

TENDER NO: PSER:SCT:NBN-C2056:20

VOLUME -III

PRICE SCHEDULE-REV-00

FOR

CIVIL & ARCHITECTURAL WORKS INCLUDING LEVELLING GRADING, PILING WORK, TESTING OF PILES AND OTHER ASSOCIATED WORKS ETC. OF FGD SYSTEM FOR 4X250 MW BRBCL NABINAGAR TPP, BIHAR.

BHARAT HEAVY ELECTRICALS LIMITED
(A GOVT. OF INDIA UNDERTAKING)
POWER SECTOR – EASTERN REGION
PLOT NO. – 9 / 1, DJ – BLOCK,
SECTOR – II, KARUNAMOYEE,
SALT LAKE CITY,
KOLKATA – 700091.

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PREAMBLE

SL NO	DESCRIPTION
1	This preamble forms part of tender document and schedule of items. The tenderer should read this preamble carefully before filling in rates for various items. Clauses under this preamble shall be read in conjunction with various volumes of tender and other tender sections as applicable and shall have precedence over any contrary statement mentioned anywhere in this document.
2	The work shall be carried out strictly as per specifications, description of the items in these schedule and / or engineer's instructions. Drawings enclosed with the tender are only preliminary and for tender purposes and giving some idea of the work involved. The work is to be executed as per drawings & documents, which shall be furnished during execution.
3	Items of work provided in this schedule but not covered in this specification shall be executed strictly as per instruction of the engineer.
4	Unless specifically mentioned otherwise in the tender document, the tenderer shall quote for the finished items and shall provide for the complete cost towards power, fuel, tools, tackles, equipment, constructional plants, temporary works, labour, dismantling of all temporary piping, structures, valves, pumps, tanks & other misc. equipment, strengthening of roads/culverts/bridges etc. including arranging all clearances etc. required for carrying out different activities & tests, materials, levies, transport, layout, repairs, rectification, maintenance till handing over, supervisions, colonies, shops, establishments, overheads, profits and all incidental items not specifically mentioned but reasonably implied and necessary to complete the work according to the complete tender document and this schedule.
5	The quantities of the various items mentioned in this schedule of items are approximate, based on very preliminary information and may vary to any extent or be deleted altogether. The quoted rates of each item will remain firm throughout the period of execution including extension, for reasons whatsoever, as long as variation in the total value of work executed under any part of this contract including extra items, if any but excluding any price variation remains, within plus minus fifteen percent ($\pm 15\%$) of the awarded price as per LOI.
6	Prior written approval of BHEL shall be sought by the contractor in case quantity variation of any item crosses +50% (plus fifty percent) limit during execution, an approval to be obtained before execution of further quantity for this item.
7	In case Sealed /Paper Price Bids are opened for finalisation of the tender, for any Item Rate/BOQ based contract, possibility of variation of quantity/ addition/deletion of items can not be ruled out. Under such circumstances, after execution of work, if it is observed that standing as L-1 is changed based on actual quantity executed, the bidder shall give suitable rebate to maintain your standing as L-1. Since this aspect can be assessed at the end of execution, necessary adjustment will be effected at the end of execution in final bill. This condition shall not be applicable where the tender is finalised through Reverse Auction.
8	BHEL reserve the right to rationalize the rates, quoted by L-1 bidder against unit rate items and/ or other optional items with respect to item-wise lowest rates (amongst the participating bidders), before placement of order.
9	The rates quoted shall be inclusive of cleaning of site of any vegetation, dressing , clearing of old structures and leveling etc. including fixing of grid pillars, benchmarks etc. required for commencement of site activities. No separate payment will be made towards the same. However, if separate rate for such item is available in the rate schedule, the same shall be considered.
10	Rates shall be quoted in figures and in words in clear legible writing. No overwriting is allowed. All scoring and cancellations should be countersigned and in case of illegibility the interpretation of engineer shall be final. All entries shall be in English language.
11	All works item wise shall be measured upon completion and paid for at the rates quoted and accepted as per BHEL approved payment schedule/billing break-up.
12	The tenderer shall be deemed to have visited site and made himself aware of all the site conditions, studied the specifications and details of work to be done within the time schedule attached and to have acquainted himself of the conditions prevailing at site before submission of his bid/offer. No claim whatsoever due to lack of knowledge of site conditions shall be entertained after award of the work.
13	No splitting of the job is envisaged unless the same is specifically indicated in the TCC/Vol-1F. Decision of BHEL in this regard shall be final and binding to the bidders.
14	Bidders are not allowed to alter the Price Schedule format including item description, quantity etc. and the offer is liable for rejection if the bidders submit their prices in Price Schedules modified by them. BHEL reserves the right to reject the offers of bidders who submit offers in Price Formats which are modified/ altered by them. Also putting any comments instead of rates/price in the designated column of the rate schedule shall make the offer liable for rejection.
15	Bidders to note that for Civil & Structural packages, against a particular item against a ST No. appearing in more than one schedule of the BOQ, same rate must be quoted in all schedules for that particular items with same descriptions. If by error, different rates are quoted in different schedules for same ST No.(i.e. item with same description), then the higher of the rates shall be considered for evaluation but awarding shall be done with the lower rate ,if the bidder becomes L-1. The same modality shall be applicable for other item rate service contracts where item with same description is repeated in different schedules.
16	For Lumpsum Service Contract : The items/components indicated in the tender is indicative and may vary to any extent. No compensation shall be payable in case of any variation in the items/components listed in the bill of quantities if the executed weight remains within the variation limit. However, in case of deletion of any item or addition of new items over and above the items listed or variation of existing quantity beyond variation limit specified, adjustment (i.e. Payment or recovery as the case may be) shall be done on pro-rata basis based on the Rate per MT worked out from the quoted lump-sum Price and the total weight of components listed /indicated in price schedule plus 15% weight variation limit.
17	Engineer's decision shall be final and binding on the contractor regarding clarification of items in the schedule with respect to the other sections/volumes of the contract.
18	In case of tender for Civil and/or Structural works, if the Non-schedule items are not quoted by the bidder, it will be treated at par with rate of corresponding item of CPWD/PWD/DSR schedule as prescribed in the tender/BOQ cum Rate Schedule. PVC/escalation is not payable for these Non-scheduled items.
19	No interest, whatsoever, shall be payable by BHEL on the security deposit, any bank guarantee submitted or any amount due to successful bidder/contractor. No idling charge whatsoever (either for labour or any other resources) is payable by BHEL for any reason whatsoever.
20	Size and weights of various items are mentioned in the attached BOQ cum rate/price schedule for reference purpose only & these shall not be taken into consideration for quoting/calculating amount in the rate schedule. These shall be utilised as per relevant sections of tender. Bidders shall quote for each item in the rate column, taking unit as mentioned in the quantity column. Rates shall be filled in both figures and words. Amount shall be calculated based upon these rates multiplied by the mentioned quantity for the respective items.
21	Bidder's Total price shall be considered for evaluation unless stated otherwise.
22	In case of BOP packages, if Bidder does not quote/indicate the price for freight charges against indicated rate schedule, the same shall be considered as 2% of basic price and adjusted with the total quoted price against each item keeping the total quoted price unaltered.

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SCH-1 - TOTAL PRICE

SL NO	DESCRIPTION	PRICE SCHEDULE REF	TOTAL PRICE (IN INR)
1.0	TOTAL PRICE FOR CIVIL & ARCHITECTURAL WORKS INCLUDING LEVELLING GRADING, PILING WORK, TESTING OF PILES AND OTHER ASSOCIATED WORKS ETC. OF FGD SYSTEM FOR 4X250 MW BRBCL NABINAGAR TPP, BIHAR.	SCH 2 - BREAK UP OF TOTAL PRICE	<u>IN FIGURES:-</u> <u>IN WORDS:-</u>
2.0	NON-SCHEDULE ITEM For items not covered in Schedule 3 & 4, quote % above or % below or at par the CPWD Schedule of rates 2018		
a)	Rate of complete item	% above / % below / at par	of CPWD Rate Schedule 2018
b)	Rate of supply of material at site only	% above / % below / at par	of CPWD Rate Schedule 2018
c)	Rate for execution complete excluding supply of materials.	% above / % below / at par	of CPWD Rate Schedule 2018
NOTE			
1.0	Bidder shall quote total price for total price of SCH-2 part only at Sl No. 1 above. All other amounts / rates of each item of works in respective schedules / parts will be derived based on allocated percentages. As such, any uncalled figure/ amount noted at any other place / schedule of Volume-III will not be reckoned & will stand null & void.		
2.0	Bidder to note that total price at Sl No. 1 above shall be considered for evaluation & awarding. As such grand total price should be completed in all respect for the full scope defined and considering all terms and conditions.		
3.0	Bidder's quoted total price of SCH-3 & SCH-4 at Sl. No 1 above, respectively shall be apportioned into amount of various items of works based on allocated percentages against respective item, in respective schedules / parts. As such, bidder shall not indicate / quote any amount / rate in these schedules / parts and any amount / rate quoted against any item shall not be taken into cognizance / account and offer may be liable for rejection.		
4.0	Based on the itemwise percentage allocations, the amount for the individual items of the Bill of Quantity shall be arrived at. The rates of individual items shall be derived from the amount against each items after rounding off.		
5.0	Bidders to note that this is an item rate contract. Payment shall be made for the actual quantities of work executed at the unit rate arrived at as per Sl No.4 above.		
6.0	Based on the itemwise percentage allocations, the amount for the individual items of the Bill of Quantity shall be arrived at. The rates of individual items shall be derived from the amount against each items and its quantity after rounding off to upto 9 decimal places. However, RA bill payment shall be done after rounding off the gross amount to two decimal points. Any adjustment, if required, due to such methodology, will be effected / adjusted in final bill.		
7.0	Any item as per scope of work, if not included in the price quoted above and shown separately will not be taken cognizance of and the offer shall be liable for rejection.		
8.0	Price format shall not be changed by bidder in any case and it may lead to cancellation of their offer.		
9.0	The quoted price shall be excluding GST including freight on FOR site basis.		
10.0	The quantity of items may vary during execution mainly due to actual requirement etc. The unit rates work out from the overall amount quoted & accepted by BHEL shall be considered and no separate unit rates shall be allowed. Unit rates shall be valid throughout the contract period.		
11.0	For payment of non schedule items, the rate shall be derived from CPWD Schedule - 2018.		

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SCH-2 - BREAK UP

SL NO	DESCRIPTION	WEIGHTAGE
1.0	TOTAL SERVICE PART (SCH-3).	0.85942077
2.0	TOTAL SUPPLY PART (SCH-4).	0.14057923
3.0	TOTAL	1.000000000

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SCHEDULE - 3 : SERVICE PART

ST NO.	ITEM DESCRIPTION	UNIT	Qty	WEIGHTAGE
	100 EARTH WORK			
	Earth work: Earth work in excavation, backfilling and disposal including necessary men/women, materials, equipment, loading, transportation, unloading, dewatering etc 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), shoring & strutting (wherever required), dressing the sides & bottom, all lifts, ramming/compacting the excavated bottom, stacking, disposal of surplus excavated materials within a lead upto 500m, spreading/levelling of disposed materials etc all complete for following depths below ground level. [Measurement of excavation shall be paid as per actual quantity at site and as per clause 5.2.0 of Technical Specification, Section D, Sub-Section D1 OF VOL-II B].			
a	Depth from ground level but not exceeding 2 m	CUM	69444	0.01458656
b	Depth exceeding 2 m but not exceeding 4 m	CUM	43049	0.0113233
c	Depth exceeding 4 m but not exceeding 6 m	CUM	5473	0.00180206
A101	Extra over item no 101 for providing and installing special kind of shoring and strutting with temporary removable earth retaining structure using steel I/H sections with waler beam arrangement, including, design, necessary MS clamp, anchors (if required) etc for earth protection during excavation/concreting around foundation and demolishing the same after completion of work for excavation up to following depth below ground level at specified locations and side as per drawing. (The design and scheme of earth retaining structure shall be submitted to BHEL for approval prior to construction. The design should take care of earth pressure due to overburden, surcharge due to adjacent structure/ facilities, earth moving machinery etc.). Mode of measurement: Area shall be the exposed structural shoring arrangement between ground level and bottom of excavation.			
a	Depth from ground level but not exceeding 4 m	SQM	100	0.00223203
103	Earth work in excavation in soft rock (rock without any recovery of excavated materials in the form of hard stone/boulder) 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), shoring & strutting (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. [Measurement of excavation shall be paid as per actual quantity at site and as per clause 5.2.0 of Technical Specification, Section D, Sub-Section D1 OF VOL-II B].			
b	Depth exceeding 2 m but not exceeding 4 m	CUM	1185	0.00036596
c	Depth exceeding 4 m but not exceeding 6 m	CUM	60	0.00002224
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 300 mm compacted thickness using/with selected materials from compulsorily excavated earth available within a lead upto 500 m and compacted as specified including re-excavation of stacked earth, watering, ramming/compaction by manual/mechanical means, dressing etc all complete for the following. [Measurement of Backfilling shall be paid as per excavation quantity after deduction for concrete etc.].			
a	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII)	CUM	87065	0.01268614
b	Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII)	CUM	8750	0.00142397
A108	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 directly from excavation within a lead upto 1Km and compacted as specified including re-excavation of stacked earth, watering, ramming/compaction by manual/mechanical means, dressing etc all complete for the following. [Measurement of Backfilling shall be paid as per excavation quantity after deduction for concrete etc.].			

