Corrigendum - 2 to Tender for the work of "CIVIL AND ARCHITECTURAL WORKS OF ESP, FGD, LHP AND GHP OF UNIT 1 AND UNIT 2 AT 2X800 MW NTPC LARA TPP STAGE II, RAIGARH, CHHATTISGARH STATE, INDIA".

A) Some of the Bidders had asked queries in the published tender specification. The clarifications issued by BHEL are furnished below:

SI. No.	Reference clause of Tender Document	Existing Clause	Bidder's Query	BHEL's Response
1	Chapter-X of TCC (TECHNCIAL SPECIFICATIONS AND DRAWINGS)	PLOT PLAN (TENDER STAGE DRAWING FOR BIDDER'S INFORMATION ONLY. FINAL PLOT PLAN SHALL BE PROVIDED TO THE SUCCESSFUL BIDDER AFTER AWARD OF WORK)	Request to provide structural/dimensional drawings of above work so the optimized sequencing of resources can be planned along with Nos of shuttering sets.	drawings will be provided to the
2	BOQ Cum Rate Schedule and 2.5.3 of General Technical Specification	In case the earth required for backfilling is over and above the earth available from the compulsory excavations within the project area, then borrow areas for obtaining suitable fill material shall be arranged by the contractor himself from outside the plant boundary limits and all expenses including royalties, taxes, duties etc shall be borne by him.	As per BOQ, Earthwork in excavation is about 2.80 Lacs Cum and Backfilling quantity is about 5.30 Lacs Cum. (a) Please clarify whether successful contractor is required to bring additional backfilling earthwork quantity from outside borrow area or within Lara TPP boundary area. (b) As per given BOQ excavation quantity is less than filling quantity so please verify that extra soil for filling is available in NTPC plant or not, please clarify.	

SI.	Reference clause of	Existing Clause	Bidder's Query	BHEL's Response
No.	Tender Document			
3	BOQ A201, B201, A202, B202 of BOQ CUM RATE SCHEDULE	Design Mix Concrete of grade M7.5 (with partial replacement of river sand by mass with coarse bottom ash)	Bidder can't identify in those items in BOQ, they have to design with partial replacement of river sand by coarse bottom ASH, please suggest.	In the said BOQ Items (A201 and A202) 25% of river sand will be replaced by bottom ash as per IS 383: 2016 - table1. Work is to be executed as per available BOQ Items.
4	BOQ CUM RATE SCHEDULE ST No. : 106 (d)	Earth work in excavation in hard rock requiring chiselling including setting out, levelling,	Chiselling rate is abnormally low.	Tender conditions shall prevail.
5	BOQ CUM RATE SCHEDULE ST No. : A 602 (c)	Providing and applying polysulphide based sealant conforming to IS:12118 in expansion joints in concrete	Expansion joints sealant with material rate is abnormally low.	Tender conditions shall prevail.
6	BOQ CUM RATE SCHEDULE ST No. : 907	Providing and fixing fire proof steel doors (single or double shutter) with vision panel	Fire proof Doors Supply & Fixing rate is abnormally low.	Tender conditions shall prevail.
7	BOQ CUM RATE SCHEDULE ST No. : 908 B	Providing and fixing steel windows/ ventilator with steel sections	Steel windows supply & Fixing rate is abnormally low.	Tender conditions shall prevail.
8	BOQ CUM RATE SCHEDULE ST No. : 1514	Providing and installing under deck insulation with resin bonded rock wool 50 mm	Underdeck Insulation Supply & Installation Rate is abnormally low.	Tender conditions shall prevail.
9	BOQ CUM RATE SCHEDULE ST No. : 2114 A,B,C	Providing & fixing in position P.V.C. water tank of Syntex or approved equivalent	Water Tanks supply & Fixing rate is abnormally low.	Tender conditions shall prevail.

SI. No.	Reference clause of Tender Document	Existing Clause	Bidder's Query	BHEL's Response
10	BOQ CUM RATE SCHEDULE ST No. : 2202	Providing and fixing approved vitreous china laboratory basin/sink of size 550x400x200mm	Lab sink supply & Fixing rate is abnormally low.	Tender conditions shall prevail.
11	BOQ CUM RATE SCHEDULE ST No. : 2219	Providing and fixing eye and face drinking water fountain	Water Foundation Supply & Fixing rate is abnormally low.	Tender conditions shall prevail.
12	BOQ CUM RATE SCHEDULE ST No. : 2307 A	Taking delivery from BHEL store, transportation, fabrication, erection and alignment of factory made electroforged galvanised grating	Grating Fixing rate is abnormally low.	Tender conditions shall prevail.
13	BOQ CUM RATE SCHEDULE ST No. : 2311	Taking delivery from BHEL store and fixing in position of permanent mild steel bolts	Foundation Bolts Fixing rate is abnormally low.	Tender conditions shall prevail.

B) In addition to response to the queries, TCC modifications are as follows:

SI.	Reference clause	Existing in Tender	Revised as
No.	of Tender		
	Document		
1	BOQ Cum Rate Schedule ST NO. A	Construction and maintenance of labour colony having adequate no. of rest rooms along with toilets & fencing etc. as per drawing attached and TCC including associated civil and structural works on built, own and operate basis. Proposal for construction of these hutment is to be got approved from BHEL before organizing material and execution. Payment towards construction/development of labour colony of 02 Sets as per drawing attached and as above shall be paid by BHEL. Payment shall be done for each set on set wise completion. Land for labour colony shall be arranged by the contractor on his own cost as per availability outside project area within 5Km, Necessary levelling/dressing of land shall be done by the contractor. All arrangement for electricity and drinking/service water to be arranged by the contractor within his quoted price. The labour colony shall be handed over for accommodation with all amenities within Three (03) Months from date of start as per TCC. Payment Terms: 1. On receipt of material and readiness of foundation for labour colony at site-50% 2. On completion of erection and installation works of labour colony-20% 3. Handing over for accommodation of labour with all amenities-30%	Construction and maintenance of labour colony having adequate no. of rest rooms along with toilets & fencing etc. as per drawing attached and TCC including associated civil and structural works on built, own and operate basis. Proposal for construction of these hutment is to be got approved from BHEL before organizing material and execution. Payment towards construction/development of labour colony of 02 Sets as per drawing attached and as above shall be paid by BHEL. Payment shall be done for each set on set wise completion. Land for labour colony shall be arranged by the contractor on his own cost as per availability outside project area within 5Km, Necessary levelling/dressing of land shall be done by the contractor. All arrangement for electricity and drinking/service water to be arranged by the contractor within his quoted price. The labour colony shall be handed over for accommodation with all amenities within Three (03) Months from date of start as per TCC. (Refer Annexure-A to Corrigendum-2)

SI.	Reference clause	Existing in Tender	Revised as
No.	of Tender		
	Document		
2	BOQ Cum Rate Schedule ST NO.: 111, B111, A201, A202, 203, 204, A205, A206, 207, 211, 212, A213, 214, 220, A506, 701, 702, 704, A1607, 2208, A2321	Payment Terms / Break-up was given under BOQ Item	Payment Break-up removed in ST No. 111, B111, A201, A202, 203, 204, A205, A206, 207, 211, 212, A213, 214, 220, A506, 701, 702, 704, A1607, 2208, A2321 (Refer Annexure-A to Corrigendum-2)
3	BOQ Cum Rate Schedule ST NO.: 403, 405, 406, 501, 502, 507, A507, A508, A510, B510, 800, 804, A808, A809, 1000, 1100, 1200, 1400	As per BOQ CUM Rate Schedule	Notes added / modified to bring clarity in BOQ CUM Rate Schedule R01. (Refer Annexure-A to Corrigendum-2)
4	NOTE for BOQ CUM RATE SCHEDULE	Not Existing	Note: Documents required for payment of RA Bill and Final Bill are as per modified Clause No. 7.1 of Technical Conditions of Contract (TCC). (Refer Annexure-A to Corrigendum-2)

SI. No.	Reference clause of Tender	Existing in Tender	Revised as
NO.	Document		
5	Chapter-VI of TCC Clause 6.10	Not Existing	6.10 COMPLETION OF WORK AND COMMENCEMENT OF GUARANTEE PERIOD
			6.10.1 The works shall be completed to the entire satisfaction of the Engineer and in accordance with the completion schedule as specified in the Contract, and all unused stores and materials, tools, plant, equipment, temporary buildings, site office, labor hutments and other things shall be removed and the site and work cleared of rubbish and all waste materials and delivered up clean and tidy to the satisfaction of the Engineer at the Contractor's expenses.
			6.10.2 BHEL shall have power to take over from the Contractor from time to time such sections of the work as have been completed to the satisfaction of the Engineer. Such work however shall not be treated as have been completed until the remaining / pending works are executed to the satisfaction of Engineer.
			6.10.3 The Engineer shall certify to the contractor the date on which the work is completed and the date thereof for commencement of Guarantee Period. Guarantee Period shall be as given in GCC.

SI.	Reference clause	Existing in Tender	Revised as
No.	of Tender		
	Document		
6	Chapter-VII of TCC	Progressive Payment/ Final Payment:	Progressive Payment/ Final Payment:
	(Payment Terms)	The payments for works under the scope of this contract shall be as	The payments for works under the scope of this contract shall
		per clause no 2.6; 2.22; 2.23 of General Conditions of Contract and	be as per clause no 2.6; 2.22; 2.23 of General Conditions of
	Clause 7.1	Volume-IB, Chapter-X of SCC.	Contract and Volume-IB, Chapter-X of SCC.
			Documents required for RA Bill:
		Required documents For RA Bill:	GST Complied Invoice of the work done as per approved BBU.
		GST Complied Invoice of the work done as per approved BBU.	• WAM -6 for RA Bill.
		• WAM -6 for RA Bill.	Jointly signed Measurement sheet.
		Jointly signed Measurement sheet.	Power of Attorney before submission of Bill.
		Power of Attorney before submission of Bill.	Validity of Bank Guarantees as applicable under the contract.
		Validity of Bank Guarantees as applicable under the contract.	HR/IR compliance documents:
		HR/IR compliance documents:	i. Wages payment sheet as per applicable minimum wages.
		i. Wages payment sheet as per applicable minimum wages.	ii. Proof of PF contribution submission.
		ii. Proof of PF contribution submission.	iii. Proof of ESI/ WC contribution submission
		iii. Proof of ESI/ WC contribution submission	iv. Proof of Bonus payment as per Bonus Act if applicable.
		iv. Proof of Bonus payment as per Bonus Act if applicable.	v. Proof of EL payment if applicable.
		v. Proof of EL payment if applicable.	vi. Any other statutory document if applicable.
		Any other document applicable / required for payment.	
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SI.	Reference clause	Existing in Tender	Revised as
No.	of Tender		
	Document		
			Documents required for Final Bill:
			The final bill is drawn as soon as the entire work is completed. From the final amount due, all amounts already claimed up to the previous running account bill will be deducted. It should be ensured that in the final bill the following additional particulars have been provided:
			• Final Bill in WAM-7 Format.
			'No claim' certificate from the contractor.
			Clearance certificates where ever applicable viz. Clearance Certificates from Customer, various Statutory Authorities like Labour department, PF Authorities, Commercial Tax Department etc.
			Final Material re-conciliation statement duly approved by BHEL.
			Indemnity Bond as per prescribed format.
			Deviation statement showing the difference between the actuals and as per the contract.
			• Final Delay Analysis.
7	Chapter-VII of TCC (Payment Terms)	Labour colony to be developed – 02 set as per attached drawing. Payment of Rs. Fifty Lakhs (Rs. 50,00,000/-) as per BOQ Item No. A	Labour colony to be developed – 02 set as per attached drawing.
		for each labour hutment set limited to 02 sets towards	Payment of Rs. Fifty Lakhs (Rs. 50,00,000/-) as per BOQ Item No. A for each labour hutment limited to 02 sets towards

SI. No.	Reference clause of Tender Document	Existing in Tender	Revised as
	Clause 7.2	construction/development of labor colony shall be paid by BHEL as per following payment terms: On receipt of material and readiness of foundation for labour colony at site- 50% On completion of erection and installation works of labour colony-20% Handing over for accommodation of labour with all amenities- 30%	construction/development of labour colony shall be paid by BHEL after completion of labour hutments to the satisfaction of BHEL. Ownership of the labour hutment shall be of the contractor and contractor shall keep BHEL indemnified from any statutory obligations / legal compliances w.r.t. labour hutment establishment during as well as after the completion of contract.
		Ownership of the labor hutment shall be of the contractor and contractor shall keep BHEL indemnified from any statutory obligations / legal compliances w.r.t. labor hutment establishment during as well as after the completion of contract.	Labour colony requirement shall be assessed by contractor as per work requirement, and labour hutments more than 02 sets, if required shall be constructed by contractor as per requirement without any cost implication to BHEL.
		Labor colony requirement shall be assessed by contractor as per work requirement, and labor sheds more than 02 set, if required shall be constructed by contractor as per requirement without any cost implication to BHEL. Minimum 2 sets of labour colony as per drawing shall be completed within 3 months from the date of start of work. Payment against any RA bill after this period of 3 months shall not be done without completion of minimum 2 sets of labor hutment as per drawing. Labor colony establishment of contractor must be completed in all respect to the satisfaction of BHEL/ NTPC.	Minimum 02 sets of labour hutment as per drawing shall be completed within 3 months from the date of start of work. Payment against any RA bill after this period of 3 months shall not be done without completion of minimum 02 sets of labour hutment as per drawing. Labour colony establishment of contractor must be completed in all respect to the satisfaction of BHEL.
8	Clause No. 2.5.4 Chapter-II of TCC	Furnishing all labor, materials, supervision, construction plans, equipment, supplies, transport, to and fro the site, fuel, electricity, compressed air, water, transit and storage insurance and all other incidental items and temporary works not shown on specified but reasonably implied or necessary for the proper completion,	Furnishing all labor, materials, supervision, construction plans, equipment, supplies, transport, to and fro the site, fuel, electricity, compressed air, water, transit and storage insurance and all other incidental items and temporary works not shown on specified but reasonably implied or necessary for the proper

SI.	Reference clause	Existing in Tender	Revised as
No.	of Tender		
	Document		
		maintenance and handling over the works, except in accordance with the stipulations laid down in the contract documents and additional stipulations as may be provide by the engineer during the course of works.	completion, maintenance and <i>handing</i> over the works in accordance with the stipulations laid down in the contract documents and additional stipulations as may be provide by the engineer during the course of works.
9	Clause No. 2.5.5 Chapter-II of TCC	Manpower hired/deployed by contractor for this project shall be monitored through online project monitoring system. Such personnel entering in to NTPC site premises for carry out any work shall be tracked. Tracking devices shall be provided by BHEL on chargeable basis to contractor. BHEL will provide tags free of cost at first instance. In case of damage or missing of issued worker tag, Rs. 1000/- per tag will be charged for issuing new worker tag.	Manpower hired/deployed by contractor for this project shall be monitored through online project monitoring system. <i>All</i> Personnel entering in to NTPC site premises for <i>carrying</i> out any work shall be tracked. Tracking devices shall be provided by BHEL on chargeable basis to contractor. BHEL will provide tags free of cost at first instance. In case of damage or missing of issued worker tag, Rs. 1000/- per tag will be charged for issuing new worker tag.
10	Clause No. 2.6.5 Chapter-II of TCC	Contractor shall set up suitable storage facilities for Cement, sand, deck plate, bolts, aggregate, reinforcement steel, structural steel, handrail, grating, foundation bolts, shuttering item, inserts, water proofing material, admixture other BOI's etc. and all are stored properly as per IS recommendation/technical specifications/manufacturer recommendation. Wastage due to lapse of storing will be because of contractor.	Contractor shall set up suitable storage facilities for Cement, sand, deck plate, bolts, aggregate, reinforcement steel, structural steel, handrail, grating, foundation bolts, shuttering item, inserts, water proofing material, admixture and other Bought Out Items (BOIs) etc. All materials are to be stored properly as per IS recommendation/technical specifications/manufacturer recommendation. Wastage due to inadequacy of storage facilities will be on account of contractor only.
11	Clause No. 2.7.2 Chapter-II of TCC	Carrying out topographic survey of the entire and establish levels and coordinates at suitable intervals from existing grid levels and coordinates furnished by the owner established bench marks, setting out the locations and levels of proposed structures, constructions and marking of reference pillars and other identification works etc., The contractor shall provide the owner/BHEL such a assistance, instruments, machines, labour and	Carrying out topographic survey of the entire <i>work area</i> and establish levels and coordinates at suitable intervals from existing grid levels and coordinates furnished by the owner established bench marks, setting out the locations and levels of proposed structures, constructions and marking of reference pillars and other identification works etc., The contractor shall provide the owner/BHEL such a assistance, instruments,

SI.	Reference clause	Existing in Tender	Revised as
No.	of Tender		
	Document		
		materials as are normally required for examining, measuring and testing any work and the quality, weight or quantity of any material used.	machines, labour and materials as are normally required for examining, measuring and testing any work and the quality, weight or quantity of any material used.
12	Clause No. 2.7.4 Chapter-II of TCC	Medical/First aid center/medicine purchased for emergency/Doctor purpose along with ambulance services with fuel and operator (round the clock) shall be arranged by BHEL for handling medical emergencies. Cost against these facilities shall be distributed / shared among the vendors working in Lara Project site proportionately based on contract value.	Medical/First aid centre <i>along with emergency medicines</i> , Doctor and ambulance services with fuel and operator (round the clock) shall be arranged by BHEL for handling medical emergencies <i>in line with Health Safety and Environment Plan (HSEP:14) attached with Tender</i> . Cost against these facilities shall be distributed / shared among the vendors working in Lara Project site proportionately based on contract value.
13	Clause No. 2.12.7 Chapter-II of TCC	Any point of time any additional requirement beyond 2 sets of labour colony shall be established by bidder at his own cost. All labour hutments shall be constructed in accordance with the approved drawing for labour hutment. In case labour hutment is not done as per the drawings and specification and any penalty is imposed by Customer, same shall be recovered from contract's RA Bill.	Additional requirement beyond 2 (two) set of labour colony for bidder's scope of work, the same shall be established by bidder at his own cost. All labour hutments shall be constructed in accordance with the approved drawing for labour hutment. In case labour hutment is not done as per the drawings and specification and any penalty is imposed by Customer, same shall be recovered from contract's RA Bill.
		Rectification and Corrections in labour hutment as pointed out by BHEL/Customer shall be bidder's responsibility and any cost incurred by BHEL to complete the works, in case of non-compliance of the instructions by bidder, same shall be recovered from his RA Bills along with 5% overheads.	Rectification and Corrections in labour hutment as pointed out by BHEL/Customer shall be bidder's responsibility and any cost incurred by BHEL to complete the works, in case of non-compliance of the instructions by bidder, same shall be recovered from his RA Bills along with 5% overheads.
14	Clause No. 2.13.1 Chapter-II of TCC	Cement (wherever specified as free issue by BHEL) and Reinforcement Steel required for the tender scope shall be procured by BHEL and issued to contractor free of cost (As FOC Item). However, unloading, handling / storage of Cement and	Cement <i>and Reinforcement Steel</i> (wherever specified as free issue by BHEL) required for the tender scope shall be procured by BHEL and issued to contractor free of cost (As FOC Item). However, unloading, handling / storage of Cement and
		Reinforcement steel procured by BHEL for this tender scope, at site,	Reinforcement steel procured by BHEL for this tender scope at

SI.	Reference clause	Existing in Tender	Revised as
No.	of Tender		
	Document		
		inside BHEL Stores / Contractor's Stores and further transportation	site, Contractor's Stores, issuance of materials from BHEL
		from Stores to work area will be in the scope of contractor. No Extra	Stores and further transportation from Stores to work area
		payment shall be made for this work.	(including loading and unloading) will be in the scope of
			contractor. No Extra payment shall be made for this work.
15	CHAPTER- IV of	T&Ps shown in the above mentioned list is suggestive requirement	T&Ps shown in the above mentioned list is suggestive
	TCC,	considering parallel working in both units. However, mobilization	requirement considering parallel working in both units.
		schedule as mutually agreed at site for major T&Ps, have to be	However, mobilization schedule as mutually agreed at site for
		adhered to. Numbers/time of requirement will be reviewed from	major T&Ps, have to be adhered to. Numbers/time of
	NOTE-1	time to time at site and contractor will provide required	requirement will be reviewed from time to time at site and
		T&Ps/equipment to ensure completion of entire work within	contractor will provide required T&Ps/equipment to ensure
		schedule/target date of completion without any additional financial	completion of entire work within schedule/target date of
		implication to BHEL. Vendor will give advance intimation &	completion without any additional financial implication to
		certification regarding capacity etc. prior to dispatch of heavy	BHEL. Vendor will give advance intimation & certification
		equipment. Also on completion of the respective activity,	regarding capacity etc. prior to dispatch of heavy equipment.
		demobilization of T&Ps in total or in part can be done with the due	Also on completion of the respective activity, demobilization of
		approval of engineer in charge. Retaining of the T&Ps during the	T&Ps in total or in part can be done with the due approval of
		contract period will be mutually agreed in line with construction	engineer in charge. Retaining of the T&Ps during the contract
		requirement. In the event of non-mobilization of any T&P by the	period will be mutually agreed in line with construction
		successful bidder and as a result progress of work suffered, BHEL	requirement. In the event of non-mobilization of any T&P by
		reserves the right to deduct suitable amount from the dues of the	the successful bidder and as a result progress of work suffered,
		bidder, with assigning reasons thereof.	BHEL reserves the right to deploy the T&Ps on behalf of
			contractor and recover the expenses incurred by BHEL along
			with 5% overheads from the dues of the bidder.

