

TS; BHE/PW/PUR/SKT-CVL/564

PRICE BID- PART-II, VOL-III

ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
100	EARTH WORK IN EXCAVATION, BACKFILLING AND DISPOSAL AS PER SPECIFICATION, DRAWINGS AND AS DIRECTED BY ENGINEER FOR THE FOLLOWING:-					
101	Earth work in excavation upto 2m depth below ground level for foundation, trenches, pipe lines, storm water drains etc including setting out, clearing & grubbing, removal of debris, dewatering if required, strutting, shoring/sheet piling if required, dressing the sides, levelling to grade and ramming the bottom, stacking/disposal of surplus excavated material within a lead of 1.0 KM etc complete for all types of soils including ash, laterite, morrum, weathered rock, decomposed rock, soft rock etc which can be excavated by means of crow bar, pick axe, pneumatic chiesel attachment with poclain etc but does not require chiselling or blasting.	CUM	168,691			
102	Earth work in excavation upto 2m depth below ground level for foundation, trenches, pipe lines, storm water drains etc including setting out, clearing & grubbing, removal of debris, dewatering if required, strutting, shoring/sheet piling if required, dressing the sides, levelling to grade and stacking/disposal of surplus excavated material within a lead of 1.0 KM etc complete for hard rock requiring blasting/controlled blasting and/or chiselling, wedging, line drilling, pre shearing or any other means including supply, storage, handling of blasting materials etc without damaging the existing structures and as approved by Engineer. Measurement shall be taken on stock basis less 30% voids	CUM	65,838			
103	Earth work in excavation for depth exceeding 2.0m but not exceeding 4.0m below ground level for foundation, trenches, pipe lines, storm water drains etc including dewatering if required, strutting, shoring/sheet piling if required, dressing the sides, levelling to grade and ramming the bottom, stacking/disposal of surplus excavated material within a lead of 1.0 KM etc complete for all types of soils including ash, laterite, morrum, weathered rock, decomposed rock, soft rock etc which can be excavated by means of crow bar, pick axe, pneumatic chiesel attachment with poclainetc but does not require chiselling or blasting.	CUM	61,076			

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ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
104	Earth work in excavation for depth exceeding 2.0m but not exceeding 4.0m below ground level for foundation, trenches, pipe lines, storm water drains etc including dewatering if required, strutting, shoring/sheet piling if required, dressing the sides, levelling to grade and stacking/disposal of surplus excavated material within a lead of 1.0 KM etc complete for hard rock requiring blasting /controlled blasting and/or chiselling, wedging, line drilling, pre shearing or any other means including supply, storage, handling of blasting materials etc without damaging the existing structures and as approved by Engineer. Measurement shall be taken on stock basis less 30% voids	CUM	92,108			
105	Earth work in excavation for depth exceeding 4.0m but not exceeding 6.0m below ground level for foundation, trenches, pipe lines, storm water drains etc including dewatering if required, strutting, shoring/sheet piling if required, dressing the sides, levelling to grade and ramming the bottom, stacking/disposal of surplus excavated material within a lead of 1.0 KM etc complete for all types of soils including ash, laterite, morrum , weathered rock, decomposed rock, soft rock etc which can be excavated by means of crow bar, pick axe, pneumatic chiesel attachment with poclainetc but does not require chiselling or blasting.	CUM	3,697			
106	Earth work in excavation for depth exceeding 4.0m but not exceeding 6.0m below ground level for foundation, trenches, pipe lines, storm water drains etc including dewatering if required, strutting, shoring/sheet piling if required, dressing the sides, levelling to grade and stacking/disposal of surplus excavated material within a lead of 1.0 KM etc complete for hard rock requiring blasting /controlled blasting and/or chiselling, wedging, line drilling, pre shearing or any other means including supply, storage, handling of blasting materials etc without damaging the existing structures and as approved by Engineer. Measurement shall be taken on stock basis less 30% voids	CUM	58,703			

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ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
107	Earth work in excavation for depth exceeding 6.0m but not exceeding 8.0m below ground level for foundation, trenches, pipe lines, storm water drains etc including dewatering if required, strutting, shoring/sheet piling if required, dressing the sides, levelling to grade and ramming the bottom, stacking/disposal of surplus excavated material within a lead of 1.0 KM etc complete for all types of soils including ash, laterite, morrum , weathered rock, decomposed rock, soft rock etc which can be excavated by means of crow bar, pick axe, pneumatic chiesel attachment with poclain etc but does not require chiselling or blasting.	CUM	821			
108	Earth work in excavation for depth exceeding 6.0m but not exceeding 8.0m below ground level for foundation, trenches, pipe lines, storm water drains etc including dewatering if required, strutting, shoring/sheet piling if required, dressing the sides, levelling to grade and stacking/disposal of surplus excavated material within a lead of 1.0 KM etc complete for hard rock requiring blasting /controlled blasting and/or chiselling, wedging, line drilling, pre shearing or any other means including supply, storage, handling of blasting materials etc without damaging the existing structures and as approved by Engineer. Measurement shall be taken on stock basis less 30% voids	CUM	11,778			
109	Earth work in excavation for depth exceeding 8.0m but not exceeding 12.0m below ground level for foundation, trenches, pipe lines, storm water drains etc including dewatering if required, strutting, shoring/sheet piling if required, dressing the sides, levelling to grade and ramming the bottom, stacking/disposal of surplus excavated material within a lead of 1.0 KM etc complete for all types of soils including ash, laterite, morrum , weathered rock, decomposed rock, soft rock etc which can be excavated by means of crow bar, pick axe, pneumatic chiesel attachment with poclainetc but does not require chiselling or blasting.	CUM	273			

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ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
110	Earth work in excavation for depth exceeding 8.0m but not exceeding 12.0m below ground level for foundation, trenches, pipe lines, storm water drains etc including dewatering if required, strutting, shoring/sheet piling if required, dressing the sides, levelling to grade and stacking/disposal of surplus excavated material within a lead of 1.0 KM etc complete for hard rock requiring blasting /controlled blasting and/or chiselling, wedging, line drilling, pre shearing or any other means including supply, storage, handling of blasting materials etc without damaging the existing structures and as approved by Engineer. Measurement shall be taken on stock basis less 30% voids	CUM	10,169			
116	Disposal of surplus excavated earth/rock beyond an initial lead of 1km in/outside of the plant at the area earmarked by BHEL/BHEL's Customer for the following lead dumping and levelling the dumped soil and levelling the area from where the material is transported, complete with all lifts as specified and directed by Engineer.	CUM				
(i)	Carriage beyond initial lead of 1KM but not exceeding 2 Km.	CUM	114,736			
(ii)	Carriage beyond initial lead of 1 KM but not exceeding 3 Km.	CUM	80,000			
(iii)	Carriage beyond initial lead of 1KM but not exceeding 4KM	CUM	50,000			
(iv)	Carriage beyond initial lead of 1KM but not exceeding 5 Km.	CUM	20,000			
(v)	Carriage beyond initial lead of 1KM but not exceeding 10 Km.	CUM	10,000			
118	Back filling around foundations in plinths etc.to proper grade and level with selected materials within a lead beyond 1 Km but not exceeding 5 Kms. from available excavated soil including re-excavating loose thickness, watering and ramming in layers of 25 cm. thickness to 90% max. dry denisty by manual / mechanical means, compaction with mechanised compaction machine, dressing etc. complete including transportation.	CUM	140,720			

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ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
118a	Back filling around foundations and plinths to proper grade and level with selected excavated soil within a lead beyond 1KM but not exceeding 5 kms including watering and ramming in layers of 15 cm. thickness to 95% max Standard procter density by manual/ mechanical means in saturated condition, dressing etc. complete including transportation.	CUM	43,962			
118b	Back filling around foundations and plinths to proper grade and level with selected excavated soil within a lead of 1KM kms including watering and ramming in layers of 25 cm. thickness to 95% max Standard procter density by manual/ mechanical means in saturated condition, dressing etc. complete including transportation.	CUM	50,000			
118c	Back filling around foundations in plinths, trenches, drains etc.to proper grade and level with selected good soil (from contractor's own sources) free from shingle, salts, organic materials, roots, sod or any other foreign substance including re-excavating loose thickness, watering and ramming in layers of 20 cm. thickness compacted to 95% max Standard procter density for non cohesive soil by manual/ mechanical means, dressing etc. complete as directed by the engineer in charge including cost of material for all leads, loading, unloading, royalty and transportation. (payment for solid measure of the consolidated filling).	CUM	12,670			
119	Supply and filling sand under floors, in foundation and plinths including cost of sand, transporting for all leads, loading, unloading, spreading in layers in 25 cm loose thickness at all depths, watering, compaction with mechanised compaction machine or manually to minimum 80% of relative density, dressing and levelling etc complete.	CUM	27,613			
119a	75 thk. Gravel/Clean Coarse sand mixed with 8 to 10% by vol. of hot bitumen of grade 80/100.	SQM	111			

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ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
119b	Filling in trenches, plinths, area paving and other underground structures with stone (63 mm down graded), in layers not exceeding 200 mm thickness including breaking of boulders to required sizes, filling the interstices with selected sand and compacting to 85 % of original volume of stone stack for all lifts all complete as per instructions of engineer-in-charge.	CUM	50			
119c	Filling in trenches, plinths, area paving and other underground structures with stone (63 mm -40 mm down graded), in layers not exceeding 225 mm thickness including breaking of boulders to required sizes, filling the interstices with selected sand and compacting to 85 % of original volume of stone stack for all lifts all complete as per instructions of engineer-in-charge.	CUM	956			
119d	Filling in trenches, plinths, area paving and other underground structures with stone (63 mm -40 mm down graded), in layers not exceeding 250 mm thickness including breaking of boulders to required sizes, filling the interstices with coarse sand and compacting to 85 % of original volume of stone stack for all lifts all complete as per instructions of engineer-in-charge.	CUM	150			
119e	50 thk. Crushed stone fill (12 mm & down) mixed with 8 to 10 % by vol. of hot bitumen of grade 80/100.	SQM	250			
119f	50 thk. Premix carpet in two layers of 30mm & 20mm with 12 mm down broken respectively stone chips mixed with bitumen of grade 80/100.	SQM	968			
119g	Bitumen concrete consisting of high grade bitumen of grade 80/100 and well proportioned aggregate (0-12 mm) to achieve maximum density .	CUM	236			