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SCHEDULE - 3 : SERVICE PART

ST NO.	ITEM DESCRIPTION	UNIT	Qty	WEIGHTAGE
a	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII)	CUM	835	0.0000395
A109	Extra over ST No. 101 and A107 for carriage of material/earth for every 500m or part thereof beyond an initial lead of 500 m.	CUM	36895	0.00048872
A110	Earth work in backfilling upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 300 mm compacted thickness so as to achieve required compaction with approved borrowed soil (borrowed soil to be arranged by the bidder) and compacted as specified including supplying borrowed soil, royalty/seignorage fee (if any), sorting, spreading, breaking clods, watering, ramming/compaction by manual/mechanical means, dressing, finishing to required lines, grades and slopes, testing, all lead and lifts etc all complete as per specification, drawing and as directed by the engineer for the following: [Measurement of Backfilling shall be paid as per excavation quantity after deduction for concrete etc.].			
a	Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII)	CUM	50	0.00003293
b	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII)	CUM	95	0.00006256
A111	Supplying and filling sand upto any depth under floors, around foundations, plinths, paving, passages, etc. in layers not exceeding 300 mm 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	255	0.0012329
A112	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 300 mm 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	1500	0.00725233
A113	Earth work in stripping of top soil upto a minimum depth of 0.30 m below ground level so as to exclude all debris, grass, vegetation, bushes, trees having girth upto 300mm 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 500 m etc all complete as per specification, drawing and as directed by the engineer-in-charge.	SQM	17500	0.0006292
A114	Supplying and filling moorum upto any depth under floors, around foundations, plinths, paving, passages, shoulder of road etc. in layers not exceeding 300 mm compacted thickness and compacted so as to achieve 95% maximum dry density as per IS-2720 (Part-VII) including spreading, watering, ramming/compaction by manual / mechanical means, dressing, royalty (if any) etc. all complete.	CUM	1500	0.00637524
200A: CONCRETE WORKS				
	CONCRETE WORK: Transporting from batching plant 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: (RMC WITH REQUIRED PLASTICIZER/SUPERPLASTICIZER SHALL BE PROVIDED BY BHEL AT BATCHING PLANT IN PROJECT PREMISES . TRANSPORTATION FROM THE BATCHING PLANT UP TO THE POURING POINT SHALL BE UNDER THE SCOPE OF CONTRACTOR)			
201A	Concrete of grade M7.5 (1 part cement, 4 part sand, 8 parts of 40 mm graded aggregate by volume) as mass filling course, lean concrete, levelling course, mud mat under and around foundations/ floors, at any depth below finished floor level etc.	CUM	3433	0.00485927
202A	Concrete of grade M10 (1 part cement, 3 part sand, 6 parts of 40 mm graded aggregate by volume) as lean concrete, levelling course, mud mat under and around foundations/floors at any depth below finished floor level etc.	CUM	171	0.00024204
A204A	Concrete of grade M20 (1 part cement, 1.5 part sand, 3 parts of 12 mm graded aggregate by volume) under floors, paving, plinth protection, pipe encasing etc complete.	CUM	115	0.00018312

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SCHEDULE - 3 : SERVICE PART

ST NO.	ITEM DESCRIPTION	UNIT	Qty	WEIGHTAGE
205A	Laying 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 at all level below finished floor level, any shape, position or thickness etc complete including use of plasticizer/ superplasticizer conforming to IS:9103 (latest) to achieve required slump in concrete all complete as per specification & drawing for the following.			
a	M 25 Grade	CUM	20660	0.03472648
b	M 30 Grade	CUM	110	0.00018489
206A	Laying Design Mix cement concrete of grade conforming to IS:456 & IS 10262-2009 for reinforced concrete works with coarse sand and graded hard stone aggregate of 20mm nominal size in superstructure at all level above finished floor level, any shape, position or thickness etc complete including use of plasticizer/ superplasticizer conforming to IS:9103 (latest) to achieve required slump in concrete all complete as per specification & drawing for the following.			
a	M25 Grade	CUM	2839	0.00502311
b	M30 Grade	CUM	29	0.00005131
c	M35 Grade	CUM	10	0.00001769
A207A	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, Coal mills, Booster fans, Ball mills, etc. at all elevations below/above finished floor level except TG deck and top decks supported over vibration isolation system but including TG foundation columns with addition of suitable plasticizer conforming to IS 9103(latest) to achieve a slump more than 125mm in concrete as per manufacturer's recommendation with 20 mm nominal size graded aggregate in concrete all complete as per specification & drawing			
a	M 30 Grade	CUM	4510	0.00797964
A210A	Extra over ST Nos. 205 to A207 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.			
211A	Encasing of structural steel member with concrete using nominal 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. (Payment of welded wire mesh, chicken wire mesh shall be made separately)			
a	M20 grade	CUM	24	0.00003822
b	M25 grade	CUM	216	0.00034396
212A	Screed concrete conforming to IS 456 with coarse sand and graded hard stone aggregate 12.5mm/6 mm nominal size on the roof at any level or thickness, drains etc complete as per following.			
a	1:2:4 (1 part cement, 2 part sand, 4 parts of aggregate by volume)	CUM	169	0.00025416
b	1:1:2 (1 part cement, 1 part sand, 2 parts of aggregate by volume)	CUM	3	0.00000451
213A	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 precast 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. (Supply of cement for cement mortar in contractor's scope)			
a	M 25 grade	CUM	76	0.00012775
b	M 30 grade	CUM	30	0.00005043
214A	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 suitable plasticizer cum waterproofing cement additives confirming to IS 9103 latest to achieve a slump more than 125 mm in concrete as per manufacturers recommendation and conforming to limits of permeability as per IS 2545 and specification with 20 mm nominal size graded aggregate for following grades. Watertightness is to be ensured including structural grouting if required.			
b	M 30 grade	CUM	670	0.00118545

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ST NO.	ITEM DESCRIPTION	UNIT	Qty	WEIGHTAGE
215A	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	80	0.00011536
b	Reinforced cement concrete of all grades	CUM	80	0.00017455
216A	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	110	0.00001415
217A	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 of engineer in charge. Measurement shall be on the cross sectional area of reinforcement cut.	SQCM	35	0.00000033
218A	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	30	0.00001442
219A	Providing and applying curing compound (water based) of approved make where ever required as per manufacturer's specification.	SQM	45	0.0000092
200B: CONCRETE WORKS				
	CONCRETE WORK: Transporting from batching plant 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: (CONCRETE WITH CEMENT, AGGREGATES, REQUIRED ADDITIVES/PLASTICIZER/SUPERPLASTICIZER ETC. AND INCLUDING TRANSPORTATION, POURING/LAYING, COMPACTION AND CURING ETC. ALL COMPLETE IS IN THE SCOPE OF CONTRACTOR)			
201B	Concrete of grade M7.5 (1 part cement, 4 part sand, 8 parts of 40 mm graded aggregate by volume) as mass filling course, lean concrete, levelling course, mud mat under and around foundations/ floors, at any depth below finished floor level etc.	CUM	381	0.00437659
202B	Concrete of grade M10 (1 part cement, 3 part sand, 6 parts of 40 mm graded aggregate by volume) as lean concrete, levelling course, mud mat under and around foundations/floors at any depth below finished floor level etc.	CUM	19	0.00022893
205B	Laying 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 at all level below finished floor level, any shape, position or thickness etc complete including use of plasticizer/ superplasticizer conforming to IS:9103 (latest) to achieve required slump in concrete all complete as per specification & drawing for the following.			
a	M 25 Grade	CUM	2000	0.02808184
b	M 30 Grade	CUM	15	0.00021374
206B	Laying Design Mix cement concrete of grade conforming to IS:456 & IS 10262-2009 for reinforced concrete works with coarse sand and graded hard stone aggregate of 20mm nominal size in superstructure at all level above finished floor level, any shape, position or thickness etc complete including use of plasticizer/ superplasticizer conforming to IS:9103 (latest) to achieve required slump in concrete all complete as per specification & drawing for the following.			
a	M25 Grade	CUM	300	0.00420773
b	M30 Grade	CUM	5	0.00007117
c	M35 Grade	CUM	5	0.0000722
211B	Encasing of structural steel member with concrete using nominal 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. (Payment of welded wire mesh, chicken wire mesh shall be made separately)			
a	M20 grade	CUM	5	0.00006755
b	M25 grade	CUM	24	0.00033367

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SCHEDULE - 3 : SERVICE PART

ST NO.	ITEM DESCRIPTION	UNIT	Qty	WEIGHTAGE
212B	Scree concrete conforming to IS 456 with coarse sand and graded hard stone aggregate 12.5mm/6 mm nominal size on the roof at any level or thickness, drains etc complete as per following.			
a	1:2:4 (1 part cement, 2 part sand, 4 parts of aggregate by volume)	CUM	20	0.00026345
b	1:1:2 (1 part cement, 1 part sand, 2 parts of aggregate by volume)	CUM	2	0.00002781
	300 FORM WORKS			
	FORMWORK: Providing, fixing and removing formwork at all elevations for all structures, as per specifications and including all labour, material, scaffoldings and centering 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, mass concrete, trenches etc.including chamfering of edges as per drawing, specification and instruction of engineer in charge..	SQM	36190	0.03698091
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 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.	SQM	7846	0.00966551
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	20	0.00001011
b	Pockets of depths more than 150mm and upto 300 mm depth	EACH	20	0.00001786
c	Pockets of depths more than 300mm and upto 600 mm depth	EACH	20	0.00003308
d	Pockets of depths more than 600mm and upto 1000 mm depth	EACH	20	0.00005291
e	Pockets of depths more than 1000mm and upto 1500 mm depth	EACH	20	0.00007736
f	Pockets of depths more than 1500mm and upto 2000 mm depth	EACH	20	0.00010249
	400 REINFORCEMENT			
	REINFORCEMENT WORK: Reinforcement work including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling etc at all level as per specification, drawings and as directed by engineer - in - charge for the following.:			
401	Transportation from store, straightening, cutting, bending, placing in position at all level, binding of mild steel reinforcements (material as per ST 401 S of SCH-4 of Vol-III) conforming to grade 1 of IS:432 part 1 in concrete including binding wire, labour, scaffolding, transportation to & from stores etc. all complete as per specifications & drawings. (Cost on account of supply of reinforcement steel is payable separately under ST 401S of SCH-4 of Vol-III)	MT	5	0.00009496
A402	Providing, straightening, cutting, bending, placing in position at all level, binding in position of steel reinforcements of high yield strength deformed TMT steel bars of grade Fe-500 having minimum elongation of 14.5 % or Fe-500D conforming 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. (Reinforcement steel will be supplied by BHEL free of cost)	MT	3930	0.07464217
	500 WATER PROOFING WORKS			
	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 for the following: (Supply of cement is in scope of contractor)			
A502	Providing and laying topping plaster with cement mortar 1:4 (1 cement : 4 sand) and thickness of 25 mm including preparation of surface, batching, mixing, leveling etc. all complete.	SQM	6150	0.00207209

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SCHEDULE - 3 : SERVICE PART

ST NO.	ITEM DESCRIPTION	UNIT	Qty	WEIGHTAGE
A506	Providing and applying PU based water proofing treatment with one coat of polymerised mastic over the RCC roof to achieve smooth surface as primer with an application rate of minimum 6 sq.m per litre and two successive liquid coatings of high solids content urethane pre-polymers or equivalent material based finish coats as per relevant IS/ASTM standards(ASTM C 836 and ASTM C 898), to form an elastomeric membrane with overall dry film thickness minimum 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	6960	0.01111876
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.	SQM	5730	0.00997552
510	Providing and laying cement concrete chequered flooring tiles of 22 mm thickness and size 300 x 300 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 filled up with (silicon / elastomeric) joint sealant, underbed as per drawings including cost of cement for tiles making etc all complete. (Water proofing will be paid elsewhere)	SQM	1325	0.00171987
A511	Applying two coats of bitumen grade 85/25 as per IS 702 (@ 1.7kg/sqm)with 1% antistripping compound conforming to IS 6241(material as per ST A 511S of SCH-4 of Vol-III) in foundation, wall, column etc on concrete surfaces exposed to soil / ash including transportation from store, surface preparation etc. all complete. (Cost on account of supply of bitumen grade 85/25 and antistripping compound is payable separately under ST A 511S of SCH-4 of Vol-III)	SQM	31510	0.00329478
513	Providing and mixing water proofing compound conforming to IS:2645 in concrete or cement mortar all complete.	KG	525	0.00009384
A518	Providing and applying waterproofing treatment (two component transparent polyamide cured epoxy sealer coating, having solid by volume minimum 40%+ 2%, of minimum 50 micron DFT & sealer coat shall be followed with the application of epoxy phenolic coating, solid by volume minimum 63%, of minimum 400 micron DFT) for the concrete surfaces of underground water retaining structure including surface preparation etc. all complete as per specification.	SQM	535	0.00009562
A519	Providing and applying waterproofing treatment with minimum 400 micron food grade epoxy coating complying to FDA title 21, Part 175.300 for the internal concrete surfaces of water retaining structure including surface preparation etc. all complete as per specification.	SQM	55	0.00004577
A520	Providing and fixing two coats of acrylic based polymer modified cementitious composite coating system etc. all complete as per specification.	SQM	55	0.00002442
A521	Providing and fixing two coats of acrylic based polymer modified cementitious composite coating system including fine silica/quartz sand of 0.6mm nominal size etc. all complete with total nominal thickness of coating minimum 1.5mm as per specification.	SQM	310	0.00013766
A522	Providing and fixing waterproofing treatment to be provided on sunken portion of all vertical and horizontal surfaces of depressed portions of false floor, toilets, W.C., kitchen, Pantry and the like consisting of : (i) 1st course of applying cement slurry @ 4.4 kg/sq.m mixed with water proofing compound conforming to IS 2645 in recommended proportions including rounding off junction of vertical and horizontal surface. (ii) 2nd course of 20 mm cement plaster 1:3 (1 cement: 3 coarse sand) mixed with water proofing compound in recommended proportion including rounding off junction of vertical and horizontal surface. (iii) 3rd course of applying blown or residual bitumen applied hot at 1.7 kg. per sq.m of area. (iv) 4th course of 400 micron thick PVC sheet. (Overlaps at joints of PVC sheet should be 100 mm wide and pasted to each other with bitumen @ 1.7 kg/sq.m) etc. all complete.	SQM	75	0.0000707
600 JOINTS AND FILLERS				

