

Ref: BHE/PW/PUR/MANUT-CVL BOP /1562/Corr-03

Date: 08/01/2016

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To

ALL BIDDERS

Sub: Corrigendum-03: "Chapter XI BOQ Vol-IA Rev-01 Dated 08/01/2016"

Job: All Civil and Architectural works of Balance of Plant Building including final micro level grading, backfilling up to required level and handing over of all foundations / buildings / structures to mechanical / electrical agencies for Unit # 01, 02, 03 & 04 (i.e. All Four Units) **AT 4X270 MW Thermal Power Stations, Manuguru, Distt- Khammam, Telangana.**

Tender Specification Nos: BHE/PW/PUR/MANUT-CVL BOP /1562

Bidders to kindly take note of the following:

AA) REVISED CHAPTER XI (Rev-01 Dated 08/01/2016) of VOL IA TCC (BOQ & %age Weightage of Individual Items):

Chapter-XI "BOQ & %age Weightages of Individual Items" Vol-IA has been revised and up-loaded in the BHEL web site as titled "Chapter-XI-BOQ & %age Weightages of Individual Items- Vol-IA Rev-01 Dated 08/01/2016".

In case any bidder who has submitted/dispatched the offer in line with original "Chapter-XI of Vol-IA- BOQ & %age Weightages of Individual Items" shall take cognizance of this corrigendum and can submit the revised total lump sum price in the sealed "Vol-II Price Bid Specification" super scribed at the envelope as "Revised Vol-II- Price Bid Specification".

All other Terms and conditions of the Tender Specification shall remain unaltered unless expressly amended by BHEL in writing.

Bidders are requested to submit as a part of Technical Bid, a copy of this corrigendum duly countersigned by the authorized signatory and stamped with the Official seal as a token of Bidder's unqualified acceptance of this corrigendum.

This letter is hosted as file titled "Corrigendum-03-Time Extn (T.S. No 1562)" against NIT-25630 in BHEL web page (www.bhel.com→Tender Notifications → View Corrigendum).

Thanking you,

Yours faithfully,

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AGM (Purchase)

Enclosure:

1. Chapter-XI -“BOQ & %age Weightages of Individual Items” Vol-IA Rev-01 Dated 08/01/2016
2. Excel Sheet of Chapter-XI for Calculation Purpose Only (uploaded separately). This shall not be part of the contract.

Scope: All Civil and Architectural works of Balance of Plant Building including final micro level grading, backfilling up to required level and handing over of all foundations / buildings / structures to mechanical / electrical agencies for Unit # 01, 02, 03 & 04 (i.e. All Four Units)				
ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	WEIGHTAGE
100 EARTH WORK				
Earth work In excavation, backfilling and disposal including necessary men/women, materials, equipment, loading, transportation, unloading, dewatering etc as per specification, drawing and as directed by engineer- in-charge for the following.				
101	Earth work in excavation in all types of soil including ash which can be excavated by any means including setting out, levelling, dewatering (but excluding special type of dewatering viz. well point method), shoring & strutting (wherever required), dressing the sides & bottom, all lifts, ramming/compacting the excavated bottom, stacking, disposal of surplus excavated materials within a lead upto 500 m, spreading/levelling of disposed materials etc all complete for following depths below ground level.			
a	Depth from ground level but not exceeding 2 m	CUM	102198	2.425554061100
b	Depth exceeding 2 m but not exceeding 4 m	CUM	42970	1.386985057900
c	Depth exceeding 4 m but not exceeding 6 m	CUM	1100	0.046209249100
103	Earth work in excavation in soft rock (rock without any recovery of excavated materials in the form of hard stone/boulder) including weathered rock which can be excavated by means of crow bar, pick axe, pneumatic rock breaker attachment with excavator machine etc but does not require chiselling or blasting including setting out, levelling, dewatering (wherever required), shoring & strutting (wherever required), dressing the sides & bottom, all lifts, ramming/compacting the excavated bottom, stacking, disposal of surplus excavated materials within a lead upto 500 m, spreading / levelling of disposed materials etc all complete for following depths below ground level.			
b	Depth exceeding 2 m but not exceeding 4 m	CUM	5367	0.295515874500
c	Depth exceeding 4 m but not exceeding 6 m	CUM	733	0.048016028600
107	Back filling upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 250 mm thickness using/with selected materials from compulsorily excavated soil / from Stock Pile of other sources available within a lead upto 500m and compacted as specified including re-excavation of stacked earth, watering, ramming/compaction by manual/mechanical means, dressing etc all complete for the following.			
a	Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII)	CUM	40577	0.799321453400
b	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII)	CUM	20904	0.411785387300
108	Back filling upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 250 mm thickness using/with selected materials directly from excavation and compacted as specified including watering, ramming/compaction by manual/mechanical means, dressing etc all complete for the following.			
a	Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII)	CUM	10144	0.192601176700
b	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII)	CUM	5226	0.099224541500
109	Extra over ST No. 101, 103 & 107 for carriage of excavated earth/selected materials beyond an initial lead of 500m.			