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ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
120	Providing and laying rubble soling with specified sizes of approved quality hard rock rubble or hand broken hard metal of sizes ranging from 100mm to 230mm , at all position and depths below or above finished ground floor level, below foundations, below flooring, and for providing hard standing etc in one or more layers each of approximately 230mm thickness, hand packing, filling in interstices with quarry spalls and providing a layer of 50mm. thickness (consolidated) of moorum over each layer of soling including watering, thoroughly compacting each layer with 10 tonne power roller with minimum 6 passes (or with vibrating plate of approved capacity at places not approachable by power roller) all as per the direction of the Engineer and as per specification.	CUM	515			
121	Providing and laying rubble soling with specified sizes of approved quality hard rock rubble or hand broken hard metal of sizes ranging from 63mm and down , at all position and depths below or above finished ground floor level, below foundations, below flooring, and for providing hard standing etc in one layer of approximately 225 mm thickness, hand packing, filling in interestices with sand including watering, thoroughly compacting the layer all complete as per specification and the direction of the Engineer .	CUM	14,405			
200	PROVIDING AND PLACING CONCRETE WORK INCLUDING COST OF LABOUR, MATERIALS AND EQUIPMENT FOR HANDLING, TRANSPORTATION, BATCHING, MIXING, PLACING, VIBRATING AND CURING, (EXCLUDING COST OF CENTERING, SHUTTERING AND REINFORCEMENT) COMPLETE AT ALL ELEVATIONS AS PER DRAWING, SPECIFICATIONS UNLESS SPECIFIED OTHERWISE AND AS DIRECTED BY ENGINEER FOR THE FOLLOWING:					
201	Plain Cement Concrete of grade M7.5/1:4:8 as blinding layers below foundations, trenches, under foundations/floors etc all complete.	CUM	50			

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ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
202	Plain Cement Concrete of grade M10 as levelling course, under water retaining structures, equipment foundations, underground structures/floors etc all complete.	CUM	100			
203	Plain Cement Concrete of grade M20 as levelling course, under water retaining structures, equipment foundations, under foundations/floors etc all complete.	CUM	10,061			
204	Plain Cement Concrete of grade M20 as filling course, under water retaining structures, equipment foundations etc all complete.	CUM	595			
205	Concrete of grade M-35 conforming to IS:456 with coarse sand and graded hard stone aggregate 20mm nominal size for all major equipment foundations at all heights/depths from finished ground floor level including addition of suitable plasticizer/ superplasticizer conforming to IS:9103 (latest) to achieve required slump in concrete all complete.	CUM	1,035			
206	Concrete of grade M-35 conforming to IS:456 with coarse sand and graded hard stone aggregate 20mm nominal size in foundations , under floors etc at any 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.	CUM	46,446			
207	Concrete of grade M-35 conforming to IS:456 with coarse sand and graded hard stone aggregate 20mm nominal size in superstructure/water retaining structure (below ground) at all heights/depths from finished floor level at any level, shape, position or thickness complete including use of plasticizer/ superplasticizer conforming to IS:9103 (latest) to achieve required slump in concrete all complete.	CUM	13,384			

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ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
208	Concrete of grade M-30 conforming to IS:456 with coarse sand and graded hard stone aggregate 20mm nominal size in superstructure at all heights from finished floor level at any level, shape, position or thickness complete including use of plasticizer/ superplasticizer conforming to IS:9103 (latest) to achieve required slump in concrete all complete.	CUM	16,304			
209	Concrete of grade M-35 conforming to IS:456 with coarse sand and graded hard stone aggregate 20mm nominal size for foundation, super structure of T.G. Block at all heights/depths from finished ground floor level including addition of suitable plasticizer/ superplasticizer conforming to IS:9103 (latest) to achieve a slump more than 125mm in concrete as per manufacturer's recommendation etc. all complete. The rate shall also include Conducting Non-destructive Ultrasonic pulse velocity test as per specification to find out soundness of concrete including all equipments, tools, plants, scaffolding required for testing, preparation of test report etc. all complete as directed by Engineer.	CUM	2,310			
210	Extra for temperature control of fresh concrete for equipment foundation & Deck (temperature to be maintained between 18 deg.C to 23deg. C) with addition of crushed ice in mixing water etc complete.	CUM	1,500			
211	Concrete of grade M-30 conforming to IS:456 with coarse sand and graded hard stone aggregate 20mm nominal size in precast works like roof slabs etc including formwork/moulds for thicknesses varying from 50mm to 250mm including transportation, erection, fixing in position at all elevations and use of plasticizer wherever required all complete excluding the cost of reinforcement .	CUM	189			
212	Concrete of grade M-25 conforming to IS:456 with coarse sand and graded hard stone aggregate 20mm nominal size in precast works like trench covers etc including formwork/moulds for thicknesses varying from 50mm to 250mm including transportation, erection, fixing in position at all elevations and use of plasticizer wherever required all complete excluding the cost of reinforcement .	CUM	1,493			

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ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
213	Concrete of Grade M-30 conforming to IS:456 with coarse sand and graded hard stone aggregate 20mm nominal size in grade slab, etc complete.	CUM	284			
214	Concrete of Grade M-20 conforming to IS:456 with coarse sand and graded hard stone aggregate 20mm nominal size in paving, plinth protection, underfloor, etc complete.	CUM	8,283			
215	Breaking existing concrete work at any level including reinforced concrete, removing the rubbish within a lead of 1Km., including transportation, loading, unloading, etc all complete.	CUM	326			
215a	Breaking existing concrete work at any level including cutting reinforcements, removing the rubbish within a lead of 1Km., including making good the broken edges/surface with cement mortar, painting, finishing to match with existing finishing, scaffolding/supporting at any level, all complete and as directed by Engineer.	CUM	21			
216	Providing and encasing of structural steel member with concrete (M-35) work around flanges, webs etc and filling the gap. Encased member shall be wrapped with chicken wire mesh with 50mm lap etc complete as per specification and as directed by Engineer.	CUM	26			
300	SUPPLYING, FIXING AND REMOVING FORMWORK AT ANY ELEVATION INCLUDING ALL LABOUR, MATERIAL, SCAFFOLDING COMPLETE INCLUDING POCKETS ETC. AS PER SPECIFICATIONS AND AS DIRECTED BY ENGINEER FOR THE FOLLOWING:					
301	Ordinary form work (reasonably good steel/ply surface) duly accepted by BHEL/Customer below finished ground floor level for foundations, footings, bases of columns, walls, columns pilasters, beams, mass concrete, trenches etc.	SQM	138,649			

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ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
302	Fairface (using new commercial laminated ply board with steel/wooden frame) form work below finished ground floor level for foundations, footings, base of columns, walls, columns, pilasters, beams, mass concrete, trenches etc for exposed concrete works.	SQM	56,090			
303	Ordinary form work (reasonably good steel/ply surface) duly accepted by BHEL/Customer above finished ground floor level for columns, beams, suspended floors, roofs, lintels, cantilevers, staircases, landings, balconies, domes, arches etc for all heights.	SQM	10,343			
304	Fairface form work (using new commercial laminated ply board with steel/wooden frame) above finished ground floor level for columns, beams, suspended floors, roofs, lintels, cantilevers, staircases, landings, balconies, domes, arches etc for all heights.	SQM	99,853			
305	Extra over item no.301, 302,303,304 for curved form work for beams, walls, trenches etc as per specification.	SQM	50			
306	Fairface Formwork (using new commercial laminated ply board with steel/wooden frame)for TG superstructure. (above raft top level).	SQM	2,000			
307	Formwork in Pockets for foundation bolts, embedments, etc all complete.	SQM	500			
400	REINFORCEMENTS (Supply of Reinforcement Steel is in BHEL's Scope).					
401	Taking delivery from BHEL store, trasporting, loading, unloading at site, straightening, cutting, bending, placing in position at any level, binding in position of mild steel reinforcements confirming to grade-1 of IS:432 (part-I) including cost of binding wire, labour, complete all as per specifications, drawings and as directed by Engineer. Reinforcement/TMT bars shall be supplied by BHEL free of cost.	MT	4			

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ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
402	Taking delivery from BHEL store, trasporting, loading, unloading at site, straightening, cutting, bending, placing in position at any level, binding in position of tor steel reinforcements of corrosion resistant steel (CRS) type of grade Fe-500 confirming to IS:1786 as per relevent IS Code including cost of binding wire, labour complete all as per specifications, drawings and as directed by Engineer. Reinforcement shall be supplied by BHEL free of cost.	MT	8,500			
500	WATER PROOFING AS PER SPECIFICATIONS.					
501	Providing and mixing approved water proofing compound in concrete or cement mortar for works wherever specified or directed as per specification/ manufacturer's instructions, testing of samples for water proofing etc complete.	KG	80,304			
502	Providing and fixing roof water proofing treatment using high solid content liquid applied elastomeric water proofing membrane with separate wearing course as per ATM C836 & C- 898 . Thickness of the membrane shall be 1.5mm. This treatment shall include application of polymerized mastic over the roof to achieve smooth surface and primer coat.	SQM	20,789			
503	Providing and grading under bed over roof slab, floors to achieve the specified slope with 1:4 cement mortar plaster (by volume) of average 15 mm thickness at all elevations including all labour, material, equipment, handling, preperation of surface, transportation, batching, mixing, placing, laveling, curing, testing etc. complete as per specification, drawing and instruction of engineer.	SQM	19,459			
504	Providing and laying protective wearing course of 25 mm thick PCC (1:2:4) with 6 mm down aggregate laid in 1200 square mm panels alternatively cast reinforced with 0.56 mm dia galvanised chicken wire mesh with a gap of 6 mm between two adjacent panels gaps shall be filled with silicon sealant for expansion and contraction all complete with labour, material, equipment and as per specification/drawing and to the satisfaction of engineer in charge.	SQM	20,469			

ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
505	Providing and laying cement concrete chequered flooring tiles 22 mm thick over roof as per IS 13801. Under bed shall be 20 mm thk wearing course PCC 1:2:4 with 6 mm down aggregate reinforced with 0.56 mm GI chicken wire mesh. Tiles shall be laid over under bed with 8 mm thick 1:3 cement mortar with fine joints including sealing of joints between wearing course and the tiles with silicon sealant all complete with labour, material, equipment, handling, scaffolding, transporting etc. as per drawing and specification.	SQM	16,669			
508	Screed concrete 1:2:4 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 to maintain the required grade complete.	CUM	2,565			
509	Screed concrete 1:2:4 conforming to IS 456 with coarse sand and graded hard stone aggregate 12.5mm/6 mm nominal size in manholes .	CUM	250			
510	Coating for sub structure concrete works shall be done by adopting the following painting system					
	a) Concrete penetrating bipolar corrosion inhibitor (CPCI)	SQM	125,621			
	b) 2 Coat epoxide resin based paint (ERBP)	SQM	125,621			
511	ANTI-TERMITE COATING	SQM	50			