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SCHEDULE - 3 : SERVICE PART

ST NO.	ITEM DESCRIPTION	UNIT	Qty	WEIGHTAGE
	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 for the following:			
601	Supplying & installation of bitumen impregnated fibre board conforming 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	55	0.00005828
b	20 mm wide joints.	SQM	40	0.00005306
c	25 mm wide joints	SQM	325	0.00065006
d	50 mm wide joints	SQM	243	0.00097209
A603	Providing and applying two-part polysulphide based sealant conforming to IS:12118 in joints in concrete including cleaning of joints, raking out groove, application of primer, scaffolding etc. all complete for following size grooves:			
a	25mmX25mm	RM	175	0.00019737
b	50mmX25mm	RM	970	0.00210354
604	Supplying and filling in position hot applied bitumin sealing compund (Grade A) conforming 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	845	0.00009594
b	12mm X 25mm	RM	55	0.00000541
c	20mmX25mm	RM	845	0.00011033
605	Supplying and installation of commercial quality of expanded polystyrene products from reliable manufacturers as approved by the Engineer, as filler material in joints including nailing, installation as per manufacturer's recommendation etc. all complete.			
Ae	100 mm wide joints with polystyrene board of type-1 conforming to IS: 4671 with density 20 Kg/cum	SQM	865	0.00035872
606	Providing and installing PVC joint sealing strips of minimum 3mm thickness and minimum width 100 mm at the construction, expansion and isolation joints from reputed manufacturers as a continuous diaphragm to contain the filler material and/ or to exclude passage of water or any other material into or out of the structure, without any longitudinal joint; and shall be procured and installed in largest practicable lengths having a minimum number of transverse joints with jointing procedure as per the manufacturer's recommendations including the material and tools required for jointing, testing, protection, etc all complete. The joints in rubber seals shall be vulcanised as needed.	RM	22	0.00000966
607	Providing and installing strong and tough alkathene sheet or equivalent of about 1 mm in thickness in isolation joints and shall be fixed by an approved adhesive compound on the cleaned surface of the already set concrete as per the manufacturer's recommendations, to cover it fully including the material and tools required for jointing, testing, protection, etc all complete.	SQM	2	0.00000098
608	Supplying and filling in position hot applied bitumin sealing compund (Grade B) conforming 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	15	0.0000017
b	12mm X 25mm	RM	15	0.00000148
c	20mmX25mm	RM	15	0.00000196
609	Providing and sealing of joints with premium grade silicon sealant (Silpruf of GE silicones or approved equivalent) including cleaning of joints, raking out groove, joint filler tapes, application of primer, curing, scaffolding etc. all complete as per manufacturer's recommendation for following size groove:			
a	25mmX25mm	RM	5	0.00000324
b	50mmX25mm	RM	5	0.00000604
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	327	0.00015222
612	Providing and applying approved fire retardant sealant in joints/openings including cleaning of joints/openings, raking out groove, application of primer, scaffolding etc. all complete.			
a	25mmX25mm	RM	20	0.00006237
b	50mmX25mm	RM	20	0.00012296
613	Providing and fixing G.I strips minimum 1.5mm thk and 150mm wide including fixing accessories etc. all complete.	Kg	30	0.00002191
614	Providing and fixing aluminium strips minimum 18 SWG thk and 300mm wide over expansion joints with minimum lap of 50mm length including brass / aluminium screws, rawl plugs etc. all complete.	Kg	10	0.00001459

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SCHEDULE - 3 : SERVICE PART

ST NO.	ITEM DESCRIPTION	UNIT	Qty	WEIGHTAGE
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	20	0.0000366
	700 MS EMBEDMENTS			
	MS EMBEDMENTS: Embedments including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling etc. at all level as per specification, drawings and as directed by engineer - in - charge for the following:			
701	Transportation of material of ST 701S of SCH-4 of Vol-III from store, fabricating & 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, touch-up primer painting etc. all complete. (Cost on account of supply of embedments, inserts, pipe sleeves, angle pieces, rungs etc. is payable seperately under ST 701S of SCH-4 of Vol-III)	MT	17	0.00082569
A701	Transportation of material of ST A701S of SCH-4 of Vol-III from store, fabricatiing & 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, manual cleaning, touch-up primer Coat of Chlorinated Rubber based Zinc Phosphate Primer of Minimum 50 Micron Dry Film Thickness (DFT) etc. all complete. (Cost on account of supply of embedments, inserts, pipe sleeves, angle pieces, rungs etc. is payable seperately under ST A701S of SCH-4 of Vol-III)	MT	25	0.00128184
702	Transportation from store, erection, installation and alignment of mild steel foundation bolt assembly (material as per ST 702 S of SCH-4 of Vol-III) 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. (Cost on account of mild steel foundation bolt assembly with nuts, lock nuts, washers, anchor plates, stiffner plates, protective tape, pipe sleeves, templates etc. is payable seperately under ST 702S of SCH-4 of Vol-III)	MT	23	0.00132063
A703	Same as above items 701, A701 & 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.	MT	6	0.00020712
b	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	6	0.00021036
704	Supplying, fabricating, erecting and installing following items in concrete/brickwall for all kind of works, including setting material in concrete, layout, scaffolding, cutting, forming, grinding, drilling, bolting, welding, jointing, testing etc. all complete.			
a	MS pipes of all diameters	Kg	20	0.00000343
b	PVC pipes / conduits of all diameters	Kg	110	0.00005368
c	UPVC pipes / conduits of all diameters	Kg	110	0.00008867
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	EACH	4	0.00000025
ii	10mm Dia	EACH	4	0.00000029
iii	12mm Dia	EACH	4	0.00000035
iv	14mm Dia	EACH	4	0.00000051
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	EACH	4	0.00000104
ii	HST M10	EACH	4	0.00000153
iii	HST M12	EACH	4	0.00000233
iv	HST M16	EACH	4	0.00000429
v	HST M20	EACH	4	0.00000864
vi	HST M24	EACH	4	0.00001593
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:			

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SCHEDULE - 3 : SERVICE PART

ST NO.	ITEM DESCRIPTION	UNIT	Qty	WEIGHTAGE
i	HAS-E5.8 M8	EACH	4	0.00000177
ii	HAS-E5.8 M10	EACH	4	0.00000207
iii	HAS-E5.8 M12	EACH	4	0.00000247
iv	HAS-E5.8 M16	EACH	4	0.00000413
v	HAS-E5.8 M20	EACH	4	0.00000739
vi	HAS-E5.8 M24	EACH	4	0.00001029
706	Supply and installation of approved 25mm thick vibration damping resilient pads on/around foundation of vibrating equipment and at other locations all complete.	SQM	30	0.00011154
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.	MT	10	0.00213829
800 GROUTING				
	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 for the following: (Supply of cement is in scope of contractor)			
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	10	0.00001014
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	2	0.00008303
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-charge. (Cost of all material and cleaning the pocket by compressed air shall be in the scope of the contractor).	CUM	22	0.0008152
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 ConbextraGP-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	15	0.0011262
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	23	0.00194595
806	Providing Chemical (epoxy) injection grouting with pressure pump for water retaining concrete structures conforming to IS:6494, including fixing nozzles, cost of approved chemical, admixture, curing etc. all complete . Payment shall be made as per the consumption of chemical grout.	Kg	10	0.00002005
807	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 : 50 mm thick P. C. C. (1 : 2 : 4 with 10 mm nominal size stone aggregates) shall be provided 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. 50 mm thick P. C. C. (1 : 2 : 4) with 10 mm nominal size stone aggregates shall then be laid over the polymer modified cementitious coating before laying the raft.	SQM	315	0.00046354

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SCHEDULE - 3 : SERVICE PART

ST NO.	ITEM DESCRIPTION	UNIT	Qty	WEIGHTAGE
808	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	285	0.00019954
	900 DOORS, WINDOWS, VENTILATORS, LOUVERS			
	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 engineer - in - charge for the following:			
A903	Providing, fitting and fixing factory made pre-laminated solid core flush door shutter as per IS 2202 part II, 35mm thick homogenous particle board bonded with BWP type phenolformaldihyde synthetic resin, particle board core conforming to IS 3087 type I, 35x12 mm thick teakwood beading all around including preparation of working drawings. godrej or equivalent make mortice lock with handles on both sides, approved ISI mark anodised fittings like door stopper, 300mm long tower bolts, 16x300mm long aldrops, 125mm long handles on both sides etc. butt hinges, sliding bolt, knobs, (all fittings shall be anodised aluminium color dyed), finish synthetic paint over primer, screws etc. all complete as per drawing, specification and instruction of engineer in charge. with commercial faces and teak wood edges. (Finish painting paid separately)	SQM	15	0.00021362
A904	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, shop and final painting etc all complete. Side, top and bottom edges of shutters shall be reinforced by continuous pressed steel channel with minimum 18G.	SQM	95	0.00193779
906	Transportation from store, assembling and fixing anodized extruded aluminium doors (single or double shutter) conforming to IS:1948, IS:1949 (material as per ST 906 S of SCH-4 of Vol-III) 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 bi-metallic 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). (Cost on account of supply of aluminium extruded sections etc is payable separately under ST 906S of SCH-4 of Vol-III)	KG	50	0.00001729
907	Providing and fixing fire proof steel doors (single or double shutter) with 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, TAC requirements and as per specification. Minimum ratings shall be 2 Hrs.	SQM	50	0.00094181

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SCHEDULE - 3 : SERVICE PART

ST NO.	ITEM DESCRIPTION	UNIT	Qty	WEIGHTAGE
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, shop and final painting ,glazing etc. all complete. (Glazing shall be paid separately)			
a	Openable type	SQM	370	0.00213759
b	fixed type	SQM	205	0.00079292
A909	Transportation from store, assembling and fixing anodised aluminium work of INDAL, Jindal, Hindalco or other equivalent approved make for door frames, windows, ventilators, partitions, railing etc with extruded standard tubular and other sections(of minimum 2mm wall thickness) 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-metallic protection etc. including preparation 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/stainless steel scd sections etc is payable seperately under ST 906S of SCH-4 of Vol-IIIital decking. (Payment shall be restricted to quantity consumed as per ST 1502 of SCH-3 of Vol-III).g of Silicon Modified Polyester (SMP with silicon content of 30% to 50%) paint or Polyester paint, of minimum 20 microns (nominal) SMP or polyester paint on one side (exposed face), over minimum 5 micron (nominal) primer coat and minimum 10 micron (nominal) SMP or Polyester	Kg	9230	0.00376148
911	Providing and fixing of door closers as per specification ,of approved make & quality all complete of following type :			
a	Over head hydraulic door closers as per IS 3564	EACH	25	0.00008066
b	Floor mounted Hydraulic door closers as per IS 6315	EACH	10	0.00007991
912	Providing and fixing pressed steel frames fabricated from 16 gauge 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	650	0.00020664
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 galvanised steel plate and securely riveted with stiffening angles.(partly coiled and lath/full lath).			
b	Mechanically Operated	SQM	37	0.00071822
c	Electrically operated	SQM	147	0.00316114
914	Providing and fixing PVC doors (25 thk double skin) of sintex or equivalent make including all fitting & fixtures as per specification, drawing and instructions of engineer in charge.	SQM	5	0.00002414
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.			
Aa	6 mm thick ground glass	SQM	10	0.00004445
Ad	6 mm thick laminated glass	SQM	15	0.00015876
Ae	3mm thick Polycarbonate sheet fire retardant and ultra violet resistant	SQM	15	0.00003146
Ah	6 mm thick clear toughened glass	SQM	1110	0.00583933
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	30	0.00023009
916	Supplying and fixing weather stripping of approved make and quality to doors as per instructions of engineer in charge and specification complete.	RM	25	0.00001116
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	10	0.00006407

**VOLUME-III
PRICE SCHEDULE, REV-00**

**JOB: CIVIL & ARCHITECTURAL WORKS INCLUDING LEVELLING GRADING, PILING WORK, TESTING OF PILES AND OTHER
ASSOCIATED WORKS ETC. OF FGD SYSTEM FOR 4X250 MW BRBCL Nabinagar TPP, BIHAR.**