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Scope: All Civil and Architectural works of Balance of Plant Building including final micro level grading, backfilling up to required level and handing over of all foundations / buildings / structures to mechanical / electrical agencies for Unit # 01, 02, 03 & 04 (i.e. All Four Units)				
ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	WEIGHTAGE
a	Carriage beyond initial lead of 500m or part thereof but not exceeding 2 km	CUM	18320	0.156528202200
b	Carriage beyond 2 km or part thereof but not exceeding 3 km	CUM	18320	0.313056404400
c	Carriage beyond 3 km or part thereof but not exceeding 4 km	CUM	6107	0.156536746300
d	Carriage beyond 4 km or part thereof but not exceeding 5 km	CUM	3054	0.104374919100
e	Carriage beyond 5 km or part thereof but not exceeding 6 km	CUM	3054	0.130468648900
f	Carriage beyond 6 km or part thereof but not exceeding 7 km	CUM	3054	0.156562378600
g	Carriage beyond 7 km or part thereof but not exceeding 8 km	CUM	3054	0.182656108400
h	Carriage beyond 8 km or part thereof but not exceeding 9 km	CUM	3054	0.208749838200
i	Carriage beyond 9 km or part thereof but not exceeding 10 km	CUM	3054	0.234843568000
110	Back filling upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 250 mm thickness using/with approved borrowed soil (borrowed soil to be arranged by the bidder) and compacted as specified including supplying borrowed soil, royalty (if any), watering, ramming/compaction by manual/mechanical means, dressing etc all complete for the following.			
a	Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII)	CUM	660	0.044017039900
b	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII)	CUM	340	0.022514238700
111	Supplying and filling sand upto any depth under floors, around foundations, plinths etc. in layers not exceeding 250 mm thickness and compacted so as to achieve at least 80% relative density as per IS-2720 (Part-XIV) including spreading, watering, ramming/compaction by manual / mechanical means, dressing, royalty (if any) etc. all complete.	CUM	750	0.106089760900
200 CONCRETE WORKS				
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) with mechanised equipments like batching plant, transit mixer, concrete pump etc. complete as per drawing, specifications and as per direction of engineer in charge for the following.				
201	Concrete of grade M7.5 (1 part cement, 4 part sand, 8 parts of 40 mm graded aggregate by volume) as filling course at any depth below finished floor level, under and around foundations / floors, mass fill etc.	CUM	150	0.065567428800
202	Concrete of grade M10 (1 part cement, 3 part sand, 6 parts of 40 mm graded aggregate by volume) as lean concrete, levelling course , mud mat under and around foundations / floors at any depth below finished floor level etc.	CUM	4455	2.400956970100
203	Concrete of grade M15 (1 part cement, 2 part sand, 4 parts of 40 mm graded aggregate by volume) as lean concrete, levelling course , mud mat under and around foundations / floors at any depth below finished floor level etc.	CUM	155	0.102278785200
204	Concrete under floors, paving, plinth protection, pipe encasing etc complete with 20 mm nominal size graded aggregate at any depth below finished floor level for the following grades.			
b	M20 Grade	CUM	300	0.198639952700