C) In addition to response to the queries and TCC modifications, clause 2.7.9 (2nd para) of GCC is being rectified due to typographical error and may be read as follows:

SI.	Reference clause	Existing in Tender	Revised as
No.	of Tender		
	Document		
1	clause 2.7.9 (2 nd para) of GCC	If the contractor fails to maintain the required progress of work which results in delay in the completion of the work as per the contractual completion period, BHEL shall have the right to impose Liquidated Damage/Penalty at the rate of 0.5% of the contract value, per day of delay or part thereof subject to a maximum of 10% of the contract value. For this purpose, the period for which LD is applicable shall be worked out based on portion of time extension granted solely attributable to contractor at the end of the contract. Contract Value for this purpose, shall be the final executed value exclusive of ORC, Extra Works executed on Manday rate basis, Supplementary/ Additional Items and PVC.	If the contractor fails to maintain the required progress of work which results in delay in the completion of the work as per the contractual completion period, BHEL shall have the right to impose Liquidated Damage/Penalty at the rate of 0.5% of the contract value, per week of delay or part thereof subject to a maximum of 10% of the contract value. For this purpose, the period for which LD is applicable shall be worked out based on portion of time extension granted solely attributable to contractor at the end of the contract. Contract Value for this purpose, shall be the final executed value exclusive of ORC, Extra Works executed on Manday rate basis, Supplementary/Additional Items and PVC.

Note:

- 1) All other terms and conditions against this NIT shall remain unchanged.
- 2) This corrigendum is to be submitted duly signed and stamped along with the Techno-commercial bid (Part- I).

for BHARAT HEAVY ELECTRICALS LTD AGM / SCT- CPC

Annexure - A to Corrigendum-2 dated 13/03/2024

PART-B

PROJECT: 2X800 MW NTPC LARA TPP STAGE II, RAIGARH, CHHATTISGARH STATE, INDIA BOQ CUM RATE SCHEDULE (PRICE BID) Rev 01

SCOPE OF WORK:-CIVIL AND ARCHITECTURAL WORKS OF ESP, FGD, LHP AND GHP AREA OF UNIT-1 AND UNIT-2 FOR 2X800 MW NTPC LARA TPP STAGE II, RAIGARH, CHHATTISGARH STATE, INDIA.

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
A	Construction and maintenance of labour colony having adequate no. of rest rooms along with toilets & fencing etc. as per drawing attached and TCC including associated civil and structural works on built, own and operate basis. Proposal for construction of these hutment is to be got approved from BHEL before organizing material and execution. Payment towards construction/development of labour colony of 02 Sets as per drawing attached and as above shall be paid by BHEL. Payment shall be done for each set on set wise completion. Land for labour colony shall be arranged by the contractor on his own cost as per availability outside project area within 5Km, Necessary levelling/dressing of land shall be done by the contractor. All arrangement for electricity and drinking/service water to be arranged by the contractor within his quoted price. The labour colony shall be handed over for accommodation with all amenities within Three (03) Months from date of start as per TCC.	Set	2.00	₹ 5,000,000.00	₹ 10,000,000.00	Fixed Price

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
В	Supervision Services for PMX (Supplying Civil Engineers Diploma Holder having relevant experience of 3+ year in the field of Civil work execution, Quality or Planning, BHEL will utilize the services of Engineers as per requirement with in plant premises in any area of work. Appointment of engineer will be done after approval from BHEL. (All statutory compliances, accommodation, Transportation of engineer etc. will be in the scope of Sub-contractor)	Man- Months	60.00	₹ -	₹ -	0.233268263
100	EARTH WORK: Earth work In excavation, backfilling and disposal including all labour, Equipments etc., complete as per specification, drawing and as directed by engineer- in-charge for the following.				₹ -	
101	Earth work in excavation in all types of soil including ash which can be excavated by any means including setting out, levelling, dewatering (but excluding special type of dewatering viz. well point method), dressing the sides & bottom, all lifts, ramming/compacting the excavated bottom, stacking, disposal of surplus excavated materials within a lead upto 1Km, spreading/levelling of disposed materials etc., all complete for following depths below ground level.				₹ -	
a	Depth from ground level but not exceeding 2 m	CUM	156012.20	₹ -	₹ -	1.832965435
b	Depth exceeding 2 m but not exceeding 4 m	CUM	94829.23	₹ -	₹ -	1.395482633
С	Depth exceeding 4 m but not exceeding 6 m	CUM	16367.37	₹ -	₹ -	0.301072576
d	Depth exceeding 6 m but not exceeding 8 m	CUM	575.00	₹ -	₹ -	0.013238235
102	Extra over ST No. 101 for dewatering of ground water by well point method as per IS 9759.	CUM	1375.00	₹ -	₹ -	0.111105128

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
103	Earth work in excavation in soft rock including weathered rock which can be excavated by means of crow bar, pick axe, pneumatic rock breaker attachment with excavator machine etc but does not require chiselling or blasting including setting out, levelling, dewatering (wherever required), dressing the sides & bottom, all lifts, ramming/compacting the excavated bottom, stacking, disposal of surplus excavated materials within a lead upto 1 Km, spreading / levelling of disposed materials etc all complete for following depths below ground level.					
b	Depth exceeding 2 m but not exceeding 4 m	CUM	2774.00	₹ -	₹ -	0.058071835
С	Depth exceeding 4 m but not exceeding 6 m	CUM	1221.00	₹ -	₹ -	0.030672982
d	Depth exceeding 6 m but not exceeding 8 m	CUM	193.00	₹ -	₹ -	0.005818069
104	Earth work in excavation upto any depth below ground level in hard rock requiring blasting (but excluding controlled blasting) including setting out, levelling, dewatering (wherever required), dressing the sides & bottom, all lifts, necessary licenses/statuatory clearances for blasting, supply, storage & handling of blasting materials, stacking/disposal of surplus excavated material within a lead upto 1 Km, spreading / levelling of disposed materials etc all complete for following depths below ground level.					
d	Depth exceeding 6 m but not exceeding 8 m	CUM	20.00	₹ -	₹ -	0.001182006
105	Earth work in excavation in hard rock requiring controlled blasting including wedging, line drilling, pre shearing etc as required, setting out, levelling, dewatering (wherever required), dressing the sides & bottom, all lifts, necessary licenses/statuatory clearances for blasting, supply, storage & handling of blasting materials, stacking/disposal of surplus					

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)		Amount (INR)= Rate * Quantity		Weightage in %
	excavated material within a lead upto 1Km, spreading / levelling of disposed materials etc all complete for following depths below ground level.							
b	Depth exceeding 2 m but not exceeding 4 m	CUM	4233.60	₹	-	₹	-	0.195945341
С	Depth exceeding 4 m but not exceeding 6 m	CUM	4307.20	₹	-	₹	-	0.239222157
d	Depth exceeding 6 m but not exceeding 8 m	CUM	165.00	₹	-	₹	-	0.011004765
106	Earth work in excavation in hard rock requiring chiselling including setting out, levelling, deawtering (wherever required), dressing the sides & bottom, all lifts, stacking/disposal of surplus excavated material within a lead upto 1Km, spreading / levelling of disposed materials etc all complete for following depths below ground level.							
d	Depth exceeding 6 m but not exceeding 8 m	CUM	88.00	₹	-	₹	-	0.009293818
107	Earthwork in Back filling upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 250 mm thickness using/with selected materials from compulsorily excavated earth available within a lead upto 1 Km and compacted as specified including reexcavation of stacked earth, watering, ramming/compaction by manual/mechanical means, dressing etc all complete.for the following.							
a	at least 90% maximum dry density as per IS-2720 (Part-VII)	CUM	37312.00	₹	-	₹	-	0.380809252
b	at least 95% maximum dry density as per IS-2720 (Part-VII)	CUM	562.00	₹	-	₹	-	0.006402772

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
A107	Earthwork in Back filling upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 300mm compacted thickness using/with selected materials from compulsorily excavated earth available within a lead upto 1 Km and compacted as specified including reexcavation of stacked earth, watering, ramming/compaction by manual/mechanical means, dressing etc all complete.for the following.					
а	at least 90% maximum dry density as per IS-2720 (Part-VII)	CUM	136081.10	₹ -	₹ -	1.296318083
b	at least 95% maximum dry density as per IS-2720 (Part-VII)	CUM	355478.34	₹ -	₹ -	3.779911787
108	Earthwork in Back filling upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 250 mm thickness using/with selected earth directly from excavation within a lead upto 1Km and compacted as specified including watering, ramming/compaction by manual/mechanical means, dressing etc all complete.for the following:					
a	at least 90% maximum dry density as per IS-2720 (Part-VII)	CUM	372.00	₹ -	₹ -	0.001633447
109	Extra over ST No. 101 and 103 to 108 for carriage of material/earth for every 500m or part thereof beyond an initial lead of 1km.					
b	Carriage for disposal of serviceable/unserviceable material/earth	CUM	106015.57	₹ -	₹ -	0.150977217
111	Supplying and filling sand upto any depth under floors, around foundations, plinths etc. in layers not exceeding 250 mm thickness and compacted so as to achieve at least 80% relative density as per IS-2720 (Part-XIV)					

ST. No.	Item Description	UOM	Total Quantity	Qu W	ates= Total toted Price * deightage /(tantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
	including spreading, watering, ramming/compaction by manual / mechanical means, dressing, royalty (if any) etc. all complete.						
	For 80% Relative Density	CUM	140.00	₹	-	₹ -	0.01877444
B111	Supplying and filling clean and well graded sand (conforming to IS 383 with grading zone I to III) upto any depth under floors, around foundations, plinths, paving, tank foundations, etc. in layers not exceeding 300mm compacted thickness and compacted so as to achieve at least 80% relative density as per IS-2720 (Part-XIV) including spreading, watering, ramming/compaction by manual / mechanical means, dressing, royalty (if any) etc. all complete.	CUM	3475.00	₹	-	₹ -	0.489308841
112	Extra over item no. 101 for shoring and strutting in trenches including packing cavities (wherever required as instructed by engineer) all complete as per specification and as directed by engineer in charge.						
a	upto depth of 2m	SQM	9855.00	₹	-	₹ -	0.378932757
b	Depth exceeding 2 m but not exceeding 4 m	SQM	3365.00	₹	-	₹ -	0.16173373
200	CONCRETE WORK: Providing and placing concrete work including cost of labour, materials (unless otherwise specified in BOQ/contract specification) and equipment for handling, transportation, batching, mixing, placing, vibrating and curing (excluding cost of centering, shuttering and reinforcement) with mechanised equipments like batching plant, transit mixer, concrete pump etc. complete as per drawing, specifications and as per direction of engineer in charge for the following. Notes: 1. Cement shall be issued free of Cost by BHEL as per TCC)						

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
	2. PPC/OPC cement shall be generally used for RCC concreting. In case PPC cement is replaced by OPC cement+Fly Ash, Bidder to collect Fly Ash from existing NTPC Phase-I LARA plant					
A201	Design Mix Concrete of grade M7.5 (with partial replacement of river sand by mass with coarse bottom ash) as mass filling course, lean concrete, levelling course, mud mat under and around foundations/floors below finished floor level upto depth of 10m from FFL. (For depth greater than 10m from FFL, extra over for additional depth to be paid in Item No 224). (Bidder to collect Coarse Bottom Ash from NTPC at nominal charge)	CUM	11513.40	₹ -	₹ -	4.603255869
B201	Extra over item no. A201 for using Concrete of grade M7.5 (1 part cement, 4 part sand, 8 parts of 40 mm graded aggregate by volume) in place of Design Mix Concrete of grade M7.5 (with partial replacement of river sand by mass with coarse bottom ash).	CUM	11513.40	₹ -	₹ -	0.102476756
A202	Design Mix Concrete of grade M10 (with partial replacement of river sand by mass with coarse bottom ash as per relevant IS code provision) using 40 mm nominal size graded stone aggregate. (Bidder to collect Coarse Bottom Ash from NTPC at nominal charge)	CUM	239.00	₹ -	₹ -	0.095556322
B202	Extra over item no. A202 for using Concrete of grade M10 (1 part cement, 3part sand, 6 parts of 40 mm graded aggregate by volume) in place of Design Mix Concrete of	CUM	239.00	₹ -	₹ -	0.002127256

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
	grade M10 (with partial replacement of river sand by mass with coarse bottom ash).					
203	Concrete of grade M15 (1 part cement, 2 part sand, 4 parts of 40 mm graded aggregate by volume) as lean concrete, levelling course, mud mat under and around foundations/floors below finished floor level upto depth of 10m from FFL. (For depth greater than 10m from FFL, extra over for additional depth to be paid in Item No 224)	CUM	28.00	₹ -	₹ -	0.011444101
204	Concrete of grade M20 (1 part cement, 1.5 part sand, 3 parts of 10-20 mm graded aggregate by volume) under floors, paving, plinth protection, pipe encasing etc complete below finished floor level upto depth of 10m from FFL. (For depth greater than 10m from FFL, extra over for additional depth to be paid in Item No 224).	CUM	309.80	₹ -	₹ -	0.120002992
A205	Design Mix cement concrete conforming to IS:456 & IS 10262-2009 for reinforced concrete works with coarse sand and graded hard stone aggregate of 20mm nominal size in foundations/substructure, grade slab, paving, drains, under floors etc. for any shape, position or thickness etc. complete including use of high performance PCE-based BIS approved water reducing admixture of Type-G/F as per ASTMC-494 of approved make FOSROC/SIKA/BASF or Equivalent having minimum water reduction capability of 30% to achieve required slump in concrete all complete as per specification & drawing for the following.					
b	M 25 Grade	CUM	63889.25	₹ -	₹ -	28.46312431
С	M 30 Grade	CUM	1000.00	₹ -	₹ -	0.449304865

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
A206	Providing and laying Design Mix cement concrete of grade conforming to IS:456 & IS 10262-2009 for reinforced concrete works with sand and graded hard stone aggregate of 20mm nominal size in superstructure for any shape, position or thickness etc complete including use of high performance PCE-based BIS approved water reducing admixture of Type-G/F as per ASTMC-494 of approved make FOSROC/SIKA/BASF or Equivalent having minimum water reduction capability of 30% to achieve required slump in concrete all complete as per specification & drawing upto 10m level above finished floor level (For height greater than 10m from FFL, extra over for additional height to be paid in Item No 225), for the following.					
b	M 25 Grade	CUM	8827.00	₹ -	₹ -	4.046675184
С	M 30 Grade	CUM	1516.00	₹ -	₹ -	0.700756564
d	M 35 Grade	CUM	94.00	₹ -	₹ -	0.04380758
207	Providing and laying Design Mix cement concrete confirming to IS:456 & IS 10262-2009 for reinforced concrete works of grade mentioned below in machine foundations for TG, Gas Turbine, ID/FD/PA fans, BFP, Mills, Crusher House, CHP-AHP civil works, FGD etc. at all elevations below/above finished floor level (except top decks supported over vibration isolation system and TG deck) but including TG foundation Columns with addition of high performance PCE-based BIS approved water reducing admixture of Type-G/F as per ASTMC-494 of approved make FOSROC/SIKA/BASF or Equivalent having minimum water reduction capability of 30% to achieve a slump more than 125mm in concrete as per manufacturer's recommendation with 20 mm					

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
	nominal size graded aggregate in concrete all complete as per specification & drawing all complete.					
a	M 30 Grade	CUM	6463.00	₹ -	₹ -	3.226763824
A209	Extra over St. No. 205 to 208 for controlling of temperature of fresh concrete to less than 25 degree centigrade using ice, including all related arrangements for providing, storing and mixing of ice with water, cooling of aggregates etc. All complete as per specification, drawing and instruction of engineer in charge.	CUM	6463.00	₹ -	₹ -	0.885883579
210	Extra over ST Nos. 205 to 207 for conducting UPV test for concrete at all levels including all equipments, making necessary arrangements, staging, submission of report etc. all complete as directed by engineer in charge and as per specification.	CUM	1293.35	₹ -	₹ -	0.053413882
211	Providing and encasing of structural steel member with concrete using nominial aggregate size of 12.5mm down. Encased member shall be wrapped with welded wire mesh/chicken wire mesh with proper lap etc. complete as per specification for the following grades.					
a	M 20	CUM	6.00	₹ -	₹ -	0.002452307
b	M 25	CUM	6.00	₹ -	₹ -	0.002452307
Ac	M 30	CUM	665.40	₹ -	₹ -	0.271960888
212	Screed concrete conforming to IS 456 with sand and graded hard stone aggregate 12.5mm/6 mm nominal size on the roof upto 10m level above finished floor level (For height greater than 10m from FFL, extra over for					

