in existing conduits and mending good all the damages.	Mtr.	700			

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
36.5		Supplying and fixing clip in Module type telephone socket complete with Modular front plates, 50mm. deep MS box (16SVVG) with adjustable lugs on wall/ column / in panel /partition / in race way including connection, painting etc. as required. Fixing of box to be made properly to avoid any movement.					
36.5.1		Telephone socket RJ-II for single line.	each	150			
36.5.2		Telephone Socket RJ-II for double line.	each	300			
37.0	18	CABLE WORK FOR COMPUTER SYSTEM					
37.1		Supplying & laying of UTP Cat- 6 cable for computer network system in pre-laid conduit.	Mtr.	12500			
37.2		Connection of UTP Cat - 6 cable by proper socketing in RJ 45 socket outlet and Server end .	Set	125			
37.3		Supplying and fixing D LINK /approved vendor make Lan Socket outlet (RJ 45 type with shuttered) (for computer network / LAN system) with front plate,50mm, deep MS box (16 - SWG) , with adjustable lugs on wall /on column /on beam /in panel /Ply partition including connection painting etc. as required. Fixing of box is to be made properly to avoid any movement.	each	125			
38.0		Supply, installation, testing & commissioning of modular type 240V, 50Hz, 25A stater with 20 A plug point including base plate and necessary connection in existing modular type MS box for 2TR, 1.5TR & 1TR split type AC machine.	each	125			
PART B (f) : SUB-TOTAL							

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
<u>NON-PRICED BILL OF QUANTITIES (Rate and Amount to be provided by the bidder)</u> <u>FOR FIRE PROTECTION SYSTEM</u>							
PART B (g) : (Refer Clause 12 of ITB, Volume I, Section 2)							
		<u>FIRE HYDRANT, & SPRINKLER, SYSTEM</u>					
1	3, 4, 5, 6, 7 & 8	<u>PIPES - ABOVE- GROUND LVL - for HYDRANT SYSTEM</u>					
		MS ERW PIPE - 'Heavy' grade Piping for Hydrant system: Supply , fabrication, welding, erection, testing & commissioning of M.S. Black- ERW pipe with bevelled end, "Heavy" Grade conforming to IS-1239 part 1 for 150mm dia and below sized pipes & IS-3589 for above 150mm dia pipes; (above ground level) , including the Riser cum Down-comer for the Bldg., with all MS-Black, "Heavy" class Pipe Fittings (Elbows, Tees, reducer etc) with plain/bevelled edge including providing MS supports, clamps, dash Fasteners etc.,necessary cutting of pipes and grinding / surface preparation works and welding works, and painting the pipes with 2 coats Fire red colour synthetic enamel paint over one coat of anti-corrosive red oxide primer application . [Make:- "Jindal" /"TATA"/"Nezone"] .					
		200mm NB : minimum of 6.3 mm thickness (as per IS-3589)	Meter	180.0			
		150mm NB : "Heavy" Grade -(as per IS-1239, P-I)	Meter	100.0			
		80mm NB : "Heavy" Grade -(as per IS-1239, P-I)	Meter	27.0			
		25mm NB : "Heavy" Grade -(as per IS-1239, P-I)	Meter	50.0			
		<u>SPRINKLER PIPES - ABOVE- GROUND LVL.</u>					
2		MS ERW PIPE - 'Heavy' grade Piping for Sprinkler system: Supply , fabrication, welding, erection, testing & commissioning of M.S. Black- ERW pipe with bevelled end, "Heavy" Grade conforming to IS-1239 part 1; (above ground level) , including with all MS-Black, "Heavy" Pipe Fittings (Elbows, Tees, reducer etc) with plain/bevelled edge, including providing MS supports, clamps, dash Fasteners etc.,necessary cutting of pipes and grinding / surface preparation works and welding works, and painting the pipes with 2 coars of Fire Red colour synthetic enamel paint over one coat of anti-corrosive red oxide primer application .					
		200mm NB : minimum of 6.3mm thickness (as per IS-3589)	Meter	125.0			
		150 mm NB	Meter	500.0			
		100 mm NB	Meter	2000.0			
		80 mm NB	Meter	256.0			
		50 mm NB	Meter	448.0			
		40 mm NB	Meter	100.0			

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
		32 mm NB	Meter	368.0			
		25 mm NB	Meter	18.0			
	3, 4, 5, 6, 7 & 8	PIPES - UNDERGROUND FOR HYDRANT SYSTEM					
3		MS ERW PIPE U/G : 'Heavy' grade Piping for Hydrant system: Supply , fabrication, welding, laying, testing & commissioning of M.S. Black- ERW pipe with bevelled end, "Heavy" Grade conforming to IS-1239 part1, (under ground), with all MS-Black, "Heavy" class Pipe Fittings (viz., Elbows, Tees, Flanges, Reducers) with 'plain/Bevelled' ends, including laying at around 1.0 M below ground level and testing and commissioning, excavation and back filling and also including of at least 4mm thick (supply and fixing) corrosion protection wrapping coating by the tape made up of HMHDPE film with fibre glass Mat reinforced coal tar mix all compositely bonded, as per IS-10221, with (total 4mm thk) of "PYPKOTE" make, and wrapping with all around the under ground pipe, including supply of necessary primer before wrapping application from u/g Main. [Make:- "Jindal" /"TATA"/ "Nezone"].					
		200mm NB : minimum of 6.3mm thickness (as per IS-3589)	Meter	250.00			
		150 mm NB (IS-1239, P-I)	Meter	25.0			
		80 mm NB (IS-1239, P-I)	Meter	25.0			
	3, 4, 5, 6, 7 & 8	PIPES - UNDERGROUND FOR SPRINKLER SYSTEM					
4		MS ERW PIPE U/G : 'Heavy' grade Piping for Sprinkler system: Supply , fabrication, welding, laying, testing & commissioning of M.S. Black- ERW pipe with bevelled end, "Heavy" Grade conforming to IS-1239 part1, (under ground), with all MS-Black, "Heavy" class Pipe Fittings (viz., Elbows, Tees, Flanges, Reducers) with 'plain/Bevelled' ends, including laying at around 1.0 M below ground level and testing and commissioning, excavation and back filling and also including of at least 4mm thick (supply and fixing) corrosion protection wrapping coating by the tape made up of HMHDPE film with fibre glass Mat reinforced coal tar mix all compositely bonded, as per IS-10221, with (total 4mm thk) of "PYPKOTE" make, and wrapping all around the under ground pipe, including supply of necessary primer before wrapping application from u/g Main.[Make:-"Jindal"/"TATA"/"Nezone"].					
		150 mm NB	Meter	38.0			
5		Gun metal short Branch Pipe (for Hydrant system). Supply , fitting and fixing of Gun metal short branch pipe, with 32mm Nozzle of 63mm dia (ISI marked)- [Make:- "FIRE-SHIELD"/ "Surex" / "Minimax"]	Nos.	107.0			