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ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
600	SUPPLYING & INSTALLATION OF PREMOULDED JOINT FILLER IN BETWEEN EQUIPMENT FOUNDATIONS, MAT FOUNDATIONS, PILE CAPS, WALLS, BASEMENT SLABS ETC. COMPLETE INCLUDING LABOUR, EQUIPMENT AND MATERIALS, SEALING OF JOINTS INCLUDING COST OF SEALING COMPOUND (POLYSULFIDE BASE SEALANT AS PER IS:12118) ETC. COMPLETE AS PER SPECIFICATIONS AND DRAWINGS OR AS DIRECTED BY ENGINEER FOR THE FOLLOWING:					
601	12mm thick joints.	SQM	173			
602	20mm thick joints.	SQM	168			
603	25mm thick joints.	SQM	299			

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ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
700	M.S. EMBEDMENTS					
701	Supply , fabricating and fixing of embedments, MS inserts , pipe sleeves, guide rails, angle pieces, rungs of various diameters, plates of dimensions as required including cost of all labour, materials and equipment, transportation, loading, unloading, handling, welding, cutting, drilling, scaffolding and setting complete as per specifications, drawings and as directed by Engineer.	MT	368			
702	Supply , fabrication, transportation, delivery at site and erection, installation and alignment of MS Foundation bolts (Grade- 1 of IS: 432 & IS: 2062) assembly in concrete along with nuts, locknuts (IS: 1363, IS: 1364 & IS: 3138), washers, anchor plates, stiffener plates, protective tapes etc. upto & inclusive of 50mm diameter and upto 2000mm long, for columns including pipe sleeves, templates wherever necessary etc. all complete as per specifications and directed by the Engineer.	MT	61			
703	Transportation from BHEL stores/store yard , delivery at work spot and erection, installation and alignment of embedments, MS inserts, pipe sleeves , rails, guide rails, angle pieces, anchor bolts, foundation bolts of various diameters, plates of dimensions as required including cost of all labour, equipment, material, loading, unloading etc. all complete as per specifications, drawings and as directed by Engineer.	MT	34			
800	GROUTING AS PER SPECIFICATION FOR THE FOLLOWING:					
801	Providing & grouting cement slurry mix at any elevation/depth with pressure pump for water retaining concrete structures , including fixing nozzles, cost of approved cement, admixture, curing, etc all complete as per specification and as directed by the Engineer.	SQM	256			

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ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
802	Providing and grouting of pocket holes , pipe sleeves of any shape and size under base plates after erection of necessary structural steel work, machinery with M-35 or higher grade concrete at any elevation including roughening surface, cleaning, ramming, curing etccomplete (non-shrink hand grout using approved admixture) as per specification and as directed by the Engineer.	CUM	20			
803	Providing and grouting of pocket holes, pipe sleeves of any shape and size under base plates after erection of necessary structural steel work, machinery with mix 1:1:2 (one part Cement : 1part Sand : 2 parts of 6mm down graded stone chips) at any elevation including roughening surface, cleaning, ramming, curing etccomplete (non-shrink hand grout using approved admixture) as per specification and as directed by the Engineer	CUM	20			
804A	Providing & grouting of pocket holes, pipe sleeves of any shape and size under base plate after erection and alignment if necessary, structural steel work, machinery at any elevations including roughening surface, cleaning, ramming, curing, etcwith /ConbextraGP-1`Fosroc`/Pidigrout10/Pagel or equivalent all complete as per specifications. (Cost of all material and clearing the pocket by compressed air shall be in the scope of the contractor).	CUM	10			
804B	Providing & grouting of pocket holes, pipe sleeves of any shape and size under base plate after erection and alignment if necessary, structural steel work, machinery at any elevations including roughening surface, cleaning, ramming, curing, etcwith ConbextraGP-2`Fosroc`/Pidigrout10/Pagel or equivalent all complete as per specifications. (Cost of all material and clearing the pocket by compressed air shall be in the scope of the contractor).	CUM	40			

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ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
900	DOORS, WINDOWS, VENTILATORS, LOUVERS, ROOF VENTILATORS, ROLLING SHUTTERS, PARTITIONS ETC. COMPLETE INCLUDING FRAMING, KICK PLATES, STOPPERS AS PER SPECIFICATION, DRAWINGS AND AS DIRECTED BY ENGINEER FOR THE FOLLOWING:-					
901	Providing and fixing 40mm thick solid core flush door shutters (single or double) with commercial faces and hard board edges. Core of solid core doors shall be of block board or wood particle board of approved make including all fixtures, Godrej make Mortice lock with handle on both sides, shop painting/polishing as per specification all complete including test certificates. Pressed steel frame shall be paid separately under relevant items	SQM	217			
902	Providing and fixing steel windows of fixed type with steel sections as per IS:1038, IS:1361 & IS:7452 latest revision. Glazing shall be of 6.0mm thk. toughened safety glass panes including all fittings, metal beadings, hold fasts, primer painting as per specification all complete.	SQM	2,262			
903	Providing and fixing steel openable windows/ventilators with steel sections as per IS:1038, IS:1361 & IS:7452 latest revision. Glazing shall be of 4.0mm thick float glass panes including all fittings, metal beadings, hold fasts, primer painting as per specification all complete.	SQM	1,663			
904	Providing and fixing anodized extruded aluminium windows (single or double shutter) including aluminium frame conforming to IS:1948, IS:1949 fabricated from extruded sections of INDAL/JINDAL or approved equivalent having minimum 1.5mm wall thickness as per IS:1285, IS:733 and electro color coating of minimum 15 microns thickness. Glazing shall be clear float glass of 5.0mm thickness including snap fit type beading, concealed screws, fixtures, Godrej make Mortice lock with handle on both sides etc complete. Aluminium section shall be smooth, free of stains, straight, mitred & jointed mechanically wherever required.	SQM	692			

TS; BHE/PW/PUR/SKT-CVL/564

PRICE BID- PART-II, VOL-III

ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
904(A)	Providing and fixing solid wood windows (Openable/Fixed) with 4.0 mm glazing.	SQM	25			
905	Providing and fixing anodized extruded aluminium ventilators conforming to IS:1948, IS:1949 fabricated from extruded sections of INDAL or approved equivalent having minimum 1.5mm wall thickness as per IS:1285, IS:733 and electro color coating of minimum 15 microns thickness. Glazing shall be clear float glass of 5.0mm thickness including snap fit type beading, concealed screws, fixtures, etc complete. Aluminium section shall be smooth, free of stains, straight, mitred & jointed mechanically wherever required.	SQM	12			
906	Providing and fixing steel single or double door shutters. Shutters 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 centres including all fittings, Godrej make Mortice lock with handle on both sides, primer painting complete as per specification. Pressed steel frame shall be paid separately under relevant items	SQM	310			
907	Providing and fixing steel single or double shutter doors. Shutters shall be of 18 gauge M.S. sheets and shall present a flush surface on the outside. The inside shall be stiffened with semitubular edge and central stiffening rail which shall convey the lock. Complete with fixtures, Godrej make Mortice lock with handle on both sides, primer painting as per specification. Pressed steel frame shall be paid separately under relevant items	SQM	488			

TS; BHE/PW/PUR/SKT-CVL/564

PRICE BID- PART-II, VOL-III

ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
908	Providing and fixing fire proof steel door shutters (single or double shutter) conforming to IS:3614(part-1 & part-2). Shutters shall be minimum 60mm thick 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 with mineral wool insulation, primer and epoxy based painting including door frame, all fittings complete as per specification. and shall be TAC approved with minimum 2 hrs. fire rating.	SQM	74			
909	Providing and fixing anodized extruded aluminium doors (single or double shutter) conforming to IS:1948, IS:1949 fabricated from extruded sections of INDAL or equivalent make having minimum 3mm wall thickness as per IS:1285, IS:733 and electro color coating of minimum 15 microns thickness. Glazing shall be clear float glass of 6.0mm thickness including snap fit type beading, concealed screws, fixtures, Godrej make Mortice lock with handle on both sides etc complete. Aluminium section shall be smooth, free of stains, straight, mitred & jointed mechanically wherever required. (Frames shall be measured and paid under separate item).	SQM	210			
910	Providing and fixing in position anodised aluminium frame for doors, windows, ventilators having minimum 3mm wall thickness as per IS:1285 and electro colour coating of minimum 15 micron thickness including holdfast, fillingup of gapes at junctions, at top, bottom and sides etc all complete as per specification.	Kg	3,865			

TS; BHE/PW/PUR/SKT-CVL/564

PRICE BID- PART-II, VOL-III

ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
910a	Providing and fixing anodized aluminium work in doors, windows, ventilators and partitions etc with extruded standard tubular and other sections including all fittings and fixtures and accessories of aproved make confirming to IS 733 and IS 1285, anodised and alectrocoloyr dyed to required shape according to IS 1868 (min. anodic coating of grade AC15), fixed with roll plucks, expansion fasteners, screws or with fixing clips including necessary filling up of gaps at junctions, at top, bottom and sides with required PVC/neoprene felt for bimetallic protection etc. including preperation of working drawings, aluminium cleat angle, aluminium snap-on-beading for glazing/paneling with all fittings and fixtures (like tower bolts, handles, door stoppers with rubber shoes, "L" drops, stays, floor springs, hydrolic door closers etc), C.P. brass/ stainless steel screws, providing and fixing hinges/pivots, and making provisions for fixing of fittings where ever required including the cost ofCONTD	Kg	494			
	PVC/neoprene gas fits all complete as per drawings, specifications and instruction of engineer (glazing and paneling to be measured else where)					
911	Providing and fixing aluminium glazed partition . Aluminium sections shall be of extruded sections of INDAL or approved equivalent make having minimum 3mm wall thickness as per IS:1285, IS:733 and electro color coating of minimum 15 microns thickness. Glazing shall be clear float glass of 5.5mm thickness including snap fit type beading, concealed screws, hold fast, fixtures, Godrej make Mortice lock with handle on both sides, necessary fillingup of gaps at the junctions, at top, bottom and sides, etc complete. Aluminium section shall be smooth, rust free, straight, mitred & jointed mechanically wherever required.	SQM	1,470			