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)		Amount (INR)= Rate * Quantity		Weightage in %
	additional height to be paid in Item No 225) or thickness, drains etc. complete as per following.							
a	1:2:4	CUM	196.19	₹	-	₹	-	0.080187386
b	1:1.5:3	CUM	6.00	₹	-	₹	-	0.002452307
A213	Providing and laying Design Mix cement concrete as per IS:456 & IS 10262-2009 for reinforced concrete works using graded aggregate for Concrete in precast works like roof slabs/trench covers, fins, lintels, chajas, beams, columns, wall panels, facias etc.at all levels in all kinds of work including formwork/moulds, curing, rendering the top exposed surface with cement sand mortar (1:3), handling, storing, transpoting, all leads, erection without damage, setting in position with cement sand mortar (1:3), filling the gaps between adjacent preacast units with M30 grade concrete or cement sand mortar (1:3) and including making of holes for bolts for fixing, welding etc.complete with graded aggregate (20/12.5/10 mm) and as per specification and drawing for following grades.							
b	M25	CUM	6.00	₹	-	₹	-	0.004856907
С	M30	CUM	45.00	₹		₹	-	0.036597697
214	Providing and laying Design Mix cement concrete as per IS:456, IS 3370 & IS 10262-2009 for reinforced concrete works using graded aggregate for Concrete in water retaining/conveying structures including addition of high performance PCE-based BIS approved water reducing admixture of Type-G/F as per ASTMC-494 of approved make FOSROC/SIKA/BASF or Equivalent having minimum water reduction capability of 30% and suitable waterproofing cement additives to achieve a slump more than 125 mm in concrete as per							

ST. No.	Item Description	UOM	Total Quantity	Qı W	tates= Total noted Price * /eightage /(nantity*100)		ount (INR)= * Quantity	Weightage in %
	manufacturers recommendation and conforming to limits of permeability as per IS 2545 and specification with 20 mm nominal size graded aggregate upto depth of 10m from FFL, (For depth greater than 10m from FFL, extra over for additional depth to be paid in Item No 224). for following grades. Watertightness is to be ensured including structural grouting if required.							
a	M25	CUM	11.00	₹	-	₹	-	0.005588541
b	M30	CUM	403.00	₹	-	₹	-	0.207565556
215	Dismantling concrete work for all types of structures at all levels including stacking of servicable material to a lead of 500 m and disposal of unservicable material upto a lead of 2 km, cutting of reinforcement, labour, equipment, safety precautions etc all complete as per drawings, specification and instructions of engineer in charge.							
a	Plain cement concrete of all grades	CUM	208.55	₹	-	₹	-	0.025468036
b	Reinforced cement concrete of all grades	CUM	465.84	₹	-	₹	-	0.086463048
216	Chipping of concrete in reinforced concrete work, cutting pockets, making openings at all levels and according to shapes, disposal of waste materials upto a lead of 2 km as directed by Engineer including equipment, safety precautions, making good the broken surface etc all complete as per specification, drawing, instructions of engineer in charge but excluding cutting of reinforcement.	CUDM	1779.18	₹	-	₹	-	0.015413582
217	Extra over and above St No 216 for cutting of reinforcement, all sizes and types including labour, equipment, return of cut reinforcement to store etc all complete as per specification, drawings and instructions	SQCM	366.67	₹	-	₹	-	0.000261087

ST. No.	Item Description	UOM Total Quoted Price * Quantity Weightage /(Quantity*100)		uoted Price * Veightage /(ount (INR)= e * Quantity	Weightage in %	
	of engineer in charge. Measurement shall be on the cross sectional area of reinforcement cut.							
218	Cutting Reinforced concrete with mechanised tools like Core drilling machine etc. for cutting pockets, holes, cores in slab, beam, column or foundation as per direction of engineer in charge.	CUDM	372.92	₹	-	₹	-	0.012834295
220	Providing & laying Plum cement concrete 1:3:6 with 75% graded metal of maximum size 40 mm and 25% plums of maximum size 150 mm.	CUM	10.00	₹	-	₹	-	0.003926967
222	Cutting of groove of 10mm X 40mm size with groove cutting machine in concrete paving all complete.	RM	50.00	₹	-	₹	-	0.000373827
223	Cutting of existing concrete/ RCC work inside control room/ pump house or anywhere inside boundary using power tools of (DD2E of HILTI/ BOSCH make) with low noise and dust including cutting reinforcements, removing the rubbish within a lead of 1 km, including making good the broken edges/ surface with cement mortar, painting, finishing to match with existing finishing, scaffolding/ supporting at any level, all complete and as directed by Engineer (measurements shall be taken as per cutting surface area).	SQM	10.00	₹	-	₹	-	0.003273066
225	Extra over item no. 206 and 212 for height above FFL (Finished Floor Level) as per following:							
a	Height exceeding 10m from FFL but not exceeding 20m	CUM	1470.00	₹	-	₹	-	0.063326352
b	Height exceeding 20m from FFL but not exceeding 30m	CUM	3115.00	₹	-	₹	-	0.241396931
С	Height exceeding 30m from FFL but not exceeding 40m	CUM	115.00	₹	-	₹	-	0.011887116
d	Height exceeding 40m from FFL but not exceeding 50m	CUM	75.00	₹	-	₹	-	0.009043061
е	Height exceeding 50m from FFL but not exceeding 60m	CUM	30.00	₹	-	₹	-	0.003877124
300	FORMWORK: Providing, fixing and removing formwork at all elevations for all structures, as per specifications and including all labour, material,							

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
	scaffoldings and centereing etc. complete as per drawing, specifications and as per direction of engineer in charge for the following.					
301	Fairface form work with good quality water proof ply wood of minimum 12mm thickness and smooth surface below finished ground floor level for foundations, footings, base of columns, walls, columns, pilasters, beams & slabs(for which scaffolding work not required for vertical support of bottom face of formwork), mass concrete, trenches, grade slab, paving etc.including chamfering of edges as per drawing, specification and instruction of engineer in charge.					
a	Upto Depth 10m From FGL	SQM	15650.00	₹ -	₹ -	1.111575607
b	Depth exceeding 10m From FGL	SQM	1500.00	₹ -	₹ -	0.11743519
A301	Fairface form work with good quality water proof ply wood with Filmface of minimum 12mm thickness and smooth surface below finished ground floor level for foundations, footings, base of columns, walls, columns, pilasters, beams & slabs(for which scaffolding work not required for vertical support of bottom face of formwork), mass concrete, trenches, grade slab, paving etc.including chamfering of edges as per drawing, specification and instruction of engineer in charge.					
a	Upto Depth 10m From FGL	SQM	54588.20	₹ -	₹ -	4.071109083
302	Fairface form work with good quality water proof ply wood of minimum 12mm thickness and smooth surface above finished ground floor level for columns, beams, suspended/intermediate floors, roofs, lintels, cantilevers, staircases, landings, balconies, etc. including chamfering of edges as per drawing.for all heights as per specification, drawing and instruction of engineer in charge.					

ST. No.	Item Description	UOM	Total Quantity	Qu W	tates= Total noted Price * /eightage /(nantity*100)		ount (INR)= e * Quantity	Weightage in %
a	For Height Upto 20m from FGL	SQM	11385.00	₹	-	₹	-	0.974021564
b	For Height More Than 20m from FGL	SQM	1200.00	₹	-	₹	-	0.114070744
A302	Fairface form work with good quality water proof ply wood with Film face of minimum 12mm thickness and smooth surface above finished ground floor level for columns, beams, suspended/intermediate floors, roofs, lintels, cantilevers, staircases, landings, balconies, etc. including chamfering of edges as per drawing.for all heights as per specification, drawing and instruction of engineer in charge.							
a	For Height Upto 20m from FGL	SQM	20421.00	₹	-	₹	-	1.834432945
b	For Height More Than 20m from FGL	SQM	1000.00	₹	-	₹	-	0.099811901
304	Providing, fixing and removing formwork in block- outs/pockets and openings (below 0.1 sqm plan area) at all elevations including cutting, formation of all shapes and all other operations required for making the required shape and size all complete as per specification, drawing and instruction of engineer in charge.							
a	Upto 150 mm depth	Each	179.00	₹	-	₹	-	0.005268236
b	Pockets of depths more than 150mm and upto 300 mm depth	Each	158.00	₹	-	₹	-	0.007669038
С	Pockets of depths more than 300mm and upto 600 mm depth	Each	90.00	₹	-	₹	-	0.007722205
d	Pockets of depths more than 600mm and upto 1000 mm depth	Each	60.00	₹	-	₹	-	0.008017706
e	Pockets of depths more than 1000mm and upto 1500 mm depth	Each	70.00	₹	-	₹	-	0.013432863
f	Pockets of depths more than 1500mm and upto 2000 mm depth	Each	20.00	₹	-	₹	-	0.00506269
400	REINFORCEMENT WORK : Reinforcement work including all labour, material (unless otherwise							

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
	specified in BOQ/contract specification), equipment, transportation, handling etc at all level as per specification, drawings and as directed by engineer in - charge.					
403	Transportation, straightening, cutting, bending, placing in position at any level, binding in position of steel reinforcements of TMT steel of grade Fe-500D or 500EQR or HCRM or any other Grade confirming to IS:1786 including cost of binding wire, labour, scaffolding, transportation to & from stores etc complete all as per specifications, drawings and as directed by Engineer. Note: TMT Steel shall be issued free of cost by BHEL.	MT	7658.00	₹ -	₹ -	9.542566002
405	Providing & fixing of Rebar in existing concrete surface by inserting reinforcemnet bar with Epoxy based suitable bonding compound of Hilti or equivalent make (HIT-RE-500 of Hilti or equivalent make) for interconnection of new R.C. structure with existing R.C. structure. Depth of drilled hole should be suitable to develop maximum recommended strength as per approved manufacturer's recommendation. This item includes supply of all materials including bonding chemicals, T&P required to execute the work, cost of all labour, transportation of chemical, staging to reach work place etc. all complete as directed by Engineer - in - Charge. Random Pull out non destructive test as directed by engineer shall beconducted to ensure strength of bond and same is included in this item. Note: Reinforcement bars shall be paid separately under item no. 403.					
а	12mm Reinforcement bar	Nos.	70.00	₹ -	₹ -	0.003563821
a b	16mm Reinforcement bar	Nos.	65.00	₹ -	₹ -	0.005303021

ST. No.	Item Description	UOM	Total Quantity	Qı W	tates= Total noted Price * Veightage /(nantity*100)		ount (INR)= * Quantity	Weightage in %
С	20mm Reinforcement bar	Nos.	65.00	₹	-	₹	-	0.007258778
d	25mm Reinforcement bar	Nos.	50.00	₹	-	₹	-	0.006979594
e	28mm Reinforcement bar	Nos.	50.00	₹	-	₹	-	0.007817145
406	Supply and fixing reinforcement bar couplers (of approved manufacturer's as per the relevant IS code) in position for steel reinforcements of TMT steel of grade Fe-500D or 500EQR or any other Grade confirming to IS:1786 including, labour, scaffolding, transportation to & from stores etc complete all as per specifications, drawings and as directed by Engineer. Note: Supply of Reinforcement bar couplers is in contractor's scope.							
a	12mm dia	Nos.	22.00	₹	-	₹	-	0.000172317
b	16mm dia	Nos.	22.00	₹	-	₹	-	0.000237588
С	20mm dia	Nos.	22.00	₹	-	₹	-	0.000295027
d	25mm dia	Nos.	22.00	₹	-	₹	-	0.000407294
е	28mm dia	Nos.	20.00	₹	-	₹	-	0.000574389
500	Roof Treatment works: Roof treatment works including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling, curing, sampling, testing etc at all level as per specification, drawings and as directed by engineer - in - charge.							
501	Providing and laying underbed/topping grading plaster with cement mortar 1:4 (1 cement : 4 sand) and average thickness of 25 mm including preparation of surface, batching, mixing, leveling etc. all complete. Note: Cement will be issued free of cost by BHEL.	SQM	30.00	₹	-	₹	-	0.000840221

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
502	Providing and laying underbed/topping grading plaster with cement mortar 1:4 (1 cement : 4 sand) and average thickness of 15 mm including preparation of surface, batching, mixing, leveling etc all complete. Note: Cement will be issued free of cost by BHEL.	SQM	10744.70	₹ -	₹ -	0.179793472
506	Providing and applying PU based water proofing treatment with one coat of polyurethane or any other equivalent material based primer with an application rate of minimum 6 sq.m per litre and two successive liquid coatings of high solids content urethane prepolymers or equivalent material based finish coats as per relevant IS/ASTM standards to form an elastomeric membrane with overall dry film thickness 1.5 mm subject to minimum 500 gm/sqm/coat application rate. Item includes surface preparation, polyscrim cloth /fabric, polymerised mortar base preparation, etc all complete as per specifications and directions of engineer in charge.	SQM	2288.00	₹ -	₹ -	0.297595997
A506	Providing and applying PU based high solid content (minimum 90%) of approved make water proofing treatment with one coat of polyurethane or any other equivalent material based primer with an application rate of minimum 6 sq.m per litre and two successive liquid coatings of high solids content urethane prepolymers or equivalent material based finish coats as per relevant IS/ASTM standards to form an elastomeric membrane with overall dry film thickness 1.5 mm subject to minimum 500 gm/sqm/coat application rate. Item includes surface preparation. The coating shall have high viscosity, min. 400% elongation and forming a perfectly smooth permanently flexible seamless	SQM	8456.70	₹ -	₹ -	1.099947583

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
	membrane which should have good adhesion to roof substrates. The cured film should have a very low water absorption rate (0.5% maximum at ambient temperature after 7 days), reinforcing layer of polyscrim cloth (non woven polyscrim cloth of 100% polyester with min. weight of 40gsm/sqm) or geo-textile non woven polyster (120-150 gsm), polymerised mastic base preparation, primer, making of fillets, cleaning & preparation of surface, vaccum removal of loose sand, expansion joints & sealing at suitable intervals, application by using a pneumatic machine as per manufactures recommendations, etc. all complete as per specifications, drawings and direction of engineer in charge. The application of waterproofing treatment shall be carried by authorised applicator of approved Manufacturer of Waterproofing materials.					
507	Providing and laying wearing course consisting of 25mm thick plain cement concrete of grade M15 (1:2:4) with graded aggregate of 12.5mm size cast in panels of maximum size 1.2mx1.2m and reinforced with 0.56 mm dia. galvanised chicken wire mesh and sealing of joints (in grooves of 6mm X 6mm) using silicon /elastomeric compound etc all complete. Note: Cement will be issued free of cost by BHEL.	SQM	2288.00	₹ -	₹ -	0.219938648
A507	Providing and laying wearing course consisting of 20 mm thick plain cement mortar 1:4 (1 cement : 4 sand)) cast in panels of maximum size 1.2mx1.2m and reinforced with 0.56 mm dia. galvanised chicken wire mesh and sealing of joints (in grooves of 6mm X 6mm) using silicon /elastomeric compound etc all complete. Note: Cement will be issued free of cost by BHEL.	SQM	8456.70	₹ -	₹ -	0.337099812

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
A508	Providing and laying pressed precast concrete tiles of 20 mm thickness and size 600x600 mm conforming to IS 13801 with 20 mm thick 1:4 cement mortar over the top most layer of roofing treatment with fine joints including sealing of joints (polysulphide/silicon/elastomeric sealant) etc all complete. Note: Cement will be issued by BHEL free of cost for cement mortar only.	SQM	2288.00	₹ -	₹ -	0.127890251
A510	Providing and laying cement concrete chequered roof / floor tiles of 22 mm thickness and size min. 200x200 mm conforming to IS 13801 with 8 mm thick 1:4 cement mortar over the top most layer of roofing treatment in pathway or entire area with fine joints including sealing of joints (silicon/elastomeric sealant) and providing expansion gap in both directions including underbed (as per drawings) filled up with (silicon/elastomeric) joint sealant etc all complete. (including cost of cement for tiles making). Note: Cement will be issued by BHEL free of cost for cement mortar only.	SQM	2035.56	₹ -	₹ -	0.26596944
B510	Providing and laying cement concrete chequered flooring tiles of 22 mm thickness and size 300x300 mm conforming to IS 13801 with 20 mm thick 1:4 cement mortar over the top most layer of roofing treatment in pathway or entire area with fine joints including sealing of joints (silicon/elastomeric sealant) and providing expansion gap in both directions including underbed(as per drawings) filled up with (silicon/elastomeric) joint sealant etc all complete. (including cost of cement for tiles making) Note: Cement will be issued by BHEL free of cost for cement mortar only.	SQM	458.00	₹ -	₹ -	0.032992459

ST. No.	Item Description	UOM	Total Quantity	Qu W	ates= Total oted Price * eightage /(antity*100)		nt (INR)= Quantity	Weightage in %
A511	Providing and applying two coats of bitumen paint of minimum 150 micron DFT with suitable primer, conforming to IS 9862 with 1% antistripping compound conforming to IS 6241 in foundation, wall, column etc on concrete surfaces including surface preparation etc. all complete.	SQM	1230.00	₹	-	₹	-	0.024833991
513	Providing and mixing water proofing compound conforming to IS:2645 in concrete or cement mortar all complete.	KG	28.00	₹	-	₹	-	0.000382135
600	JOINTS AND FILLERS: Joints & fillers including all labour, material, equipment, transportation, handling etc at all level as per specification, drawings and as directed by engineer - in - charge.							
601	Supplying & installation of bitumen impregnated fibre board confirming to IS 1838 as joint filler at joints in concrete including nailing, coating of both faces with coal tar pitch/bitumin etc. all complete.							
a	12 mm wide joints.	SQM	43.00	₹	-	₹	-	0.003041412
b	20 mm wide joints.	SQM	27.00	₹	-	₹	-	0.002800501
С	25 mm wide joints	SQM	625.70	₹	-	₹	-	0.07863622
d	50 mm wide joints	SQM	400.00	₹	-	₹	-	0.096174501
A602	Providing and applying polysulphide based sealant conforming to IS:12118 in expansion joints in concrete including cleaning of joints, raking out groove, application of primer, scaffolding etc. all complete for following size grooves:	-						
С	25mmX25mm	RM	654.50	₹	-	₹	-	0.031922056
603	Providing and applying polysulphide based sealant conforming to IS:12118 in expansion joints in concrete including cleaning of joints, raking out groove, application of primer, scaffolding etc. all complete for							