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	WEIGHTAGE
205	Providing and laying Design Mix cement concrete conforming to IS:456 & IS 10262-2009 for reinforced concrete works with coarse sand and graded hard stone aggregate of 20mm nominal size in foundations/substructure, grade slab, paving, drains, under floors etc at 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 as per specification & drawing for the following.			
a	M25 Grade	CUM	27495	21.285496845000
206	Providing and laying Design Mix cement concrete conforming to IS:456 & IS 10262-2009 for reinforced concrete works with coarse sand and graded hard stone aggregate of 20mm nominal size in superstructure at any level above finished floor level, any shape, position or thickness etc complete including use of plasticizer/ superplasticizer conforming to IS:9103 (latest) to achieve required slump in concrete all complete as per specification & drawing for the following.			
a	M25 Grade	CUM	9920	8.181136565900
211	Providing and encasing of structural steel member with concrete using nominal aggregate size of 12.5mm down. Encased member shall be wrapped with welded wire mesh/chicken wire mesh with proper lap etc. complete as per specification for the following grades. (Payment of welded wire mesh, chicken wire mesh shall be made separately)			
a	M20 grade	CUM	60	0.037235934100
b	M25 grade	CUM	100	0.090279469600
212	Screed concrete conforming to IS 456 with coarse sand and graded hard stone aggregate 12.5mm/6 mm nominal size on the roof at any level or thickness, drains etc complete as per following.			
a	1:2:4 (1 part cement, 2 part sand, 4 parts of aggregate by volume)	CUM	679	0.556825326200
213	Providing and laying Design Mix cement concrete as per IS:456 & IS 10262-2009 for reinforced concrete works using graded aggregate for Concrete in precast works like roof slabs/trench covers, fins, lintels, chajas, beams, columns, wall panels, facias etc.at all levels in all kinds of work including formwork/moulds, curing, rendering the top exposed surface with cement sand mortar (1:3), handling, storing, transpoting, all leads, erection without damage, setting in position with cement sand mortar (1:3), filling the gaps between adjacent precast units with M30 grade concrete or cement sand mortar (1:3) and including making of holes for bolts for fixing, welding etc.complete with graded aggregate (20/12.5/10 mm) and as per specification and drawing for following grades.			
a	M 25 grade	CUM	950	1.328441259900
214	Providing and laying Design Mix cement concrete as per IS:456, IS 3370 & IS 10262-2009 for reinforced concrete works using graded aggregate for Concrete in water retaining/conveying structures including addition of suitable plastisizer cum waterproofing cement additives confirming to IS 9103 latest to achieve a slump more than 125 mm in concrete as per manufacturers recommendation and conforming to limits of permeability as per IS 2545 and specification with 20 mm nominal size graded aggregate for following grades.			
b	M 30 grade	CUM	1025	0.983633643700
215	Dismantling concrete work for all types of structures at all levels including stacking of servicable material to a lead of 500 m and disposal of unservicable material upto a lead of 2 km, cutting of reinforcement, labour, equipment, safety precautions etc all complete as per drawings, specification and instructions of engineer in charge.			
a	Plain cement concrete of all grades	CUM	10	0.004295822700
b	Reinforced cement concrete of all grades	CUM	10	0.006063999900

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	WEIGHTAGE
216	Chipping of concrete in reinforced concrete work, cutting pockets, making openings at all levels and according to shapes, disposal of waste materials upto a lead of 2 km as directed by engineer including equipment, safety precautions, making good the broken surface etc all complete as per specification, drawing, instructions of engineer in charge but excluding cutting of reinforcement .	CUDM	5	0.000110367100
217	Extra over and above St No 216 for cutting of reinforcement , all sizes and types including labour, equipment, return of cut reinforcement to store etc all complete as per specification, drawings and instructions of engineer in charge. Measurement shall be on the cross sectional area of reinforcement cut.	SQCM	5	0.000125791000
218	Cutting Reinforced concrete with mechanised tools like Core drilling machine etc. for cutting pockets, holes, cores in slab, beam, column or foundation as per direction of engineer in charge.	CUDM	5	0.000115108400
219	Providing and applying curing compound of approved make where ever required as per manufacturer's specification.	SQM	2200	0.022454284700
300 FORM WORKS				
Providing, fixing and removing formwork at any elevations for all structures, as per specifications and including all labour, material, scaffoldings and centering complete including pockets etc. complete as per drawing, specifications and as per direction of engineer in charge for the following.				
301	Fairface form work with good quality water proof ply wood of required thickness and smooth surface below finished ground floor level for foundations, footings, base of columns, walls, columns, pilasters, beams, mass concrete, trenches etc.	SQM	84677	6.230044510800
302	Fairface form work with good quality water proof ply wood of required thickness and smooth surface above finished ground floor level for columns, beams, suspended floors, roofs, lintels, cantilevers, staircases, landings, balconies, domes, arches, circular overhead tanks etc. for all heights.	SQM	57872	5.398013033300
304	Providing, fixing and removing formwork in block-outs/pockets and openings (below 0.1 sqm plan area) at all elevations including cutting, formation of all shapes and all other operations required for making the required shape and size all complete as per specification, drawing and instruction of engineer in charge.			
a	Upto 150 mm depth	Each	20	0.001756314100
b	Pockets of depths more than 150mm and upto 300 mm depth	Each	20	0.001822770500
c	Pockets of depths more than 300mm and upto 600 mm depth	Each	15	0.002175208000
d	Pockets of depths more than 600mm and upto 1000 mm depth	Each	15	0.003018956400
e	Pockets of depths more than 1000mm and upto 1500 mm depth	Each	10	0.002959612000
305	Fairface plywood with filmface/laminated formwork above finished ground floor level for columns, beams, suspended floors, roofs, lintels, cantilevers, staircases, landings, balconies, domes, arches, circular overhead tanks etc. for all heights where ever specifically mentioned in the drawing.	SQM	50	0.005802935100
400 REINFORCEMENT				
401	Providing, straightening, cutting, bending, placing in position at any level, binding of mild steel reinforcements conforming to grade 1 of IS:432 part 1 in concrete including cost of reinforcement and binding wire, labour, scaffolding, transportation to & from stores etc. all complete as per specifications & drawings.	MT	15	0.175682861700
402	Providing, straightening, cutting, bending, placing in position at any level, binding in position of steel reinforcements of TMT steel of grade Fe-500 conforming to IS:1786 including cost of binding wire, labour, scaffolding, transportation to & from stores etc complete all as per specifications, drawings and as directed by Engineer.	MT	3492	5.297889519100
406	Providing, straightening cutting, bending, placing in position at any level, binding of mild steel reinforcements in brickwork including cost of reinforcement and binding wire, labour, scaffolding etc. complete all as per specifications & drawings.	MT	2	0.023485140500