TS; BHE/PW/PUR/SKT-CVL/564

PRICE BID- PART-II, VOL-III

ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
912	Providing and fixing aluminium glazed partition with double glazing . Aluminium sections shall be of extruded sections of INDAL or approved equivalent make having minimum 3mm wall thickness as per IS:1285, IS:733 and electro color coating of minimum 15 microns thickness. Double glazing shall be of two clear float glass of 5.5mm thickness sealed and separated by 12mm air-gap including colour anodised aluminium beading, concealed screws, hold fast, fixtures, PVC/neoprene gasket, necessary fillingup of gaps at the junctions, at top, bottom and sides, etc complete. Aluminium section shall be smooth, rust free, straight, mitred & jointed mechanically wherever required. Minimum anodising thickness shall be 15micron.	SQM	210			
913	Providing and fixing of over head hydraulic door closers of "Yale" make or approved equivalent & quality as directed by Engineer.	NOS	63			
914	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 etc complete as per specifications.	KG	2,620			
915	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 specification and of approved make - Mechanically operated . The bottom lath shall be coupled to a lock plate fabricated from 3mm thick galvanised steel plate and securely rivetted with stiffening angles.	SQM	67			

TS; BHE/PW/PUR/SKT-CVL/564

PRICE BID- PART-II, VOL-III

ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
916	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 specification and of approved make - Hand operated . The bottom lath shall be coupled to a lock plate fabricated from 3mm thick galvanised steel plate and securely rivetted with stiffening angles.	SQM	21			
917	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 specification and of approved make - Electrically operated . The bottom lath shall be coupled to a lock plate fabricated from 3mm thick galvanised steel plate and securely rivetted with stiffening angles.	SQM	627			
918	Providing and fixing in position PVC Door of Syntex make or approved equivalent in toilet as per specifications and as directed by Engineer.	SQM	63			
919	Providing and fixing 25mm thick prelaminated particle board door shutters (single or double) hard wood edge lippings including all fixtures, handle on both sides, shop painting/polishing as per specification all complete including test certificates.	SQM	25			
920	Providing and fixing prelaminated particle board partition over hard wood frame of section 50mm X50mm including all fittings for electrical, communications, wiring, cabling in between frame, shop painting/polishing, fire retardant paint as per specification	SQM	25			

ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
921	Providing and laying polished granite slab of minimum 20mm thickness over floor or dado all complete including underbed mortar, labour, material, scaffolding, etc as per specification.	SQM	25			
922	Supplying, stacking and laying sand filter of approved quality as sand blanket at the prepared base of raw water reservoir, in body and slopes of embankment including screening, washing, watering, compaction, dressing, necessary trimming if any including all leads and lifts etc all complete as per specification and as directed by the Engineer-in-Charge.	Each	263			

TS; BHE/PW/PUR/SKT-CVL/564

PRICE BID- PART-II, VOL-III

ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
1000	BRICKWORK MASONRY INCLUDING SUPPLY OF MATERIAL, COST OF LABOUR, SCAFFOLDING ETC. COMPLETE AS PER SPECIFICATIONS, DRAWING AND AS DIRECTED BY ENGINEER FOR THE FOLLOWING:-					
1001	Providing brick work in cement mortar 1:5 (1 part cement: 5 parts coarse sand) in walls, chambers etc. of 254mm & above in thickness at all depths, places and positions below plinth including raking out joints, curing, scaffolding etc. all complete excluding plastering and painting, using bricks of class designation 5.0 or best locally available quality of nominal dimensions as per specification.	CUM	3,511			
1002	Providing 254mm thick brick work in cement mortar 1:4 (1cement : 4 coarse sand) in walls, chambers etc. at all heights, places and position above plinth including raking out joints, curing, scaffolding, providing 3 nos. 6mm dia. MS bars at every third layer including cutting, bending, placing, tying/welding of reinforcement bar etc complete but excluding plastering and painting, using bricks of class designation 5.0 or best locally available quality of nominal dimensions as per specification.	CUM	11,999			
1003	Providing 127mm thick brick work in cement mortar 1:4 (1 cement : 4 coarse sand) in partition walls, chambers etc. at all heights, places and position above or below plinth/graded level including providing 2 nos. 6mm dia. MS bars at every third layer, raking out joints, curing, scaffolding etc. all complete using bricks of class designation 5.0 or best locally available quality of nominal dimensions excluding plastering and painting as per specification.	SQM	5,762			
1004	Providing and laying brick on edge surfacing with class designation 5.0 or best locally available quality of nominal dimensions including 12mm thick cushion of sand, excavation, disposal of surplus earth, spreading of earth, ramming, watering etc. complete in all respects, as per specification and directed by Engineer.	SQM	420			

ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
1005	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. Encased member shall be wrapped with chicken wire mesh with 50mm lap etc complete as per specification.	CUM	473			
						0
1006	Making openings in existing finished brick wall or partition wall including making good the broken edges/surface with cement mortar, fixing steel /precast concrete section as lintel (steel/ precast concrete section to be paid seperately under Item ST no.701/ 211 respectively), painting, finishing to match with existing finishing, scaffolding/ staging works, gas cutting of reinforcement/structural work, cleaning and removing of all debris within 1Km lead etc. all complete and as directed by Engineer.	SQM	30			
1007	Dismantling existing brick work at all level including stacking and removing the debris within a lead of 1Km., including transportation, loading, unloading, etc all complete and as directed by Engineer.	CUM	50			
1008	Filling existing brick wall/ partition wall opening at all level including making good the broken edges/surface with cement mortar, painting, finishing to match with existing finishing, scaffolding/supporting at any level, removal of debris etc. all complete and as directed by Engineer.	SQM	25			

ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
1100	DAMP PROOF COURSE INCLUDING ALL MATERIALS, LABOUR, SHUTTERING, CENTERING, CURING ETC., COMPLETE WITH THICKNESS AS SPECIFIED/SHOWN ON DRAWINGS OR AS DIRECTED BY ENGINEER FOR THE FOLLOWING:-					
1101	Damp Proof Course 50mm thick 1:1.5:3 concrete (10mm and down graded aggregate) with 2% of approved admixture of water proofing compound. Two layers of hot bitumen coating 85/25 grade as per IS:702 @ 1.7Kg./sqm shall be applied before & after the DPC as per specification.	SQM	335			
1200	CEMENT MORTAR PLASTER INCLUDING MAKING GROOVES WHEREVER REQUIRED, ALL MATERIALS, SCAFFOLDING, CURING ETC. COMPLETE AS PER SPECIFICATION, DRAWING AND AS DIRECTED BY ENGINEER FOR THE FOLLOWING:-					
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 as per specification including providing 3mmx3mm size grooves at junctions of two dissimilar materials.	SQM	40,833			
1202	Providing 12mm thick plaster in two layers inside the building/boundary wall in cement mortar 1:4 on walls finished to a smooth finish as per specification.	SQM	57,162			
1202a	Providing 12mm thick plaster in cement mortar 1:6 on walls with rough finish as per specification.	SQM	3,392			
1203	Providing 6mm thick plaster on ceiling in cement mortar 1:3 finished to a smooth as per specification.	SQM	66,670			

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PRICE BID- PART-II, VOL-III

ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
1204	Providing 15mm thick neat plaster in drains/culverts as per specification.	SQM	4,300			
1205	Providing 18mm thick plaster in cement mortar 1:6 on walls finished to a wooden float/smooth/rough finish as per specification.	SQM	1,780			
1300	FINISHES, PAINTING TO CONCRETE, PLASTERED SURFACES, SURFACE PREPARATION INCLUDING ALL MATERIALS, LABOUR, SCAFFOLDING ETC. ALL COMPLETE AS PER SPECIFICATION, DRAWING AND AS DIRECTED BY ENGINEER FOR THE FOLLOWING:-					
1301	Two or more coats of white washing with lime to give an even shade on ceiling including a priming coat complete.	SQM	24,910			
1301A	Two or more coats of colour wash as per IS 627 of approved brand and manufacture to give an even shade on walls including a priming coat as per specifications.	SQM	200			
1302	Two or more coats of water proofing cement paint (Snowcem or equivalent) of approved brand and manufacture & of required shade to give an even shade on walls complete.	SQM	13,330			
1303	Two or more coats of distempering with oil bound washable distemper as per IS:428 of approved brand and manufacture to give an even shade including a priming coat with distemper primer complete over P.O.P. Rate shall be inclusive of 2mm thick POP for surface preparation.	SQM	16,362			
1304	Two or more coats of water bound distempering of approved brand and manufacture to give an even shade including a priming coat with distemper primer complete. Rate shall be inclusive of 2mm thick POP for surface preparation.	SQM	68,107			

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PRICE BID- PART-II, VOL-III

ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
1304a	Cement paint/Cement wash over concret surface	SQM	50			
1305	Providing two coats of Acrylic emulsion paint of approved brand and manufacture to give an even shade including 3mm thick plaster of paris punning, one coat of solvent thinnable cement primer of approved shade & quality of Berger make complete as per specifications.	SQM	42,425			
1305A	Providing two coats of exterior emulsion paint of approved brand and manufacture complete as per specifications.	SQM	27,768			
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 primer etc all complete as per manufacturer's recommendations and as approved by engineer, at all heights above or below grade level.	SQM	1,240			
1307	Two or more coats of fire resistant paint to withstand 2 hrs of fire as per approved grade and manufacture to give an even shade complete.	SQM	50			
1308	Two or more coats of black anti-corrosive bitumastic painting of approved brand and manufacture to give an even shade complete.	SQM	50			
1309	Two or more coats of approved paint/ synthetic enamel paint of made from synthetic resins and drying oil with rutile titanium dioxide and other selected pigments to give smooth, hard, durable & glossy finish to all interior and exterior surfaces complete.	SQM	3,061			
1309A	7 mm thick mirror polished vitrified ceramic tiles on masonry walls upto false ceiling height	SQM	25			
1309B	Coloured 5 mm thick ceramic tiles upto 2.10m with border tiles in toilets/canteen	SQM	50			

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PRICE BID- PART-II, VOL-III

ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
1309C	Resin bonded grannular textured finish (Vineratex)	SQM	500			
1309D	20 mm thick polished granite on lift facia	SQM	50			
1309E	Oil resistant paint upto 1.2 m height	SQM	50			
1311	Providing and applying ready made Epoxy Paint over areas other than steel structure 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, splash, spillage & acidic environment. The epoxy paint coating shall be of 150micron thickness over epoxy primer.	SQM	50			
1400	FLOORING AND SKIRTING INCLUDING BASE LAYER AND ALL MATERIALS, LABOUR, CURING, POLISHING ETC. COMPLETE IN ALL RESPECTS AS SHOWN ON DRAWINGS, DESCRIBED IN SPECIFICATIONS AND AS DIRECTED BY ENGINEER FOR THE FOLLOWING:-					
1401	Providing and laying 50 mm thick heavy duty cement concrete flooring with non metallic hardener pigmented topping using 12mm thick uniform graded treated iron particles in flooring . Under layer of 38mm thick cement concrete mix 1:2:4 (1 part cement, 2 parts sand and 4 parts stone chips 12.5 mm well graded).	SQM	45,277			
1402	Providing and laying 50 mm thick heavy duty cement concrete flooring with metallic hardener pigmented topping using 12 mm thick uniform graded treated iron particles in skirting and dado . Under layer of 38mm thick cement concrete mix 1:2:4 (1 part cement, 2 parts sand and 4 parts stone chips 12.5 mm well graded) and top layer of 12mm thick metallic concrete complete.	SQM	2,492			

ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
1403	Providing and laying precast polished heavy duty cement concrete tiles (Carborundum) of size 300X300X25 thick of approved shade as per IS 1237, laid in floors jointed with neat cement slurry with pigment to match the shade of the tiles including rubbing and polishing complete with laying as per IS 1443.	SQM	1,334			
1404	Providing and laying precast polished heavy duty cement concrete tiles (Carborundum) of size 300X300X25 thick of approved shade as per IS 1237, laid in skirting and dado , jointed with neat cement slurry with pigment to match the shade of the tiles including rubbing and polishing complete with laying as per IS 1443.	SQM	289			
1405	Providing and laying interlocking M30 concrete blocks of thickness 60 mm as paving (for covered parking area) of approved colour and pattern and should be laid on the subbase and bedding as per specifications and recommendations of manufacturer.	SQM	1,785			
1413	Providing and laying polished Kota stone 20 mm thk in flooring . Under bed shall average 30mm thk of 1 part cement, 2 part sand : 4 parts stonechip by volume and brought to proper level. The kota stone slabs/tiles laid over under bed, pressed and tapped down with wooden mallet to the proper level, lifted and pressed again with thick cement slurry spread over the surface with fine joint finished including pigments, curing, grinding, granite polishing etc. complete.	SQM	158			
1414	Providing polished Kota stone 20 mm thk in skirting projecting 6mm from adjacent plaster all complete .	SQM	11			
1414A	Marble stone border (with kota stone)	SQM	63			
1414B	Marble flooring	SQM	530			

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PRICE BID- PART-II, VOL-III

ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
1415	Providing and laying polished Granite stone of approved color and texture 20 mm thk in flooring. Under bed shall average 30mm thk of 1 part cement, 2 part sand : 4 parts stonechip by volume and brought to proper level. The granite stone slabs/tiles laid over under bed, pressed and tapped down with wooden mallet to the proper level, lifted and pressed again with thick cement slurry spread over the surface with fine joint finished including pigments, curing, grinding, granite polishing etc. complete .	SQM	210			
1416	Providing and laying polished Granite stone 20 thk in skirting and dado including pigments, curing, grinding, granite polishing etc. complete.	SQM	21			
1417	Providing and laying 7 mm thk vitrified ceramic tiles of polished variety of size 300x300 from reputed manufacturer, complete as per specification.	SQM	2,205			
1417A	Providing and laying 7 mm thk vitrified ceramic tiles of unpolished variety of size 300x300 from reputed manufacturer, complete as per specification.	SQM	207			
1418	Providing and laying 7 mm thk vitrified ceramic tiles of polished variety of size 300x300 from reputed manufacturer, for skirting and dado up to specified height complete as per specification.	SQM	2,620			
1418A	Providing and laying 7 mm thk vitrified ceramic tiles of unpolished variety of size 300x300 from reputed manufacturer, for skirting and dado up to specified height complete as per specification.	SQM	50			
1420	Providing and laying granite stone slab of 20mm thickness single piece for wash basin slab of black or approved colour with cutting and opening complete.	SQM	50			
1421	Providing and laying Heavy Duty dust pressed Ceramic Tiles of size 300x300x7mm thick of reputed manufacturer of approved finish shade and colour.	SQM	42			

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PRICE BID- PART-II, VOL-III

ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
1408	Providing & fixing 20mm thick Acid / Alkali resistant vitreous tile lining confirming to IS:4457 in flooring/Dado and shall be laid over over bitumastic lining of min 12mm thick (to be laid in layers of 6mm each). The tiles shall be applied with 6mm thick Potassium Silicate bedding mortar as per IS:4441 & 4443 including preparation of surface, application of bitumen primer, curing etc. all complete as per specification and direction of Engineer.	SQM	6,263			
1411	Providing and laying marble dado of minimum 20mm thickness projecting 6mm from adjacent plaster all complete including underbed mortar, labour, material, scaffolding, etc as per specification.	SQM	20			
1412	Providing and fixing White glazed tiles of size 150x150mm, 5.5mm to 6mm thk in dado , projecting 6mm uniformly from adjacent plaster or wall finish. The mix for underbed plaster shall consist of 1part cement and 3 parts coarse sand by weight. fairly moist but firm, tiles shall be pressed over under bed by applying cement slurry, including pigments, curing etc all complete.	SQM	326			
1417	Providing and laying Heavy Duty Ceramic Tiles (Matt Finish) of size 300x300mm, 7mm thick of reputed manufacturer (Kajaria, 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 layer of 20mm thick consisting of 1 part of lime putty:1 part surkhi:2 parts coarse sand by weight complete as per specification. including all material, labour, etc all complete.	SQM	352			
1418	Providing and laying 2mm thick antistatic PVC floor of approved shade including all labour, material etc all complete as per drawing and as directed by Engineer.	SQM	10,028			
1419	Providing and laying screed concrete 1:1.5:3 by volume laid in slope (with 6 to 10mm nominal size stone chips) including all labour, materials, scaffolding etc. complete for all lifts, all leads and of following average thickness:-					

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PRICE BID- PART-II, VOL-III

ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
a)	40mm	SQM	1,463			
b)	30mm	SQM	263			
1500	PROVIDING AND ERECTING ROOFING/SIDE CLADDING INCLUDING LAPS, SCAFFOLDING HOOKS, WASHERS, CORNER PIECES, ETC. COST OF ALL MATERIAL, LABOUR, EQUIPMENT, CLEATS, SHEETING RUNNER, RAILS MILD STEEL WIND TIES (HORIZONTAL/VERTICAL) AND ANY OTHER STEEL WORKS ETC. AT ALL ELEVATIONS COMPLETE AS PER SPECIFICATION, DRAWING AND AS DIRECTED BY THE ENGINEER FOR THE FOLLOWING:					
1501	Designing, providing and fixing permanently color coated galvanised MS troughed metal sheet decking plate over roof purlins as per relevant IS code and specification. Thickness of deck plate shall be minimum 0.8mm with minimum trough depth of 38 mm and shall serve as permanent shuttering to the cast-in-situ roof slab of minimum 75mm thickness measured over crest of metal decking & shall have adequate strength to support weight of green concrete and imposed loads during construction over a span of 2500mm between purlins as per manufacturer's recommendations/ calculations/ test certificates for approval including fixing of plates to purlins, side lapping, end lapping etc.complete as per engineers approval and specification. (height of trough required as per design should be included in the cost). M.S. Trough decking plate shall be connected to the top surface of the purlin, top chord of truss with self tapping self drilling white zinc plated heat treated high carbon steel screws of min 5.6mm diameter at spacing of 390mm C/c in the trough and sealing it withCONTD	SQM	12,970			
	epoxy sealent including all material, labour, tools, etc complete. In addition shear connector of 16mm dia and min 75mm long mild steel studs at spacing 520mm C/c shall be fixed on top cord of purlin passing through the metal decking. (Note:-Leak proofing of the metal decking and concrete system shall be demonstrated by the contractor). Measurement shall be of the plan area of roof covered by MS trough metal decking.					

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PRICE BID- PART-II, VOL-III

ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
1502	Design supply & erection of thermally insulated sandwiched metal cladding for external walls with outer sheeting having troughed zinc-aluminium alloy coated (both sides) M.S. sheet having 0.6mm minimum thickness (or high tensile steel sheet of 0.5mm minimum thickness) shall be used on external face (outer face) of cladding system. Weight of coating shall not be less than 150 gm/sq.m. The outer side (exposed face) shall be permanently colour coated with Polyfluro Vinyl Coating (PVF2) of Dry Film Thickness (DFT) 20 microns (minimum) over primer. Inner side of external sheet shall be provided with suitable pre-coating of minimum 7 microns. Galvanised M.S. sheets of minimum 0.6mm thickness shall be used as inner liner (internal face) of cladding system. The exposed face shall be permanently colour coated with silicon modified polyester paint of DFT 20 microns (minimum) over primer. Inner face of external sheet shall be provided with suitable pre-coating of minimum 7 microns. The permanent colour coated sheet shall meet the general ...CONTD	SQM	20,475			
	requirements of IS : 14246 and shall conform to class 3 for the durability. Inner sheet shall be fixed directly to side runners and Z spacers made out of atleast 2 mm thick galvanized steel sheet of grade 375 as per IS : 277. Inner sheet shall be fixed at the rate not more than 1.50 m center to center to hold the insulation and external sheeting. The insulation shall be of bonded mineral wool of minimum thickness 50 mm conforming to IS : 8183, having a density of 32 Kg/cu.m. for glass wool & 48 Kg/cu. M. for rock wool.					

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PRICE BID- PART-II, VOL-III

ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
1503	Design supply & erection of single sheet metal cladding for external walls , ridge, hips, flashing/trimming /closure for vertical/ horizontal joints, capping, etc, with sheeting outer sheeting having troughed zinc-aluminium alloy coated (both sides) M.S. sheet having 0.6mm minimum thickness (or high tensile steel sheet of 0.5mm minimum thickness) shall be used on external face (outer face) of cladding system. Weight of coating shall not be less than 150 gm/sq.m. The outer side (exposed face) shall be permanently colour coated with Polyfluro Vinyl Coating (PVF2) of Dry Film Thickness (DFT) 20 microns (minimum) over primer. The exposed face shall be permanently colour coated with silicon modified polyester paint of DFT 20 microns (minimum) over primer. Inner face of external sheet shall be provided with suitable pre-coating of minimum 7 microns. The permanent colour coated sheet shall meet the general...CONTD	SQM	893			
	requirements of IS : 14246 and shall conform to class 3 for the durability. Inner sheet shall be fixed directly to side runners and Z spacers made out of atleast 2 mm thick galvanized steel sheet of grade 375 as per IS : 277. Inner sheet shall be fixed at the rate not more than 1.50 m center to center.					
1600	PROVIDING AND FIXING FALSE CEILING INCLUDING SUPPLY OF CEILING MATERIAL, SUSPENSION SYSTEM AND ALL OTHER MATERIALS REQUIRED FOR THE WORK INCLUDING POLISHING/ PAINTINGS, LABOUR ETC., ALL COMPLETE AS PER SPECIFICATION, DRAWING AND AS DIRECTED BY ENGINEER FOR THE FOLLOWING:-					