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)		Amount (INR)= Rate * Quantity		Weightage in %
	following size grooves (10 mm thick backer rod to be paid separatly):							
a	25mmX25mm groov size	RM	213.00	₹	-	₹	-	0.010717808
b	50mmX25mm groove size	RM	57.00	₹	-	₹	-	0.005249248
Ac	20mmX25mm groove size	RM	2108.00	₹	-	₹	-	0.081254447
604	Supplying and filling in position hot applied bitumin sealing compund (Grade A) confirming to IS 1834 including cleaning, mixing, heating, pouring/injecting sealing compound in gaps in joints including application of primer etc. all complete.							
a	10mm X 40mm	RM	33.00	₹	-	₹	-	0.000191898
b	12mm X 25mm	RM	257.00	₹	-	₹	-	0.00137248
С	20mmX25mm	RM	127.00	₹	-	₹	-	0.000813876
A605	Supply and installation of Polystyrene flexible board confirming to IS 4671 (type-1), 20 Kg/Cum. as joint filler at joint of concrete including nailing, coating of both faces with coal tar pitch /butimen etc. all complete.							
a	100 mm thick	SQM	600.00	₹	-	₹	-	0.156643626
610	Providing and fixing PVC water stops in joints conforming to IS 12200 & IS 15058 all complete for the following: (Bulb or Kicker type)	·						
d	230 mm wide and 6 mm thick	RM	358.00	₹	-	₹	-	0.00875207
615	Providing and fixing 300 mm wide Stainless steel strips over expansion joints with minimum lap of 50mm length including stainless steel screws, rawl plugs etc. all complete.	Kg	50.00	₹	-	₹	-	0.003595863
700	MS EMBEDMENTS: Embedments including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling etc. at all level as per							

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
	specification, drawings and as directed by engineer - in - charge.					
701	Supply, fabricating and fixing of mild steel embedments, inserts, pipe sleeves, angle pieces, rungs of various diameters, plates of dimensions as required etc. including welding, bolting, cutting, drilling, scaffolding, setting etc. all complete.	МТ	55.75	₹ -	₹ -	0.650705029
702	Supply, Fabrication, transportation, delivery at site and erection, installation and alignment of mild steel foundation bolt assembly conforming to IS:2062 and grade 1 of IS:432 in concrete along with nuts, lock nuts (as per IS:1363, 1364 and IS:3138), washers, anchor plates, stiffner plates, protective tape, pipe sleeves, templates etc. including welding, cutting, grinding, threading, drilling etc. all complete.	МТ	10.00	₹ -	₹ -	0.142446019
703	Same as above items 701 & 702 with BHEL supplied material free of cost including loading, transportation, unloading etc. all complete from BHEL store to plant site.					
A	Mild steel embedments, inserts, pipe sleeves, angle pieces, rungs of various diameters, plates of dimensions as required etc.	МТ	20.00	₹ -	₹ -	0.056926191
В	Mild steel foundation bolt assembly conforming to IS:2062 and grade 1 of IS:432 in concrete along with nuts, lock nuts (as per IS:1363, 1364 and IS:3138), washers, anchor plates, stiffner plates, protective tape, pipe sleeves, templates etc.	MT	135.00	₹ -	₹ -	0.4186172
704	Supplying, fabricating, erecting and installing following items in concrete/brickwall for all kind of works, including setting material in concrete, layout, scaffoling, cutting, forming, grinding, drilling, bolting, welding, jointing, testing etc. all complete.	,	272.26			
a	MS pipes of all diameters	kg	272.00	₹ -	₹ -	0.002614655

ST. No.	Item Description	UOM	Total Quantity	Qı W	tates= Total noted Price * /eightage /(nantity*100)		ount (INR)= * Quantity	Weightage in %
b	PVC pipes / conduits of all diameters	kg	122.00	₹	-	₹	-	0.005516267
С	UPVC pipes / conduits of all diameters	kg	100.00	₹	-	₹	-	0.005138643
d	Expansion anchor fasteners (galvanised) of HILTI make(HUD-1 Universal Fastners) or equivalent of safe tensile capacity as specified below for brick work with expansion sleeve of A6 polyamide:							
i	8mm Dia	Nos	40.00	₹	-	₹	-	0.000261086
ii	10mm Dia	Nos	40.00	₹	-	₹	-	0.000289568
iii	12mm Dia	Nos	40.00	₹	-	₹	-	0.000327544
iv	14mm Dia	Nos	20.00	₹	-	₹	-	0.000201748
e	Expansion fasteners (mechanical galvanised) of HILTI make or equivalent of safe tensile capacity as specified below for concrete work with expansion sleeve of stainless steel:							
i	HST M8	Nos	40.00	₹	-	₹	-	0.000973138
ii	HST M10	Nos	40.00	₹	-	₹	-	0.001286441
iii	HST M12	Nos	40.00	₹	-	₹	-	0.001998493
iv	HST M16	Nos	20.00	₹	-	₹	-	0.001813359
v	HST M20	Nos	20.00	₹	-	₹	-	0.003681309
vi	HST M24	Nos	20.00	₹	-	₹	-	0.006598349
f	Chemical Expansion fasteners (galvanised)of HILTI make or equivalent of safe tensile capacity as specified below for concrete work with anchoring rod,nuts,washers,chemicals all complete,etc:							
i	HAS-E5.8 M8	Nos	20.00	₹	-	₹	-	0.000806992
ii	HAS-E5.8 M10	Nos	20.00	₹	-	₹	-	0.000937535
iii	HAS-E5.8 M12	Nos	20.00	₹	-	₹	-	0.001179633
iv	HAS-E5.8 M16	Nos	20.00	₹	-	₹	-	0.002200241
v	HAS-E5.8 M20	Nos	20.00	₹	-	₹	-	0.003427344
vi	HAS-E5.8 M24	Nos	20.00	₹	-	₹	-	0.005473307

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
707	Providing, laying and fixing rails(52kg/rm) and guide rails in concrete for transformer, rail track including cutting of rails, joining of rails, anchoring lugs etc all complete.	МТ	2.00	₹ -	₹ -	0.020564302
800	GROUTING: Grouting including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, roughening surface, cleaning, ramming, curing etc. at all level, drawings and as directed by engineer - in - charge. Note: Cement will be issued by BHEL free of cost.					
801	Providing & grouting with cement slurry mix of approved ratio using pressure pump for water retaining concrete structures as per approved procedure including cost of nipples/ nozzles, cement, admixture, curing, pressure pumps, slurry agitator etc. all complete. Cost shall include fixing of nipples at maximum 500 mm centre to centre spacing, cutting of nipples after completing of grouting, making good of the nipple hole with appropriate non-shrink cement paste, water tightness test etc. all complete wherever specified in the drawing.	SQM	4.00	₹ -	₹ -	0.000320423
802	Providing & grouting of pocket holes, pipe sleeves under base plates, machinery, pipe supporting structures etc. with mix 1:1 (1 cement:1 sand) using non shrink admixture etc. all Complete.	CUM	5.00	₹ -	₹ -	0.013621556
803	Providing & grouting of pocket holes, pipe sleeves and under base plate of structural steel work/ machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing etc. all complete with mix 1:1:2 (1 cement: 1 coarse sand: 2 aggregate of 6 mm down graded stonechips) using non shrink admixture as per specification, drawing and direction of engineer-in-	СИМ	20.00	₹ -	₹ -	0.052820024

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
	charge. (Cost of all material and cleaning the pocket by compressed air shall be in the scope of the contractor).					
804	Providing & grouting of pocket holes, pipe sleeves and under base plates of structural steel work/ machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing etc. all complete with Conbextra GP-1 or equivalent as per specification, drawing and direction of engineer-in-charge. (Cost of all material and cleaning of the pockets by compressed air shall be in the scope of the contractor.	CUM	71.00	₹ -	₹ -	0.368441501
805	Providing & grouting of pocket holes, pipe sleeves and under base plates of structural steel work/ machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing, etc. all complete with Conbextra GP-2 or equivalent as per specification, drawing and direction of engineer-in-charge. (Cost of all material and cleaning of the pockets by compressed air shall be in the scope of the contractor).	CUM	20.00	₹ -	₹ -	0.113543825
A807	Providing on the outer surface of walls, frames, rafts and roof slabs coming in contact with earth, Polymer modified cementitious coating in two layers as specified and as per manufacturer's specifications shall be provided directly on the concrete surface	SQM	254.00	₹ -	₹ -	0.007924435
A808	Providing 50 mm thick P. C. C. (1:2:4 with 10 mm nominal size stone aggregates) under the raft i.e. over the lean concrete, followed by polymer modified cementitious coating in two layers (slurry mix application) as per manufacturer's specification. And 50 mm thick P. C. C. (1:2:4) with 10 mm nominal size stone aggregates shall then be laid over the polymer	SQM	254.00	₹ -	₹ -	0.007131991

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
	modified cementitious coating before laying the raft. Note: P.C.C. (1:2:4) shall be paid separately under applicable BOQ Item.					
A809	Providing Chemical Injection Grouting with Minimum, 12 mm dia (NB) threaded nozzle of suitable length over the surface and along the construction joint line in a grid pattern at a spacing not exceeding 1.5m c/c before concreting operation After the nozzles are fully set, neat cement slurry admixed with water soluble non-shrink polymer / monomer based chemical shall be injected through the net - work of nozzles with low pressure grout pumps at a pressure of about 2.0 Kg/Sqcm. Cement slurry shall be prepared by mixing cement with non-shrink polymer/monomer @ 500 gm/50 kg bag of cement and water, ensuring that Water: Cement ratio does not exceed 2 (by weight). Wetter the structure, lesser should be the water cement ratio. The property of the polymer/monomer should be such that when it is mixed with water @ 0.5% by weight of water, the viscosity of the resultant solution (water and polymer/monomer) should not be more than 1.2 centipoises. Plasticizing agent shall be added wherever required. The grouting shall be started at very low pressure and increased gradually to a required pressure. The grouting shall continue, till the hole refuses to take any further grout, even at an increased pressure. Applied pressure shall not be more than the designed strength of the concrete. After completion of grouting operation, the nozzles shall be sealed properly to the satisfaction of the Engineer.	SQM	304.00	₹ -	₹ -	0.021816307

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
900	DOORS & WINDOWS: Doors, windows, ventilators, louvers, roof ventilators, rolling shutters, partitions including all labour, material (unless otherwise specified in BOQ/contract specification), equipments, transportation, handling, preparation of working drawings etc. at all level as per specification, drawings and as directed by engineerin-charge.					
904	Providing and fixing single or double steel door shutters with 45mm thk flush design shutter comprising of two outer sheets of 18 gauge steel sheets rigidly connected and reinforced inside with continuous vertical 20 gauge stiffeners, spot welded in position at not more than 150mm on centres including void filled with mineral wool (density as per specification), all fittings, Godrej or equivalent make mortice lock with handle on both sides, side, top & bottom edges of shutter shall be reinforced by continous pressed steel chanel with min 18G, shop and final painting etc all complete.	SQM	49.00	₹ -	₹ -	0.046264872
A904	Providing and fixing single or double steel door shutters with 35mm (min) thk flush design shutter comprising of two outer sheets of 18 gauge steel sheets rigidly connected and reinforced inside with continuous vertical 20 gauge stiffeners, spot welded in position at not more than 150mm on centres including void filled with mineral wool (density as per specification), all fittings, Godrej or equivalent make mortice lock with handle on both sides, shop and final painting etc all complete.	SQM	75.50	₹ -	₹ -	0.069519029

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
906	Providing and fixing anodized extruded aluminium doors (single or double shutter) conforming to IS:1948, IS:1949 fabricated from extruded sections of HINDALCO/JINDAL or equivalent make having minimum 3mm wall thickness as per IS:1285, IS:733 and anodized and electro color coating of required shade as per IS 1868 (minimum anodized coating of grade AC15). fixed with rawl plugs, expansion fasteners,SS screws / fixing clips necessary filling of gaps at Junctions, at top, bottom & sides with required PVC / neoprene felt for bimetallic protection etc. Glazing shall be clear float glass of 6mm thickness including snap fit type beading, concealed screws, fixtures, Godrej or equivalent make Mortice lock with handle on both sides, etc all complete. Aluminium section shall be smooth, free of stains, straight, mitred & jointed mechanically wherever required. (Glazing shall be paid separately)	KG	55.00	₹ -	₹ -	0.002884998
907	Providing and fixing fire proof steel doors (single or double shutter) with vision panel, panic devices shall be 45mm thk flush design comprising of two outer sheets of 18 gauge steel sheets rigidly connected and reinforced inside with continuous vertical 20 gauge stiffeners, spot welded in position at not more than 150mm on centers including all fittings, shop painting with approved post office/signal red color fire resistant paint and mineral wool insulation (64 kg/cum density) complete and shall be fire proof as per IS:3614, NBC 2016 & TAC requirements and as per specification. Vision panel shall be provided with interlayered fire rated glass. Minimum ratings shall be 2 Hrs.	SQM	183.80	₹ -	₹ -	0.20261658

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
B907	Providing and fixing automatically closing fire proof steel flush doors along with frame of minimum 44mm thk flush shutter design comprising of two outer sheets of 18 gauge steel sheets rigidly connected and reinforced inside with continuous vertical 20 gauge stiffeners, spot welded in position at not more than 150mm center to center of approved make conforming to IS: 3614 (part 1) & tested to IS/ISO 3008,satisfying LPA regulations and shall carry a unique label with certification/test report number,fire rating embossment, fixed at all elevations, with or without removable panels,with panic bar,panic trim with following fire rating using galvanised MS sheets for frames conforming to IS 277, made out of minimum 1.6mm (16 SWG) for both frame and shutter, G.I. sheet (min.zinc coating 120 gsm), and leaves, mineral wool / PUF/ any other fire retardant insulation material filled with required density, mastic caulking and grouting the frame, reinforcing and insulating the shutters with fire retardant material, with panic devices, including all fittings, fire rated vision glass, shop painting with approved post office/signal red color fire resistant paint and mineral wool insulation (min.64 kg/cum density) complete and shall be fire proof as per IS:3614, LPA requirements and as per specification.Shop drawings shall be submitted by the fabricator/manufacturer for approval before exectuion Minimum ratings shall be 2 Hrs. All hardware fittings shall be fire rated.	SQM	28.40	₹ -	₹ -	0.059064222
908	Providing and fixing steel windows/ventilator with steel sections as per IS:1038, IS:1361 & IS:7452 latest revision including all fittings, metal beadings, hold fasts,					

ST. No.	Item Description	UOM	Total Quantity	Qu W	ates= Total noted Price * /eightage /(nantity*100)		ount (INR)= * Quantity	Weightage in %
	shop and final painting ,glazing etc. all complete. (Glazing shall be paid separately)							
a	Openable type	SQM	783.00	₹	-	₹	-	0.252192471
b	fixed type	SQM	315.00	₹	-	₹	-	0.067214156
909	Providing and fixing anodised aluminium work of Jindal, Hindalco or other equivalent approved make for door frames, windows, ventillators, partitions, railing etc with extruded standard tubular and other sections including all fittings & fixtures and accessories of approved make conforming to IS733 and IS1285, anodised and electro color dyed to required shade according to IS 1868 (minimum anodic coating of grade AC15), fixed with rawl plugs, expansion fasteners, SS screws or with fixing clips, including necessary filling of gaps at junctions, at top, bottom and sides with required PVC/neoprene felt for bi-metalic protection etc. including preperation of working drawings, aluminium cleat angle, aluminium snap-on-beading for glazing/panelling, stair case tread nosing, with all fittings and fixtures (like tower bolts, handles, door stopper with rubber shoes, 'L' drops, stays, floor springs, hydraulic door closures etc.), CP brass/stailess steel screws, providing and fixing hinges/pivots, and making provision for fixing of fitting wherever required including cost of PVC/neoprene gasket, all complete as per drawing, specification and instructions of engineer in charge (Glazing and panelling shall be paid seperately). Weight of aluminium section only shall be measure.	Kg	13310.20	₹	-	₹	-	0.900367786
910	Providing and fixing of aluminium composite panel(ACP) of following thickness with PVDF or polyester coating for interior partition of approved shade ,color etc all complete as per specification.							

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
A910	Providing, fabricating, designing, supplying and fixing of Aluminium composite panel cladding (ACP) in pan shape in solid or metallic colour of approved shades made out of 4mm thick aluminium composite panel (weight of panel should be 8.1 kg/sqmt) material consisting of 3mm thick FR grade Class A2 as per EN 13501,mineral core sandwiched between two Aluminium sheets (each 0.5mm thick). The aluminium composite panel cladding sheet shall be coil coated, with Kynar 500 based PVDF conforming to AAMA 2605 or Lumiflon based fluoropolymer resin coating of approved colour and shade on face # 1 and polymer (Service) coating on face # 2 as specified using stainless steel screws, nuts, bolts, washers, cleats, weather silicone sealant, backer rods etc. The top coated surface of ACP shall comply with the "specification for coated coil for the exterior building application" issued by ECCA (European Coil Coating Association). The aluminium composite panel top and bottom skin should conform to Aluminium Alloy 5005 (AlMg 1) marine grade series and H 22/24 temper with mechanical properties confirming to EN 485-2 standard. The ACP product must conform to either BS 476 part 6 & 7 or ASTM E 84 standards along with EN-13501-1. The manufacturer must furnish Class 1A certificate for this ACP produced in the plant from which it is going to be supplied. The panel shall be designed for 12mm groove in horizontal & in verticals with close joint system. Vertical & Horizontal groove shall be filled by non-staining high performance weather sealant. ACP panel shall have sub frame all around panel and aluminium stiffener profile as per structural requirements. The finished surface of ACP shall be	SQM	1500.00	₹ -	₹ -	0.615042108

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
 	protected with a self-adhesive (Rubber based) peel off					
	foil with 70 microns thickness white or black, tested to					
	withstand up to 6 months' exposure to local weather					
	condition without losing the original peel off					
	characteristic or causing stain or other damages on the					
	coated surface of the aluminium composite panel.					
	Installation of ACP Coping/facia at terrace level sealing					
	the top gap of the parapet wall and ACP Panel shall have					
	GI stiffeners below with required aluminium grid work					
	with necessary MS HDG / aluminium alloy brackets & SS					
	fasteners.2nd barrier of 1mm thk GI sheet laid					
	continuously below the copping to seal the parapet wall.					
	Overlap of GI sheet shall be properly sealed with weather					
	sealant, All shade approval shall be as per Architect's					
	Approval.as per approved sample from Alucobond Plus,					
	Aludecor, Alpolic or equivalent. The system shall be					
	designed to withstand a wind pressure of 200kg/Sqm or					
	as per design requirement and shall be fixed to the					
	Masonry/RC walls or aluminium frame with necessary					
	clamps, brackets and anchor fasteners etc. All clamps					
	and brackets shall be Hot dip galvanized minimum 80					
	microns thick and shall conform to IS: 4759-1996. The					
	extruded aluminium section shall be anodized in					
	approved colour with a anodic coating of minimum 20					
	microns. Extruded section shall be 6063 T5 or T6 alloy					
	conforming to ASTM B221. Any other festering straps,					
	nuts, bolts, rivets, washers, etc. shall be in stainless steel					
	SS316 grade. EPDM gaskets, open cell polyethylene					
	backer rods, weather sealant etc. shall be provided as per					
	requirement. Item shall include aluminium base frame					
	with all fixing arrangements to wall/RC members,					
	fastening material and hardware(festering straps, nuts,					
	bolts, rivets, washers etc.), EPDM gaskets, open cell					