TENDER NO. PSER:SCT:NBN-C2056:20

SCHEDULE - 3 : SERVICE PART

ST NO.	ITEM DESCRIPTION	UNIT	Qty	WEIGHTAGE
919	Providing and fixing 1 mm thk. MS sheet sliding shutters with frame and diagonal braces of 50X50X6 angle iron, 3 mm MS gusset plates at junction and corners, 25 mm dia pulley, 50X50X6 angle and T-iron guide at the top and bottom respectively including painting etc. all complete.	SQM	10	0.00008928
A923	Providing and fixing anodised aluminium grill (anodised transparent or dyed to required shade according to IS: 1868 with minimum anodic coating of grade AC 15) of approved design/pattern, with approved standard section and fixed to the existing window frame with C.P. brass/ stainless steel screws @ 200 mm centre to centre, including cutting the grill to proper opening size for fixing and operation of handles and fixing approved anodised aluminium standard section around the opening, all complete as per requirement and direction of Engineer-in-charge. (Only weight of grill to be measured for payment).	KG	650	0.00052432
	1000 BRICKWORK			
	BRICKWORK: Brickwork masonry including all labour, cement & other 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 for the following: (Supply of cement is in scope of contractor)			
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.			
Aa	Using table moulded/machine made fly ash lime bricks confirming to IS 12894 with crushing strength of 75 kg/cm ² and minimum percentage of fly ash 25% (including cost of cement for brick making)	CUM	328	0.00437004
C	Using burnt clay bricks of class designation 7.5 of nominal dimension	CUM	50	0.00079852
1002	Providing brick work in cement mortar 1:6 (1 cement 6 coarse sand) in walls, chambers etc. in thickness 230mm at all heights, places and position above plinth including raking out joints, curing, scaffolding etc complete excluding plastering and painting.			
Aa	Using table moulded/machine made burnt clay fly ash bricks confirming to IS 13757 with crushing strength of 75 kg/cm ² and minimum percentage of fly ash 25% (including cost of cement for brick making)	CUM	800	0.01225657
C	Using burnt clay bricks of class designation 7.5 of nominal dimension	CUM	50	0.00089437
A1002	Providing brick work in cement mortar 1:6 (1 cement 6 coarse sand) in walls, chambers etc. in thickness 345mm at all heights, places and position above plinth including raking out joints, curing, scaffolding etc complete excluding plastering and painting.			
Aa	Using table moulded/machine made fly ash lime bricks confirming to IS 12894 with crushing strength of 75 kg/cm ² and minimum percentage of fly ash 25% (including cost of cement for brick making)	CUM	360	0.00732519
1003	Providing brick work in cement mortar 1:4 (1 cement 4 coarse sand) in partition walls, chambers etc. in thickness 115mm at all heights, 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.			
a	Using fly ash lime bricks confirming to IS 12894 with crushing strength of 75 kg/cm ² (including cost of cement for brick making)	SQM	79	0.0002087
c	Using burnt clay bricks of class designation 7.5 of nominal dimension	SQM	35	0.00010291
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	10	0.0000251
1006	Providing and encasing of structural steel member with masonry work around flanges, webs etc. and filling the gap between steel and masonry by minimum 12mm thick mortar of 1:6. 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	0.00016909
1007	Providing and laying 75 mm thick bed of dry brick aggregate including of excavation, disposal of surplus earth spreading of earth, ramming, watering etc. complete in all respects as directed by the engineer.	SQM	10	0.00000473
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	10	0.00005251

VOLUME-III
PRICE SCHEDULE, REV-00

JOB: CIVIL & ARCHITECTURAL WORKS INCLUDING LEVELLING GRADING, PILING WORK, TESTING OF PILES AND OTHER ASSOCIATED WORKS ETC. OF FGD SYSTEM FOR 4X250 MW BRBCL Nabinagar TPP, BIHAR.

TENDER NO. PSER:SCT:NBN-C2056:20

SCHEDULE - 3 : SERVICE PART

ST NO.	ITEM DESCRIPTION	UNIT	Qty	WEIGHTAGE
1009	Supply and placing in position mild steel wire fabric 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	10	0.00000357
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 all level, removal of debris upto a lead of 1 km including loading, unloading, transportation etc. all complete.	SQM	10	0.00002091
1011	Providing and filling brick bats in soak pits all complete.	CUM	10	0.00002801
1100 DAMP PROOF COURSE				
	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 for the following: (Supply of cement is in scope of contractor)			
A1101	Providing Damp Proof Course of following thickness with M20 concrete (10mm and down graded aggregate) with 2% of approved admixture of water proofing compound followed by two layers of bitumen coating 85/ 25 grade as per IS: 702 @ 1.7 kg/sq .m. etc. all complete.			
b	50mm thick	SQM	350	0.00027151
1200 CEMENT MORTAR PLASTER				
	PLASTERING: Cement mortar plaster including making grooves wherever required including all labour, cement & other 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 for the following: (Supply of cement is in scope of contractor)			
1201	Providing 18mm thick plaster in two layers outside the building/boundary 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	915	0.00083785
A1201	Providing 18mm thick plaster in two layers outside the building/boundary wall consisting first (base) layer of 12 mm thick plaster in cement sand mortar (1:6) and second (finishing) layer of 6 mm thick plaster in cement sand mortar (1:4) on walls, finished to a smooth finish including providing 3mmx3mm size grooves at junctions of two dissimilar materials all complete	SQM	4400	0.00413954
1202	Providing 12mm thick plaster inside the building/boundary wall in cement mortar 1:6 on walls finished to a smooth finish as per specification all complete.	SQM	3820	0.00288136
A1202	Providing 12mm thick plaster on exposed RCC walls of structures in cement mortar 1:4 on walls finished to a smooth finish as per specification all complete.	SQM	700	0.00034119
1203	Providing 12mm thick plaster in cement mortar 1:6 on walls with rough finish all complete.	SQM	915	0.00072094
1204	Providing 6mm thick plaster on ceiling in cement mortar 1:4 finished to a smooth all complete.	SQM	130	0.00009512
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	120	0.00003346
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 battens, 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	20	0.00000111
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	20	0.00003326
A1210	Providing drip course in cement mortar (1:3) in parapet, chajjas, window/door heads, architectural facias, fins etc. all complete.	SQM	20	0.00000595
1300 FINISHES TO CONCRETE / PLASTERED SURFACES				
	FINISHES TO CONCRETE / PLASTERED SURFACES: Finishes, painting to concrete, plastered surfaces including all labour, cement & other 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 for the following: (Supply of cement is in scope of contractor)			
1301	Two or more coats of white wash/ colour wash as per IS 627 of approved brand and manufacture to give an even shade including a priming coat as per specifications.	SQM	85	0.00000507
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	4165	0.00071801

**VOLUME-III
PRICE SCHEDULE, REV-00**

JOB: CIVIL & ARCHITECTURAL WORKS INCLUDING LEVELLING GRADING, PILING WORK, TESTING OF PILES AND OTHER ASSOCIATED WORKS ETC. OF FGD SYSTEM FOR 4X250 MW BRBCL Nabinagar TPP, BIHAR.

TENDER NO. PSER:SCT:NBN-C2056:20

SCHEDULE - 3 : SERVICE PART

ST NO.	ITEM DESCRIPTION	UNIT	Qty	WEIGHTAGE
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	620	0.00015452
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	45	0.00002968
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	30	0.00001776
1308	Providing and applying 2 or more coats of Chlorinated Rubber paint of approved brand and colour to floors, walls and ceiling including preparation of surface to receive paint, providing and applying chlorinated rubber zinc phosphate 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, inclusive of intermediate coat of Titanium dioxide / micaceous iron oxide complete as per specifications.	SQM	45	0.00001789
1309	Two or more coats of fire resistant transparent paint (@3.5 litre per sqm per coat) as per IS 162 on all woodwork over french polish as per IS 348 or flat oil paint as per IS 137 of approved grade and manufacture to give an even shade as per specifications. French polish payment will be made separately.	SQM	20	0.00001733
A1312	Providing and applying 2 or more coats of water proof cement paint of approved make and color on exterior surface at all heights including material, labour, scaffolding, curing etc including primer coat complete as per specification.	SQM	95	0.00001515
1314	Providing and applying resin bonded granular textured finish, for external applications shall consist of crushed stone/quartz chips of .5 mm to 2.5 mm size and of approved natural color/shade and bonded with synthetic resins, adhesives and additives altogether in a single pack mix, applied on cured and dried plaster surface with a dry film nominal thickness of 2.5 mm. The final finish shall have UV resistance, fungus, bacterial resistance properties all complete with grooves filled with poly sulfide sealant of matching color and shade as per specification/drawing/approval of engineer in charge.	SQM	4495	0.01194752
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	335	0.00007062
A1317	Providing and applying 2 mm thick polymer based water resistant putty 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	1020	0.0002571
A1319	Providing and applying two or more coats of Premium Acrylic Smooth Exterior paint with silicone additives of approved brand and manufacture and required shade over one coat of primer of waterproof cement paint 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 repellent and extremely durable with color fastness as per specification.	SQM	915	0.00024601
1320	Providing and applying acid alkali and oil resistant high build, solvent free, self smoothing, seamless epoxy based amine cured floor finish 150 microns over primer on C.C. flooring.	SQM	30	0.00001788
1400 FLOORING AND SKIRTING				
	FLOORING AND SKIRTING: Flooring and skirting at all level including base layer, labour, cement & material (unless otherwise specified in BOQ/contract specification), equipments, transportation, handling, curing, polishing etc. at all level as per specification, drawings and as directed by engineer - in - charge for the following: (Supply of cement is in scope of contractor)			

**VOLUME-III
PRICE SCHEDULE, REV-00**

**JOB: CIVIL & ARCHITECTURAL WORKS INCLUDING LEVELLING GRADING, PILING WORK, TESTING OF PILES AND OTHER
ASSOCIATED WORKS ETC. OF FGD SYSTEM FOR 4X250 MW BRBCL Nabinagar TPP, BIHAR.**

TENDER NO. PSER:SCT:NBN-C2056:20

SCHEDULE - 3 : SERVICE PART

ST NO.	ITEM DESCRIPTION	UNIT	Qty	WEIGHTAGE
A1401	Providing and laying 50 mm thick heavy duty cement concrete in flooring with metallic hardener pigmented topping 12mm thick uniform graded treated iron paricles in flooring. Under layer of 38mm thick M20 grade cement concrete mix (with stone chips of size 12.5mm 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	14135	0.01415691
1402	Providing and laying 25 mm thick heavy duty cement concrete mix 1:2:4 (1 cement: 2 sand : 4 stone aggregates) flooring with metallic hardener pigmented topping of 10 mm thick uniform graded treated iron particles in skirting and dado. Under layer of 15mm thick cement concrete mix 1:2:4 (1 cement: 2 sand : 4 stone aggregates 12.5 mm well graded) and top layer of 10mm 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 as per specification. (Quoted item rate shall be inclusive of providing glass joint strips).	SQM	330	0.00029758
A1404	Providing and laying interlocking M35 Grade concrete blocks in paving with approved colour and pattern including bedding of sand minimum 50mm thick laid on the subbase as per specifications and recommendations of manufacturer.(inclusive of cost of cement for paver manufacturing).			
b	75mm	SQM	1380	0.0040657
A1406	Providing and laying polished Kota stone 18mm to 20mm thk in flooring. Under bed shall average 30mm thk of M20 concrete 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	550	0.00170956
1408	Providing polished Kota stone 18mm to 20mm thk in skirting projecting 6mm from adjacent plaster minimum 12 mm thick cement mortar bedding of 1:3 (1 cement : 3 sand) with thick cement slurry @4.4kg/sqm spread over the surface with fine joint finished including cutting brickwall upto the required depth, edging, finishing etc. all complete.	SQM	430	0.00129552
A1416	Providing and laying vitrified ceramic tiles of mirror polished variety of size 600x600 from reputed / approved manufacturer, complete including underbed of cement mortar 1:3 minimum 18mm thick underbed for flooring and 12mm thick underbed for dado/skirting with neat cement slurry @3.3Kg/sqm , 3 mm groove joint pointed neatly with 3x4mm stainless epoxy grout SP-100 of laticrete or approved equivalent etc. all complete for following			
Aa	10mm thick tiles In flooring, skirting and dado	SQM	385	0.00094786
d	minimum 9.5mm thick tiles In skirting and dado upto specific height	SQM	45	0.00011285
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	55	0.00015166
d	10mm thick tiles In skirting and dado upto specific height	SQM	35	0.00009762
A1419	Providing and laying granite stone slab of 18mm thickness single piece for wash basin / sink slab /facia of black or approved colour with cutting,making corners,moulding and opening etc. all complete.	SQM	22	0.00016532
A1421	Providing and laying Heavy Duty dust pressed (grade-5) Ceramic Tiles (Matt Finish) of size 300x300mm(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,with Under bed shall 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	120	0.00023927

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TENDER NO. PSER:SCT:NBN-C2056:20