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
6		"Swing" type Hose Reel Drum (for Hydrant system). Supply, fitting & fixing of "Swing" type Hose Reel Drum fabricated from 14 SWG CRCA sheets, painted with Red colour Synthetic enamel paint of two coats over one coat of Primer with 30 mtrs. long Rubber Hose of 20mm dia with 10 Kg / cm ² , working pressure with GM Self-closing "Shut-off" Nozzle of 5mm outlet fixed on wall with Dash fasteners. [Make:- "FIRE-SHIELD"/ "Surex" / "Minimax"]	Nos.	20.0			
	9	<u>MS "SLIP-ON FLANGES :- (Hydrant & Sprinkler system)</u>					
7		M.S. "Slip-on" flanges of 150mmNB. Supply, fitting & fixing of M.S. slip-on flanges required for Valves / or pipe fittings fixing with Hydrant main / Stand post with "Uni-Klinger" make CAF Gaskets.	Nos.	21.0			
8		M.S. "Slip-on" flanges of 100mmNB. Supply, fitting & fixing of M.S. slip-on flanges required for Valves / or pipe fittings fixing with Hydrant main / Stand post with "Uni-Klinger" make CAF Gaskets.	Nos.	20.0			
9		M.S. "Slip-on" flanges of 80mmNB. Supply, fitting & fixing of M.S. slip-on flanges required for Valves / or pipe fittings fixing with Hydrant main / Stand post with "Uni-Klinger" make CAF Gaskets.	Nos.	200.0			
	9	<u>MS BLIND FLANGES :-</u>					
10		M.S. "Blind" Flanges of 150mmNB. Supply, fitting & fixing of M.S. slip-on blind flanges required for Valves / or pipe fittings fixing with Hydrant main / Stand post, also with "Uni-Klinger" make CAF Gaskets.	Nos.	4.0			
	15.0(9)	<u>HUME PIPE BELOW ROAD LVL. - AS SLEEVE :-</u>					
11		RCC pipe NP3 class 300mm NB. Providing, laying & Commissioning of NP-3 class R.C.C. pipe with R.C.C. Collars; jointed with stiff mixture of cement mortar including testing of joints etc. all complete for R.C.C. pipe laying.[Make :- "EASTERN SPUNCRETE"/ "HINDUSTAN" / "W.B. Concrete Industries (P) Ltd."] of 300mm dia(For Hydrant system) including necessary excavation & back-filling.	Meter	120.0			
	10, 11, 15(6)	<u>Sluice Valve</u>					
12		Non-Rising Spindle type Sluice Valve 200mmNB, (PN-1.6) class (for Hydrant system) . Supply, installation, testing commissioning of cast iron body, Flanged, with M.S. "Slip-on" type matching Flanges, along with "Uni-Klinger" make CAF Gaskets with atleast 3mm thick, also with appropriate M.S. Bolts, nuts, plain round Washers etc, all complete. [Make:- Sant / Zoloto /Leader / Kirloskar].	Nos.	6.0			

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
13		Non-Rising Spindle type Sluice Valve 150mmNB, (PN-1.6) class (for Hydrant system) . Supply, installation, testing commissioning of cast iron body, Flanged, with M.S. "Slip-on" type matching Flanges, along with "Uni-Klinger" make CAF Gaskets with atleast 3mm thick, also with appropriate M.S. Bolts, nuts, plain round Washers etc, all complete. [Make:- Sant / Zoloto /Leader / Kirloskar].	Nos.	12.0			
(iii)		Non-Rising Spindle type Sluice Valve 80mmNB, (PN-1.6) class (for Hydrant system) . Supply, installation, testing commissioning of cast iron body, Flanged, with M.S. "Slip-on" type matching Flanges, along with "Uni-Klinger" make CAF Gaskets with atleast 3mm thick, also with appropriate M.S. Bolts, nuts, plain round Washers etc, all complete. [Make:- Sant / Zoloto /Leader / Kirloskar].	Nos.	3.0			
	15(16)	HOSE BOX					
14		M.S. Hose Box above Floor mounted type (for Hydrant system). Supply, installation of "Break Glass Open" type M.S. Hose Box 16 SWG CRCA Sheet of size 750 mm x 600mm x 250mm size with double doors, front glass doors, suitable to accommodate 2 nos x 15 mts CP Hose Reels, including 4nos. - 40x40x6mm thick 1200mm long MS Angle Stands and 300mm PCC (1:3:6) Pedestal Cubes; all complete as shown in the drg, suitable for above G.L. mounted. [Make:- "FIRE-SHIELD"/ "Surex" / "Minimax"- all ISI approved].(For Hydrant system)	Nos.	20.0			
15	15(10)	63mm Hydrant valves. Supply, installation, testing & commissioning of 63 mm NB Hydrant valves (PN 1.6)- flanged G.M. body, Oblique type, with GM instanteneous Female Couplings with rubber cap & chain, including matching M.S. Flanges, also with "Uni-Klinger" make CAF Gaskets along with MS Bolts / nuts & washers, all complete. [Make:- "FIRE-SHIELD"/ "Surex" / "Minimax"] :- 'ISI' marked, Single Headed . (For Hydrant system)	Nos.	20.0			
16	15(11)	Hose Reels (1 x 15 mts.-) (for Hydrant system). Supply , fitting & fixing of fire fighting (CP) Hose Reels of 1 x 15 mtrs Hose each with gun-metal male & female 63 mm dia coupling binding (ISI marked). [Make:- "FIRE-SHIELD"/ "Surex" / "Minimax"]. (For Hydrant system)	Nos.	20.0			
17	15(16)	Brass body Fire Engine Coupling (for Hydrant system). Supply, installation, testing and commissioning of GM/Brass body Quick- Couplings for fixing of Hose connection with one no. " FIRE ENGINE INLET " written MS Box- Glass fronted type as per the approved Specifications & drawing. [Make:- "FIRE-SHIELD"/ "Surex" / "Minimax"] (For Hydrant system)	Nos.	5.0			
	15(4)	Butter-fly valve					