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
	polyethylene backer rods, weather sealant, scaffolding, approach to all height, material handling, transportation, labour, T&P, preparation of working drawings etc.all complete as per drawing, specification & instructions of engineer in charge. Measurement of payment shall be outer finished area of ACP panel.The contractor shall provide the material cutsheet/ declaration from manufacturer mentioning the recycled content used in maufacturer of ACP.					
911	Providing and fixing of door closers as per IS 3564, of approved make & quality all complete of following type:					
a	Over head hydraulic door closures	Each	4.00	₹ -	₹ -	0.001030102
b	Floor mounted Hydraulic door closers	Each	4.00	₹ -	₹ -	0.001463979
A912	Providing and fixing pressed steel frames(complying general requirements of IS 4531) fabricated from 1.2 mm thick M.S sheet mortised, reinforced drilled and tapped for hinges and locks bolts strikes, hold fasts adjustable floor anchors, floor tiles/weather bars paintings etc all complete as per specifications.	Kg	2229.00	₹ -	₹ -	0.042908981
913	Providing and fixing in position rolling shutter of hot rolled double dipped galvanised steel lath section of 18 SWG tested mild steel strips at 75mm rolling centres interlocked together through their entire length and jointed together at the end by end locks mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation including wire springs, top cover, primer & shop coats of approved enamel paint etc, all complete as per IS 6248 and specification of approved make of following types: The bottom lath shall be coupled to a lock plate fabricated from 3mm thick					

ST. No.	Item Description	UOM	Total Quantity	Qu W	tates= Total noted Price * Veightage /(nantity*100)	Amount (INR)= Rate * Quantity	WAIGHTAGA IN Va
	galvanised steel plate and securely rivetted with stiffening angles.(partly coiled and lath/full lath).						
b	Mechanically Operated	SQM	10.00	₹	-	₹ -	0.004177372
С	Electrically operated	SQM	97.00	₹	-	₹ -	0.04799148
A913	Providing and fixing in position rolling shutter of hot rolled double dipped galvanised steel lath section of 18 SWG tested mild steel strips at 75mm rolling centres interlocked together through their entire length and jointed together at the end by end locks mounted on specially designed pipe shaft with brackets, side guides of 75mm wide and 3mm thick(min.) and arrangements for inside and outside locking with push and pull operation including wire springs, top/hood cover 0.9mm thick (min.), factory galvanized, primed & field painted, partly grilled (as required) with approved enamel paint etc, all complete as per IS 6248 and specification of approved make of following types: The bottom lath shall be coupled to a lock plate fabricated from 3mm thick galvanised steel plate and securely rivetted with stiffening angles.(partly coiled and lath/full lath).						
С	Electrically & Mechanically operated	SQM	367.00	₹	-	₹ -	0.27022378
915	Providing, fixing and fitting of glazing of first grade class in steel/aluminium/wooden frames, where ever required, cleaning after fixing including hardware, gaskets, clips, beadings etc. all complete.						
Ab	4 mm thick plain or tinted float glass	SQM	84.00	₹	-	₹ -	0.017983587
С	5.5 mm thick clear float glass	SQM	50.00	₹	-	₹ -	0.01102494
d	6 mm thick wired glass	SQM	135.00	₹	-	₹ -	0.033131783

ST. No.	Item Description	UOM	Total Quantity	Qu W	ates= Total oted Price * eightage /(antity*100)		unt (INR)= * Quantity	Weightage in %
h	6 mm thick clear toughened safety glass	SQM	933.00	₹	-	₹	-	0.275481558
Ah	6 mm thick clear toughened glass conforming to IS 5437	SQM	1062.40	₹	-	₹	-	0.310235404
AhB	8 mm thick clear toughened glass	SQM	129.60	₹	-	₹	-	0.046205572
AhC	8 mm thick clear toughened fire resistant glass	SQM	50.00	₹	-	₹	-	0.028622951
i	Two nos. 6 mm thick clear toughened float glass hermetically sealed and separated by 12 mm thick air gap for thermal insulation (only single elevation area to be measured)	SQM	20.00	₹	-	₹	-	0.008955242
I(b)	composite double glazing of fire resistant glass MIN.30 mm thick Hermetically sealed double glazed unit of one Fire resistant glass of min.14mm thick (outer side) clear, toughened, interlayered glass with 120 minute fire rated for both integrity & radiation control (EW 120) with symmetrical (Bi-Directional) fire protection and 6 mm thick toughened tinted glass (Inner side) with 10 mm air gap etc all complete as per specification.	SQM	55.00	₹	-	₹	-	0.037865268
917	Providing and fixing 12 mm thick BWP particle board, decorative veneer (prelaminated) on both sides, as panels in aluminium framed door shutter, fixed with necessary snap-on-beading etc. all complete (excluding aluminium works).	SQM	10.00	₹	-	₹	-	0.002093433
918	Providing and fixing steel louvered window with ISMC 100 frame all round including verticals with 18G pressed steel louvers, painting etc. all complete.	SQM	50.00	₹	-	₹	-	0.019943392
1000	BRICKWORK: Brickwork masonry including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling, scaffolding etc. at all levels as per specification, drawings and as directed by engineer - in - charge. Note: Cement will be issued free of cost by BHEL for cement mortar only.							

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
1001	Providing brick work in cement mortar 1:6 (1 part cement 6 parts coarse sand) in walls, chambers etc. in thickness varying from 230mm to 460mm at all depths, places and positions below plinth including raking out joints, curing, scaffolding etc. complete excluding plastering and painting.					
a	Using fly ash lime bricks confirming to IS 12894 with crushing strength of 75 kg/cm2(including cost of cement for brick making)	CUM	276.00	₹ -	₹ -	0.175268772
A1001	Providing brick work in cement mortar 1:6 (1 part cement 6 parts coarse sand) in walls, chambers etc. in thickness varying from 230mm to 460mm at all depths, places and positions below plinth including raking out joints, curing, scaffolding etc. complete excluding plastering and painting.					
a	Using table moulded/machine made fly ash lime bricks confirming to IS 12894 with crushing strength of 75 kg/cm2 and minimum percentage of fly ash 25% (including cost of cement for brick making)	CUM	170.00	₹ -	₹ -	0.107955403
1002	Providing brick work in cement mortar 1:6 (1 cement 6 coarse sand) in walls, chambers etc. in thickness 230mm upto 10m level above finished floor level (For height greater than 10m from FFL, extra over for additional height to be paid in Item No 1014), places and position above plinth including raking out joints, curing, scaffolding etc complete but excluding plastering and painting.					
a	Using fly ash lime bricks confirming to IS 12894 with crushing strength of 75 kg/cm2(including cost of cement for brick making)	CUM	2338.00	₹ -	₹ -	1.617886531
С	Using burnt clay bricks of class designation 7.5 of nominal dimension	CUM	40.00	₹ -	₹ -	0.031757523

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
A1002	Providing and laying Autoclaved Areated concrete blocks in cement mortar 1:6 (1 part cement 6 parts coarse sand) with suitable plasticizer, confirming to (IS: 2185 Pt- 3) in walls, chambers etc. in thickness 100mm to 300mm having oven dry density of 550kg/m3 to 650kg/m3, of minimum 30kg/sqm of compressive strength (other parameters as per specification), at all depths, places and positions below/above plinth including raking out joints in line with specification and as per approval of engineer in-charge, curing, scaffolding etc.complete excluding plastering and painting all complete as per specification and drawing. AAC masonry work shall conform to I.S 6041I.S - 1905.All other structural requirements like stiffening of masonry, joint reinforcement etc. Note: Cemet for making of AAC blocks is in the scope of contractor.	CUM	1230.00	₹ -	₹ -	0.903650453
1003	Providing brick work in cement mortar 1:4 (1 cement 4 coarse sand) in partition walls, chambers etc. in thickness 115mm upto 10m above finished floor level (For height greater than 10m from FFL, extra over for additional height to be paid in Item No 1015), places and position above or below plinth/graded level including providing two nos. 6 mm diameter MS bars at every third layer, raking out joints, curing, scaffolding etc complete excluding plastering and painting as per specification. (Reinforcement payment shall be made seperately as per applicable BOQ in 400 Series)					
a	Using fly ash lime bricks confirming to IS 12894 with crushing strength of 75 kg/cm2(including cost of cement for brick making)	SQM	62.60	₹ -	₹ -	0.006478155

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
A1003	Providing factory made composite modular light weight aerated concrete panels of minimum 2 hours of fire rating, consisting of two fiber reinforced cement sheets(min. 4 mm thick) on either side of light weight concrete core, having min. compressive strength of 35 Kg/Cm2 and density in the range of 700-900 Kg/Cu.M. to provide external wall and internal partition at all levels. The panels shall be fixed in position through toungue and groove jointing system by screwing the panels to top & bottom U channels(channels min. 1.25 mm thick and galvanized to min. grade 180 as per IS:277), fixing U profiled top & bottom channels to concrete/primary steel members which are placed at max vertical spacing of 4.5 M with the help of galvanized steel expansion fasteners, filling the joints from both faces with silicon acrylic paste and making the same water tight by covering with fiber glass tape(min. 50 mm wide & min. 0.5 mm thick) or by any other suitable material, so as to ensure that entire construction done is weather proof and panel surfaces are fush for painting, creating opening for doors/windows/ventilators/ducts/pipes/fans/AC etc. and finishing the opening with same U profiled galvanized steel channel which is used at top & bottom. The wall must be capable of sustaining wind pressure of 4.5 M height within limiting deflection of span/250.	SQM	700.00	₹ -	₹ -	0.15779086
1005	Breaking of existing brick work at all levels including plastering, removing the rubbish up to a distance of 500 m including transportation, loading, unloading etc. all complete as directed by the engineer.	CUM	58.36	₹ -	₹ -	0.01372618

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
1006	Providing and encasing of structural steel member with masonary work around flanges, webs etc. and filling the gap between steel and masonry by minimum 12mm thick mortar of 1:6 upto 10m level above finished floor level (For height greater than 10m from FFL, extra over for additional height to be paid in Item No 1014). Encased member shall be wrapped with chicken wire mesh with 50mm lap etc. complete as per specification. (Chicken wire mesh to paid separately)					
a	Using fly ash lime bricks confirming to IS 12894 with crushing strength of 75 kg/cm2(including cost of cement for brick making)	CUM	37.00	₹ -	₹ -	0.024277772
A1006	Providing and encasing of structural steel member with masonary work around flanges, webs etc. and filling the gap between steel and masonry by minimum 12mm thick mortar. Encased member shall be wrapped with chicken wire mesh with 50mm lap etc. complete as per specification. (Chicken wire mesh to paid separately)	CUM	10.00	₹ -	₹ -	0.006574958
1008	Making openings in existing brick wall or partition wall including making good the broken edges/surface with cement mortar 1:6 etc. complete.	CUM	20.92	₹ -	₹ -	0.005632627
1009	Supply and placing in position mild steel wire fabric(Chicken Wire Mesh) of square mesh 25 mm size and wire diameter of 2 mm for encasing of steel sections in concrete including cutting, bending, fixing etc. complete.	SQM	20.00	₹ -	₹ -	0.00050793
1010	Filling existing brick wall/ partition wall opening at all level including making good the broken edges/surface with cement mortar 1:6, painting, finishing to match with existing finishing, scaffolding/supporting at any level, removal of debris upto a lead of 1 km including loading, unloading, transportation etc. all complete.	SQM	1.00	₹ -	₹ -	0.000115352

ST. No.	Item Description	UOM	Total Quantity	Qu W	ates= Total toted Price * eightage /(tantity*100)		ount (INR)= • * Quantity	Weightage in %
1011	Providing and filling brick bats in soak pits all complete.	CUM	20.00	₹	-	₹	-	0.002978751
1012	Providing Autoclave Areated concrete blocks in cement mortar 1:4 (1 part cement 4 parts coarse sand) confirming to (IS: 2185 Pt-3) in walls, chambers etc. upto 10m level above finished floor level (For height greater than 10m from FFL, extra over for additional height to be paid in Item No 1014) including raking out joints, curing, scaffolding etc. all complete (excluding plastering and painting) as per specification and drawing.	CUM	10.00	₹	-	₹	-	0.006751441
A1012	Providing Autoclaved Aerated Concrete (AAC) block masonry with blocks having dimensions of 625 mm x 250 mm. thickness ranging from 100 mm to 300 mm conforming to IS 2185(part-III) .The jointing cement sand mortar in the composition of 1: 6 (Cement: sand) shall be used with suitable plasticizer(optional). Sand having modulus of fineness 1.1 shall be used. The horizontal and vertical joint thickness shall be approximately 10 mm. In case of partition walls (100 mm /125 mm thick) the joint reinforcement i.e. 1 number of 6-8 mm diameter bars shall be placed at every alternate course to be anchored properly with the main structure. All other structural requirements like stiffening of masonry, joint reinforcement etc. in the AAC masonry work strictly be carried out as per instructions laid down in IS 6041, IS 1905 etc all complete as per specification.	CUM	200.00	₹	-	₹	-	0.155708417
1014	Extra over item no. 1002, 1006, 1012 & 1013 for height above FFL (Finished Floor Level) as per following:							
a	Height exceeding 10m from FFL but not exceeding 20m	CUM	600.00	₹	-	₹	-	0.058815502
b	Height exceeding 20m from FFL but not exceeding 30m	CUM	500.00	₹	-	₹	-	0.088235121
С	Height exceeding 30m from FFL but not exceeding 40m	CUM	55.00	₹	-	₹	-	0.0129368

ST. No.	Item Description	UOM	Total Quantity	Qu W	ates= Total oted Price * eightage /(antity*100)		unt (INR)= * Quantity	Weightage in %
1015	Extra over item no. 1003 for height above FFL (Finished Floor Level) as per following:							
a	Height exceeding 10m from FFL but not exceeding 20m	SQM	315.00	₹	-	₹	-	0.002093433
b	Height exceeding 20m from FFL but not exceeding 30m	SQM	55.00	₹	-	₹	-	0.000659242
1100	DAMP PROOF COURSE: Damp proof course including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling, shuttering, centering, curing etc at all level as per specification, drawings and as directed by engineer - in - charge. Note: Cement will be issued free of cost by BHEL. Providing Damp Proof Course of following thickness with 1:1.5:3 concrete (10mm and down graded aggregate) with 2% of approved admixture of water proofing compound all complete. Two layers of hot bitumen coating 85/25 grade as per IS:702 @ 1.7Kg./sqm shall be applied one before & one after the DPC.							
b	50mm thick	SQM	434.20	₹	-	₹	-	0.016592285
1102	Providing Damp Proof Course 50mm thick 1:1.5:3 concrete (6 mm and down graded stone chips) with 1% of approved admixture of water proofing compound all complete. Then hot bitumen (residual petroleum bitumen of penetration 80/100 of approved quality) shall be applied over the prepared surface in two coats at the rate of 1.7kg per sq. meter per coat and dry sand spread over it	J						
b	50mm thick	SQM	212.00	₹	-	₹	-	0.00729616

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
1200	PLASTERING: Cement mortar plaster including making grooves wherever required including all labour, material (unless otherwise specified in BOQ/contract specification), scaffolding, curing etc at all level as per specification, drawings and as directed by engineer - in - charge. Note: Cement will be issued free of cost by BHEL.					
1201	Providing 18mm thick plaster in two layers outside the building/boundary wall in cement mortar as applicable upto 10m above finished floor level (For height greater than 10m from FFL, extra over for additional height to be paid in Item No 1206) on walls, finished to a smooth finish including providing 3mmx3mm size grooves at junctions of two dissimilar materials all complete					
a	Cement Mortar 1:6	SQM	2770.00	₹ -	₹ -	0.103878905
A1201	Providing 18mm thick plaster in two layers outside the building/boundary wall/rough surface of internal wall in cement mortar 1:6 on walls, finished to a smooth finish including providing 3mmx3mm size grooves at junctions of two dissimilar materials all complete.	SQM	11927.40	₹ -	₹ -	0.400144398
1202	Providing 12mm thick plaster internal/external surfaces of building/boundary wall in cement mortar as applicable above finished floor level (For height greater than 10m from FFL, extra over for additional height to be paid in Item No 1206) on walls finished to a smooth finish as per specification all complete.					
a	Cement Mortar 1:6	SQM	13253.40	₹ -	₹ -	0.402650073
b	Cement Mortar 1:4	SQM	200.00	₹ -	₹ -	0.006076178
1203	Providing 12mm thick plaster in cement mortar 1:6 on walls with rough finish all complete.	SQM	20.00	₹ -	₹ -	0.000581509

ST. No.	Item Description	UOM	Total Quantity	Qı M	Rates= Total uoted Price * Veightage /(uantity*100)		ount (INR)= e * Quantity	Weightage in %
1204	Providing 6mm thick plaster on ceiling in cement mortar 1:4 finished to a smooth all complete.	SQM	11844.20	₹	-	₹	-	0.316263273
1205	Providing 12mm thick plaster in walls, drains/culverts with a paste of neat cement @ 1kg/sqm and rubbed smooth with trowel etc. all complete.	SQM	30.00	₹	-	₹	-	0.000591003
1206	Extra over Item 1201 to 1202 for plastering on exterior walls over & above 10m height from FGL.							
a	Height exceeding 10m from FGL but not exceeding 20m	SQM	500.00	₹	-	₹	-	0.002788871
b	Height exceeding 20m from FGL but not exceeding 30m	SQM	20.00	₹	-	₹	-	0.000201748
С	Height exceeding 30m from FGL but not exceeding 40m	SQM	10.00	₹	-	₹	-	0.000134103
1207	Forming groove of uniform size from 12X12 mm upto 25X15 mm in plastered surface as per approved pattern, using wooden battens nailed to the under layer, including removal of wooden battons, repair of the edges of plaster panel and finishing the groove etc. complete as per specification, drawing and the instructions of engineer in charge.	RM	50.00	₹	-	₹	-	0.000231417
1208	Providing and laying encasement to box type steel beams at all levels with lath plaster 50 mm nominal thickness with cement plaster (1:4) over chicken wire mesh including all labour, materials, equipment, handling, transporting, mixing, placing, leveling, curing and cleaning, finishing the exposed surfaces etc including centering and shuttering all complete as per specification, drawing and instructions of enginner in charge (chicken wire mesh to be paid separately)	SQM	5.00	₹	-	₹	-	0.00032161
1210	Providing drip course in cement mortar(1:4) in parapet, chajjas, windor/door heads, architectural facias, fins,etc all complete with all labour, T&Ps as per specification, drawing and instructution of engineer.	RM	50.00	₹	-	₹	-	0.000195814
A1210	Providing moldings and cornices on plastered surface at all elevations for all type of work such as chajjas, parapet,	RM	300.00	₹	-	₹	-	0.003239837