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Scope: All Civil and Architectural works of Balance of Plant Building including final micro level grading, backfilling up to required level and handing over of all foundations / buildings / structures to mechanical / electrical agencies for Unit # 01, 02, 03 & 04 (i.e. All Four Units)				
ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	WEIGHTAGE
407	Providing, straightening, cutting, bending, placing in position at any level, binding in position high yield strength steel reinforcements in brickwork including cost of reinforcement and binding wire, labour, scaffolding etc. complete all as per specifications & drawings.	MT	4	0.006368286500
500 WATER PROOFING WORKS				
Water proofing works including all labour, material, equipment, transportation, handling, curing, sampling, testing etc at any level as per specification, drawings and as directed by engineer - in - charge.				
A501	Providing and laying underbed grading plaster with cement mortar 1:4 (1 cement : 4 sand) and average thickness of 15 mm including preparation of surface, batching, mixing, leveling etc all complete.	SQM	11695	0.172778142900
502	Providing and laying in-situ light weight foam concrete insulation as per relevant IS Code in suitable panels over roofs followed by a layer of 15 mm thick cement sand plaster 1:5 (1 cement: 5 coarse sand) after the curing period of laid foam concrete and providing of expansion joint at intervals as per the recommendation of manufacturer. The insulating properties shall be such that the thermal conductivity shall not exceed 0.125 Kcal/sqm-hr deg C. Cost shall include making of fillets, cleaning & preparation of surface, expansion joints at suitable intervals etc all complete for following.			
a	Average 50 mm thickness	SQM	800	0.064299745200
b	Average 75 mm thickness	SQM	100	0.008773249000
c	Average 100 mm thickness	SQM	100	0.011692375700
A502	Providing and laying rigid insulation (extruded polystyrene blocks) as per relevant IS Code in suitable panels over roofs followed by a layer of 15 mm thick cement sand plaster 1:4 (1 cement: 4 coarse sand) and providing of expansion joint at intervals and filling with sealant in both directions as per the recommendation of manufacturer. The block shall be strong enough to withstand without deformation the workload and standard loads expected on the roof. Cost shall include making of fillets, cleaning & preparation of surface, expansion joints including filling with sealants at suitable intervals etc all complete as per specification for following.			
a	Average 50 mm thickness	SQM	10895	1.865326125400
A506	Providing and applying PU based water proofing treatment with elastomeric, seamless waterproof membrane applied in 2 coats to a DFT of 1.2 mm thick having an elongation capacity of over 600% and average tensile strength of 1 MPa, tear resistance as per GBT 19250-2003 >20N/m. The material shall comply with – ASTM C 836 National Std. of Canada 37.58 – M86 by CGSB. All complete as per specifications and directions of engineer in charge.	SQM	800	0.089795464300
B506	Providing and applying a separation layer of non-woven polypropylene geo-textile membrane of 120 gsm for water proofing as per technical specification.	SQM	11695	0.192378073700
C506	Providing and applying 4 mm thick APP modified Bituminous Polyester membrane for waterproofing manufactured from a rich mixture of bitumen and selected polymers blended together to obtain excellent heat resistant, flexibility, UV resistance etc. Modified bitumen then coated onto a dimensionally stable carrier to obtain excellent tensile strength, tear and puncture resistance etc complete as per technical specification.	SQM	10895	0.790669383600
A508	Providing and laying pressed precast concrete tiles of 20 mm thickness and size 600x600 mm conforming to IS 13801 with 15 mm thick 1:4 cement mortar over the top most layer of roofing treatment with fine joints including sealing of joints (silicon/elastomeric sealant) etc all complete. (Water proofing paid elsewhere)	SQM	11695	1.439599074900
509	Providing and applying two coats of bitumen grade 85/25 as per IS 702 (@ 1.7kg/sqm) with 1% antistripping compound conforming to IS 6241 in foundation, wall, column etc on concrete surfaces exposed to soil / ash including surface preparation etc. all complete.	SQM	42339	1.487228067700