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
18		Cast Iron body Butterfly valve of 150mm dia (for Hydrant system). Providing, fixing & Commissioning C.I. Butterfly valve (Wafer type) with matching Flanges & MS Bolts / nuts & Washers, "Uni-Klinger" make CAF Gaskets, along with MS Bolts / nuts & Washers, etc. [Make:- Intervalve"/ "Crawlie & Ray"/ "Leader"/"Sant"/"Zoloto"] .	Nos.	8.0			
19		Cast Iron body Butterfly valve of 80mm dia (for Hydrant system). Providing, fixing & Commissioning C.I. Butterfly valve (Wafer type) with matching Flanges & MS Bolts / nuts & Washers, "Uni-Klinger" make CAF Gaskets, along with MS Bolts / nuts & Washers, etc. [Make:- Intervalve"/ "Crawlie & Ray"/ "Leader"/"Sant"/"Zoloto"] .	Nos.	1.0			
	15(7)	<u>Non-Return valve :- "Swing" - Wafer type Horizontally fixed</u>					
20		CI Non Return Valve of 150mm dia , (for Hydrant system). Providing & fixing C.S. "Swing" Flap "Horizontal" / Wafer type Non-Return (Check) valve, with Neoprene / Nitrile seat, complete including matching flanges, Bolts, Nuts, & washers, including necessary "Uni-Klinger" make CAF Gaskets - [Make:- "Sant" / "Leader" / "Amco"] .	Nos.	8.0			
21		CI Non Return Valve of 80mm dia , (for Hydrant system). Providing & fixing C.S. "Swing" Flap "Horizontal" / Wafer type Non-Return (Check) valve, with Neoprene / Nitrile seat, complete including matching flanges, Bolts, Nuts, & washers, including necessary "Uni-Klinger" make CAF Gaskets - [Make:- "Sant" / "Leader" / "Amco"] .	No.	1.0			
	13 /14	<u>PUMP STARTER PANEL</u>					
22		Main LT Fire Pump Starter Panel :- (for Hydrant & Sprinkler). Supply, fitting & fixing of wall / floor mounting type M.C.C. Panel as per Technical specifications and as per direction of Engineer in-charge.M.C.C. should be dust & vermin proof with IP -54 protection. The Panel should be made of 14SWG (2mm thick) thick M.S. plate over an Angle Iron Frame work having suitable Cable alley. All the doors of the panel should be of concealed hinged type. It should have one Incoming Feeder Chamber, aluminium Busbar Chamber and three Outgoing Feeder Chambers. The Panel should consist the following major components :-FIRE PUMP M.C.C.QTY. SHOULD BE AS PER THE DETAIL TENDER DRG. RECOMMENDED MAKES OF MATERIALS. Description :-	No.	1.0			
		FIRE PANELS supply, Installation, testing and commissioning of cubicle type panels as specified and shown on drawing GE 1792/ i) All cable termination and connections.ii) Earthing all components, frame etc. to a common internal earth bar.iii) All accessories & supporting structure.iv) Brass glands and crimping lugs for sending and receiving ends.v) MS base frame for MAIN LT FIRE PANEL.					

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
		<p>Panel should have suitable Relays for AUDIO VISUAL ANNUNCIATION through a separate Annunciator Panel for the audio visual annunciation for each Type of pump.</p> <p>1) Pump Running 2) Pump Fails to start 3) Motor / Engine trip 4) Motor / Engine Temp. high</p> <p>The Fails to start/ trip annunciation will be inter faced with the BMS panel by Control Module, for which required Relay/ contractor should be provided.</p>					
23		<p>Diesel Pump Panel :- (for Hydrant & Sprinkler system). Supply, fitting & fixing of wall / floor mounting type M.C.C. Panel as per Technical specifications and as per direction of Engineer in-charge.M.C.C. should be dust & vermin proof. The Panel should be made of 14SWG (2mm thick) thick M.S. plate over an Angle Iron Frame work having suitable Cable alley. All the doors of the panel should be of concealed hinged type. It should have one Incoming Feeder Chamber, aluminium Busbar Chamber and four Outgoing Feeder Chambers. The Panel should consist the following major components :-FIRE PUMP M.C.C.QTY. SHOULD BE AS PER THE DETAIL TENDER DRG. RECOMMENDED MAKES OF MATERIALS.</p>	No.	1.0			
		<p>Supply, Installation, testing and commissioning of cubicle type panels as specified and as to be shown on "Working" -Shop drawing. i) All cable termination and connections.ii) Earthing all components, frame etc. to a common internal earth bar.iii) All accessories & supporting structure.iv) Brass glands and crimping lugs for sending and receiving ends.v) MS base frame for DIESEL PUMP PANEL.</p>					
		<p>Panel should have suitable Relays for AUDIO VISUAL ANNUNCIATION through a separate Annunciator Panel for the audio visual annunciation for each Type of pump.</p> <p>1) Pump Running 2) Pump Fails to start 3) Motor / Engine trip 4) Motor / Engine Temp. high</p> <p>The Fails to start/ trip annunciation will be inter faced with the BMS panel by Control Module, for which required Relay/ contractor should be provided.</p>					

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
		<u>Cable</u>					
24		Supply, Laying, testing & Commissioning of Heavy duty 1100 V grade LT XLPE insulated, sheathed & armoured cables Indoor & Outdoor with Copper Conductors as specified and required. MV CABLE [Make:- "Mescab" /"Havells" / "Nicco" / "Gloster" / "Polycab"]					
(i)		4C x 2.5 sq. mm. LT Cu. XLPE	Meter	20.0			
(ii)		3.5C x 35 sq. mm. LT Cu. XLPE	Meter	32.0			
		<u>Cable Gland</u>					
25		Terminations 3.5C X 2.5 sqmm Al. XLPE CABLE. Making Cable end terminations including supply of brass double compression glands and crimping type copper lugs for cable sizes mentioned below of aluminum or copper3.5C X 2.5 sqmm Al. XLPE CABLE	Nos.	8.0			
26		Pressure Gauge (for Hydrant). Supply, fitting & fixing of Pressure Gauge of 6" dia O - 10 Kg. / cm ² with all valve & cock. [Make:- "H. Guru" / "Fiebig"]	Nos.	6.0			
27		25mm NB Bronze / Gun metal body Gate Valve (for Hydrant system). Supply, fitting & fixing of 25mm nominal dia Gate Valve for Swinging Hose Reel Drum to Dry-Riser connection point - of "Sant" / "Zoloto" / "Leader" make.	Nos.	82.0			
	17 & 18	<u>Fire Pumps :-</u>					
28		Electric motor driven Hydrant service Main Pump. Supply, installation, testing and commissioning of Electric Motor driven Main Fire Pump of capacity 2850 LPM of 93M head, complete with M.S. Base plate, Base Channel, Coupling, Coupling guard, cushy-foot mounting, foundation Bolts etc. including of 75 KW- appx. rated, 3-phase Motor 415 volts (with + / - 10% variation), 3- phase, 2900 RPM, TEFC Motor mounted on common base frame, ; complete with all accessories. [Pump Make - "KSB", Model- MEGA 80 / 250, / "Mather & Platt" / "Kirloskar".] [Motor Make - "KIRLOSKAR" / "CROMPTON-GREAVES" /"ABB"]. (Rate includeThird Party Inspection charge also).	Set	1.0			