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
	projections etc. including scaffolding, finishing etc. complete with all labour, tools and plants as per specification, drawing and instructions of engineer in charge.					
1300	FINISHES TO CONCRETE / PLASTERED SURFACES: Finishes, painting to concrete, plastered surfaces including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, surface preparation, scaffolding etc. at all level as per specification, drawings and as directed by engineer - in - charge.					
1304	Two or more coats of acrylic distemper of approved brand and manufacture to give an even shade including a priming coat with distemper primer complete.	SQM	4838.00	₹ -	₹ -	0.062467665
A1304	Two or more coats of Low VOC (volatile organic compound) acrylic distemper of approved brand and manufacture to give an even shade including a priming coat with distemper primer complete. All necessary documentation (certificates, manufacturer declarations) should be provided by the contractor to engineer in charge	SQM	19168.80	₹ -	₹ -	0.21661255
1305	Providing and applying two or more coats of acrylic emulsion paint as per IS 5411 of approved brand, shade and manufacture to give smooth, hard, durable & glossy finish over a coat of primer over prepared plaster surface as per manufacturers guideline.	SQM	308.00	₹ -	₹ -	0.005771562
A1305	Providing and applying two or more coats of low VOC (volatile organic compound) acrylic emulsion paint as per IS 15489,relevant latest code of approved brand, shade and manufacture to give smooth, hard, durable & glossy finish over a coat of primer over prepared plaster surface as per manufacturers guideline. Note: The paint	SQM	97.00	₹ -	₹ -	0.001551521

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
	should have VOC content limit less than 50 grams per litre All necessary documentation (certificates, manufacturer declarations) should be provided by the contractor to engineer in charge.					
1306	Providing and applying 2 or more coats of acid/alkali resistant paint of approved brand and colour to floors, walls and ceiling including preparation of surface to receive paint, providing and applying bitumen primer confirming to IS 158 complete all as per manufacturer's recommendations and as approved by engineer, at all heights above or below grade level, complete as per specifications.	SQM	118.00	₹ -	₹ -	0.00371658
B1306	Providing and applying 2 or more coats of acid/alkali resistant paint (epoxy based & minimum 150 micron thickness) of approved brand and colour to floors, walls and ceiling including preparation of surface to receive paint, providing and applying primer complete all as per manufacturer's recommendations and as approved by engineer, at all heights above or below grade level, complete as per specifications.	SQM	800.00	₹ -	₹ -	0.030511906
1307	Providing and applying two coats of Epoxy coating with suitable pigments of approved shade as per specification and direction of Engineer. The epoxy paint shall be a two pack material and shall be resistant to water, oil, splash, spillage & acidic environment. The epoxy paint coating shall be of minimum 150 micron thickness over epoxy primer.	SQM	480.00	₹ -	₹ -	0.014149899
1311	Two or more coats of synthetic enamel paint of approved make made from synthetic resins and drying oil with rutile titanium dioxide and other selected pigments to give smooth, hard, durable & glossy finish to all interior and exterior surfaces complete.	SQM	10.00	₹ -	₹ -	0.000100518

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
1316	Providing and applying 2 mm thick plaster of paris punning on walls including preparation of surface, staging, etc. to achieve a smooth even surface all complete as per specification and as directed by Engineer.	SQM	11.00	₹ -	₹ -	0.000193987
1317	Providing and applying 2 mm thick white cement punning on walls including preparation of surface, staging, etc to achieve a smooth even surface all complete as per specification and as directed by engineer.	SQM	11.00	₹ -	₹ -	0.000133415
A1317	Providing and applying 2 mm thick Acrylic wall putty punning on walls including preparation of surface, staging, etc. to achieve a smooth even surface all complete as per specification and as directed by Engineer.	SQM	9374.80	₹ -	₹ -	0.169475906
A1319	Providing and applying two or more coats of Premium Acrylic Smooth Paint with Silicone additives weather coat paint of approved brand and manufacture and required shade over one coat of primer after necessary cleaning/ washing, preparing the surface using coir brush/ wire brush, sand paper, including filling of cracks with putty wherever required etc. all complete to give smooth, hard, durable & glossy finish over a coat of primer over prepared plaster surface as per manufacturers guidelines. The final finished coating shall be fungus resistant, UV resistant, water repellant and extremely durable with color fastness as per specification	SQM	13961.40	₹ -	₹ -	0.284998896
1400	FLOORING AND SKIRTING: Flooring and skirting at all level including base layer, labour, material (unless otherwise specified in BOQ/contract specification), equipments, transportation,					

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
	handling, curing, polishing etc. at all level as per specification, drawings and as directed by engineer in - charge. Note: Cement will be issued free of cost by BHEL.					
1401	Providing and laying 50 mm thick heavy duty cement concrete in flooring with metallic hardener pigmented topping 12mm thick uniform graded treated iron particles in flooring. Under layer of 38mm thick cement concrete mix 1:2:4 (1 cement: 2 sand: 4 stone aggregates 12.5 mm 20 well graded) and top layer of 12mm thick metallic concrete of mix 1:2 (1 cement hardner mix with approved quality metallic hardening compound: 2 stone aggregate 6mm nominal size) by volume including cement slurry, rounding off edges, aluminium strips etc. all complete for following (Quoted item rate shall be inclusive of providing glass joint strips):	SQM	49030.20	₹ -	₹ -	3.549392368
A1401	Providing and laying 50 mm thick heavy duty cement concrete in flooring without metallic hardener pigmented topping 12mm thick uniform graded treated iron particles in flooring. Under layer of 38mm thick cement concrete mix 1:2:4 (1 cement: 2 sand: 4 stone aggregates 12.5 mm well graded) (1 cement hardner mix with approved quality metallic hardening compound: 2 stone aggregate 6mm nominal size) by volume including cement slurry, rounding off edges, aluminium strips etc. all complete for following (Quoted item rate shall be inclusive of providing glass joint strips):	SQM	877.00	₹ -	₹ -	0.060261324
1403	Providing and laying precast polished heavy duty cement concrete tiles (Carborundum topping pigment content is 3.5 kg per 50 Kg of Cement) of size 300X300X25 thick of approved shade as per IS 1237, including minimum 20mm cement mortar bedding of					

ST. No.	Item Description	UOM	Total Quantity	Qu W	ates= Total toted Price * eightage /(tantity*100)		ount (INR)= ** Quantity	Weightage in %
	1:3 (1 cement : 3 sand) jointed with neat cement slurry@4.4 kg/sqm,labour,materials, etc. all complete with pigment to match the shade of the tiles including rubbing, curing, grinding and polishing complete with laying as per IS 1443 etc.(inclusive of cost of cement for tiles manufacturing) all complete for following:							
a	Laid in floors	SQM	300.00	₹	-	₹	-	0.039340878
b	Laid in skirting	SQM	101.00	₹	-	₹	-	0.019201909
A1404	Providing and laying interlocking M35 Grade concrete blocks in paving with approved colour and pattern and should be laid on the subbase and bedding of sand minimum 20mm thick as per specifications and recommendations of manufacturer.(inclusive of cost of cement for paver manufacturing)							
b	80mm	SQM	3391.85	₹	-	₹	-	0.337886848
1406	Providing and laying polished Kota stone 18mm to 20mm thk in flooring. Under bed shall average 30mm thk of 1 cement: 2 sand: 4 stone aggregates by volume and brought to proper level. The kota stone slabs/tiles laid over under bed, pressed and tapped down with wooden mallet to the proper level, lifted and pressed again with thick cement slurry @4.4kg/sqm spread over the surface with fine joint finished including pigments, curing, grinding, granite polishing etc. all complete.	SQM	10.00	₹	-	₹	-	0.002012734
1412	Providing and laying 18-20mm thick polished Granite stone of approved color and texture in flooring with brass/stainless steel strips. Under bed shall average 30 mm thick of 1 cement: 2 sand: 4 stone aggregate by volume and brought to proper level. The granite stone slabs/tiles laid over under bed, pressed and tapped down with wooden mallet to the proper level, lifted	SQM	10.00	₹	-	₹	-	0.002728346

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
	and pressed again with thick cement slurry @3.3kg/sqm spread over the surface with fine joint finished including pigments, curing, grinding, granite polishing etc. all complete.					
A1412	Providing and laying 20mm thick Mirror polished (6 layers of polish)/Flame finish (making top surface rough by burning / shot blasting)Granite stone of approved color and texture in flooring with brass/ stainless steel strips. Under bed shall average 30mm thk of 1 cement: 1.5 sand: 3 stone aggregate by volume and brought to proper level. The granite stone slabs/tiles laid over under bed, pressed and tapped down with wooden mallet to the proper level, lifted and pressed again with thick cement slurry spread over the surface with fine joint finished including pigments, moulding, cornice, curing, grinding, granite polishing etc. all complete.	SQM	300.00	₹ -	₹ -	0.091282585
1414	Providing and laying polished Granite stone 18-20mm thk in skirting and dado with 6mm thick projection from adjacent plaster minimum 12 mm thick cement mortar bedding of 1:3 (1 cement : 3 sand) with thick cement slurry @3.3kg/sqm spread over the surface with fine joint finished including cutting brickwall upto the required depth, edging, finishing etc. all complete. including mortar ,cement slurry ,pigments, curing, grinding,moulding, granite polishing etc. all complete.	SQM	105.00	₹ -	₹ -	0.02925822
1416	Providing and laying vitrified ceramic tiles of polished variety of size 600x600 from reputed / approved manufacturer, complete including underbed of cement mortar 1:3 minimum 20mm thick underbed for flooring and 12mm thick underbed for dado/skirting with neat cement slurry @3.3Kg/sqm etc. all complete for following					

ST. No.	Item Description	UOM	Total Quantity	Qu W	ates= Total toted Price * eightage /(tantity*100)		ount (INR)= • * Quantity	Weightage in %
b	10mm thick tiles In flooring	SQM	230.00	₹	-	₹	-	0.031799059
A1416	Providing and laying vitrified ceramic tiles of polished variety of size 600x600 with Matt/ Glazed from reputed / approved manufacturer, complete including underbed of cement mortar 1:3 average 40mm thick underbed for flooring and 12mm thick underbed for dado/skirting with neat cement slurry @3.3Kg/sqm etc. all complete for following	SQM	48.00	₹	-	₹	-	0.007502181
D1416	Providing and laying matt finish vitrified ceramic tiles of polished variety of size 600x600 / 800x800 of approved shade, colour, pattern and make from reputed / approved manufacturer as Simpolo,Endura,Varmora or equivalent, complete including underbed of average 40 mm thick cement concrete mix 1:1.5:3 (1 cement: 1.5 sand : 3 stone aggregates 12.5mm well graded) with 3mm groove joints as per approved pattern pointed neatly with 3X4mm stainless epoxy grout SP- 100 of Laticrete, Luxture or approved equivalent in approved colour to match colour of tile etc. all complete for following.							
a	9.0 mm (min.) thick tiles In flooring	SQM	1100.00	₹	_	₹	_	0.170358461
b	9.0 mm (min.) thick tiles In dado	SQM	200.00	₹	-	₹	-	0.033324038
1417	Providing and laying vitrified ceramic tiles of matt finish of size 600x600mm from reputed / approved manufacturercomplete including underbed of cement mortar 1:3 minimum 20mm thick underbed for flooring and 12mm thick underbed for dado/skirting with neat cement slurry @3.3Kg/sqm etc. all complete for following							
b	10mm thick tiles In flooring	SQM	194.00	₹	-	₹	-	0.026821815
d	10mm thick tiles In skirting and dado upto specific height	SQM	21.00	₹	-	₹	-	0.003110244

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
B1417	Providing and laying vitrified ceramic tiles of matt finish variety of size 600x600/1000X1000 from reputed / approved manufacturer, complete including including underbed of 40.5 mm thick cement concrete mix 1:1.5:3 (1 cement: 1.5 sand : 3 stone aggregates 12.5mm well graded) with 3mm groove joints as per approved pattern pointed neatly with 3X4mm stainless epoxy grout SP-100 of Laticrete or approved equivalent in approved colour to match colour of tile etc. all complete for following.					
a	9.5 mm thick tiles In flooring	SQM	400.00	₹ -	₹ -	0.061046599
С	9.5 mm thick tiles In skirting and dado upto specific height	SQM	200.00	₹ -	₹ -	0.032873071
A1418	Providing and laying 10 mm thk non-skid fully vitrified tiles of approved manufacturer simpolo, varmora or equivalent in flooring and skirting over 30 mm thick underbed of 1 part cement and 3 parts coarse sand by weight mixed with sufficient water, cement slurry 3.3kg/sqm complete as per specification laid in pattern of following					
b	600X600 mm	SQM	78.00	₹ -	₹ -	0.015162437
1419	Providing and laying granite stone slab of 20mm thickness single piece for wash basin / sink slab /facia of black or approved colour including 20mm underbed of cement mortar 1:3 with cutting,making corners,moulding and opening etc. all complete.	SQM	9.00	₹ -	₹ -	0.003903826
1420	Providing and laying Heavy Duty dust pressed Ceramic Tiles of 7mm thick of reputed manufacturer of approved finish shade and colour including 20mm underbed of cement mortar 1:3 with neat cement slurry @3.3kg/sqm etc. all complete.					
b	600X600 mm	SQM	37.00	₹ -	₹ -	0.004167047

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
A1420	Providing and laying Heavy Duty dust pressed Ceramic Tiles of 7mm thick Designer glazed/matt finish of reputed manufacturer Simpolo,varmora or equivalent of approved finish shade and colour on walls, skirting etc.including underbed of cement mortar 1:3 with neat cement slurry etc. all complete.					
a	300X300 mm	SQM	200.00	₹ -	₹ -	0.02219229
1421	Providing and laying Heavy Duty dust pressed (grade-5) Ceramic Tiles (Matt Finish) of size 600x600mm(approved size) and 7mm thick of reputed / approved manufacturer (Kajaria, jhonson, Spartek or equivalent) of approved finish, shade and colour. The tiles shall be scratch resistance of minimum 5 on Mohr's scale and shall have a bending strength of 350 Kg./sqm, Under bed shall be average 43mm thk of 1 cement: 2 sand: 4 stone aggregates by volume and brought to proper level including cement mortar with neat cement slurry @3.3kg/sqm all complete.	SQM	66.00	₹ -	₹ -	0.008803812
A1421	Providing and laying Heavy Duty anti skid (grade-5) Ceramic Tiles (Matt Finish) of size 600x600mm(approved size), vitrified tiles min.7mm thick on floor, skirting and dado of reputed / approved manufacturer Simpolo,varmora or equivalent of approved finish, shade and colour. The tiles shall be scratch resistance of minimum 5 on Mohr's scale and shall have a bending strength of 350 Kg./sqm,with Under bed shall average 43mm thk of 1 cement: 3 sand by volume and brought to proper level including cement mortar,12mm thick underbed for dado / skirting with neat cement slurry @3.3Kg/sqm etc. all complete.	SQM	103.60	₹ -	₹ -	0.017653686

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
1422	Providing & fixing Acid / Alkali resistant (Chemical resistant) tiles confirming to IS:4457 in flooring/Dado and shall be laid over bitumastic lining of min 12mm thick (to be laid in layers of 6mm each). The tiles shall be applied with 6mm thick Potassium Silicate bedding mortar as per IS:4441, 4443 & 4832 and including preparation of surface, application of bitumen primer, curing etc. all complete for following thicknesses. The tiles should be abrasion resistant & durable.					
b	38mm thick	SQM	25.00	₹ -	₹ -	0.01043453
A1422	Providing & fixing Acid / Alkali resistant (Chemical resistant) tiles confirming to IS:4457 in flooring/Dado and shall be laid over bitumastic lining of min 12mm thick (to be laid in layers of 6mm each). The tiles shall be applied with 6mm thick Potassium Silicate bedding mortar as per IS:4441, 4443 & 4832 and including preparation of surface, application of bitumen primer, curing, pointing joint of bedding 20mm deepx6mm wide with epoxy/Furane mortar etc. all complete for following thicknesses. The tiles should be abrasion resistant & durable.					
a	20mm thick	SQM	400.00	₹ -	₹ -	0.11823435
1423	Providing & fixing Acid / Alkali resistant (Chemical resistant) tiles confirming to IS:4457 in flooring/Dado beded and jointed with epoxy mortar all complete for following thicknesses. The tiles should be abrasion resistant & durable.					
b	38mm thick	SQM	74.00	₹ -	₹ -	0.043505908

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
1427	Providing and fixing glazed ceramic tiles of approved color and design of size 200x300mm / 300x300mm in dado of approved size, projecting 6mm uniformly from adjacent plaster or wall finish. The mix for 20mm thick underbed plaster shall consist of 1part cement and 3 parts sand by weight. fairly moist but firm, tiles shall be pressed over under bed by applying cement slurry @ 3.3kg/sqm including pigments, curing etc all complete for following thicknesses:					
a	5mm thick	SQM	112.00	₹ -	₹ -	0.0117631
A1427	Providing and fixing Designer digitally glazed ceramic tiles of approved color and design as per IS: 15622 of size 300x300mm / 300x450mm, 300X600 of reputed / approved manufacturer Simpolo,varmora or equivalent of approved finish,size in dado, projecting 6mm uniformly from adjacent plaster or wall finish. The mix for 20mm thick underbed plaster shall consist of 1part cement and 3 parts sand by weight. fairly moist but firm, tiles shall be pressed over under bed by applying cement slurry @ 3.3kg/sqm including pigments, curing etc all complete as instructed by engineer incharge for following thicknesses,.					
a	5mm thick	SQM	112.00	₹ -	₹ -	0.012479786
1500	ROOFING / SIDE CLADDING: Roofing / side cladding work including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling, scaffolding, laps, hooks, washers, corner pieces etc. at all level as per specification, drawings and as directed by engineer - in - charge.					