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	WEIGHTAGE
512	Anti termite chemical treatment of soil with Chloropyrifos emulsifiable concentrates (1%) conforming to IS :8944 all complete.	SQM	1500	0.027768860300
600 JOINTS AND FILLERS				
Joints & fillers including all labour, material, equipment, transportation, handling etc at any level as per specification, drawings and as directed by engineer - in - charge.				
601	Supplying & installation of bitumen impregnated fibre board confirming to IS 1838 as joint filler at joints in concrete including nailing, coating of both faces with coal tar pitch/bitumin etc. all complete.			
a	12 mm wide joints.	SQM	100	0.023425391700
b	20 mm wide joints.	SQM	150	0.046565818300
c	25 mm wide joints	SQM	150	0.056925583000
d	50 mm wide joints	SQM	100	0.048891695000
602	Providing and applying polysulphide based sealant conforming to IS:12118 in expansion joints in concrete including cleaning of joints, raking out groove, application of primer, scaffolding etc. all complete for following size grooves:			
a	12mm X 25mm	RM	300	0.010182108900
b	20mmX25mm	RM	300	0.015948951700
c	25mmX25mm	RM	200	0.018797054800
d	50mmX25mm	RM	200	0.037594496700
603	Supplying and filling in position hot applied bitumin sealing compound (Grade A) confirming to IS 1834 including cleaning, mixing, heating, pouring/injecting sealing compound in gaps in joints including application of primer etc. all complete.			
a	10mm X 40mm	RM	300	0.000854605100
b	12mm X 25mm	RM	200	0.000427302500
c	20mmX25mm	RM	200	0.000712170900
604	Supplying and filling in position hot applied bitumin sealing compound (Grade B) confirming to IS 1834 including cleaning, mixing, heating, pouring/injecting sealing compound in gaps in joints including application of primer etc. all complete.			
a	10mm X 40mm	RM	300	0.000711783800
b	12mm X 25mm	RM	200	0.000379695400
c	20mmX25mm	RM	200	0.000616956700
606	Providing and fixing PVC water stops in joints conforming to IS 12200 & IS 15058 all complete for the following:			
a	150 mm wide and 8 mm thick	RM	100	0.007120161000
b	230 mm wide and 8 mm thick	RM	150	0.014703039600
c	150 mm wide and 6 mm thick	RM	150	0.008401778400
d	230 mm wide and 6 mm thick	RM	100	0.017112035200
700 MS EMBEDMENTS				
Embedments including all labour, material, equipment, transportation, handling etc. at any level as per specification, drawings and as directed by engineer - in - charge.				
701	Supply, fabricating and fixing of mild steel embedments, inserts, pipe sleeves, angle pieces, rungs of various diameters, plates of dimensions as required etc. including welding, bolting, cutting, drilling, scaffolding, setting etc. all complete.	MT	30	0.491768169700