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
29		Jockey Pump -(for Hydrant system). Supply, installation, testing and commissioning of Electric Motor driven Jockey Pump of capacity 180 LPM of 93 M Head complete with M.S. Base plate, Base Channel, Coupling, and Coupling guard, cushy-foot mounting, foundation Bolts etc. and also including of 11.0 KW- (appx.) rated 3-phase Motor of 415 volts (with + 10 % variation), 3- phase - 2900 RPM, TEFC Motor mounted on common Base-frame, complete with all accessories. [All as per Detailed Technical Specifications of Tender]. [Pump Make - "KSB": Model-MEGA 32-250 / "KIRLOSKAR", Model- DB 32-26, / "Mather & Platt"]. Motor make-'KIRLOSKAR' / 'CROMPTON GREAVES' / ABB. (Rate includeThird Party Inspection charge also).	Set	1.0			
30		Diesel Engine driven Fire Pump (for Hydrant system). Supply, installation, testing and commissioning of Diesel Engine driven stand-by Fire Pump of capacity 2850 LPM of 93 M head, including supply, installation, testing and commissioning of at least 125 BHP Diesel Engine, with coupling and coupling guard, M.S. Base plate/Base frame, cushy-foot mounting, foundation Bolts, including 700 Ltrs. - Fuel Tank, 12 V - 21 plate of 2nos. Battery (1-working + 1-standby) and with 2nos. (1-working + 1-standby) Battery Chargers including with necessary CU Conductor of suitable rating, and suitable Change-over Switch - (Battery & Chargers shall be placed suitably in the Pump room near the Pump taking in view of the Maintenance aspect) and 1no. MS Diesel Tank (700 Ltrs. capacity). [All as per Detailed Technical Specifications of Tender].	Set	1.0			
		[Pump Make - "KSB", Model- MEGA 80 / 250, / "KIRLOSKAR", "Split-Casing" Model- DSM 100-36, -- or-- Model-DB 100 / 26, "Mather & Platt"]. 'KOEL' / 'CUMMINS' / 'GREAVES' - ENGINE. (Rate includeThird Party Inspection charge also).					
31		Electric motor driven Sprinkler Pump. Supply, installation, testing and commissioning of Electric Motor driven Main Fire Pump of capacity 2850 LPM of 93M head, complete with M.S. Base plate, Base Channel, Coupling, Coupling guard, cushy-foot mounting, foundation Bolts etc. including of 75 KW- appx. rated, 3-phase Motor 415 volts (with + / - 10 % variation), 3-phase, 2900 RPM, TEFC Motor mounted on common base frame, complete with all accessories. [Pump Make -"KSB", Model- MEGA 80-250, / "Mather & Platt" / "Kirloskar"]. [Motor Make - "KIRLOSKAR" / "CROMPTON-GREAVES" /"ABB"]. (Rate includeThird Party Inspection charge also).	Set	1.0			

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
32		Diesel Engine driven Fire Pump (for Sprinkler system). Supply, installation, testing and commissioning of Diesel Engine driven stand-by Fire Pump of capacity 2850 LPM of 93 M head, including supply, installation, testing and commissioning of at least 125 BHP Diesel Engine, with coupling and coupling guard, M.S. Base plate/Base frame, cushy-foot mounting, foundation Bolts, including 700 Ltrs. - Fuel Tank, 12 V - 21 plate of 2nos. Battery (1-working + 1-standby) and with 2nos. (1-working + 1-standby) Battery Chargers including with necessary CU Conductor of suitable rating, and suitable Change-over Switch - (Battery & Chargers shall be placed suitably in the Pump room near the Pump taking in view of the Maintenance aspect) and 1no. MS Diesel Tank (700 Ltrs. capacity). [All as per Detailed Technical Specifications of Tender].	Set	0.0			
		[Pump Make - "KSB", Model- MEGA 80 / 250, / "KIRLOSKAR", "Split-Casing" Model- DSM 100-36, -- or-- Model-DB 100 / 26, "Mather & Platt"]. 'KOEL' / 'CUMMINS' / 'GREAVES' - ENGINE. (Rate includeThird Party Inspection charge also).					
33		Pipe support with MS Angles/Channels (for Hydrant, Sprinkler & Alarm system). M.S. Pipe support (ISA 75, ISA 50, ISA 45, ISA 35- all at least 6mm thick) and ISMC 150, & ISMC100, as required, with G.I. "U" Clamps, Nuts, and Bolts, 8mm dia Dash-fasteners etc., including providing Insert plates as required on R.C.C. Columns / Beams / Floors, also welding the Supports to Ladder / Pole / Bridge including concrete grouting inside Bricks / Block walls or Bldg. outside walls or on Terrace, etc, complete in all respects inclusive all consumables, Tools & Tackles etc; and including painting with 2-coats of Red Oxide Primer & 2 coats of Synthetic enamel paint with (Black / Oxford Blue).	Kg.	700.0			
34		MS reducing half couplings - Supply, installation, testing & commissioning of threaded (female) M.S. Reducing half - couplings 'heavy' type (to be welded with 25 NB) nozzle pipe (for sprinkler jet connection) with teflon tape, with necessary welding works of 25 x 15 mm NB (For Srinkler system).	Nos.	3951.0			
	16	<u>SPRINKLER SYSTEM</u>					
35		Supply, installation, testing & commissioning of Flow switch - SPDT type with IP-65 protection (Make :- "SIEMENS", Model- QVE 1900)	Nos.	78.0			
36		Pressure switch (for Hydrant system). Supply, fitting & fixing of Pressure Switch of 1 - 10 Kgs. Rated ; with cable & cocks connected with the M.C.C. Panel as per Technical specifications and as per direction of Engineer in-charge. [Make:- "Indfoss" / "Danfoss"]	Nos.	8.0			

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
37		Sprinklers - Supply, installation, testing & commissioning of open type spray nozzles (sprinkler jets) - pendent type - with 1/2" inch inlet connection (male threaded) with deflector and quartzoid bulb of (MAKE :- "Tyco" / "Viking"/ "Central" - Model :ELO-16 / "Crawlie & Ray" / "Omex"), Conventional "Pendent" - "UL" Listed Sprinklers. (For Sprinkler system)	Nos.	3951.00			
		("Pendent" only - in all Floors below False Ceiling / True ceiling)					
		("Up-Right" only - in respective Floors, above False Ceiling only).					
38		Providing and fixing Bronze / Gun-metal Gate valve, with Non-rising Spindle, (1.0 Mpa); (PN-1.0), class-1, of approved quality (screwed end)					
		(Make :- Zoloto, code- 1035 / "Sant" / "Leader")					
(i)		25mm dia	Nos.	78.0			
39		Providing and fixing, testing & commssioning of Air Cushion Tank (Material IS-2062 / 2002) with SS Air Release Valve of approved quality with SS Isolation valve, GM Drain valve, Gate Valve, Provision for Pressure switches, Pressure gauge etc, inside the Pump house, including making inlet & outlet connection with GI Pipe of required length from Discharge Header to Air-cushion Tank fixing properly and securing the same to the Base etc, complete in all respect having Painting including two coats of approved paint over a coat of Primer. The Tank shall be Fabricated out of 8mm thick MS Sheet, shall be of cylindrical shape with 300 mm dia and 1.5 M height. The Tank shall be installed on suitable Vertical Legs having MS Plate of Size 75mm x 75mm x 5mm at the bottom. The Leg shall be grouted in Cement concrete Foundation. Flange connections shall be provided for Connection with Discharge Header. The Tank shall be Tested at 25 Kg/sq. cm. before Installation.	Nos.	14.0			
40		Providing and fixing, 150mm Dial type Pressure Gauge of of O-to-16 Kg/sq.cm. range with Gun Metal Shut-off Cock etc, duly clibrated before Installation in MKS & FPS Units, and fixing the same where required as directed including all Fittings, Short-piece, Nipples, Elbows, Testing the Joint etc, all complete. (Quantity of this Items will be Payable only where it has not been included in the relevant composite Items).	Nos.	6.0			
41		Providing and fixing, Water Level Monitor (Water gauge) for installing on the side wall of Water Reservoir consisting of clibrated bore transparent Tube, Floating Indicator, Drain-out Valve etc, complete operational (for Monitoring Water Level Difference upto 4 metres.	Nos.	4.0			