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
1512	Providing and fixing insulation of resin bonded mineral wool of 50 mm nominal thickness conforming to IS 8183 having a density of 32 kg/cum glass wool or 48 kg/cum for rock wool, for cladding/under deck insulation including wrapping in black polythene black supported over weld mesh 75X75X1.6 MM dia to hold in position and application of glue & tying with lacing wire, for glass/rock wool as per manufacturer's recommendation.					
Ac	Mineral wool/rock wool insulation(density 48 kg/cum) bound in polythene bags laying on top of false ceiling panels at all height and levels as per instruction from engineer in-charge.	SQM	150.00	₹ -	₹ -	0.014151679
1514	Providing and installing under deck insulation with resin bonded rock wool 50 mm nominal thickness conforming to IS 8183 having a density of 48kg/cum using minimum 0.05 mm thick aluminium foil on exposed surface followed by 0.56 mm dia and 25 mm mesh GI wire netting, fixed at various elevations with rawl plugs including clips, etc complete as per specifications.	SQM	1311.00	₹ -	₹ -	0.106885782
1600	FALSE CEILING: False ceiling including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling, suspension system etc at all level as per specification, drawings and as directed by engineer - in - charge.					
1601	Providing and fixing glass fibre reinforced gypsum plaster board (GRG) ceiling (having gypsum core mixed with glass fibre) system consisting of metal supporting grid system forming panels of specified size, suspended from RCC slab/structural steel or catwalkway grid above with 4 mm (minimum) galvanised wires (rods) with special height adjustment clips, including preperation of					

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
	working drawing, providing openings for AC ducts, return air grills, light fixtures etc (but excluding the cost of catwalkway grid) all complete as per drawings, specification and instructions of the engineer.					
a	12 mm thick GRG board with galvanised light gauge steel load bearing supporting GI frame and finished flat (seamless).	SQM	10.00	₹ -	₹ -	0.001243718
1602	Providing, fixing and laying light weight mineral fiber tile false ceiling of minimum thickness 15 mm and exposed surface semi-perforated with depth of perforation as 4 mm and humid resistance of 95% RH and fire performance of class 0/1 as per BS 476 with metal suspension grid system with galvanized Tees of section 24 X 38 mm for main runners of approved colour and make as per specification including 50mm thick mineral wool insulation (density48kg/cum) as per IS:8183 bound in polythene bags on top of panels. Additional hangers and height adjustment clips shall be provided for return air grills, light fixtures. A.C. ducts etc. suitable M.S. channel (minimum MC 75 @ 1.2m) grid shall also beprovided above the false ceiling level for movement of personnel to facilitate maintenance of lighting fixtures, AC ducts etc. complete with cut-outs etc. The size of tiles shall be 600 X 600 mm or 600 X 1200 mm. Required MS channel shall be measured & paid extra under respective item unit rate.	SQM	55.00	₹ -	₹ -	0.008903025
1603	Providing and fixing permanently colour coated aluminium false ceiling of approved colour and Luxalon 84 C or approved equivalent with corrosion resistant aluminium alloy panels of minimum thickness 0.5mm. Additional hangers and height adjustment clips shall be provided for return air grills, light fixtures, A.C. ducts etc	SQM	10.00	₹ -	₹ -	0.00482534

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
	all complete. Suitable M.S. channel grid with minimum MC 75 shall also be provided above the false ceiling level for movement of personnel to facilitate maintenance of lighting fixtures, AC ducts etc. (Materials for structural platform grid made up of MS Channels/Beams / Angles shall be supplied by BHEL and shall be paid under ST No 2301)					
A1603	Providing and fixing permanently colour coated aluminium false ceiling of approved colour of Luxalon Hunter douglas, or approved equivalent with corrosion resistant aluminium alloy panels of size 600 mm x 600 mm and 0.6 mm thk. with clip on torsion spring system ,perforation patterns in combination with built in nonwoven tissue, acoustic fleece for providing good acoustic properties and installed with silhouette T-Grid (of profile 24 mm) in same or contrasting colours or with 6 mm recess joints. The whole system shall be level adjusting arrangement and shall be suspended as per manufacturer. Additional hangers and height adjustment clips shall be provided for return air grills, light fixtures, A.C. ducts etc all complete. Suitable M.S. channel grid with minimum MC 75 shall also be provided above the false ceiling level for movement of personnel to facilitate maintenance of lighting fixtures, AC ducts etc. (Materials for structural platform grid made up of MS Channels/Beams / Angles shall be supplied by BHEL and shall be paid under ST No 2301)	SQM	567.00	₹ -	₹ -	0.236069052

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
A1607	Providing and Fixing 12mm thick Calcium silicate board of HILUX or equivalent in plan or elevation with aluminium grid, metal suspension system, anchor fastener adjustable hangers etc. including two or more coats of acrylic emulsion paint of approved colour to give an even shade with smooth finish all complete as per architectural design and detail. Metal suspension system as per ASTM C-635 shall be hot dipped M.S.galvanized (grade 180 as per is :277) and nominal size of T-section shall be 24 x 38 mm or 24 x 25 mm cross runners. 24mm wide exposed flange surface shall be permanently color coated. Suspension system shall be as per manufaturer's specification. Movement platform of structural steel shall be provided if required for the movement of personnel to facilitate maintenance of lighting fixtures, AC ducts etc. (Structural steel works for platform for movement is separately payable under relevant items of BOQ). Work shall include 25mm thick resin bonded mineral wool insulation (as per IS:8183) bound in polythene bags on top of ceiling. The work to be complete as per specifications, drawings and direction of engineer.	SQM	101.40	₹ -	₹ -	0.032331851
1700	RAIN WATER DOWN TAKE PIPES: Rain water down take pipes at all level including all labour, material (unless otherwise specified in BOQ/contract specification), transportation, 2 coats of approved paint over one primary coat, fixtures, accessories etc as per specification, drawings and as directed by engineer - in - charge.					
1704	Providing and fixing galvanised MS down take pipes of 150 mm dia- Medium quality as per IS:1239(part-I) all complete.	RM	1618.00	₹ -	₹ -	0.357151084

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
A1704	Providing and fixing galvanised MS down take pipes of 150 mm dia- Medium quality as per IS:1239(part-I) with welded joints and provided with roof drain heads and complete with shoes bends, junctions, sockets, adapters, brackets and finished with anti corrosive painting over a coat or primer all complete. Galvanising shall be as per IS: 4736. The minimum mass of zinc coating shall not be less than 360 gms/sq.m. as per IS:6745. The zinc coating shall be smooth and shall be subjected to testing as per IS: 2633, for uniformity of coating. The zinc coating shall be free from all defects as per IS: 2629.	RM	1380.00	₹ -	₹ -	0.304615881
C1704	Providing and fixing galvanised MS down take pipes of 100 mm dia- Medium quality as per IS:1239 (part-I) with welded joints and provided with roof drain heads and complete with shoes bends, junctions, sockets, adapters, brackets and finished with anti corrosive painting over a coat or primer all complete. Galvanising shall be as per IS: 4736. The minimum mass of zinc coating shall not be lessthan 360 gms/sq.m. as per IS:6745. The zinc coating shall be smooth and shall be subjected to testing as per IS: 2633, for uniformity of coating. The zinc coating shall be free from all defects as per IS: 2629.	RM	320.00	₹ -	₹ -	0.048305613
1710	Providing and fixing galvanised ERW steel down take pipes of medium duty as per specification of following diameters.					
1710-с	273mm OD and 4mm thick	RM	653.00	₹ -	₹ -	0.274102177
1800	MISCELLANEOUS: Miscellaneous works including all labour, material (unless otherwise specified in BOQ/contract specification), equipment etc. at all level unless otherwise specified as per specification, drawings and as directed by engineer - in - charge.					

ST. No.	Item Description	UOM	Total Quantity	Qu W	ates= Total toted Price * 'eightage /(tantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
A1801	Providing and Filling in trenches, plinths, area paving, grade slab and other underground structures with graded stone aggregate of size range 63 mm to 45 mm in layers not exceeding 200 mm in thickness including breaking of stone boulders to required sizes, filling the interstices with selected moorum and compacting to 85% of original volume of stone stack for all lifts etc. all complete. Payment shall be made for the measurement of the volume of the compacted fill.	CUM	19150.25	₹	-	₹ -	3.818073117
B1801	Providing and Filling in trenches, plinths, area paving and other underground structures with graded stone aggregate of size range 63 mm to 45 mm in layers not exceeding 275 mm compacted thickness including breaking of stone boulders to required sizes, filling the interstices with well graded selected sand and compacting to 90 % of original volume of stone stack for all lifts etc. all complete. Payment shall be made for the measurement of the volume of the compacted fill.	CUM	4354.00	₹	-	₹ -	0.868076936
1802	Supply and laying approved quality Stone aggregate 40mm size in transformer yards.	CUM	416.25	₹	-	₹ -	0.159063535
1803	Supply and laying approved quality rounded pebbles / gravels of 40mm size in transformer yards.	CUM	1.00	₹	-	₹ -	0.000357331
1804	Providing and fixing weep holes in Retaining wall, drains, etc consisting of 100 mm dia HDPE pipe sleeves with single side covering for the pipe mouth with galvanised welded wire fabric of 20 mm sq. opening all complete.	EACH	20.00	₹	-	₹ -	0.000465207
1807	Anti termite chemical treatment of soil with Chlorpyriphos/Lindane E.C. 20% with 1% concentration conforming to IS:8944 and as per IS 6313 all complete. (Plinth area of building at ground floor only shall be measured for payment). Drilling 12mm dia hole @300 c/c using material one liter per hole.	SQM	20.00	₹	-	₹ -	0.000391629

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
1808	Laying of earthing mats/rods including risers, transportation from yard stores, loading, unloading, cutting to length, welding, protective painting of joints etc. all complete. (Excavation & Back filling shall be paid separately under respective item of earth work. Earthing mats/rods shall be supplied by BHEL free of cost)	MT	196.50	₹ -	₹ -	0.28293799
1809	Construction of below ground earthing system test pits as per drawing / sketches including concreting, reinforcement, formwork, providing & fixing GI strip etc as per drawing and specification (Excavation & backfilling only will be paid under applicable BOQ items & cement/steel to be supplied by BHEL free of cost)	NO	52.00	₹ -	₹ -	0.068949902
1810	Construction of below ground earthing system test links as per drawing/ sketches including concreting, reinforcement, formwork, providing & fixing GI strip etc as per drawing & specification (Excavation & backfilling only will be paid under applicable BOQ items & cement/steel to be supplied by BHEL free of cost)	NO	51.00	₹ -	₹ -	0.053164657
1811	Construction of below ground earthing system earth electrodes as per drawing and specification. (Excavation and backfilling only will be paid under applicable BOQ items & steel shall be supplied by BHEL free of cost.)	NO	157.00	₹ -	₹ -	0.015390056
1812	Construction of below ground earthing system - Earth connection and riser pig tails as per drawing and specification. (Excavation and backfilling only will be paid under applicable BOQ items& steel shall be supplied by BHEL free of cost.)	NO	76.00	₹ -	₹ -	0.004662992
1813	Providing Earthing pit as per drawing with charcoal & salt, GI pipes, GI earth electrodes, GI wire, GI strips, brick chamber with covers including associated earthwork etc. all complete.	NO	47.00	₹ -	₹ -	0.147001373

ST. No.	Item Description	UOM	Total Quantity	Qu W	ates= Total oted Price * eightage /(antity*100)		unt (INR)= * Quantity	Weightage in %
1814	Construction of below ground earthing system test pits as per drawing/ sketches including brickwork, plaster, providing & fixing GI strips/pipes, GI wires, covers etc as per drawing & specification including associated earthwork.	NO	47.00	₹	-	₹	-	0.106367527
1815	Providing and fixing GI rungs in concrete/brick walls having zinc coating of minimum 900 g/sqm etc. all complete.	Kg	30.00	₹	-	₹	-	0.000395189
1817	Providing and laying dry stone pitching of 225 mm thickness for slope protection in cement mortar 1:6 including hammer dressing, raking of joints, pointing, preparing the bedding surface and voids filling with stone aggregate etc. all complete.	SQM	20.00	₹	-	₹	-	0.006372866
A 1817	Providing and laying dry stone pitching of 300 mm thickness for slope protection in cement mortar 1:6 including hammer dressing, raking of joints, pointing, preparing the bedding surface and voids filling with stone aggregate etc. all complete.	СИМ	300.00	₹	-	₹	-	0.086033693
A1825	Providing & Laying 125micron thick polythene sheet below the concrete base including materials, labour etc. complete as per drawing / direction of engineer.	SQM	1140.00	₹	-	₹	-	0.002560632
1849	Providing 50mm thick premix carpet surfacing laid to slope in two layers 30mm and 20mm respectively with 12mm downgraded stone chips mixed with 80/100 grade bitumen @ 52 Kg/Cu.M including compaction etc. all complete.	SQM	651.00	₹	-	₹	-	0.047380572
1850	Providing 50mm thick anti corrosive layer laid to required slope consisting of clean & well graded coarse sand mixed with A90 grade bitumen for softening point upto 45 degree Celcius or A65 grade bitumen for softening point above 45 degree celcius as per IS: 73 or	SQM	651.00	₹	-	₹	-	0.047074632

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
	its equivalent quality 8 to 10% by volume and rolled or compacted all complete.					
2000	FENCING AND GATES: Fencing and gates including all labour, material (unless otherwise specified in BOQ/contract specification), equipment etc at all level as per specification, drawings and as directed by engineer - in - charge.					
2001	Supplying and erecting in position 2.4 m high PVC coated gavanised chain linked fencing of minimum 8 gauge (including PVC coating) of mesh size 75mm x 75mm. The diameter of the hot dip galvanised steel wire for chain link fencing excluding PVC coating shall not be less than 12 gauge. GI barbed wire fencing of height of 600 mm confirming to IS 298 at top of chain link fencing shall be provided with 4 strands of barbed wire hot dip galvanised wire of 12G comprising of 2 ply of wires with barbs of 16G spaced at 100mm. Cost to include for GI hook bolts, rings & washers, hot dip galvanised tension wires, 25X6 mm GI flat stretcher bar at end posts, accessories etc. all complete. (Structural post shall be separately under item 2007)	RM	396.00	₹ -	₹ -	0.118428503
A2003	Supplying and erecting in position 2.4 m high PVC coated gavanised chain linked fencing of minimum 8 gauge (including PVC coating) of mesh size 75mm x 75mm. The diameter of the hot dip galvanised steel wire for chain link fencing excluding PVC coating shall not be less than 12 gauge. The PVC coated chain link will be stretched by the clips at 0.5m intervals to three strands of galvanised high tensile spring steel wire (HTSSW) of 2.5 mm diameter interwoven with chain link wire mesh and kept under tension which in turn are attached to the fence	RM	287.00	₹ -	₹ -	0.090837552

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
	post with security nuts and bolts. Concertina of height of 600 mm at top of chain link fencing shall be provided with all accessories. Concertinal shall be from tensile serrated galvanised wire (HTSW) made with wire diameter of 2.5 mm which will be stretched to 6m and attached on two strands of galvanised HTSSW (high tensile spring steel wire) of 2.5mm dia by means of clips at 1m interval. These two HTSSW strands will be attached to the fence posts/ angles with 12 mm security fasteners. Cost to include for GI hook bolts, rings & washers, hot dip galvanised tension wires, 25X6 mm GI flat stretcher bar at end posts etc. all complete. (Structural post shall be paid separately under ST No. 2007)					
2005	Supplying and fixing 600mm high G.I. barbed wire fencing on top of boundary wall consisting of min. 6 nos. strands of barbed wire hot dip galvanised wire of 12G comprising of 2 ply with barbs of 16G spaced at 100mm including GI clips, anchors, accessories etc. all complete. (Structural post shall be separately under ST No. 2007) Measurement shall be for per running meter of fencing.	RM	10.00	₹ -	₹ -	0.000166145
2007	Supply and fixing of hot dip galvanised mild steel posts for fencing. Rate of zinc coating shall not be less than 710 g/m2 on steel posts.	MT	2.00	₹ -	₹ -	0.025645031
2008	Supply, fabrication and fixing of mild steel posts for fencing including painting etc all complete.	MT	2.00	₹ -	₹ -	0.024137616
2009	Supply, fabrication and installing in position and testing galvanised MS Gates out of channels, joists, angles, flats, plates, pipes, welded steel wire mesh & sheets including stiffners, bracings, fabricated hinges, MS Aldrops with locking arrangement, tempered steel pivot, guide track	МТ	3.00	₹ -	₹ -	0.042358554

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
	of MS Tee, bronze aluminium ball bearing arrangements, castor wheels, paintings etc. all complete.					
2100	WATER SUPPLY: Water supply work including men, material (unless otherwise specified in BOQ/contract specification), equipment etc. at all level as per specification, drawings and as directed by engineer - in - charge.					
2101	Providing and fixing in position tested heavy duty type chromium plated (CP) brass long neck/body bib cocks including sockets, union, nuts etc all complete - 15mm nominal bore.	NOS	2.00	₹ -	₹ -	0.000375251
A2101	Providing and fixing in position tested heavy duty type chromium plated (CP) brass long neck bib cocks with flow rate less than 5 LPM (litres per minute) at 45 psi, including sockets, union, nuts etc all complete -15mm nominal bore.(Note: Flow rate of all faucets at 45 psi should be less than 5 lpm. The contractor should submit the cutsheets/ declaration from the manufacturers mentioning the same to Engineer in charge.)	NOS	25.00	₹ -	₹ -	0.002309215
2102	Providing and fixing in position heavy duty brass stop cock of approved quality including all specials etc all complete - 15mm nominal bore.	NOS	26.00	₹ -	₹ -	0.000678823
2103	Providing and fixing in position heavy duty brass full way valve with wheel of approved quality including all specials etc all complete for following sizes:					
a	25mm nominal bore.	NOS	14.00	₹ -	₹ -	0.001043394
b	50mm nominal bore.	NOS	13.00	₹ -	₹ -	0.003702671
2104	Providing and fixing GI pipes class B medium class conforming to IS:1239 pipes shall be concealed and painted with anticorrsive paint, complete for internal works with GI sockets, unions, elbows, tees, nipples etc					

ST. No.	Item Description	UOM	Total Quantity	Qı W	Rates= Total noted Price * Veightage /(nantity*100)		ount (INR)= e * Quantity	Weightage in %
	and clamps including cutting and making good the walls etc all complete for following sizes:							
a	15 mm nominal bore.	RM	68.00	₹	-	₹	-	0.003897773
b	20 mm nominal bore.	RM	30.00	₹	-	₹	-	0.001879818
С	25 mm nominal bore.	RM	11.00	₹	-	₹	-	0.0007454
d	50 mm nominal bore.	RM	7.00	₹	-	₹	-	0.000795006
2105	Providing and fixing GI pipes class B complete for external work with GI sockets, unions, elbows, tees, nipples etc including trenching & refilling, anticorrosive paint etc all complete for following sizes:							
a	15 mm nominal bore.	RM	48.00	₹	-	₹	-	0.002101978
b	20 mm nominal bore.	RM	27.00	₹	-	₹	-	0.001326553
С	25 mm nominal bore.	RM	11.00	₹	-	₹	-	0.000596581
d	50 mm nominal bore.	RM	10.00	₹	-	₹	-	0.001000433
2106	Providing and fixing 610mmx453mmx6mm thk mirror from reputed mirror manufacturer. Mirror shall be mounted with glass adjustable revolving CP brackets with CP screws etc all complete.	NOS	1.00	₹	-	₹	-	0.000151074
A2106	Providing and fixing 600mm x 900mm x 6mm thk mirror from reputed mirror manufacturer. Mirror shall be mounted with glass adjustable revolving CP brackets with CP screws , edge mounting with teak beading and minimum 12 mm thick plywood backing etc all complete.	EACH	13.00	₹	-	₹	-	0.002713549
2107	Providing and fixing 610mmx127mmx6mm thk clear glass with C.P Guard rails and mounted on C.P. brackets etc all complete.	NOS	3.00	₹	-	₹	-	0.000297282
2108	Providing and fixing 25 mm diameter stainless steel towel rails (600mm X 25mm) with C.P. mounting brackets all complete.	NOS	18.00	₹	-	₹	-	0.002804773