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PRICE BID- PART-II, VOL-III

ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
1602	Providing 50 mm thick fibre glass under deck insulation having min. density 24kg/cum faced with reinforced aluminium foil (FSK) and fixing to ceiling with anchor fasteners at interval of 600mm c/c in both directions, sealing the joint with 75mm wide aluminium foil tape / PVC adhesive tape and held in position with 22 G GI cross wires and wire netting of 12.5mm x 0.71mm (22 G) shall be stretched over the finished insulation and secured with anchor fasteners to prevent any sagging etc. all complete as per specifications and drawings.	SQM	3,430			
1603	Providing, fixing and laying permanently colour coated aluminium false ceiling of approved colour and Luxalon make or approved equivalent (Type-84C, Interior) with corrosion resistant aluminium alloy panels of minimum thickness 0.5mm including 50mm thick mineral wool insulation (as per IS:8183) bound in polythene bags on top of panels. Additional hangers and height adjustment clips shall be provided for return air grills, light fixtures. A.C. ducts etc suitable M.S. channel (minimum MC 75) grid shall also be provided above the false ceiling level for movement of personnel to facilitate maintenance of lighting fixtures, AC ducts etc.	SQM	7,723			
1605	Providing and Fixing 12.5mm thick Gypsum board plain false ceiling tiles of India Gypsum or equivalent make in plan or elevation with aluminium grid, metal suspension system, anchor fastener adjustable hangers,etc. including two or more coats of acrylic emulsion paint of approved colour to give an even shade all complete with smooth finish as per specifications, drawings and as directed by Engineer.	SQM	5,071			
1700	PROVIDING AND FIXING RAIN WATER DOWN TAKE PIPES INCLUDING 2 COATS OF APPROVED PAINT OVER A PRIMARY COAT, ALL SPECIALS AND ACCESSORIES ETC. COMPLETE AS PER SPECIFICATION.					
1701	HCI down take pipes of 100 mm dia as per specifications	RM	415			

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PRICE BID- PART-II, VOL-III

ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
1702	MS down take pipes of 100 mm dia- Medium quality as per IS:1239(part-I)	RM	404			
1703	HCI down take pipes of 150mm dia as per specifications	RM	420			
1704	MS down take pipes of 150 mm dia- Medium quality as per IS:1239(part-I)	RM	158			
1800	MISCELLANEOUS					
1801	Providing and fixing PVC water stops - 225mm wide	RM	1,166			
1802	Providing and fixing in position 25mm wide and 25mm thick blown bitumen in expansion joints as per specification.	RM	210			
1803	Supplying and installation of 25mm thick vibration damping resistoflex or approved equivalent pads around foundation of vibrating equipment and other locations as directed by the Engineer including cost of all materials labour equipment etc complete as per drawing and specifications.	SQM	158			
1804	Providing and fixing bitumen impregnated fibre joint filling board of 25 mm thickness , fillers along with PVC water bar etc for expansion joint in water retaining structures all complete as per specifications, drawing and as directed by Engineer.	RM	268			
1805	Supplying and laying of rounded gravels 40mm thick in transformer yards, switch yard floors etc, as directed by Engineer.	CUM	1,515			

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PRICE BID- PART-II, VOL-III

ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
1806	Providing 50mm thick anticorrosive layer laid to slope consisting of compacted crushed stone screenings, fine gravel, clean sand or similar material as directed by the Engineer, mixed in hot asphalt 10% by volume and rolled or compacted complete as per drawings and specifications, below fuel oil tanks and at such other places as per specifications and as directed by the Engineer.	SQM.	395			
1807	Providing 50mm thick premix carpet surfacing laid to slope in two layers 30mm and 20mm respectively with 12mm and down broken stone chips mixed with 80/100 grade bitumen @ 52 Kg/Cu.M including compaction and cost of all material, labour all complete as per specification and as directed by the Engineer.	SQM.	884			
1808	Providing and fixing G.I strips minimum 1.5mm thk and 150mm wide unless specified otherwise in water retaining structure. Galvanising as per relevant I.S. codes and as per specifications.	RM	158			
1809	Providing and fixing aluminium strips minimum 18 SWG thk and 300mm wide unless specified otherwise with minimum lap of 50mm length all complete as per specification.	RM	74			
1810	Taking delivery of rails from BHEL stores/store yard, laying and fixing in transformer foundation, trf. yard etc. including guide rails in concrete including joining of rails, anchoring lugs etc complete as per specification and as directed by Engineer. Rails will be supplied by BHEL free of cost.	MT	53			
1811	Laying of earthing mats/rods including transportation from yard stores, loading, unloading, cutting to length, welding etc complete as per specification and as directed by Engineer. Earthing rod/strip shall be supplied by BHEL free of cost.	MT	290			

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PRICE BID- PART-II, VOL-III

ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
1812	Design, supply, fabrication, installation of truly levelled and aligned 400mm high cavity flooring comprising of 35mm thick Nova teak or approved equivalent make superparticle board of size 610mm x 610mm floor panels having 2mm thick anti-static PVC sheet on top, 2mm thick hard PVC strip lipping on edges and 26 G aluminium sheet fixed with araldite on underside including cutting of panels where required for cables etc with supporting system comprising of 25mm dia galvanised MS threaded rod and pressure die cast zinc alluminium alloy adjustable head attachment at top and welded to 100x100x8mm base plate, pedestal fixed to floor by means of expension fasteners to existing floor at a distance of 610mm center to center bothways etc all complete as per specification and as directed by Engineer.	SQM	158			
1813	Designing, providing and fixing of Heavy duty galvanised friction anchor fasteners of Hilti/Equivalent make of dia. 16mm and appropriate length in concrete (minimum grade M20) to take direct tension of minimum 1.8Mton including anchor fastener, materials, equipment, labour, scaffolding complete as per direction of Engineer.	Each	105			
1814	Designing, providing and fixing of Heavy duty galvanised friction anchor fasteners of Hilti/Equivalent make of dia. 20mm and appropriate length in concrete (minimum grade M20) to take direct tension of minimum 2.5Mton including anchor fastener, materials, equipment, labour, scaffolding complete as per direction of Engineer.	Each	20			
1815	Designing, providing and fixing of Heavy duty galvanised chemical anchor fasteners of Hilti/Equivalent make of dia. 12mm and appropriate length in concrete (minimum grade M20) to take direct tension of minimum 1.0Mton including anchor fastener, materials, equipment, labour, scaffolding complete as per direction of Engineer.	Each	25			

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PRICE BID- PART-II, VOL-III

ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
1816	Designing, providing and fixing of Heavy duty galvanised chemical anchor fasteners of Hilti/Equivalent make of dia. 16mm and appropriate length in concrete (minimum grade M20) to take direct tension of minimum 1.6Mton including anchor fastener, materials, equipment, labour, scaffolding complete as per direction of Engineer.	Each	25			
2000	FENCING AND GATES.					
2001	Supplying and fixing G.I. barbed wire in fencing including , clips, anchors, one coat of redoxide zinc chromate primer and two coats of approved aluminium paint etc complete as per specification, drawing and as directed by the Engineer. MS angle post and concreting for foundation shall be paid separately under relevant items.	SQM	500			
2002	Providing & fixing M.S gates incuding excavation,concreting, as per specifications complete.	MT	38			
2003	Supplying and erecting in position 2.4 m high PVC coated gavanised chain linked fencing of minimum 8 gauge (including PVC coating) of mesh size 75 mm. The diameter of the steel wire for chain link fencing excluding PVC coating shall not be less than 12 gauge. GI barbed wire fencing confirming to IS 298 at top of chain link fencing shall be provided with 4 stands of height of 600 mm including all accesories as per specification all complete. MS angle post and concreting for foundation shall be paid separately under relevant items.	SQM	6,479			
2100	WATER SUPPLY					
2101	Providing and fixing in position tested heavy duty type chromium plated brass long neck bib cocks including sockets, union, nut etc complete - 15mm nominal bore.	NO.	59			
2102	Providing and fixing in position heavy duty brass stop cock of approved quality including all specials etc complete as directed by Engineer - 15mm nominal bore.	NO.	55			
2103	Providing and fixing in position heavy duty brass full way valve with wheel of approved quality 25mm nominal bore.	NO.	35			

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PRICE BID- PART-II, VOL-III

ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
2104	Providing and fixing in position heavy duty brass full way valve with wheel of approved quality 50mm nominal bore.	NO.	21			
2105	Providing and fixing GI pipes complete with GI sockets, unions, elbows, tees, nipples etc and clamps including cutting and making good the walls etc complete - 15 mm nominal bore.	RM	211			
2106	Providing and fixing GI pipes complete with GI sockets, unions, elbows, tees, nipples etc and clamps including cutting and making good the walls etc complete - 20 mm nominal bore.	RM	170			
2107	Providing and fixing GI pipes complete with GI sockets, unions, elbows, tees, nipples etc and clamps including cutting and making good the walls etc complete - 25 mm nominal bore.	RM	110			
2108	Providing and fixing GI pipes complete with GI sockets, unions, elbows, tees, nipples etc including trenching & refilling, anti-corrosive paint etc all complete (for external work) - 15mm nominal bore (N.B).	RM	16			
2109	Providing and fixing GI pipes complete with GI sockets, unions, elbows, tees, nipples etc including trenching & refilling, anti-corrosive paint etc all complete (for external work) - 20mm nominal bore (N.B).	RM	137			
2110	Providing and fixing GI pipes complete with GI sockets, unions, elbows, tees, nipples etc including trenching & refilling, anti-corrosive paint etc all complete (for external work) - 25mm nominal bore (N.B).	RM	137			
2111	Providing and fixing GI pipes complete with GI sockets, unions, elbows, tees, nipples etc including trenching & refilling, anti-corrosive paint etc all complete (for external work) - 50mm nominal bore (N.B).	RM	105			