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
42		Providing and fixing, Water Level Control Switch assembly consisting of Adjustable "Low" Level & "High" Level Actuation for "Auto" "ON" / "OFF" the respective Motor for Installing on Top/Side of the Reservoir through Sleeve of 150mm dia on Topp / side of Underground Reservoir Including Flange, PVC Guide Tube, Two nos. Floats with SS Wire and Electric Contactor including Cost of Control Wiring from the respective Motor Panel to the Controlling switch etc, complete and operational.	Nos.	2.0			
43		Providing and fixing, Testing & Commissioning of SS Spring loaded Air-Relief Valve for pressure of 12 Kg/sq. cm. of approved quality with SS Isolation Valve, Tapers, GI Pipes and Specials etc including making necessary screwed / Flanged joints by providing all jointing materials including painting & Testing the joints to Hydraulic pressure specified for Pipes all complete as directed by the Engineer-in-charge.					
		25mm dia	Nos.	14.0			
44		Providing and fixing, of CI Strainer with SS perforated Screen sheet Basket including Rubber Gaskets, Flanges, nuts bolts and washers; complete as required and suitable for system Pressure.					
		200mm dia	Nos.	2.0			
45		Constructing Brick masonry Chamber for Housing valve in brick work with bricks of class 75 in cement mortar 1:4 (1 cement : 4 coarse sand), 12mm thick plaster on inside with a floating coat of neat cement and plaster on External faces with cement mortar 1:3 (1 cement : 3 coarse sand), including providing RCC Top Slab, complete in all respect. Cost shall be inclusive of excavation in earth, soring, De-watering, support to Valve and Foot Steps as required, to complete the Work.					
		Pit Size 1200mm x 900mm x 1400mm deep including providing and fixing CI Medium duty Manhole Cover with Frame of 560mm dia of Weight of Cover not less than 58 Kg & Frame not less than 58 Kg.	Nos.	2.0			
46		CI body Deluge Valve with Water Meter Gong, complete including matching flanges, Bolts, Nuts, & washers, including necessary "Uni-Klinger" make CAF Gaskets - [Make:- "Fire-Shield" / "Minimax" / "HD Fire"/ or equivalent].	Nos.	2.0			
47		Providing & Fixing Fire Inspector's Test Assembly complete with Test Valve, Sight glass, Sectional Drain Valve, Union with corrosion resistant Orifice, all complete.					

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
48		Cost shall be inclusive for Approval of Fire Hydrant & Sprinkler system from Local Fire Authority and any other relevant Statutory Authority at initial and various other stages of Works, including preparation of Report / Drawings as per requirements of the Fire Authority. Contractor shall include cost of all liaison works, which are not explicitly mentioned above; but are Mandatory to have Final N.O.C. from West Bengal Fire & Emergency Services and Approval of any Statutory Authorities	Job	1.0			
	19	<u>FIRE EXTINGUISHERS :-</u>					
49		Supply, installation, testing & commissioning of DCP type fire extinguishers of 5 Kg weight with MS fixing clamps (wall Hook) arrangement. [Make:- "FIRE-SHIELD"/ "Protector" / "Surex" / "Minimax" - all ISI marked make]	Nos.	125.0			
50		Supply, installation, testing & commissioning of CO₂ type Extinguisher of 4.5 Kg weight with MS fixing clamps (wall Hook) arrangement. [Make:- "FIRE-SHIELD"/ "Protector"/ "Surex" / "Minimax" - all ISI marked make]	Nos.	75.0			
51		Supply, installation, testing & commissioning of Water - CO₂ type Extinguisher - Cap - 9 litres each , with MS fixing clamps (wall Hook) arrangement. [Make:- "FIRE-SHIELD"/ "Protector"/ "Surex" / "Minimax" - all ISI marked make]	Nos.	22.0			
52		ABC Powder (stored Pressure type)- 500 gram capacity (0.5 Kg) - Extinguisher, 'Manual' type, 'wall hanging', with a test pressure of 30 Kg/cm ² , each with MS fixing clamps (wall Hook) arrangement.. [Make:- "FIRE-SHIELD"/ "Protector"/ "Surex" / "Minimax" -all ISI marked make]	Nos.	19.0			
53		Mechanical Foam type Fire Extinguisher, "ISI" marked (IS:13386) in HP Mild steel Cylinders fitted with Pressure Indicating Gauge, Internal Tube, squeeze Lever type Valve; complete in all respects, including wall suspension Bracket/ Trolly Mounted - 50 Litres capacity. [Make:- "FIRE-SHIELD"/ "Protector"/ "Surex" / "Minimax" -all ISI marked make]	Nos.	2.0			
54		Supply, installing at approved location of approved make Fire Buckets each of standard 9 Litres Capacity and of round-bottomed shape, painted white inside and Red outside and Black on the bottom, inscribed with letters "FIRE" in Black & Bold. Cost shall be inclusive of providing MS Stand duly painted over a coat of Primer along with six nos. Buckets Hooked in series with the Stand. (Distinctly identified as "WATER" & "SAND"). [Make:- "FIRE-SHIELD"/ "Protector"/ "Surex" / "Minimax" - all ISI marked make]	Nos.	6.0			
	20, 21, 22, 23	FIRE DETECTION, ALARM & P.A. SYSTEM					

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
		SUPPLY, INSTALLATION, TESTING & COMMISSIONING					
55		Supply, installation, testing & commissioning of 10 Loop with Dual Processors, each compatible Fire Alarm Control Panels (FACP) (out of that 1 Panel is the Master Panel, rest 2 Panels are Slave Panels including with 1 no. Re-peater Panel with LCD display, Zone Test facility, also with Battery back-up and Charger facility, & compatible with Zone-wise Hooter facility Power supply and including with Repeater Panel .	Nos.	3.0			
56		Supply, installation, testing & commissioning of Local power supply with Battery & Battery Charger.	No.	2.0			
57		Supply, installation, testing & commissioning of short - circuit - Isolators.	Nos.	26.0			
58		Supply, installation, testing & commissioning of Control Modules (CMX) for controlling Hooters/ speakers, Strobe (Flasher) Lamps, Manual Call Points (MCP), etc.	Nos.	50.0			
59		Supply, installation , testing & commissioning of Photoelectric / Ionisation type Smoke Detectors , approved make/Brand, with Operating Temperature of (-) 10°C to (+) 70°C and operating voltage of 18 to 28 v D.C. :-	Nos.	125.0			
60		Supply, installation, testing & commissioning of 'Rise' type Heat Detectors , approved make, with Operating Temperature of (-) 10°C to (+) 70°C and OPERATING VOLTAGE OF 18 TO 28 V D.C.	Nos.	50.0			
61		Supply, installation, testing & commissioning of manual push button station break glass type - Manual call points (MCP) with MS / ABS body, with chain & hammer, and also with Blinking facility, completely compatible with the main Fire Alarm Panel.	Nos.	125.0			
62		Supply, installation, testing & commissioning of manual push button station break glass type - Weather-proof Manual call points (WMCP) with MS / ABS body, with chain & hammer, and also with Blinking facility, completely compatible with the main Fire Alarm Panel	Nos.	19.0			
63		Supply, installation, testing & commissioning of Exit Point Directional Sounder with minimum 4 distinct sound pattern to indicate Corridor, Exit Door, move upward, move downward etc. to Direct occupants for fast & safe evacuation, conforming to BS-5839, standard duly approved by EN-54/LPCB standards & duly approved by	Nos.	66.0			
64		Supply , installation, testing & commissioning of Monitor Modules for Manual call points - (MMX)	Nos.	21.0			
65		Supply , installation, testing & commissioning of M.S. Junction Boxes.	Nos.	31.0			