SCHEDULE - 3 : SERVICE PART

ST NO.	ITEM DESCRIPTION	UNIT	Qty	WEIGHTAGE
A1422	Providing & fixing Acid / Alkali resistant (Chemical resistant) tiles conforming to IS:4457 in flooring/Dado with one coat of bitumen primer followed by 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.			
a	20mm thick	SQM	95	0.00041851
b	38mm thick	SQM	5	0.00002509
A1424	Providing & fixing chemical resistant (AR)(Acid / Alkali) bricks (75mm/115mm thick) conforming to IS:4860 in the floor/wall of neutralization pit. Surface on which lining to be applied shall be prepared in accordance with IS:2395. Bitumen primer as per IS:158 followed by 18mm thick bituminastic followed by 6mm thick potassium silicate mortar bedding shall be provided before laying AR bricks. The joints between AR bricks shall be filled with resin type of mortar conforming to IS:4832, part II, seal coat of readymade epoxy paint shall be provided on joints to cover up any porosity that may be left in mortar. End sealing shall be done with bituminastic AR bricks shall be laid with 6mm wide & 50mm deep pointing (epoxy / furnace / CNSL) & acid curing shall be done all complete as per specification.	SQM	35	0.00021671
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:			
b	7mm thick	SQM	105	0.00020804
1428	Providing and laying 3mm thick antistatic PVC flooring / skirting of approved shade,as per IS:3462 and laying as per IS:5318 all complete.	SQM	60	0.00010617
1429	Providing and fixing removable type flooring system consisting of fire resistant particle board of size 600X600X35 mm with 0.05 mm thick aluminium foil lining at bottom and with 2 mm thick anti static PVC topping including proprietary floor supporting system complete as per specification.	SQM	65	0.00071835
1500 ROOFING / SIDE CLADDING				
	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 for the following:			
A1501	Transportation from store & fixing permanently color coated galvanised MS troughed metal sheet decking plate (material as per ST No. A 1501 S of SCH-4 of Vol-III) over floor beams for cast-in-situ roof slab as per relevant IS code including fixing to beams, side lapping, end lapping etc. all complete for below mentioned spans including fixing of sheet (face of sheet exposed to operating floor shall be as per ST A 1501 S of SCH-4) to top flange of beam with drawn arc welding of headed shear anchor studs @ 260mm c/c in the trough and stich screws between two adjacent sheets and sealing with epoxy sealant. The shear anchor studs shall confirm to type B studs specified in AWS D1.1/D1.1M or equivalent as shear connector of 19 mm dia & 100 mm length manufactured from cold drawn round steel bars confirming to ASTM A 29 of grade designation 1010 through 1020 of standard quality with either semi killed or killed welded by drawn arc stud welding through metal deck sheet. Measurement of profile sheeting shall be of thstarted 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			
a	Span Upto 1800mm	SQM	7800	0.00713119
b	Span Exceeding 1800mm and upto 2500 mm	SQM	100	0.00009555

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TENDER NO. PSER:SCT:NBN-C2056:20

SCHEDULE - 3 : SERVICE PART

ST NO.	ITEM DESCRIPTION	UNIT	Qty	WEIGHTAGE
1502	Transportation from store and fixing permanently color coated galvanised MS troughed metal sheet decking plate (material as per ST 1502 S of SCH-4 of Vol-III) of approved colour and conforming to class3 of IS 14246 over roof purlins for cast-in-situ roof slab as per relevant IS code and specification including fixing of plates to purlins (face of sheet exposed to operating floor shall be as per ST 1502 S of SCH-4 of Vol-III), side lapping, end lapping etc. all complete for below mentioned spans including fixing of sheet to purlin with self drilling white zinc plated heat treated carbon steel screws of minimum 5.6 mm dia @ 260mm c/c in the trough and stich screws between two adjacent sheets and sealing with epoxy sealant. Measurement of profile sheeting shall be of the plan area of roof covered by MS trough metal decking. (Cost on account of supply of permanently color coated galvanised MS troughed metal sheet decking plate is payable seperately under 1502S of SCH 4 of Vol-III)			
a)	Span Upto 1800mm	SQM	1450	0.00140349
b)	Span Exceeding 1800mm and upto 2500 mm	SQM	2105	0.00212949
A1503	Providing and fixing shear connectors of mild steel studs having 16mm/19mm dia and minimum 65mm/100mm projected length above purlin passing through metal decking as per relevant IS \ AWS D1.1 \ D1.1M \ ASTM A29 codes and specification.	QUINTAL	48	0.00243573
A1504	Transportation from store and fixing External sheet of Permanent colour coated metal cladding with troughed M.S. sheets (material as per ST A 1504 S of SCH-4 of Vol-III) including fixing to supports / rails (exposed face & inner face of sheet shall be as per ST A 1504 S of SCH-4 of Vol-III) by concealed fixing system, corrosion resistant self tapping / self drilling type fasteners with suitable cap, flashing etc. all complete. (Cost on account of supply of external sheet permanent color coated metal cladding troughed sheet is payable seperately under A1504S of SCH 4 of Vol-III)	SQM	4840	0.00324773
1508	Transportation to site and fixing Inner sheet of Permanent colour coated metal cladding with troughed M.S. sheets (material as per ST 1508 S of SCH-4 of Vol-III) including fixing to supports / rails by concealed fixing system (Z Purlin) , corrosion resistant self tapping / self drilling type fasteners with suitable cap, flashing (exposed face & inner face of sheet shall be as per ST A 1504 S of SCH-4 of Vol-III) etc. all complete. The sheet shall be fixed directly to side runners and Z spacers as per IS : 277. The sheet shall be fixed at the rate not more than 1500mm center to center to hold the insulation and external sheeting. (Cost on account of supply of Inner sheet of Permanent colour coated metal cladding sheet is payable seperately under ST 1508 S of SCH 4 of Vol-III)	SQM	17520	0.01928539
1511	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 application of glue and tying with lacing wire, for glass/rock wool as per manufacturer's recommendations.			
a)	For insulation in Sandwitch Cladding	SQM	130	0.00013481
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 but excluding cost of insulation.	SQM	220	0.00042714
1519	Transportation from store and fixing of permanent colour coated Pre-Fabricated sandwitched insulated metal cladding of approved shade and colour comprising of top sheet as troughed permanently colour coated sheet & bottom sheet as plain permanently colour coated with 50 mm thick insulation sandwiched between the two sheets (material as per ST 1519 S of SCH-4 of Vol-III) including fixing of Pre-fabricated Insulated Metal Sandwich panels with structural members below with special coated fastener conforming to corrosion resistant Class 3 of AS3566 and tested for 1000 hours salt spray test etc. all complete as per specification. (Cost on account of supply of Pre-Fabricated sandwitched insulated metal cladding sheet is payable seperately under 1519S of SCH 4 of Vol-III)	SQM	1505	0.0028431

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TENDER NO. PSER:SCT:NBN-C2056:20

SCHEDULE - 3 : SERVICE PART

ST NO.	ITEM DESCRIPTION	UNIT	Qty	WEIGHTAGE
1520	Transportation from store & fixing permanently at all heights and elevations, fire resistant and UV resistant polycarbonate translucent troughed sheets (material as per ST 1520 S of SCH-4 of Vol-III) of minimum 3MM thickness over roof purlins/beams/side runners etc for roofing and side cladding (internal & external) including all labour, material, equipment, transportation, handling, scaffolding, laps, hooks, washers, corner pieces etc. at any level as per specification, drawings and as directed by engineer - in - charge. Item rate is inclusive of cost of all labour, material, tools and plants, consumables, lead, lift etc complete. (Cost on account of supply of UV resistant polycarbonate translucent troughed sheet is payable separately under ST 1520 S of SCH 4 of Vol-III)	SQM	590	0.00053548
	1600 FALSE CEILING			
	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 for the following:			
A1602	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 backed with 0.05 mm thick aluminium foil & 24 G x 25 mm mesh wire netting and shall be fixed to ceiling with 24 G wire ties and suitable fixing arrangements. Additional hangers and height adjustment clips shall be provided for return air grills, light fixtures. A.C. ducts etc. complete with cut-outs etc. The size of tiles shall be 600 X 600 mm or 600 X 1200 mm.	SQM	100	0.000297
A1603	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 including 50mm thick mineral wool insulation(density 48 kg/cum) conforming to IS:8183 backed with 0.05 mm thick aluminium foil & 24 G x 25 mm mesh wire netting and shall be fixed to ceiling with 24 G wire ties and suitable fixing arrangements. Additional hangers and height adjustment clips shall be provided for return air grills, light fixtures, A.C. ducts etc all complete.	SQM	30	0.0001998
A1604	Providing, fixing and laying permanently colour coated aluminium false ceiling of approved colour with stove enamel finish of approved make in LINEAR and SQUARE type with corrosion resistance aluminium alloys panels of minimum thickness 0.5mm including 50mm thick mineral wool insulation (as per IS:8183)backed with 0.05 mm thick aluminium foil & 24 G x 25 mm mesh wire netting and shall be fixed to ceiling with 24 G wire ties and suitable fixing arrangements.. Additional hangers and height adjustment clips shall be provided for return air grills, light fixtures etc. The work to be complete as per specifications, drawings and direction of engineer.	SQM	470	0.00331999
	1700 RAIN WATER DOWN TAKE PIPES			
	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 for the following: (Supply of cement in Contractor's scope)			
A1704	Transportation from store and fixing galvanised MS down take pipes conforming to IS: 1239/IS: 3589 of 150 mm dia- Medium quality as per IS:1239(part-I) all complete as per specification. All rain water down comers shall be provided with roof drain heads and complete with shoes bends, junctions, sockets, adapters, brackets and finished with anticorrosive painting over a coat or primer. Downcomers shall be provided with 45 x 45 cm size Khurras having minimum thickness of 30 mm with M-15 concrete over PVC sheet of 1mx1mx400micron and finished with 12 mm thick cement sand plaster 1:3.The rainwater down comers shall be provided with suitable C.I. grating at inlet point. (Cost on account of supply of galvanised MS down take pipes is payable separately under A 1704 S of SCH 4 of Vol-III)	RM	2250	0.00239423
A1711	Providing and fixing CI grills in catch pits including frame etc. all complete as per specification.	Each	100	0.00000795
	1800 MISCELLANEOUS WORKS			

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SCHEDULE - 3 : SERVICE PART

ST NO.	ITEM DESCRIPTION	UNIT	Qty	WEIGHTAGE
	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 for the following: (Supply of cement in Contractor's scope)			
A1801	Providing and Filling in trenches, plinths, area paving and other underground structures with graded stone aggregate of size range 63 mm to 45 mm (complying IRC specification) in layers not exceeding 200 mm compacted thickness including breaking of stone boulders to required sizes, filling the interstices with selected moorum/non-expansive soil sand 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	5720	0.02868036
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 200 mm compacted thickness including breaking of stone boulders to required sizes, filling the interstices with selected moorum 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	310	0.00155436
1802	Supply and laying approved quality Stone aggregate 40mm size in transformer yards.	CUM	345	0.00265716
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	100	0.00003039
1807	Anti termite chemical treatment of soil with Chlorpyrifos/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).	SQM	1575	0.00061652
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	10	0.00019018
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).	EACH	5	0.00009886
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).	EACH	5	0.00007154
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)	EACH	5	0.00000523
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.)	EACH	5	0.00000359
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.	EACH	5	0.00022948
1814	Construction of below ground earthing system test pits as per drawing/ sketches including brickwork, plaster, concreting, reinforcement, formwork, providing & fixing GI strips/pipes, GI wires, covers etc as per drawing & specification including associated earthwork.	EACH	5	0.00017294
1815	Providing and fixing GI rungs in concrete/brick walls having zinc coating of minimum 900 g/sqm etc. all complete.	Kg	140	0.00002878
1818	Fire proofing of steel structures with VERMICULITE cementitious coating including supply of all materials for vermiculite materials, reinforcement mesh (3mm thick wire, 50x50 size mesh) , nuts, tie wires, weldings, surface preparation, curing, staging, compatible paintings etc. all complete.	CUM	10	0.00170517
1819	Supply & fixing expanded metal steel sheet conforming to IS:412. Size of mesh shall be 10mmX40mm with strands of 2.5mm width and 1mm thickness to the structural steel for facilitating fireproofing works.	SQM	15	0.00001271
1821	Sprinkling of water by water tanker fitted with perforated GI pipe (portable tanker minimum 3000 litre capacity) for roads and miscellaneous area within plant boundary, for dust suppression and reduction of suspended material at site for day to day work, as directed by BHEL site engineer (water for this purpose shall be provided by BHEL free of cost and utilisation of machine will be in terms of Tank-hour put in actual use for water sprinkling).	TANK-HR	10	0.00001296

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TENDER NO. PSER:SCT:NBN-C2056:20

SCHEDULE - 3 : SERVICE PART

ST NO.	ITEM DESCRIPTION	UNIT	Qty	WEIGHTAGE
1822	Providing & filling Bentonite Powder (Sodium base) mixed with water in electronic earthing pit as per drawing & direction below ground level including all materials, transportation, labour, incidental etc all complete as per specification.	CUM	4	0.00011706
1823	Providing and laying cinder filling in the toilets, roads, etc complete as directed by engineer in charge.	CUM	4	0.00001264
1824	Disposal of scrap steel, scrap wood, broken packing crates, cable scrap, debris and other civil waste, electrical waste materials etc. from project site to a designated place within 5 KM range, with all manpower T & P etc. including loading and unloading as and when directed by BHEL.			
a	Steel scrap / metal scrap	MT	10	0.00000789
b	Debris & Other waste materials.	CUM	10	0.00000148
1832	Providing and fixing sliding layer of bitumen paper or craft paper over the screed layer for water retaining structures to destroy the bond between the screed and the base slab concrete of the water retaining structure etc all complete.	SQM	110	0.00000432
A1839	Providing bore wells in ground with perforated/non-perforated PVC pipe of standard approved make for rain water harvesting by means of mechanical equipment including pipe, drilling inside earth, weathered rock, sandstone, shale etc. upto required depth at locations shown in drawing etc all complete. Depth of borewell shall vary from 6m to 15m. Payment shall be made cumulative diamterwise as per actual length of bore well and diameter as mentioned below.			
(a)	200 mm diameter	RM	10	0.00002656
(b)	300 mm diameter	RM	10	0.00003963
A1840	Supply & packing uniformly 6mm to 3mm size gravel in the bore hole surrounding the perforated PVC pipe.	Cum	10	0.0000211
A1841	Supply & packing uniformly downgraded 40mm size gravel at all depth in the pit/well dug for rain water harvesting.	Cum	10	0.00007386
A1842	Supply & packing uniformly downgraded 40mm size pebbles at all depth in the pit/well dug for rain water harvesting.	Cum	10	0.00007386
A1843	Supply & laying coarse sand layer at all depth in the pit/well dug for rain water harvesting.	Cum	10	0.00004567
A1844	Supply and fixing of bar screen of 5 mm square M. S. bar at inlet point of Rain water collecting tanks with 50 mm X 50 mm opening etc all complete	SQM	6	0.00000106
A1845	Supply & fixing 150mm dia perforated PVC pipe ISI mark 6 Kg/ cm ² with air vent at top as per the drawing & specification complete.	RM	20	0.00004626
A1846	Providing & fixing 150 dia PVC pipe ISI mark 6 Kg/cm ² as per specification.	RM	20	0.00003976
A1847	Supply & fixing Netlon jali/ PVT net in the well dug for rain water	SQM	20	0.00000988
A1848	Providing 75mm thk. bitumen-aggregate mix laid to slope consisting of compact crushed stone (12mm downgraded stone chips), screenings, fine gravel, clean coarse sand mixed in 80/10 hot bitumen (8 to 10% by volume) and rolled or compacted all complete as per specification.	SQM	400	0.00045703
A1849	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 as per specification.	SQM	20	0.00001214
A1850	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 Celsius or A65 grade bitumen for softening point above 45 degree celcius as per IS: 73 or its equivalent quality 8 to 10% by volume and rolled or compacted all complete as per specification.	SQM	20	0.00002661
A 1851	Conducting underground survey by Ground Penetration Radar (GPR) to locate and map the underground utilities, metallic or non-metallic objects such as gas lines, communication lines, sewer lines, service lines, foundation, tunnels, storage tanks, pipes etc. in various soils/ash for depth up to 6m below ground level in a corridor of 5m width covering the whole surveyed area including locating the position and size/extent of existing underground structures/facilities, preparation and submission of report, drawings including mobilization and demobilization of necessary testing equipments to the project site etc. all complete as per specification, drawings and as per direction of engineer-in-charge.	SQM	1800	0.00051972
2000 FENCING AND GATES				
	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 for the following: (Supply of cement in Contractor's scope)			