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PRICE BID- PART-II, VOL-III

ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
2112	Providing and fixing 5.5mm thk mirror from reputed mirror manufacturer. Mirror shall be mounted with glass adjustable revolving CP brackets etc complete with CP screws as per specification.	SQM	205			
2113	Providing and fixing 610mmx127mmx6mm thk clear glass with C.P Guard rails and mounted on C.P. brackets etc complete as per specification.	NO.	53			
2114	Providing and fixing 20mm dia chromium plated M.S. pipes wall mounted towel rod with C.P. Brackets etc all complete as per specification.	NO.	55			
2115	Providing and fixing C.P. soap holder mounted with C.P. screws etc complete as per specification.	NO.	55			
2116	Providing and fixing C.P. liquid soap dispenser . Dispenser shall be round and easily revolving with removable threaded nozzle and mounted on C.P. brackets etc complete as per specification.	NO.	36			
2117	Providing & fixing P.V.C. water tank of 1000 litres capacity (Syntex or approved equivalent make) in position. The work to include making all necessary inlet & outlet pipes, fixture, ball cocks, valves etc all complete as per specification and at all heights and levels.	NO.	14			
2118	Providing & fixing P.V.C. water tank of 2000 litres capacity (Syntex or approved equivalent make) in position. The work to include making all necessary inlet & outlet pipes, fixture, ball cocks, valves etc all complete as per specification at all heights and levels.	NO.	12			
2118A	Providing & fixing P.V.C. water tank of 5000 litres capacity (Syntex or approved equivalent make) in position. The work to include making all necessary inlet & outlet pipes, fixture, ball cocks, valves etc all complete as per specification at all heights and levels.	NO.	1			

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PRICE BID- PART-II, VOL-III

ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
2200	SANITARY WORKS					
2201	Supply and fixing vitreous china Wash Basin size 600x450 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 waste of standard pattern, 32mm dia chromium plated brass trap unions, plastic connection pipe with chromium plated nuts, cutting and making good the walls where required etc complete as per specifications	NO.	60			
2202	Providing and fixing approved vitreous china acid/alkali resistant laboratory sink of size 600x450x200mm with R.S. or C.I. brackets, chromium plated brass chain with rubber plug 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 as per specification.	NO.	10			
2203	Providing and fixing colour glazed vitreous china European type water closet with siphon, open front solid plastic seat and plastic cover, low level 12.5 litre glazed vitreous china flushing cistern (same colour as WC) with valveless fittings, necessary C.P connections etc complete as per specification and directed by Engineer.	NO.	40			
2204	Providing and fixing colour glazed vitreous china Indian type water closet with siphon, open front solid plastic seat and plastic cover, low level 12.5 litre glazed vitreous china flushing cistern (same colour as WC) with valveless fittings, necessary C.P connections etc complete as per specification and directed by Engineer.	NO.	10			
2205	Providing and fixing wall type glazed vitreous china urinals with C.I. automatic flushing cistern approximately once every five minutes for every four urinals (max.) with flush pipes, lead pipes, gratings, traps and necessary C.P. fittings all complete as per specifications.	NO.	62			

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PRICE BID- PART-II, VOL-III

ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
2206	Supply, laying and jointing 75mm dia heavy duty cast iron pipes including bends, branches and all other necessary fittings, lead caulking, a coat of bituminous paint, M.S holder bats/clamps, cutting and making good the walls and floors, jointing, testing etc all complete and as per specifications.	RM	400			
2207	Supply, laying and jointing 100mm dia heavy duty cast iron pipes including bends, branches and all other necessary fittings, lead caulking, a coat of bituminous paint, M.S holder bats/clamps, cutting and making good the walls and floors, jointing, testing etc all complete and as per specifications.	RM	450			
2208	Supply, laying and jointing 150mm dia heavy duty cast iron pipes including bends, branches and all other necessary fittings, lead caulking, a coat of bituminous paint, M.S holder bats/clamps, cutting and making good the walls and floors, jointing, testing etc all complete and as per specifications.	RM	150			
2209	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 complete - 200mm dia , as per specification.	RM	895			
2210	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 complete - 300mm dia , as per specification.	RM	1,125			
2211	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 complete - 450mm dia , as per specification.	RM	1,008			
2212	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 complete - 600mm dia , as per specification.	RM	893			

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PRICE BID- PART-II, VOL-III

ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
2213	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 complete - 800mm dia , as per specification.	RM	60			
2214	Providing and fixing C.I Manhole cover of size 600mmx450mm including frame from reputed manufacture all complete as per specifications.	NO.	115			
2215	Providing and fixing circular heavy duty C.I. manhole cover of 600 mm dia with frame all complete as per specification.	NO.	129			
2216	Providing and fixing square mouth S.W Gully trap grade 'A' complete with CI grating, brick masonry chamber 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 as per drawing and specifications etc all complete size - 100x100mm P or S Type .	NO.	55			
2217	Providing and fixing square mouth S.W Gully trap grade 'A' complete with CI grating, brick masonry chamber 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 as per drawing and specifications etc all complete size - 150x100mm P or S Type .	NO.	40			
2218	Providing and fixing square mouth S.W Gully trap grade 'A' complete with CI grating, brick masonry chamber 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 as per drawing and specifications etc all complete size - 150x150mm P or S Type .	NO.	39			
2219	Construction of road /yard gullies in 250TH brickwork - 750mm deep with cement concrete M-20 grade foundation, including reinforcement, 12mm cement mortar (1:3) plastering both inside and outside, M.S. rungs @ 250 c/c, C.I. Grating along with frames as per IS standards including necessary earthwork in excavation, backfilling etc complete as per drawings/specifications.	NO	20			

ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
2220	Providing and fixing C.I. floor traps with C.P jalli complete as per specification.	NO	60			
2221	Providing and installing approved brand single tap water cooler of 80 L cooling capacity complete in all respect.	NO	15			
2222	Providing and installing approved brand single tap water cooler of 150 L cooling capacity complete in all respect.	NO	20			
2301	Taking delivery of steel from BHEL stores/store yard loading, transportation, unloading at site/fab. yard 'Fabrication, erection, alignment, welding, primer painting (primer coat consisting of 2 coats of zinc phosphate. One coat to be applied at shop and the other after erection) of structural steel made from mild steel conforming to IS:2062, pipes conforming to IS:1161/ IS:1239, chequered plate conforming to IS: 3052 and mild steel rounds, at all elevations involving rolled sections (including mild steel rounds), built up sections fabricated out of plates, rolled sections and combination of plates and rolled sections, in columns, beams, gantry girders, bunkers, silos, hoppers, roof trusses, portals, laced purlins, space frames, shear connectors, hangers, struts, monorails, galleries, stiffeners, wall beams, sheeting runners, brackets, stub columns, bracings, cleats, trestles, base plates, splice plates, chequered plate flooring, decking and seal plates, diaphragm, steel frame grid over false ceiling, walkway platforms, ladders, stairs, stringers, treads, landings,CONTD	MT	18,500			

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PRICE BID- PART-II, VOL-III

ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
	hand-rails, toeplates, MS Rungs, insert plates, edge angles, embedments, lugs, posts, stays, louvers, lacings, gusset plates, safety chains for walkways adjacent to crane girders etc, collection of steel from stores, transportation, straightening, making cutting plan, cutting, bending, rolling, grinding, drilling, bolting, erection bolts & nuts (weight erection bolts & nuts not payable, Supply of permanent bolt of grade C mild steel bolts & nuts to be paid separately under ST NO. 2310 (i)), assembly, edge preparation, preheating(& use of low hydrogen/ radiogenic electrodes as per specification), post heating, testing of welders, inspection of welds, visual inspection, non destructive and special testing, rectification and correction of defective welding works, production test plate, inspection and testing, erection scheme, protection against damage in transit, stability of structures, installation of temporary structures (Scaffolding, Access ladders, Working Platforms etc.), setting column bases, surface preparation, touch-up painting, dismantling and removal of ...CONTD					
	all temporary structures (weight of temporary structures not payable) complete with all labour, material, electrodes and other consumables, equipment, testing (mechanical and non- destructive), preparation of fabrication drawings, joint design calculations and all other general and special requirements, all other activities required for completion of the work including return of surplus/ waste steel materials to store etc. as per specification, drawings and instructions of the Engineer. Rate shall be inclusive of making fabrication drawings based on Engineering drawing supplied by BHEL through an approved agency of BHEL & getting approval of BHEL/BHEL's Customer.					
2304	Providing & application of chlorinated rubber finish paint of approved make and colour in coats of minimum 50 micron over steel sections(DFT) already having primer coats (as per ST NO. 2301) at all elevations to achieve an even shade with all materials, labour, equipment, handling, including protection and cleaning, scaffolding etc. complete as per specification, drawings and instructions of the Engineer.	MT	18,500			

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PRICE BID- PART-II, VOL-III

ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
2307	Supplying, fabrication , transportation, erection and alignment of factory made electroforged gratings with steel conforming to IS:2062 at all elevations including preparation of design drawings and fabrication drawings in flooring, platforms, drain and trench covers, walk-ways, passages, staircases with edge binding strips and anti-skid nosing in treads, fixing clamps etc. complete with other fittings and fixtures including all taxes, duties, transportation, packing, grinding, drilling, bolting (supply of permanent grade 'C' mild steel bolts and nuts to be paid separately under ST NO. 2309(i)), all welding, edge preparation, blast cleaning of steel surfaces to near white metal surface (Sa 2 1/2) followed by two coats of red oxide zinc-chromate primer and two coats of approved colour, enamel finish paint, testing, complete as per specifications, drawings and instructions of the Engineer.	MT	260			
2308	Extra over above ST NO. 2307, for finshing the fabricated grating unit with hot dipped galvanisation @ 610 gm/sqm over blast cleaned steel surfaces, as per specifications, drawings and instructions of Engineer instead of painting with 2 coats of red oxide primer followed by two coats of enamel finish paint.	MT	15			
2309	i) Supplying and fixing in position of permanent mild steel bolts (class 4.6 as per IS : 1367 and grade 'C' as per IS: 1363) and nuts, washers etc. up to and inclusive of 39 mm diameter and upto 300mm long for structural steel work complete as per specification, drawings and instructions of the Engineer.	Quintal	128			
	ii) Supply and fixing in positing of high strength structural bolts (of property class 8.8 and product grade 'C' as per IS: 1367) and conforming to IS: 3757 and high strength structural hardened and tempered nuts (of property class '8' as per IS:1367) conforming to IS:6623 with hardened and tempered washers as per IS:6649 etc. up to and inclusive of 39 mm diameter and upto 300 mm long for structural steel work complete as per specification, drawings and instructions of the Engineer.	Quintal	1,300			

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PRICE BID- PART-II, VOL-III

ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
2310	Dismantling of steel structure at any elevation, lowering of material and carriage of the dismantled material up to field fabrication shop, or, return to projects storage including temporary dismantling, cutting, re-welding, supporting, and restoring to correct position all temporarily dismantled members, re-alignment of all adjacent connected members to their correct positions, (weight of such adjacent members and temporarily dismantled members not payable) including scaffolding, staging, tools & tackles, gas cutting, welding, consumables, etc complete as per specification, drawings and instructions of the Engineer.	MT	10			
2310A	Dismantling of G.I. sheet in cladding at any elevation, lowering of material and carriage of the dismantled material up to field fabrication shop, or, return to projects storage including scaffolding, staging, tools & tackles, gas cutting, welding, consumables, etc complete as per specification, drawings and instructions of the Engineer.	SQM	500			
2311	Addition to, alterations in and/or modification of "Erection Marks" either in erected position or in the shop including cutting of parts, gouging of welds, cutting, grinding, fabrication, welding, drilling holes, straightening, removal of bends, raising to the required level, painting, transportation, return of unutilised steel pieces to the project store, temporarily dismantling, cutting, re-welding, supporting and restoring to correct position of all the temporarily dismantled members, realignment of adjacent connected members, (weight of such temporarily dismantled and adjacent members not payable), complete as per specifications, drawings and instructions of the Engineer.					
	i) In erected position	MT	42			
	ii) In fabrication yard	MT	63			