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
66		Supply, installation of NP-3 class R.C.C. pipe at about 750mm below G.L. - Top of pipe, including collars and collar jointing 300 mm dia	M	90.0			
67		Excavation of 750 mm deep trench for laying of R.C.C. Pipes / Cables externally to the factory etc, and back filling watering, compacting of loose soil etc.	Cum.	38.0			
		Supply, installation, testing & commissioning of					
68		2 core x 2.5 sq.mm copper conductor PVC insulated sheathed armoured cable - ISI marked	M	900.0			
69		2 Core x 1.5 sq.mm twisted copper conductor PVC insulated sheathed cable- ISI marked.	M	5244.0			
70		2 core x 1.5 sq.mm copper conductor PVC insulated, sheathed armoured cable - ISI marked.	M	1400.0			
71		2 Core x 1.5 sq.mm FRLS copper cable - ISI marked.	M	745.0			
		(For controlling the Signal from the Fire Alarm Panel to the respective Fire Damper Panels at respective floors).					
72		Supply, installation, testing and commissioning of 25NB G.I conduit pipe for cables with necessary fittings.	M	5244.0			
73		Supply, fixing of 'EXIT' sign board	Nos.	46.0			
74		Supply, installation, Testing, Commissioning of 'BEAM Detectors of approved make	Nos.	6.0			
		(In the Library only)					
75		Supply, installation, Testing, Commissioning of Duct Casting Unit with casing of fabricated aluminium and hinged Inspection Cover, one no. inlet of appropriate length and one no. outlet tube 7.5cm long and with one no. Intelligent Adresseable Photo-Electric type Smoke Detector with mounting Base, complete as directed.	Nos.	10.0			
76		Supply, installation, Testing, Commissioning Fire Alarm PC Station consisting of Pentium 4 Processor, 17" colour LCD TFT Monitor, 512 MB RAM, 80 GB Hard Disk, DVD drive, USB port, Mouse, Windows XP based Software, Graphic Software, including copy of CD ROM complete as required. PC Work Station shall include complete Fire Alarm Graphics Software, including Floor Plans with location of Detectors and other Devices. All Floors shall be available as drawing files with location of Detectors and Devices complete with Loop number and other details as available on the Software.	Set	1.0			
		[The Software shall be constructed to the Building and Fire Alarm layout of the Building with location of Detectors marked on floor drawings complete with Detector address, Detector condition etc. The PC and software shall allow for programming / re-programming of Detector addresses, addition or deletion of Detectors with address change, condition of Detectors, event logs for 1000 events complete. The Softwares shall be supplied, complete with registered CD unit complete and Site training].					
		Public Address (P.A.) System					

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
77		supply, installation, testing & commissioning of 'Public Address 'system including Talk-back, micro-processor based Operator console, complete with 2x240 watts Channel Mixing amplifiers (in addition to another 240 watts Amplifier as Hot Standby) with 2 channels, 1 no. micro-phone, 1no. CD Player Deck, MP3 format, 10 zones floor Selector console, a changeover Pannel for connection to the Fire Alarm Panel, a Mains Panel, a standby Battery of 2 x 12 Volts and a Monitor Panel all Pre-wired and Rack mounted complete in all respects, as per specifications. PA system shall be coupled to the Fire Alarm system.	Sets	4.0			
		TALK BACK					
		15 zones Master Handset					
		Telephone Handset					
		2pX0.5 ATC anarmoured Telephone Cable - ISI Marked.					
78		Providing, Installing, Testing & Commissioning of cycling / wall mounted Baffle Speaker of 6 watts each, complete.		60.0			
PART B (g) : SUB-TOTAL							

NON-PRICED BILL OF QUANTITIES (Rate and Amount to be provided by the bidder)
FOR ELECTRICAL WORKS

PART B (h) : (Refer Clause 12 of ITB, Volume I, Section 2)

1.0	6.0	MV SWITCHGEAR / POWER PANEL / DISTRIBUTION BOARDS.					
		Supply, installation, testing and commissioning of cubicle type panels as specified and shown on drawing no. with :					
		i) Main Aluminium busbars with bar type feeder connections & all internal wiring and connections.					
		ii) Earthing all components, frame etc. to a common internal earth bar.					
		iii) Powder Coat painting of all sheet metal works					
		iv) All accessories & supporting structure.					
		v) Brass glands and crimping lugs for sending and receiving ends.					
		vi) All ammeters with C.T's and voltmeter and energy meters with necessary fuses.					
		vii) Panel components as specified.					
		viii) MS base frame.					
		ix) All switch gear to have short circuit levels as specified.					
1.1.1		MAIN LT PANEL	each	1			

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
		i) 2 Nos. 1250A, 4P, EDO, microprocessor based ACB complete with Over current & S/C protection as INCOMER					
		ii) 1 No.1250A, 4P, EDO, microprocessor based ACB complete with Over current & S/C protection as BUSCOUPLER					
		iii) 8 Nos. 315A 4P MCCB complete with Over current & S/C protection as OUTGOING					
		iv) 2 Nos. 100A 4P MCCB complete with Over current & S/C protection as OUTGOING					
		v) 2 Nos 63A TPN MCCB complete with Over current & S/C protection as OUTGOING					
		vi) Electro-mechanical interlocking arrangement between Buscoupler & Incoming ACBs					
		vii) 96 mm ² Voltmeter 0 - 600V with Voltmeter selector switch - 2 Nos					
		viii) 96 mm ² Ampmeter 0-1250A with Ampmeter selector switch - 2 Nos.					
		ix) 6 Nos. CT's 1250/5A 10VA Class-I accuracy & Load manager - 2 sets					
		x) 9 Nos. indicating lamps (LED Type)					
		xi) TPN Aluminium busbar mounted on non-hygroscopic insulator supports - 2x150x10 mm electrical grade bar for phase 1x150x10 mm electrical grade bar for neutral					
		xii) Two Nos. 10 mm stud type earth terminals G.I. earth bus bar arrangement					
1.1.2		AREA LIGHTING DB	each	1			
		i) 1 No. 63A 4P MCCB complete with Over current & S/C protection as incomer					
		ii) 4Nos. 32A TPN MCB as outgoing					
		iii) 3 Nos. indicating lamps (LED Type)					
		iv) TPN Aluminium busbar mounted on non-hygroscopic insulator supports - 1x20x5 mm electrical grade bar for phase 1x20x5 mm electrical grade bar for neutral					
		v) Two Nos. 10 mm stud type earth terminals and G.I. earth bus bar arrangement					
1.1.3		MAIN LIGHTING DISTRIBUTION BOARD (TYPICAL) AT GR. & UPPER FLOORS (MLDB)	each	16			
		i) 1 No.63A 4P MCCB complete with Over current & S/C protection as incomer					
		ii) 4 Nos. 32A TPN MCB as outgoing					