ST. No.	Item Description	UOM	Total Quantity	Qı W	Rates= Total noted Price * Veightage /(nantity*100)		ount (INR)= * Quantity	Weightage in %
2110	Providing and fixing C.P. Soap holder mounted with C.P. screws etc all complete.	NOS	26.00	₹	-	₹	-	0.003134928
2111	Providing and fixing stainless steel / C.P. liquid soap dispenser. Dispenser shall be round and easily revolving with removable threaded nozzle and mounted on C.P. brackets etc all complete.	NOS	29.00	₹	-	₹	-	0.007943178
2112	Providing and fixing glazed vitreous wall mounted paper holder with suitable cover cum cutter fitted with CP screws etc. all complete.	NOS	16.00	₹	-	₹	-	0.002392495
2113	Providing and fixing chromium plated brass shower rose 100mm dia with 15 or 20 mm inlet dia shower arm all complete.	NOS	1.00	₹	-	₹	-	0.000127339
A2113	Providing and fixing rotating type chromium plated brass shower rose with 15 or 20 mm inlet all complete.	NOS	10.00	₹	-	₹	-	0.00043434
2114	Providing & fixing in position P.V.C. water tank of Syntex or approved equivalent including making all necessary inlet & outlet pipes, fixture, ball cocks, valves etc all complete for following capacities. GI pipes shall be paid separately under ST No. 2105.							
a	500 litres capacity	NOS	4.00	₹	-	₹	-	0.00201938
b	1000 litres capacity	NOS	2.00	₹	-	₹	-	0.00201938
С	2000 litres capacity	NOS	2.00	₹	-	₹	-	0.004038759
2115	Providing and installing approved brand single tap water cooler of 150 L cooling capacity all complete.	NOS	3.00	₹	-	₹	-	0.028983368
A2116	Providing and fixing glass shelves 600mmx127mmx4 mm with chromium plated brackets all complete.	EACH	3.00	₹	-	₹	-	0.000245537
A2117	Providing and fixing metal storing cabinets all complete.	EACH	3.00	₹	-	₹	-	0.005282504
A2118	Providing and fixing electric operated hand dryer with photo voltaic control.etc all complete	EACH	3.00	₹	-	₹	-	0.001760834
A2120	Providing and fixing grab bars, barrier-free access and appropriate fittings and fixtures for toilets for handicapped etc. all complete.	EACH	13.00	₹	-	₹	-	0.003052112

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
2200	SANITARY: Sanitary work including all labour, material (unless otherwise specified in BOQ/contract specification), equipment etc. at all level as per specification, drawings and as directed by engineer - in - charge.					
2201	Supply and fixing glazed vitreous china Wash Basin of approved make conforming to IS:2556 part 4 of oval shape with R.S. or C.I. brackets painted white, 15mm chromium plated brass hot & cold faucets with nylon washers, chromium plated brass chain with rubber plug, 32mm chromium plated brass bottle trap and waste of standard pattern, 32mm dia chromium plated brass trap unions, plastic connection pipe with chromium plated nuts, fittings, cutting and making good the walls where required etc all complete.					
a	White	EACH	1.00	₹ -	₹ -	0.001525572
b	Colored	EACH	1.00	₹ -	₹ -	0.001525572
A2201	Supply and fixing coloured glazed vitreous oval shape china wash basin 450x550mm conforming to IS: 2556 mounted over 20 mm thk granite beveled edge counter counter. The Basin shall be fitted with approved shape bib cock, photo-voltic control system for water control with flow rate less than 5 LPM (litres per minute) at 45 psi,CP brass chain with rubber plug, 40mm CP brass waste and bottle trap as per IS: 2556 with two taps, necessary union including cutting of notch in granite counter slab etc complete as per specification	ЕАСН	25.00	₹ -	₹ -	0.02279973
2202	Providing and fixing approved vitreous china laboratory basin/sink of size 550x400x200mm conforming to IS:2556 (part-5) with R.S. or C.I. brackets, chromium plated brass chain with rubber plug 32mm, 32mm CP brass waste coupling and 32mm CP brass	EACH	1.00	₹ -	₹ -	0.000712883

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
	bottle trap with necessaary union complete including painting the fittings, cutting and making good the wall where required etc. all complete.					
A2202	Providing and fixing approved vitreous china laboratory sink of size 600x400x200mm conforming to IS:2556 (part-5) with R.S. or C.I. brackets, chromium plated brass chain with rubber plug 40mm, 40mm CP brass waste and 40mm CP brass trap with necessaary union complete including painting the fittings, cutting and making good the wall where required etc. all complete.	EACH	1.00	₹ -	₹ -	0.000814944
2203	Providing and fixing stainless steel kitchen sink of size 610x510x200mm conforming to IS: 13983 including all fittings etc. all complete.	EACH	1.00	₹ -	₹ -	0.001124568
A2203	Providing and fixing stainless steel kitchen sink/Eye wash sink of size size 610 x 510 mm, bowl depth 200 mm as per approved manufacturer with drain board of at least 450 mm length with trap, hot and cold water mixer, conforming to IS: 13983 including all fittings etc. all complete.	EACH	1.00	₹ -	₹ -	0.001167668
2204	Providing and fixing colour glazed vitreous china European type water closet conforming to IS:2556 with siphon, open front solid plastic seat and plastic cover, low level 12.5 litre PVC flushing cistern (same colour as WC) with valveless fittings, 2 way bibcock with health faucet necessary C.P connections etc all complete.					
a	Floor mounted	EACH	1.00	₹ -	₹ -	0.000870365
b	Wall mounted	EACH	1.00	₹ -	₹ -	0.001386247
A2204	Providing and fixing colour glazed vitreous china European type water closet of approved make conforming to IS:2556 with siphon, open front solid plastic seat and plastic cover, low level 12.5 litre PVC flushing cistern (same colour as WC) with valveless					

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
	fittings, necessary C.P connections, water faucet etc all complete.					
b	Wall mounted	EACH	13.00	₹ -	₹ -	0.018021208
2205	Providing and fixing colour glazed vitreous indian type Orissa pattern (580x440mm) water closet conforming to IS:2556 part 3 with all fittings including foot rests, low level 12.5 litre PVC flushing cistern with valveless fittings, 2 way bibcock with health faucet necessary C.P connections etc all complete.	EACH	14.00	₹ -	₹ -	0.012218339
A2205	Providing and fixing colour glazed vitreous china Orissa pattern (580x440mm) water closet conforming to IS:2556 part 3 with all fittings including foot rests, low level 12.5 litre PVC flushing cistern with valveless fittings, necessary C.P connections etc all complete having flow rate of 6/3 LPF (litres per flush) or less at 45 psi.	ЕАСН	25.00	₹ -	₹ -	0.021818463
2206	Providing and fixing white flat back glazed vitreous china urinals of size 370x315x620 mm with photo voltaic control flushing system as per IS:2556 (part 6, section 1) with flush pipes, lead pipes, gratings, traps and necessary C.P. fittings etc. all complete.	ЕАСН	2.00	₹ -	₹ -	0.004719719
A2206	Providing and fixing white/coloured water efficient flat black glazed vitreous china urinals of size 610x375x390mm with photo voltaic control flushing systems of approved manufacturer simpolo, varmora or eqivalent per IS: 2556(pt-6 sec-1) with flush pipes, lead pipes, gratings, traps and necessary C.P fitting etc. all complete as per specification having flow rate of 2 LPF (litres per flush) or less at 45 psi.	EACH	25.00	₹ -	₹ -	0.048915783
2207	Supply, laying and jointing UPVC pipes of class 3 as per IS:4985 including bends, branches and all other					

ST. No.	Item Description	UOM	Total Quantity	Qu W	tates= Total noted Price * /eightage /(nantity*100)		ount (INR)= • * Quantity	Weightage in %
	necessary fittings, M.S holder bats/clamps, cutting and making good the walls and floors, jointing, testing etc all complete for following.							
a	75mm dia pipes	RM	91.00	₹	-	₹	-	0.003920203
b	110mm dia pipes	RM	31.00	₹	-	₹	-	0.001780605
С	160mm dia pipes	RM	25.00	₹	-	₹	-	0.002222196
2208	Providing, laying light duty non pressure NP3 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc all complete for following.							
a	200mm dia	RM	91.00	₹	-	₹	-	0.008833956
b	300mm dia	RM	31.00	₹	-	₹	-	0.00518362
С	450mm dia	RM	27.00	₹	-	₹	-	0.007497908
d	600mm dia	RM	2.00	₹	-	₹	-	0.000756674
2209	Providing, laying light duty non pressure NP2 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc complete for following.							
a	150mm dia	RM	348.50	₹	-	₹	-	0.022705739
b	250mm dia	RM	6.00	₹	-	₹	-	0.000512678
2210	Providing, laying light duty non pressure NP4 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc complete for following:							
a	450mm dia	RM	10.00	₹	-	₹	-	0.003169819
2211	Providing and fixing C.I Manhole heavy duty cover of size 600mmx450mm including frame from reputed manufacture etc. all complete.	EACH	21.00	₹	-	₹	-	0.027077561
A2211	Providing and fixing C.I Manhole heavy duty cover of size 600mmx600mm including frame from reputed	EACH	20.00	₹	-	₹	-	0.029226581

ST. No.	Item Description	UOM	Total Quantity	Qı W	Rates= Total noted Price * Veightage /(nantity*100)		ount (INR)= * Quantity	Weightage in %
	manufacture confirming to IS:4111 etc all complete as per specification.							
2212	Providing and fixing circular heavy duty C.I. manhole cover of 600 mm dia with frame etc. all complete.	EACH	1.00	₹	-	₹	-	0.001281812
2213	Providing and fixing square mouth S.W Gully trap grade 'A' complete with CI grating, brick masonry chamber(Clay Brickwork in 1:6 mortar, 12mm plaster in 1:6 mortar & 1:2:4 Cement Concrete) and water tight CI cover with 300x300mm (inside). The weight of cover to be not less than 4.53 Kg and frame to be not less than 2.72 Kg etc all complete for following sizes:							
a	100x100mm P or S Type.	EACH	11.00	₹	-	₹	-	0.002142209
b	150x100mm P or S Type.	EACH	6.00	₹	-	₹	-	0.00139135
С	150x150mm P or S Type.	EACH	6.00	₹	-	₹	-	0.001456859
2214	Providing and fixing C.I. floor traps size 100 mm Inlet and 100 mm Outlet Sand Cast Iron S&S as per IS: 1729 with C.P jalli all complete.	EACH	2.00	₹	-	₹	-	0.000409667
A2214	Providing and fixing C.I. floor traps with stainless steel grating etc all complete.	EACH	20.00	₹	-	₹	-	0.00413669
2215	Providing and fixing 100mm heavy duty UPVC floor traps with 100 mm inlet and 100 mm outlet & C.P jalli all complete.	EACH	2.00	₹	-	₹	-	0.000393053
B2216	Providing and installing approved brand single tap water efficient water cooler of 80 L cooling capacity all complete.	EACH	2.00	₹	-	₹	-	0.011238555
2217	Providing and installing approved brand single tap water cooler of 150 L cooling capacity all complete.	EACH	2.00	₹	-	₹	-	0.019322245
A2217	Providing and installing approved brand single tap water efficient water cooler of 150 L cooling capacity all complete.	EACH	2.00	₹	-	₹	-	0.019322245
2218	Providing and fixing white viterous urinal partitions of size 675x325x85mm all complete.	EACH	2.00	₹	-	₹	-	0.000612839

ST. No.	Item Description	UOM	Total Quantity	Qı W	tates= Total noted Price * /eightage /(nantity*100)		ount (INR)= e * Quantity	Weightage in %
2219	Providing and fixing eye and face drinking water fountain (combined unit with receptacle conforming to IS: 10592) all complete as per specification.	EACH	5.00	₹	-	₹	-	0.006638699
2220	Providing and fixing heavy duty cast iron pipes for above and below ground sanitory works with water tight lead joint, fixing clamps, excavation, filling, disposal etc. all complete for the following.							
a	75mm dia pipes	RM	10.00	₹	-	₹	-	0.001831161
b	100mm dia pipes	RM	6.00	₹	-	₹	-	0.00141912
2221	Providing, laying spun CI pipes with conforming to IS 1536 complete for following.(Excavation,backfilling,concrete to be paid seperately)							
С	150mm dia	RM	50.00	₹	_	₹	-	0.020780053
d	200mm dia	RM	100.00	₹	-	₹	-	0.060939791
2222	Providing and fixing HDPE pipes in concrete/brick work of following sizes including cutting, fixing and levelling in position etc. all complete.							
a	Upto 75 mm dia	RM	6.00	₹	-	₹	-	0.000203647
b	100 mm dia	RM	6.00	₹	-	₹	-	0.000215752
2223	Providing and fixing vertical wall mounted water geysers/heaters(minimum 5 star rating) of required capacity including all connections & fittings(angular stop cock and brass connection pipes, etc.) all complete as per specification.							
b	25 Litres	Each	3.00	₹	-	₹	-	0.004948406
A2224	Providing and fixing suitable water meter (Maximum Working Pressure 16 bar; Maximum Liquid Temperature 60°C; Connection Flanges according to ISO, BS 10, American Water works Association (AWWA) or	NOS.	1.00	₹	-	₹	-	0.00127529

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
	others; Register water consumption in cum) on 50 mm domestic water inlet pipe					
A2225	Supply, laying and jointing sand cast iron pipe conforming to IS: 1729 including bends, branches and all other necessary fittings, M.S holder bats/clamps, cutting and making good the walls and floors, jointing, testing etc all complete for following.					
b	160mm dia pipes	RM	15.00	₹ -	₹ -	0.003676343
2300	STRUCTURAL WORKS: Structural steel works including all labour, material (unless otherwise specified in BOQ/contract specification), equipments unless otherwise specified, transportation, handling etc. at all level as per specification, drawings and as directed by engineerin-charge.					
2306	Providing, laying and clamping of crane rails over the crane girder at all elevations as per IS 3443 including all fixtures, clamps, testings etc. all complete as per drawing and specification.	МТ	1.00	₹ -	₹ -	0.013473094
2307	Taking delivery from BHEL store, transportation, fabrication, erection and alignment of factory made electroforged galvanised grating units with mild steel having minimum galvanisation conforming to IS:2062 in flooring, platforms, drain and trench covers, walk-ways, passages, staircases with edge binding strips and antiskid nosing in treads etc. including fixing clamps, fittings, fixtures, all taxes, duties, packing, grinding, drilling, welding, edge preparation, etc. all complete. (Gratings shall be issued by BHEL free of cost)					
a	Minimum galvanisation of 610 g/sqm	MT	85.00	₹ -	₹ -	0.129794634
2311	Taking delivery from BHEL store and fixing in position of permanent mild steel bolts (class 4.6 as per IS: 1367 and	KG	50.00	₹ -	₹ -	6.52714E-05

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
	grade `C' as per IS: 1363) and nuts, washers etc. up to and inclusive of 39 mm diameter and upto 300mm long for structural steel work etc all complete.					
2313	Dismantling of steel structure, lowering of material and carriage of the dismantled material up to field fabrication shop / projects storage including temporary dismantling, cutting, re-welding, supporting, and restoring to correct position all temporarily dismantled members, re-alighment of all adjacent connected members to their correct positions (weight of such adjacent members and temporarily dismantled members not payable), scafolding, staging, tools & tackles, gas cutting, welding, consumables etc all complete.	MT	3.00	₹ -	₹ -	0.003055415
2314	Addition to, alterations in and/or modifiction of "Erection Marks" including cutting of parts, gauging of welds, cutting, grinding, fabrication, welding, drilling holes, straightening, removal of bends, raising to the required level, painting, transportation, return of unutilised steel pieces to the project store, temporarily dismantling, cutting, re-welding, supporting and restoring to correct position of all the temporarily dismantled members, realignment of adjacent connected members (weight of such temporarily dismantled and adjacent members not payable) etc all complete for the following:					
a	In erected position	MT	1.00	₹ -	₹ -	0.002699627
b	In fabrication yard	MT	1.00	₹ -	₹ -	0.002150635

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
2315	Re-erection of dismantled fabricated structural steel members including carriage of modified "Erection Marks" from the field fabrication shop to erection site, lifting to required posiion, aligning in position, tack welding, final welding and touch up painting including temporary dismantling and re-erection of temporarily dismantled members, cutting, rewelding, supporting and restoring to the correct position of all temporarily dismantled members, re-alignment of adjacent connected members (weight of such temporarily dismantled members and adjacent members not payable), scafolding, staging, tools & tackles, gas cutting, welding, consumables etc all complete.	MT	3.00	₹ -	₹ -	0.004668213
2320	Taking delivery from BHEL store, transportation, fabrication and fixing of stainless steel pipe hand railing conforming to SS 409 of 32 mm/40 mm dia including transportation, loading/unloading etc. all complete. (SS Pipe shall be issued by BHEL free of cost)	MT	0.50	₹ -	₹ -	0.00200591
2321	Taking delivery of GI Pipe from BHEL store, transportation, fabrication and fixing of MS pipe hand railing of 32 mm/40 mm dia including transportation, loading/unloading etc. all complete. (MS Pipe shall be issued by BHEL free of cost)	МТ	1.00	₹ -	₹ -	0.003334896
A2321	Supply, fabrication and fixing of galvanized MS hand railing & ladder pipes of 32 mm/40 mm dia including transportation, loading/unloading etc. all complete. Galvanization shall be as per IS:4736 and finished with suitable paint.	MT	2.00	₹ -	₹ -	0.03434512
2322	Taking delivery of GI Pipe from BHEL store, transportation, fabrication and fixing of GI pipe hand railing (900 mm high) of 32 mm/40 mm dia (Medium Grade) including transportation, loading/unloading,	МТ	0.80	₹ -	₹ -	0.002667917

ST. No.	Item Description	UOM	Total Quantity	Rates= Total Quoted Price * Weightage /(Quantity*100)	Amount (INR)= Rate * Quantity	Weightage in %
	painting etc. all complete. (GI Pipe shall be issued by BHEL free of cost)					
A2322	Taking delivery from BHEL store, transportation, fabrication and fixing of galvanised MS pipe hand railing (Min. 1000 mm high) of 32mm/40mm/50mm dia (Medium Class) including transportation, loading/unloading, painting etc. all complete. (MS Pipe shall be issued by BHEL free of cost)	МТ	1.00	₹ -	₹ -	0.003334896
	LEVELING & GRADING: Levelling & grading works including all labour, material (unless otherwise specified in BOQ/contract specification), equipment etc. as per specification, drawings and as directed by engineer - in - charge for the following:					
2/A113	Earth work in stripping of top soil upto a maximum depth of 0.30m below ground level so as to exclude all debris, grass, vegetation, bushes, trees having girth upto 300 mm including roots and organic materials etc for leveling and grading including dressing to specified levels & grades and compacting the graded/stripped surface by manual/mechanical means, disposal of stripped materials within a lead upto 1km etc all complete as per specification, drawing and as directed by the engineer-in-charge.	SQM	155568.00	₹ -	₹ -	0.387703815
	TOTAL AMOUNT (Excluding GST)				Sum-Total of the above	

Note:

Documents required for payment of RA Bill and Final Bill are as per modified Clause No. 7.1 of Technical Conditions of Contract (TCC).