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TENDER NO. PSER:SCT:NBN-C2056:20

SCHEDULE - 3 : SERVICE PART

ST NO.	ITEM DESCRIPTION	UNIT	Qty	WEIGHTAGE
2001	Supplying and erecting in position 2.4 m high PVC coated galvanised 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 conforming 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 paid separately under item 2007)	RM	305	0.00156929
2007	Supply and fixing of hot dip galvanised mild steel posts for fencing . Rate of zinc coating shall not be less than 710 g/m ² on steel posts.	MT	7	0.00131478
2008	Supply, fabrication and fixing of mild steel posts for fencing including painting etc all complete.	MT	10	0.00177545
A2008	Supply, fabrication and fixing of pre-cast RCC posts for fencing including fixtures etc all complete.	CUM	3	0.000137
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 stiffeners, bracings, fabricated hinges, MS Aldrops with locking arrangement, tempered steel pivot, guide track of MS Tee, bronze aluminium ball bearing arrangements, castor wheels, paintings etc. all complete.	MT	7	0.00152527
2100 WATER SUPPLY				
	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 for the following:			
2101	Providing and fixing in position tested heavy duty type chromium plated (CP) brass long neck bib cocks including sockets, union, nuts etc all complete - 15mm nominal bore.	EACH	33	0.00007381
2102	Providing and fixing in position heavy duty brass stop cock of approved quality including all specials etc all complete - 15mm nominal bore.	EACH	25	0.00003974
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.	EACH	13	0.00003213
b	50mm nominal bore.	EACH	12	0.0000713
A2104	Providing and fixing Galvanized MS pipes class B medium class conforming to IS:1239 pipes shall be concealed and painted with anticorrosive paint, complete for internal works with GI sockets, unions, elbows, tees, nipples etc and clamps including cutting and making good the walls etc all complete for following sizes:			
a	15 mm nominal bore.	RM	125	0.0001178
b	20 mm nominal bore.	RM	75	0.00007763
c	25 mm nominal bore.	RM	75	0.00008927
d	50 mm nominal bore.	RM	20	0.00003387
A2105	Providing and fixing Galvanized MS pipes class B complete for external work with GI sockets, unions, elbows, tees, nipples etc including trenching & refilling, anti-corrosive paint etc all complete for following sizes:			
a	15 mm nominal bore.	RM	40	0.00003149
b	20 mm nominal bore.	RM	60	0.0000528
c	25 mm nominal bore.	RM	80	0.00008266
d	50 mm nominal bore.	RM	60	0.00009231
A2106	Providing and fixing wall to wall mirror of height 450mm & 6 mm thk float glass from reputed mirror manufacturer. Mirror shall be mounted with glass adjustable revolving CP brackets with CP screws etc all complete.	EACH	8	0.00002082
A2108	Providing and fixing 20 mm diameter stainless steel towel rails (600mm X 20mm) all complete.	EACH	8	0.00001162
2110	Providing and fixing C.P. Soap holder mounted with C.P. screws etc all complete.	EACH	8	0.00001096
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.	EACH	2	0.00000248
A2111	Providing and fixing stainless steel liquid soap holder cum dispenser with requisite fittings. Dispenser shall be round and easily revolving with removable threaded nozzle and mounted on C.P. brackets etc all complete.	EACH	6	0.00000702
2112	Providing and fixing glazed vitreous wall mounted paper holder with suitable cover cum cutter fitted with CP screws etc all complete.	EACH	8	0.00001075
2113	Providing and fixing chromium plated brass shower rose 100mm dia with 15 or 20 mm inlet dia all complete.	EACH	4	0.000008

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TENDER NO. PSER:SCT:NBN-C2056:20

SCHEDULE - 3 : SERVICE PART

ST NO.	ITEM DESCRIPTION	UNIT	Qty	WEIGHTAGE
A2114	Providing & fixing in position High density polyethylene (cylindrical/vertical) molded seamless type 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	EACH	12	0.00015332
b	1000 litres capacity	EACH	4	0.00010221
2115	Providing and fixing approved stainless steel sink with integrated drainboard as per IS:13983 of size 915x460x178mm with CI brackets, stainless steel chain with rubber plug 40mm, cp brass waste trap with necessary union complete including painting the fittings, cutting and making good the wall where required etc. all complete.	EACH	4	0.0000302
2116	Providing and fixing glass shelves 600mmx127mmx4 mm with chromium plated brackets all complete.	EACH	4	0.0000082
2117	Providing and fixing metal storing cabinets all complete.	EACH	4	0.0000122
2118	Providing Minimum 600 mm long porcelain tray etc all complete..	EACH	4	0.00000651
2119	Providing and fixing Recessed porcelain soap tray in shower area etc all complete.	EACH	4	0.00000203
2120	Providing and fixing grab bars, barrier-free access and appropriate fittings and fixtures for toilets for handicapped etc. all complete.	EACH	4	0.00000813
A2121	Providing and fixing Electric operated hand dryer with photo voltaic control including fittings, cutting and making good the wall where required etc. all complete.	EACH	4	0.00002082
2122	Supply and Installation of Borewell with Boring / drilling of required dia for PVC casing pipe and strainer pipe 100 mm dia upto 25M and 50 mm dia. from 25M to upto bottom, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart / bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete including above ground Casing Pipe (2M 100mm GI pipes) , all other above ground required GI Pipes, valves, filter, tees, couplings complete with submersible pumps & motor, electrical controls, cables, etc complete items for water upto 6M high tank) including all Labour for boring through any type of soil, rock & boulders for sinking tubewell. Hire charges of Boring Machine, other tools and plants, staging force pumping set, and making arrangement for water required for boring etc. complete and lowering of casing pipes, strainers blind pipes, gravel packing the gap between d sections etc is payable separately under ST 906S of SCH-4 of Vol-III)tal decking. (Payment shall be restricted to qua	Set	1	0.00022379
2123	Development of tube well in accordance with IS : 2800 (part I) and IS: 11189, to establish maximum rate of usable water yield without sand content (beyond permissible limit), with required capacity air compressor, running the compressor for required time till well is fully developed, measuring yield of well by any approved method, measuring static level & draw down etc., collecting water samples & getting tested in approved laboratory all complete, including hire & labour charges of air compressor, tools & accessories etc., all as per requirement and direction of Engineer-in-charge.	Set	1	0.00003679
2200 SANITARY WORKS				
	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 for the following: (Supply of cement in Contractor's scope)			
A2201	Supply and fixing glazed vitreous china Wash Basin of approved make (with photovoltaic control) 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	6	0.00016015
b	Colored	EACH	6	0.00016015
2202	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 necessary union complete including painting the fittings, cutting and making good the wall where required etc. all complete.	EACH	2	0.00003091
A2203	Providing and fixing stainless steel kitchen sink of size 600x400x200mm conforming to IS: 13983 including all fittings etc. all complete.	EACH	2	0.00002614

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SCHEDULE - 3 : SERVICE PART

ST NO.	ITEM DESCRIPTION	UNIT	Qty	WEIGHTAGE
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, necessary C.P. connections etc all complete.			
a	Floor mounted	EACH	1	0.00001236
b	Wall mounted	EACH	7	0.00009066
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, necessary C.P. connections etc all complete.	EACH	2	0.0000273
A2206	Providing and fixing white flat back glazed vitreous china lipped urinals of size 440x265x355 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, with provision of squatting urinal for ladies toilet etc. all complete.	EACH	8	0.00048329
2207	Supply, laying and jointing UPVC pipes of class 3 as per IS:4985 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:			
a	75mm dia pipes	RM	30	0.00002532
b	110mm dia pipes	RM	30	0.00003452
c	160mm dia pipes	RM	30	0.00005932
d	200mm dia pipes	RM	30	0.00006835
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	550	0.00067698
b	300mm dia	RM	20	0.00004952
c	450mm dia	RM	20	0.00008683
d	600mm dia	RM	40	0.00022042
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	40	0.00004841
b	250mm dia	RM	12	0.00001985
c	300mm dia	RM	2	0.00000375
d	450mm dia	RM	2	0.00000545
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	0.00004196
2211	Providing and fixing C.I Manhole heavy duty cover of size 600mmx450mm including frame from reputed manufacture etc. all complete.	EACH	40	0.00119451
2212	Providing and fixing circular heavy duty C.I. manhole cover of 600 mm dia with frame etc. all complete.	EACH	20	0.00059953
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	10	0.00006852
b	150x100mm P or S Type.	EACH	10	0.00007026
c	150x150mm P or S Type.	EACH	10	0.00007189
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	20	0.00007547
2215	Providing and fixing 100mm heavy duty UPVC floor traps with 100 mm inlet and 100 mm outlet & C.P. jalli all complete.	EACH	40	0.00012974
2216	Providing and installing approved brand single tap water cooler of 80 L cooling capacity all complete.	EACH	20	0.00243985
2217	Providing and installing approved brand single tap water cooler of 150 L cooling capacity all complete.	EACH	10	0.00219123
2218	Providing and fixing white viterous urinal partitions of size 675x325x85mm all complete.	EACH	20	0.00011952
2219	Providing and fixing eye and face drinking water fountain (combined unit with receptacle conforming to IS: 10592) all complete as per specification.	EACH	4	0.00006714
A2220	Providing and fixing sand cast iron pipes conforming to IS:1729 for above and below ground sanitary works with water tight lead joint, fixing clamps, excavation, filling, disposal etc. all complete for the following.			
a	80mm dia pipes	RM	130	0.00033262

VOLUME-III
PRICE SCHEDULE, REV-00

JOB: CIVIL & ARCHITECTURAL WORKS INCLUDING LEVELLING GRADING, PILING WORK, TESTING OF PILES AND OTHER ASSOCIATED WORKS ETC. OF FGD SYSTEM FOR 4X250 MW BRBCL Nabinagar TPP, BIHAR.