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
		iii) 4 Nos. 32A DP MCB as outgoing					
		iv) 96 mm ² Voltmeter 0 - 600V with Voltmeter selector switch - 1 No					
		v) 96 mm ² Ampmeter 0-63A with Ampmeter selector switch - 1No					
		vi) 3 Nos. CT's 63/5A 10VA Class-I accuracy					
		vii) 3 Nos. indicating lamps (LED Type)					
		viii) TPN Aluminium busbar mounted on non-hygroscopic insulator supports - 1x20x5 mm electrical grade bar for phase 1x20x5 mm electrical grade bar for neutral					
		ix) Two Nos. 10 mm stud type earth terminals G.I. earth bus bar arrangement					
1.1.4		MAIN POWER DISTRIBUTION BOARD (TYPICAL) AT GR. FLOOR (MPDB-1 & MPDB-2)	each	2			
		i) 1 No. 315A 4P MCCB complete with Over current & S/C protection as incomer					
		ii) 5 Nos. 100A 4P MCCB complete with Over current & S/C protection as OUTGOING					
		iii) 2 Nos. 63A 4P MCCB complete with Over current & S/C protection as OUTGOING					
		iv) 96 mm ² Voltmeter 0 - 600V with Voltmeter selector switch - 1 No					
		v) 96 mm ² Ampmeter 0-315A with Ampmeter selector switch - 1No					
		vi) 3 Nos. CT's 315/5A 10VA Class-I accuracy					
		vii) 96 mm ² Ampmeter 0-100A with Ampmeter selector switch - 5Nos.					
		viii) 3 Nos. indicating lamps (LED Type)					
		ix) TPN Aluminium busbar mounted on non-hygroscopic insulator supports - 2x50x6 mm electrical grade bar for phase 1x50x6 mm electrical grade bar for neutral					
		x) Two Nos. 10 mm stud type earth terminals G.I. earth bus bar arrangement					
1.1.5		MAIN POWER DISTRIBUTION BOARD (TYPICAL) AT UPPER FLOORS (MPDB-3, MPDB-4, MPDB-5, MPDB-6 & MPDB-7)	each	5			
		i) 1 No. 315A 4P MCCB complete with Over current & S/C protection as incomer					
		ii) 3 Nos. 100A 4P MCCB complete with Over current & S/C protection as OUTGOING					

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
		iii) 3 Nos. 63A 4P MCCB complete with Over current & S/C protection as OUTGOING					
		iv) 96 mm ² Voltmeter 0 - 600V with Voltmeter selector switch - 1 No					
		v) 96 mm ² Ampmeter 0-315A with Ampmeter selector switch - 1No					
		vi) 3 Nos. CT's 315/5A 10VA Class-I accuracy					
		vii) 96 mm ² Ampmeter 0-100A with Ampmeter selector switch - 3Nos.					
		viii) 3 Nos. indicating lamps (LED Type)					
		ix) TPN Aluminium busbar mounted on non-hygroscopic insulator supports - 2x50x6 mm electrical grade bar for phase 1x50x6 mm electrical grade bar for neutral					
		x) Two Nos. 10 mm stud type earth terminals G.I. earth bus bar arrangement					
1.1.6		SUB POWER DISTRIBUTION BOARD (TYPICAL) AT GR. & UPPER FLOORS (SPDB)	each	18			
		i) 1 No. 100A 4P MCCB complete with Over current & S/C protection as incomer					
		ii) 5Nos. 32A TPN MCB as outgoing					
		iii) 10Nos. 32A DP MCB as outgoing					
		iv) 3 Nos. indicating lamps (LED Type)					
		v) TPN Aluminium busbar mounted on non-hygroscopic insulator supports - 1x20x5 mm electrical grade bar for phase 1x20x5 mm electrical grade bar for neutral					
		vi) Two Nos. 10 mm stud type earth terminals G.I. earth bus bar arrangement					
2.0	7.0	MV CABLE					
2.1		Supply of heavy duty 1100V grade LT XLPE insulated sheathed & armoured cables with aluminium conductors as specified and required.					
2.1.1		3C X 10sq.mm. Cu. PVC Insulated Cable	metre	50			
3.1.2		4C X 4sq.mm. Cu. PVC Insulated Cable	metre	1000			
2.1.3		4C X 6sq.mm. Cu. PVC Insulated Cable	metre	1600			
2.1.4		4C X 10sq.mm. Cu. Ar. XLPE Cable	metre	400			
2.1.5		4C X 16sq.mm. Al. Ar. XLPE Cable	metre	400			

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
2.1.6		4C X 25sq.mm. Al. Ar. XLPE Cable	metre	250			
2.1.7		3.5C X 35sq.mm. Al. Ar. XLPE Cable	metre	100			
2.1.8		3.5C X 50sq.mm. Al. Ar. XLPE Cable	metre	50			
2.1.9		3.5C X 95sq.mm. Al. Ar. XLPE Cable	metre	100			
2.1.10		3.5C X 150sq.mm. Al. Ar. XLPE Cable	metre	2000			
2.1.11		3.5C X 185sq.mm. Al. Ar. XLPE Cable	metre	50			
2.1.12		3.5C X 240sq.mm. Al. Ar. XLPE Cable	metre	1000			
2.1.13		3.5C X 300sq.mm. Al. Ar. XLPE Cable	metre	50			
3.0	20	INTERNAL LIGHT, CEILING AND EXHAUST FAN FITTINGS					
3.1		Supply of light fixtures and fans complete with: a) Lamps and Ballasts					
		b) all necessary accessories as required					
3.1.1		SUSPENDED TYPE T5 FITTINGS (BTSM 02 228 OF BAJAJ)	each	3000			
3.1.2		SURFACE MOUNTED T5 FITTINGS (BLPR 128 OF BAJAJ)	each	200			
3.1.3		CFL FITTINGS (BCSC 218 2 OF BAJAJ)	each	100			
3.1.4		CFL FITTINGS (BASM 236 CFL WEB 2 OF BAJAJ)	each	50			
3.1.5		Bulkhead fittings (BJDB 10 1 X 10W CFLof BAJAJ or equivalent)	each	50			
3.1.6		CFL FITTINGS (BASM 218 CFL WEBS OF BAJAJ)	each	400			
3.1.7		CFL FITTINGS (BSP 118 OF BAJAJ)	each	100			
3.1.8		MIRROR OPTICS T5 FITTINGS (BTDI 414 TD OF BAJAJ)	each	50			
3.1.9		MI. BAY FITTINGS (BLRI 250 MMH OF BAJAJ)	each	50			
3.1.10		Supply of 4 X 18W TL lamp complete with all accessories and lamp (TBS 088/418 M2 HPF of Philips or equiv.)	each	12			
3.1.11		Supply of 2 X 36W PL lamp complete with all accessories and lamp (TBS 369/236 MDGN HF of Philips or equiv.)	each	4			
3.1.12		Supply of 1 X 14W TL5 lamp complete with all accessories and lamp (Adreno 14W TWG 207 of Philips or equiv.)	each	10			
3.1.13		Supply of 1 X 36W PL lamp complete with all accessories and lamp similar to FMS 600/136 of Philips.	each	10			