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PRICE BID- PART-II, VOL-III

ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
2312	Re-erection of dismantled fabricatied structural steel members requiring additions, modification, (dismantling and additions to, alterations in and/or modification to be paid separately under ST NO. 2312 and 2313 respectively) including carriage of modified "Erection Marks" from the field fabrication shop to erection site, lifting to required posiiion, aligning in position, tack welding, final welding and touch up painting including temporary dismantling and re-erection of temporarily dismantled members, cutting, rewelding, supporting and restoring to the correct position of all temporarily dismnatled members, re-alignment of adjacent connected members, (weight of such temporarily dismantled members and adjacent membersnot payable) including scaffolding, staging, tools & tackles, gas cutting, welding, consumables, etc complete as per the specifications, drawings and instructions of the Engineer.	MT	10			
2313	Design, supply, fabrication, erection of stoplog gates in CW Pumps as per specification with embedments required, lifting beams, special tools & plants, spare parts for three years, machining, casting, all materials such as structural steel, cast steel, stainless steel, brass used for seals, rubber seals, gears, ball and roller bearing, branch bushings, greasing, bolts, nuts, lugs, threaded fastners etc., cleaning, sand blasting, hot double dip galvanised with minimum coating of zinc 750 gms/sqm., following by an application of etching primer and dipping in black bitumen as per B.S. 3416, erection along with a second stage concreting to true plumb and levels, submission of drawings / fabrication drawings for engineers approval etc., all complete as per specifications and approved drawings. The leakage through rubber seal shall not be more than 5 lit/min/metre length of seal under maximum head.(only weight of structural steel including embedments shall be considered for payment purpose)	MT	75			

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PRICE BID- PART-II, VOL-III

ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
2314	Supplying, fabricating, erecting in position and testing / examining bolted and / or welded structural steel work at all levels for stationary screens made out of rolled sections and / or plates including cutting, straightening if required, edge preparation, bolting / welding of joints, cleaning, sand blasting, hot double dip galvanised with minimum coating of zinc as 750 gms./sqm. followed by application of an etching primer and dipping in black bitumen as per BS 3416, complete as per drawing and directed.	MT	175			
2315	Providing and fixing HRC net for fire sump screen of pump house having maximum gap between wires 10mm etc all complete including labour, materials.	SQM	25			
2317	Providing and fixing in position of PTFE type sliding bearings of reputed manufacturer, individual bearing suitable for required vertical loads as per the construction drawings and for maximum displacement of + 50mm including all taxes, duties, transportations, installation, drilling, bolting, erecting, aligning etc., complete as per specification, drawings and instructions of the Engineer (Vertical load carrying capacity of individual bearing shall vary from 10MT to 40 MT, as specified in the construction drawings).					
a	Bearing of 10 - 15MT capacity	Nos.	20			
b	Bearing of 20 - 25 MT capacity	Nos.	20			
c	Bearing of 30 - 35 MT capacity	Nos.	20			
d	Bearing of 40 - 45 MT capacity	Nos.	20			
e	Bearing of 50 - 55 MT capacity	Nos.	20			
f	Bearing of 60 - 65 MT capacity	Nos.	20			

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PRICE BID- PART-II, VOL-III

ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
2318	Supply, fabrication and erection of 3.15mm thick stainless steel liner of grade AISI-304; Finish Grade 2B (Cold rolled, Annealed & Pickled and Skin passed) on M.S. plate for inside surfaces of hopper & mouth of hopper of bunkers as directed by the Engineer including fixing with stainless steel studs, bolting (including countersunk), welding etc. complete as per specifications and IS standards. Electrode classification shall be E308L for welding of stainless steel to stainless steel and E309 for stainless steel to mild steel etc. complete as per specifications, drawings and instructions of the Engineer.	MT	165			
2319	Conducting radiography test on welds wherever specified by the engineer including provision of necessary equipments, measuring devices, gauges, materials and labour as per specifications complete (over and above the work already specified in the specifications).	RM	15			
2320	Conducting ultrasonic test on welds wherever specified by the engineer including provision of necessary equipments, measuring devices, gauges, materials and labour as per specifications complete (over and above the work already specified in the specifications).	RM	15			
2321	Conducting magnetic particle test on welds wherever specified by the engineer including provision of necessary equipments, measuring devices, gauges, materials and labour as per specifications complete (over and above the work already specified in the specifications).	RM	10			
2322	Providing and fixing in position 90mm diameter pressure relief valve including non metallic PRV pipe and 430mm long 160mm diameter (OD) perforated PVC housing pipe, nylon jali, perforated end plug, collar, graded filter etc as per IS:4558, excavation, fixing with joints water tight etc all complete as per drawing and as directed by the engineer.	Each	50			
2400	ROAD WORK					

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PRICE BID- PART-II, VOL-III

ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
2401	Preparation of sub grade by excavating earth to required depth for all types of soil, dressing to camber and consolidating the base including making good the undulation etc. and disposal of surplus earth within plant boundary in accordance with IS:2720 all complete as per specification.	CUM.	20,694			
2402	Supplying and filling with selected good earth of approved quality under pavement and shoulders etc. in compacted layers of maximum depth 200 mm including watering, rolling/consolidating and dressing etc. to required camber including transportation, royalties complete.	CUM.	5,000			
2403	Providing, stacking and laying granular morrum for shoulder including watering, compaction with road roller to required level etc. complete as per specification.	CUM.	3,385			
2404	Providing and Laying water bound macadam base/sub base course in layers of required thickness with stone aggregate 90mm to 40mm size stone screening and binding material including screening, sorting, spreading to template and consolidation with road roller including carriage spreading and consolidation of blinding material moorum etc Including cost of material,labour,all complete.	CUM.	8,906			
2405	Providing &Laying water bound macadam base / sub base course in layers of required thickness with stone aggregate 63mm to 40mm size , stone screening and blinding material including screening sorting, spreading to template and consolidation with road roller including carriage, spreading and consolidation of blinding material moorum etc Including cost of material labour etc. all complete as per specification.	CUM.	5,920			
2406	Laying water bound macadam wearing course with stone aggregate 50mm to 20mm size stone screening and binding material including screening, sorting, spreading to template and consolidation with road roller including carriage spreading and consolidation of blinding material moorum etc Including cost of material labour etc. all complete as per specification.	CUM.	2,920			

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PRICE BID- PART-II, VOL-III

ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
2407	Providing and applying Tack coat of low viscosity liquid bitumen of a suitable approved grade conforming to IS 73, 217 or 454 as applicable @ 10 kg/10sqm for an untreated WBM surface including scraping, cleaning with compressed air etc. complete.	SQM	71,000			
2408	Providing, mixing and laying of compacted 75 thk. Bituminous Macadam Course . Bitumen shall be of a suitable grade complying with IS 73 and aggregates, binder material as specified in specification including hot mixing, hot laying, rolling all complete.	SQM	35,025			
2409	Providing & laying 25mm thick premix carpet surfacing with 2.25cum and 1.12 cum of stone chippings of size 12.5mm and 10mm respectively per 100 sqm with hot bitumen @ 52 kg. and 56 kg. per cu.m. of 12.5mm & 10mm size stone chippings respectively including a tack coat with hot bitumen @ 1.00 kg. per sq.m. of road surface including consolidation with road roller etc,all complete, with bitumen heated and then mixed with solvent at the rate of 70 gms. per kg. of bitumen including cost of all material, labour all complete as per specification, drawings and instructions of the Engineer.	SQM.	35,387			
2410	Providing and applying liquid seal coat comprising of an application of a layer of bituminous binder at the rate of 9.8kg/10sqm followed by a cover of stone chips at the rate of 0.09 cum/10sqm including rolling as per specification all complete.	SQM.	35,975			
2411	Providing & laying edge protection on both edges of black topping using brick on edge (bricks with crushing strength of 75 kg/cm²) with full brick width (230 mm) etc all complete as per drawings and specifications.	R.M	3,366			
2412	Supply and laying (400mm x 150mm X 350mm deep) precast concrete kerb stone of shape as per detailed drawing including fixing in 13mm thk. cement mortar 1:2 in joints, finishing of joints with neat cement paste, making drainage opening where required etc. complete as per spec.	RM	7,100			

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PRICE BID- PART-II, VOL-III

ST. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE IN FIGURE	RATE IN WORD	AMOUNT
2413	Supply and laying 150mm dia R.C.C NP-2 type Hume pipe in raised shoulders as rain water drains as per detailed drawing including fixing in 13mm thk. cement mortar, finishing of joints with neat cement paste complete as per spec.	RM	957			
2414	Providing and laying 60mm thick interlocking precast concrete blocks of approved colour and pattern with concrete grade M30 using 20mm down size aggregates including providing necessary bedding, fixing the precast concrete blocks and finishing the joints etc as per manufacturer's specification.	SQM	11,573			
2415	Dismantling of existing road consisting of premix carpet, curb stone/brick on edge, bitumen macadem course, WBM, preparing subgrade to receive new WBM including camber consolidation including disposal of debris within a lead of 1 Km etc. complete and as directed by Engineer.	SQM	4,500			
2416	Providing 25mm thick premix carpet on existing/damaged road surfaces by spreading of 2.25cum and 1.12 cum of stone chippings of size 12.5mm and 10mm respectively per 100 sqm with hot bitumen @ 52 kg. and 56 kg. per cu.m. of 12.5mm & 10mm size stone chippings respectively including a tack coat with hot bitumen @ 1.00 kg. per sq.m. of road surface including consolidation with road roller etc,all complete, with bitumen heated and then mixed with solvent at the rate of 70 gms. per kg. of bitumen including cost of all material, labour, cleaning, repairing damaged carpet, WBM, sub grade/sub base,to the required thickness wherever required,consolidation with road roller etc all complete as per specification and as directed by Engineer.	SQM	4,500			
	TOTAL OF ALL ABOVE ITEMS IN RS					
	<u>TOTAL OF ALL ABOVE ITEMS IN WORDS (Rs)</u>					