TENDER NO. PSER:SCT:NBN-C2056:20

SCHEDULE - 3 : SERVICE PART

ST NO.	ITEM DESCRIPTION	UNIT	Qty	WEIGHTAGE
b	100mm dia pipes	RM	90	0.00027766
c	150mm dia pipes	RM	40	0.00019297
2221	Providing, laying spun CI pipes with conforming to IS 1536 complete for following.(Excavation,backfilling,concrete to be paid separately)			
c	150mm dia	RM	20	0.00011268
d	200mm dia	RM	20	0.00016183
f	300mm dia	RM	20	0.00026732
2300 STRUCTURAL STEEL				
	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 engineer - in - charge for the following:			
2307	Erection and alignment of factory made electroforged galvanised grating units (material as per ST No. 2307 S of SCH-4 of Vol-III) in flooring, platforms, drain and trench covers, walk-ways, passages, staircases with edge binding strips and anti-skid nosing in treads etc. including fixing clamps, fittings, fixtures, grinding, drilling, welding, edge preparation, etc. all complete. (Cost against supply of factory made electroforged galvanised grating units with fixing clamps, fittings, fixtures, etc. payable separately under ST No. 2307 S of SCH-4 of Vol-III)			
a	Minimum galvanisation of 610 g/sqm	MT	65	0.00543128
2308	Erection and alignment of factory made galvanised welded grating units (material as per ST No. 2308 S of SCH-4 of Vol-III) in flooring, platforms, drain and trench covers, walk-ways, passages, staircases with edge binding strips and anti-skid nosing in treads etc. including 1 coat of redoxide zinc-chromate primer (after erection), fixing clamps, fittings, fixtures, grinding, drilling, welding, edge preparation, etc. all complete. (Cost against supply of factory made galvanised grating units with fixing clamps, fittings, fixtures etc. payable separately under ST No. 2308 S of SCH-4 of Vol-III)	MT	15	0.00097591
2320	Supply, 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.	MT	1	0.00073469
2321	Fabrication and fixing of MS pipe hand railing of 32 mm/40 mm dia (material as per ST No. 2321 S of SCH-4 of Vol-III) including transportation from store, loading/unloading etc. all complete. (Cost against supply of 32 mm/40 mm MS pipe payable separately under ST No. 2321 S of SCH-4 of Vol-III)	MT	25	0.00158231
A2322	Fabrication and fixing of galvanised MS pipe hand railing (1000 mm high) of 32mm/40mm/50mm dia (Medium Class) (material as per ST No. A 2322 S of SCH-4 of Vol-III: Supply) including transportation from store, loading/unloading, painting etc. all complete. (Cost against supply of 32 mm/40 mm/59 mm dia MS pipe of medium class and galvanised payable separately under ST No. A 2322 S of SCH-4 of Vol-III: Supply)	MT	30	0.00201746
2328	Supply, fixing lightning arrester and air terminal over roof of power house building, pump house and other structures including all materials, labour, electrodes etc complete (all materials to be supplied by the contractor).	EACH	1	0.00000965
2334	Providing and fixing 20mm square MS bar balustrade with suitable MS flat and teakwood handrails etc all complete.	RM	10	0.00015139
2400: ROAD WORKS				
	ROAD WORKS: Road works including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation etc. as per specification drawing, relevant IRC & IS codes and as directed by the Engineer-in-charge for the following: (Supply of cement is in Contractor's scope unless otherwise specified in BOQ.)			
2401	Preparation of sub grade by excavating earth to required depth for all types of soil/ rock, dressing to camber and consolidating the base including making good the undulation etc and disposal of surplus earth within a lead upto 1 km etc. all complete.	CUM	5020	0.00038948
2403	Providing, stacking & laying granular morrum for shoulder including watering, compaction with road roller to required camber etc all complete.	CUM	1122	0.00476868
A2405	Construction of granular sub-base by providing close graded Material conforming to specification, mixing in a mechanical mix plant at OMC, carriage of mixed material to work site, for all leads & lifts, spreading in uniform layers of specified thickness on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.	CUM	2313	0.01819279

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TENDER NO. PSER:SCT:NBN-C2056:20

SCHEDULE - 3 : SERVICE PART

ST NO.	ITEM DESCRIPTION	UNIT	Qty	WEIGHTAGE
2413	Supplying and laying 400mmx150mmx350mm deep precast concrete kerb stone of grade M-20 with 20 mm nominal size stone aggregate and of shape as per detailed drawing including fixing with cement mortar (1:2) in 13mm thick joints, finishing of joints with neat cement paste, making drainage opening where required etc all complete.	RM	1210	0.00101924
A2415	Supply and laying 150mm dia R.C.C NP-3 type Hume pipe in raised shoulders as rain water drains as per detailed drawing including fixing with cement mortar (1:3) in 13mm thick joints, finishing of joints with neat cement paste etc all complete. Payment terms - a) On receipt of materials at site - 50%; b) On completion of erection & fixing - 50%.	RM	282	0.00025172
A2419	Transportation from batching plant and laying concrete work in road (RMC INCLUDING ADMIXTURE SHALL BE PROVIDED BY BHEL AT BATCHING PLANT IN PROJECT PREMISES) including cost of labour, materials (unless otherwise specified in BOQ/contract specification) and equipment for handling, transportation, placing, vibrating and curing (excluding cost of centering, shuttering and reinforcement) with mechanised equipments like transit mixer, concrete pump etc. complete as per drawing, specifications and as per direction of engineer in charge for the following: Cement concrete of grade M35 using 20 mm nominal size stone aggregate with approved admixture (if required), provision for necessary joints including compaction, finishing to lines and grades, curing and providing & fixing forwork etc. all complete. (Excluding the cost of reinforcement and dowel bar)	CUM	1580	0.00205796
2421	Transportation & laying dry lean cement concrete of grade M10 with 20 mm nominal size graded stone aggregate over a prepared sub-grade including compaction, finishing, curing etc all complete. (RMC SHALL BE PROVIDED BY BHEL AT BATCHING PLANT IN PROJECT PREMISES)	CUM	1127	0.0011283
A2423	Providing and fixing separation Membrane of impermeable plastic sheeting of 125 microns thick laid flat without creases etc. all complete	SQM	5725	0.00223844
2425	Providing and fixing in position MS dowel bar reinforcement including surface painted with bitumen and greasing, dowel end caps with cotton fills etc all complete as per specification, drawing and as directed by Engineer.	MT	12	0.00166717
2431	Providing & laying 75 mm thick precast interlocking concrete pavers of approved colour and pattern as per specification and recommendation of manufacturer.	SQM	3677	0.00571545
2500 PILING				
	PILING WORK: Piling 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:			
2501	Mobilisation of hydraulic rotary piling rigs and accessories capable of pile boring/drilling in all types of strata/ash etc., installing various size of bored cast in situ RCC piles to project site and demobilisation of the same after completion of piling works etc all complete.	EACH	4	0.01490682
2503	Mobilisation of conventional DMC/RMC piling rigs and accessories capable of pile boring/drilling in all types of strata/installing various size of bored cast in situ RCC piles to project site and demobilisation of the same after completion of piling works etc all complete.	EACH	2	0.00044748
A2504	Installation of Bored cast-in-situ RCC vertical pile as per IS 2911 (Part 1 Sec 2) with diameter and length as specified (length to be measured from pile cut-off level to the bottom of pile) using cement concrete grade M30 conforming to IS:456 with 20 mm nominal size stone aggregates with a minimum cement content of 400Kg per cum of concrete including providing all materials (but excluding reinforcement steel for which measurement/payment shall be made separately), boring/drilling in all types of soil, providing bentonite slurry and/or casing for stabilization of pile bore, flushing of pile bore, cleaning, providing plasticizer wherever required, breaking pile head to cut off level and exposing pile reinforcement for embedment in pile cap, transportation of concrete debris up to disposal yard etc. including empty boring from ground level to pile cut off level etc all complete as per specification, drawing and as directed by the engineer-in-charge for the following. (RMC will be supplied by BHEL at Batching Plant free of cost, Transportation from Batching Plant to site to be done by the contractor.]			
d	Pile with 600 mm diameter and 18m length below cut off level	EACH	515	0.03028598
Ad	Pile with 600 mm diameter and 20m length below cut off level	EACH	100	0.00653419
Ae	Pile with 760 mm diameter and 16m length below cut off level	EACH	660	0.04225016
A2505	Extra over ST. No. A2504 for pile length more than the specified length below cut off level for the following.			

**VOLUME-III
PRICE SCHEDULE, REV-00**

**JOB: CIVIL & ARCHITECTURAL WORKS INCLUDING LEVELLING GRADING, PILING WORK, TESTING OF PILES AND OTHER
ASSOCIATED WORKS ETC. OF FGD SYSTEM FOR 4X250 MW BRBCL Nabinagar TPP, BIHAR.**

TENDER NO. PSER:SCT:NBN-C2056:20

SCHEDULE - 3 : SERVICE PART

ST NO.	ITEM DESCRIPTION	UNIT	Qty	WEIGHTAGE
d	For 600 mm diameter pile	RM	315	0.00120587
e	For 760 mm diameter pile	RM	660	0.00315855
A2506	Rebate on ST.No. A2504 for pile length less than the specified length below cut off level for the following.			
d	For 600 mm diameter pile	RM	100	0.00038282
e	For 760 mm diameter pile	RM	660	0.00315855
A2510	Extra over ST.No. A2504 for boring/drilling in rock for a length not exceeding 4 times the diameter of pile, cleaning the pile hole, concreting etc all complete for the following.			
d	For 600 mm diameter pile	RM	240	0.01176934
e	For 760 mm diameter pile	RM	2006	0.14182355
A2511	Conducting initial load test upto a maximum test load of 3 times the safe load capacity on single pile as specified in accordance with IS 2911 Part-4 including preparation of pile head for testing, necessary excavation including suitable dewatering (if/as required), all arrangements of loading, unloading, test equipments/ accessories, jacks, recording of results, labour, submission of test report but excluding the cost of installation of pile (installation of pile shall be paid separately) etc. all complete as per specification, drawing and as directed by engineer in - charge for the following:			
a	For vertical compression test by cyclic load method			
iii	600 mm diameter pile	EACH	3	0.00247328
iv	760 mm diameter pile	EACH	2	0.00172855
b	For lateral load test			
iii	600 mm diameter pile	EACH	3	0.0018128
iv	760 mm diameter pile	EACH	2	0.0015044
c	For tension/uplift test			
iii	600 mm diameter pile	EACH	3	0.0013152
iv	760 mm diameter pile	EACH	2	0.00108974
2512	Conducting routine load test on single job pile as specified in accordance with IS 2911 (Part-4) including preparation of pile head for testing, necessary excavation, providing all arrangements of loading, unloading, test equipments/accessories, jacks, recording of results, labour, submission of test report etc but excluding the cost of installation of job pile complete as per specification, drawing and as directed by the engineer-in-charge for the following.			
a	For vertical compression test by maintained load method			
iii	600 mm diameter pile	EACH	6	0.00562515
iv	760 mm diameter pile	EACH	4	0.00467511
b	For lateral load test			
iii	600 mm diameter pile	EACH	6	0.0036256
iv	760 mm diameter pile	EACH	4	0.00300881
A2513	Carrying out pile integrity test on 600mm/760mm diameter pile including all arrangements for test, equipments/ accessories, materials, labour, submission of test report etc but excluding the cost of installation of job pile all complete as per specification and as directed by the engineer-in-charge.	EACH	1275	0.00361183
2600	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.			
2601	Cutting of trees having girth more than 300 mm measured at a height of 1m above ground level including removal of roots, stacking the seviceable material like trunks,branches etc at specified area within the plant boundary and disposal of unseviceable parts/materials within a lead upto 1km etc all complete.			
a	300 mm upto 600 mm girth.	Nos	10	0.00000655
b	601 mm upto 1200 mm girth.	Nos	15	0.000044
c	1200mm and above.	Nos	5	0.00006827
2602	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	270	0.00000971
2603	Earth work in excavation upto any depth below ground level in all types of soil including moorum, ash which can be excavated by any means for grading including setting out, levelling, dewatering (wherever required), dressing the sides & bottom, levelling to grade, all lifts, ramming/compacting the excavated bottom/graded surface, stacking/disposal of surplus excavated materials within a lead upto 1km, spreading/levelling of disposed materials etc all complete as per specification, drawing and as directed by the engineer-in-charge.	CUM	225	0.00003193

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TENDER NO. PSER:SCT:NBN-C2056:20

SCHEDULE - 3 : SERVICE PART

ST NO.	ITEM DESCRIPTION	UNIT	Qty	WEIGHTAGE
2604	Earth work in excavation upto any depth below ground level in soft rock (rock without any recovery of excavated materials in the form of hard stone/boulder) 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) for grading 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 1km, spreading/levelling of disposed materials etc all complete as per specification, drawing and as directed by the engineer-in-charge.	CUM	90	0.00002367
2610	Extra over ST No. 2601 to 2604 for carriage of unserviceable material/earth for every 500m or part thereof beyond an initial lead of 1km.			
a	Carriage for stacking/ backfilling of serviceable material/ earth	CUM	15	0.0000002
b	Carriage for disposal of serviceable/unserviceable material/ earth	CUM	15	0.0000002
2611	Earth work in filling upto any depth below ground level for grading to proper grade and level in layers not exceeding 300 mm loose thickness so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII) with approved borrowed soil (borrowed soil to be arranged by the contractor) and compacted as specified including supplying borrowed soil, royalty/seignorage fee (if any), sorting, spreading, breaking clods, watering, ramming/compaction by manual/mechanical means, dressing, finishing to required lines, grades and slopes, testing, all lead and lifts etc all complete as per specification, drawing and as directed by the engineer.	CUM	110	0.00004829
2612	Providing and laying 225mm thick stone pitching including caulking with 1 cement: 4 sand mortar on the slopes of earth fill/cut with approved quality of rock fragments including, Cement, materials, testing, necessary excavations if any, compaction etc all complete as per specification, drawing and as directed by the engineer.	CUM	140	0.00088723
2613	Providing and laying 300mm thick good quality dry stone pitching on the slopes of earth fill/cut with approved quality of rock fragments including materials, testing, necessary excavations if any, compaction etc all complete as per specification, drawing and as directed by the engineer.	CUM	180	0.00105251
2614	Concrete of grade M10 (1 part cement, 3 part sand, 6 parts of 40 mm graded aggregate by volume) as lean concrete, levelling course, mud mat under and around foundations/floors at any depth below finished floor level etc. [Concrete will be supplied by BHEL at Batching Plant free of cost, Transportation from Batching Plant to site to be done by the contractor.]	CUM	10	0.00000942
TOTAL				0.85942077