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
3.1.14		Supply of 1 X 36W box type TFL fittings (Cove Light) complete with all accessories and lamp (TMS 300/136 of Philips or equiv.)	each	10			
3.1.15		Supply of 1 X 18W box type TFL fittings (Cove Light) complete with all accessories and lamp (TMS 2005/120 of PHILIPS or equiv.)	each	10			
3.1.16		Supply of 1 X 36W TFL fittings complete with all accessories and lamp (TMS 021/136 HF EBC of PHILIPS or equiv.)	each	10			
3.1.17		Supply of 2 X 36W TFL fittings complete with all accessories and lamp (TCS 350/236 MI HF of Philips or equiv.)	each	10			
3.1.18		Supply 1 X 13W CFL fittings complete with all accessories and lamp (FBH 145/213 of Philips or equiv.).	each	10			
3.1.19		Supply of 1 X 18W PL fittings complete with all accessories and lamp (HCS 370,1XPL-L18 of Philips or equiv.)	each	4			
3.1.20		Supply of 4 X 9W PL fittings complete with all accessories and lamp (FDN 622, WHITE of Philips or equiv.)	each	1			
3.1.21		Supply of 12V, 50W MH fittings complete with all accessories and lamp (DN 652 of Philips or equi.)	each	15			
3.1.22		Supply of 1X70W MH fittings complete with all accessories and lamp (MBS 205/70 CDM TD / MHN TD of Philips or equiv.)	each	24			
3.1.23		Bay luminaire (closed version) EHC 454 T5 4 X 54W of GE	each	10			
3.1.24		1200mm sweep ceiling fan	each	1000			
3.1.25		300mm sweep exhaust fan	each	40			
3.1.26		wall mounted fan (450mm sweep)	each	10			
4.0		Installation, testing and commissioning of pre-wired, PL fitting / compact fluorescent fitting of all types, complete with all accessories and tube etc. directly on false ceiling, including cutting the hole in false ceiling and connection with 1.5 sq.mm FR PVC insulated, copper conductor, single core cable and earthing etc. as required.	each	500			
5.0		Supply and laying 50mm X 6mm Cu. strip at 0.50 meter below ground as strip earth electrode, including connection / terminating with G.I. nut, bolt spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of G.I. nut bolt & spring washer spaced at 50mm).	metre	50			
6.0		Providing and fixing 50mm X 6mm Copper strip on surface or in recess for connections etc. as required.	metre	50			
7.0		Supply and laying 50mm X 6mm G.I. strip at 0.50 meter below ground as strip earth electrode, including connection / terminating with G.I. nut, bolt spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of G.I. nut bolt & spring washer spaced at 50mm).	metre	100			

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
8.0	20.0	EXTERNAL LIGHTING					
8.1		Supply, installation , testing & commisioning of Steel tubular swaged pole (confirming to IS - 2713 - Part 1 to 3 of 1980) single bent to shape, complete with base plate (400mm X 400mm X 10mm made of cast iron), finial taper plug(made of cast iron), bolts,nuts & screws as in specified type 410 SP-43 (9 meter long) including 14mm dia. hole in pole at a height of 300mm above the planting depth and coated with two coats of black bituminous paint through out internally and externally upto the planting depth and the remaining portion above ground shall be painted with two coat of aluminium painting over one coat of red oxide primer and as specified and directed by ENGINEER -IN - CHARGE with following arm.					
8.1.1		Single arm	No.	40			
8.1.2		Double arm	No.	5			
8.2		Supply & fixing of Junction box with clamp on street light pole / recessed in gate pillars, comprising of 6A SP MCB with elmex terminals suitable for terminating incoming and out going cables of upto 3 core 6 sq.mm 1.1 kV grade armoured PVC insulated and covered cables including bolt,nut & screws, D - clamp etc. as complete and as directed by Engineer - in - charge.	No.	45			
8.3		Wiring with 3 X 1.5sqmm 600 V grade FRLS insulated flexible Cu conductor wire from looping junction boxes at the base of the pole to the light fittings through prelaid rigid PVC conduit, as required to be completed in all respect and as directed by Engineer - in - Charge.	meter	300			
8.4		Supply and fixing of Street Light Luminaire (SGP 438 1 X SON T 150W of Philips or equivalent) including all necessary accessories as required.	No.	45			
8.5		Supply and fixing of Post Top Lantern (SPC 101 1 X SON 70 W (E) of Philips or equivalent) on existing GI pipe including all necessary fixing accessories as required.	No.	4			
8.6		Supply, Erection, Testing & Commissioning of 16 mtr. long high mast complete with canopy, control panel, winch, power tool, 6nos. light fittings including lamp (RVP 302, 2 X HPI-T 400W, flat glass cover of PHILIPS or equivalent), lightning arrestor with conductor (vertical or Horizontal), earthing, aviation obstruction light with necessary accessories etc. as per technical specifications including design and laying of foundation of high masts.	Each	2			
8.7		Supply and installation of Flood light fittings including CG box and Lamp as complete with all necessary fixing accessories as required as follows.					
8.7.1		SLF125 1 X SON T 250W) of PHILIPS or equiv.	No.	20			

Sl . No.	Technical Specification Clause No.	Description	Unit	Total Qty	Rate (Rs.)		Amount (Rs.)
					In Figure	In Words	
8.7.2		SLF125 1 X SON T 400W) of PHILIPS or equiv.	No.	10			
8.80	8.0	Supplying of out door type Feeder Pillar Box made of steel sheet of 16mm thick for 415 volts weather proof complete with dust protected, including two coats of synthetic enamel paints over a coat of red oxide zinc chrome primer, inclusive of 200 amps TPN copper bus bar(Phases & Neutral), earth bar, din bar for mounting MCB's, terminal connectors for all incoming and outgoing circuits, canopy, louvers and base chanel including following accessories:	No.	2			
	(a)	1 NO. 32A TPN MCB as incoming					
	(b)	2 NOS. 32A DP MCB as Out going					
	(c)	6 NOS. 20A DP MCB as Out going					
	(d)	6 NOS. 20A SP CONTACTOR with auxiliary contact					
	(e)	6 NOS. 1 phase Timer (24 hr.)					
PART B (h) : SUB-TOTAL							