VOLUME-III PRICE SCHEDULE, REV-00				
JOB: CIVIL & ARCHITECTURAL WORKS INCLUDING LEVELLING GRADING, PILING WORK, TESTING OF PILES AND OTHER ASSOCIATED WORKS ETC. OF FGD SYSTEM FOR 4X250 MW BRBCL Nabinagar TPP, BIHAR.				
TENDER NO. PSER:SCT:NBN-C2056:20				
SCHEDULE - 4 : SUPPLY PART				
ST NO.	ITEM DESCRIPTION	UNIT	QTY	WEIGHTAGE
400S	REINFORCEMENT STEEL			
401S	Supply at site of mild steel reinforcements conforming to grade 1 of IS:432 part 1 including cost of transportation etc. all complete as per specifications & drawings. (Payment shall be restricted to quantity consumed as per ST 401 of SCH-3 of Vol-III).	MT	5	0.00051561
500S	Roof Treatment works:			
511S	Supply at site bitumen grade 85/25 as per IS 702 including antistripping compound conforming to IS 6241, cost of transportation etc. all complete required for application work of bitumen as per ST 511 of SCH 3 of Vol-III. (Measurement of this item shall be based on application of two coats of bitumen @ 1.7kg/sqm with 1% antistripping compound and shall be restricted to quantity consumed as per ST 511 of SCH-3 of Vol-III).	SQM	31510	0.00768791
700S	MS EMBEDMENTS:			
701S	Supply at site of mild steel for embedments, inserts, pipe sleeves, angle pieces, rungs of various diameters, plates of dimensions as required with primer paint etc. all complete. (Payment shall be restricted to quantity consumed as per ST 701 of SCH-3 of Vol-III)	MT	17	0.0019266
A701S	Supply at site of mild steel for embedments, inserts, pipe sleeves, angle pieces, rungs of various diameters, plates of dimensions as required with Primer Coat of Chlorinated Rubber based Zinc Phosphate Primer of Minimum 50 Micron Dry Film Thickness (DFT). etc. all complete. (Payment shall be restricted to quantity consumed as per ST A701 of SCH-3 of Vol-III)	MT	25	0.00299096
702S	Supply, Fabrication, transportation, delivery at site store of mild steel foundation bolt assembly conforming to IS:2062 and grade 1 of IS:432 along with nuts, lock nuts (as per IS:1363, 1364 and IS:3138), washers, anchor plates, stiffener plates, protective tape, pipe sleeves, templates etc. including welding, cutting, grinding, threading, drilling etc. all complete. (Payment shall be restricted to quantity consumed as per ST 702 of SCH-3 of Vol-III)	MT	23	0.00308146
900S	DOORS & WINDOWS: Doors, windows, ventilators, louvers, roof ventilators, rolling shutters, partitions etc.			
906S	Supply at site of 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 raw plugs, expansion fasteners, SS screws / fixing clips necessary filling of gaps at Junctions, at top, bottom & sides with required PVC / neoprene felt for bi-metallic 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) (Payment shall be restricted to quantity consumed as per ST 906 of SCH-3 of Vol-III)	KG	50	0.00004033
A909S	Supply at site of anodised aluminium extruded standard tubular & other sections (of minimum 2mm wall thickness) of INDAL, Jindal, Hindalco or other equivalent approved make for door frames, windows, ventilators, partitions, railing etc 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), raw plugs, expansion fasteners, SS screws or with fixing clips, including necessary filling materials of gaps at junctions, at top, bottom and sides with required PVC/neoprene felt for bi-metallic protection etc. including preparation 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/stainless steel screws, 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 separately).Weight of aluminium section only shall be measured. (Payment shall be restricted to quantity of aluminium section consumed as per ST A909 of SCH-3 of Vol-III)	Kg	9230	0.00877678
1500S	ROOFING / SIDE CLADDING			
A1501S	Designing and supply at site of permanently color coated galvanised MS troughed metal sheet decking plate of approved colour over floor beams for cast-in-situ roof slab as per relevant IS code and Grade as per specification. Bare metal thickness(BMT) of deck plate shall be minimum 0.8mm with minimum trough depth of 51 mm having minimum yield strength of 250 MPa and shall serve as permanent shuttering to the roof slab 150mm thick measured over crest of metal decking & shall have adequate strength to support weight of green concrete and imposed loads of min 550 kg/sqm (for two span condition) during construction between beams as per manufacturer's recommendations/ calculations/ test certificates for approval etc. all complete for below mentioned spans. The sheet shall be permanently coated(coating thickness of atleast 40 microns) with silicon modified polyester(SMP with silicon content 30%-50%) paint or super polyester paint of minimum 20 micron(nominal) DFT on exposed surface (facing operating floor) over epoxy 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 separately).Weight of aluminium section only shall be measured. (Payment shall be restricted to quantity of aluminium section consumed as per ST A909 of SCH-3 of Vol-III)micron (nominal) primer coat and minimum 10 micron (nominal) SMP or Polyester paint ove			
a	Span Upto 1800mm	SQM	7800	0.01663945
b	Span Exceeding 1800mm and upto 2500 mm	SQM	100	0.00022296

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TENDER NO. PSER:SCT:NBN-C2056:20				
SCHEDULE - 4 : SUPPLY PART				
ST NO.	ITEM DESCRIPTION	UNIT	QTY	WEIGHTAGE
1502S	Designing and supply at site of permanently color coated galvanised MS troughed metal sheet decking plate of approved colour and conforming to class3 of IS 14246 over roof purlins for cast-in-situ roof slab as per relevant IS code and specification. Bare metal thickness of deck plate shall be minimum 0.8mm with minimum trough depth of 44 mm having minimum yield strength of 250 MPa and shall serve as permanent shuttering to the roof slab 100mm thick measured over crest of metal decking & shall have adequate strength to support weight of green concrete and imposed loads of min 150 kg/sqm during construction between purlins as per manufacturer's recommendations/ calculations/ test certificates for approval etc. all complete for below mentioned spans. The sheet shall be permanently coated with silicon modified polyester paint of minimum 20 micron DFT on exposed surface (facing operating floor) and minimum 7 micron on other face over epoxy primer applied over hot dipped galvanising @ 275 gm/sqm . Measurement of profile sheeting shall be of the plan area of roof covered by MS trough metal decking. (Payment shall be restricted to quantity consumed as per ST 1502 of SCH-3 of Vol-III.)			
a	Span Upto 1800mm	SQM	1450	0.00309323
b	Span Exceeding 1800mm and upto 2500 mm	SQM	2105	0.00469331
A1504S	Designing and supply at site of External sheet of Permanent colour coated metal cladding with troughed M.S. sheets of 0.6mm bare metal thickness having minimum yield strength 250 MPa complying AS1397 and zinc-aluminium alloy coating not less than 275 gm/sqm total on both sides etc. all complete. The exposed face of the sheet shall be permanently colour coated with silicon modified polyester (SMP with silicon content of 30% to 50%) paint or Super Polyester paint of minimum dry film thickness (DFT) 20 microns(nominal) over suitable primer coat of 5mm DFT(nominal). Inner face of the sheet shall be provided with suitable pre-coating of minimum DFT 10 microns(nominal) over suitable primer of 5mm DFT(nominal). The permanent colour coated sheet shall meet the general requirements of IS :14246 and shall conform to class 3 for the durability. (Payment shall be restricted to quantity consumed as per ST A1504 of SCH- 3 of Vol-III.)	SQM	4840	0.00757803
1508S	Designing and supply at site inner sheet of Permanent colour coated metal cladding including flashing with troughed M.S. sheets of 0.6mm bare metal thickness having minimum yield strength 250 MPa and zinc-aluminium alloy coating not less than 275 gm/sqm total on both sides of both sheets etc. all complete. The exposed surface of the sheet shall be permanently colour coated with silicon modified polyester paint of minimum dry film thickness (DFT) 20 microns over suitable primer. Other face of the sheet shall be provided with suitable pre-coating of minimum DFT 7 microns over suitable primer. The permanent colour coated sheet shall meet the general requirements of IS : 14246 and shall conform to class 3 for the durability. The sheet shall be fixed directly to side runners and Z spacers as per IS : 277. The sheet shall be fixed at the rate not more than 1500mm center to center to hold the insulation and external sheeting. (Payment shall be restricted to quantity consumed as per ST 1508 of SCH- 3 of Vol-III.)	SQM	17520	0.04499924
1519S	Designing and supply at site of permanent colour coated Pre-Fabricated sandwiched insulated metal cladding of approved shade and color comprising of top sheet as troughed permanently colour coated sheet & bottom sheet as plain permanently colour coated with 50mm thick insulation sandwiched between the two sheets etc all complete as per specification. Each sheet shall be of steel with minimum thickness (i.e. excluding the thickness of coating and painting) 0.6mm of grade G250 as per AS1397/ grade SS255 as per ASTM A653M / grade S250GD as per EN 10326 or of steel with aluminium-zinc alloy coated to class AZ150 with minimum bare metal thickness (i.e. excluding the thickness of coating and painting) of 0.5mm of grade G350 as per AS1397 / grade SS340 class 4 as per ASTM A792M / grade S350GD as per EN 10326 or of steel with aluminium-zinc alloy coated to class AZ150 with minimum bare metal thickness (i.e. excluding the thickness of coating and painting) of 0.4mm of grade G550 as per AS1397 / grade SS550 as per ASTM A792M / grade S550GD as per EN 10326. Metal sheets shall be colour coated with total coating thickness of at least 40 microns (nominal) dry film thickness (DFT) comprising of Silicon Modified Polyester (SMP with silicon content of 30% to 50%) paint or Polyester paint, of minimum 20 microns (nominal) SMP or polyester paint on one side (exposed face), over minimum 5 micron (nominal) primer coat and minimum 10 micron (nominal) SMP or Polyester paint over minimum 5 micron (nominal) primer coat on other side. SMP and Super Polyester paint shall conform to product type 4 of AS/NZS 2728. The sheets shall be of approved profile and shall have such section modulus and moment of inertia per metre width that deflection of sheets is limited to span/250 under design wind pressure for two span conditions. No increase in allowable stresses under wind load condition is allowed. For insulation of cladding , mineral wool conforming to IS: 8183 shall be used. The density shall be 32 or 48 kg. /cu.m for glass or rock wool respectively. The nominal thickness of insulation shall be 50mm. (Payment shall be restricted to quantity consumed as per ST 1519 of SCH- 3 of Vol-III.)	SQM	1505	0.00663391
1520S	Supplying fire resistant and UV resistant polycarbonate translucent troughed sheets at site of minimum 3MM thickness for roofing & side cladding work (internal & external) as per the specification and approved drawings and directions of engineer in charge. (Payment shall be restricted to quantity consumed as per ST 1520 of SCH-3 of Vol-III)	SQM	590	0.00124945
1700S	RAIN WATER DOWN TAKE PIPES			
A1704S	Supplying at site galvanised MS down take pipes conforming to IS: 1239/IS: 3589 of 150 mm dia. Medium quality as per IS:1239(part-I) all complete as per specification. (Galvanising shall be as per IS: 4736. The minimum mass of zinc coating shall not be less than 400 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. (Payment shall be restricted to quantity consumed as per ST A1704 of SCH-3 of Vol-III))	RM	2250	0.00558654
2300 S	STRUCTURAL STEEL			

VOLUME-III PRICE SCHEDULE, REV-00				
JOB: CIVIL & ARCHITECTURAL WORKS INCLUDING LEVELLING GRADING, PILING WORK, TESTING OF PILES AND OTHER ASSOCIATED WORKS ETC. OF FGD SYSTEM FOR 4X250 MW BRBCL Nabinagar TPP, BIHAR.				
TENDER NO. PSER:SCT:NBN-C2056:20				
SCHEDULE - 4 : SUPPLY PART				
ST NO.	ITEM DESCRIPTION	UNIT	QTY	WEIGHTAGE
2307S	Supplying, fabricated factory made electroforged galvanised grating units with mild steel having minimum galvanisation as below conforming to IS:2062 in flooring, platforms, drain and trench covers, walk-ways, passagess, staircases with edge binding strips and anti-skid nosing in treads etc. including fixing clamps, fittings, fixtures, all taxes, duties, packing, grinding, drilling, welding, edge preparation, etc. all complete. (Payment shall be restricted to quantity consumed as per ST 2307 of SCH-3 of Vol-III)			
a	Minimum galvanisation of 610 g/sqm	MT	65	0.01267299
2308 S	Supplying, fabricated factory made galvanised welded grating units with mild steel conforming to IS:2062 in flooring, platforms, drain and trench covers, walk-ways, passagess, staircases with edge binding strips and anti-skid nosing in treads etc. including 1 coat of redoxide zinc-chromate primer (at shop), fixing clamps, fittings, fixtures, all taxes, duties, packing, grinding, drilling, welding, edge preparation, etc. all complete. (Payment shall be restricted to quantity consumed as per ST 2308 Of SCH-3)	MT	15	0.00227713
2321 S	Supply of 32 mm/40 mm dia MS pipe for hand rail including transportation, loading/unloading etc. all complete. (Payment shall be restricted to quantity consumed as per ST 2321 of SCH-3 of Vol-III)	MT	25	0.00369206
A2322 S	Supply of 32 mm/40 mm/50 mm dia (Medium class) galvanised MS pipe for hand railing (1000 mm high) including transportation, loading/unloading, painting etc. all complete. (Payment shall be restricted to quantity consumed as per ST A2322 of SCH-3 of Vol-III)	MT	30	0.00470742
MISC-	MISC. ITEM			
MISC-01	Supplying precast reinforced cement concrete RCC Sleeper with 1:1.5:3 (1 cement : 1.5 coarse sand: 3 graded stone aggregate 20 mm nominal size) as per IS 456 with 25 mm clear cover including the cost of cement (PPC/OPC/PSC) and high yield strength steel reinforcement, all materials for concrete, form wok, lifting hole with PVC pipe, binding wire, labours, curing and shifting the finished product at designated store area etc., for the following sizes (Cement and Reinforcement Steel to be supplied by contractor) . Length= 600 mm, Width at Bottom=250 mm,Width at Top=220 mm & Height=250 mm. with 4 nos. 8 mm dia. Main Bar and 5 mm dia Stirrup @ 150 mm c/c and Lifting hole with 30 mm dia PVC pipe- 02 nos.	NOS	1000	0.00151386
TOTAL				0.14057923