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	WEIGHTAGE
702	Same as above with BHEL supplied material free of cost including loading, transportation, unloading etc. all complete from BHEL store to plant site.	MT	15	0.077342749300
703	Fixing of embedments, inserts, pipe sleeves, angle pieces, anchor bolts of various diameters, plates of dimensions as required etc. including scaffolding, setting in position, transportation from BHEL site stores to work spot etc. all complete.	MT	25	0.086456534100
704	Supply, Fabrication, transportation, delivery at site and erection, installation and alignment of mild steel foundation bolt assembly conforming to IS:2062 and grade 1 of IS:432 in concrete along with nuts, lock nuts (as per IS:1363, 1364 and IS:3138), washers, anchor plates, stiffner plates, protective tape, pipe sleeves, templates etc. including welding, cutting, grinding, threading, drilling etc. all complete.	MT	25	0.508142179100
705	Supplying, fabricating, erecting and installing following items in concrete/brickwall for all kind of works, including setting material in concrete, layout, scaffolding, cutting, forming, grinding, drilling, bolting, welding, jointing, testing etc. all complete.			
a	MS pipes of all diameters	Quintal	20	0.041239960300
b	PVC pipes / conduits of all diameters	Quintal	20	0.083585953100
c	UPVC pipes / conduits of all diameters	Quintal	20	0.087657558100
d	Expansion fasteners (mechanical galvanised) of HILTI make or equivalent of safe tensile capacity including SS Clamps wherever required as specified below for brick work with expansion sleeve of A6 polyamide:			
i	Upto 250 kg	Each	10	0.000647940000
ii	Beyond 250 Kg and upto 500 kg	Each	10	0.001006309100
iii	Beyond 500 Kg and upto 750 kg	Each	10	0.001623401300
e	Expansion fasteners (mechanical galvanised) of HILTI make or equivalent of safe tensile capacity as specified below for concrete work with expansion sleeve of stainless steel:			
i	Upto 250 kg	Each	10	0.000766609400
ii	Beyond 250 Kg and upto 500 kg	Each	10	0.001167708700
iii	Beyond 500 Kg and upto 750 kg	Each	13	0.002385023600
A705	Anchor fasteners (Chemical type, galvanised) of HILTI make or equivalent of safe tensile capacity as specified below for concrete work.:			
i	Upto 250 kg	Each	10	0.001234668200
ii	Beyond 250 Kg and upto 500 kg	Each	10	0.001590153800
iii	Beyond 500 Kg and upto 750 kg	Each	10	0.001966675400
800 GROUTING				
Grouting including all labour, material, equipment, roughening surface, cleaning, ramming, curing etc. at any level unless otherwise specified as per specification, drawings and as directed by engineer - in - charge.				
801	Providing & grouting with cement slurry mix of approved ratio using pressure pump for water retaining concrete structures as per approved procedure including cost of nipples/ nozzles, cement, admixture, curing, pressure pumps, slurry agitator etc. all complete. Cost shall include fixing of nipples at minimum 500 mm centre to centre spacing, cutting of nipples after completing of grouting, making good of the nipple hole with appropriate non-shrink cement paste, water tightness test etc. all complete wherever specified in the drawing.	SQM	25	0.002759081700
802	Providing & grouting of pocket holes, pipe sleeves under base plates, machinery, pipe supporting structures etc. with mix 1:1 (1 cement :1 sand) using non shrink admixture etc. all Complete.	CUM	13	0.059167586100
803	Providing & grouting of pocket holes, pipe sleeves and under base plate of structural steel work/ machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing etc. all complete with mix 1:1:2 (1 cement : 1 coarse sand : 2 aggregate of 6 mm down graded stonechips) using non shrink admixture. (Cost of all material and cleaning the pocket by compressed air shall be in the scope of the contractor).	CUM	5	0.013524648300

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Scope: All Civil and Architectural works of Balance of Plant Building including final micro level grading, backfilling up to required level and handing over of all foundations / buildings / structures to mechanical / electrical agencies for Unit # 01, 02, 03 & 04 (i.e. All Four Units)				
ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	WEIGHTAGE
804	Providing & grouting of pocket holes, pipe sleeves and under base plates of structural steel work/ machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing etc. all complete with ConbextraGP-1 or equivalent. (Cost of all material and cleaning of the pockets by compressed air shall be in the scope of the contractor).	CUM	20	0.251916027400
805	Providing & grouting of pocket holes, pipe sleeves and under base plates of structural steel work/ machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing, etc. all complete with Conbextra GP-2 or equivalent. (Cost of all material and cleaning of the pockets by compressed air shall be in the scope of the contractor).	CUM	5	0.069935407300
A805	Providing & grouting of pocket holes, pipe sleeves and under base plates of structural steel work/ machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing, etc. all complete with Conbextra GPX-2 or equivalent. (Cost of all material and cleaning of the pockets by compressed air shall be in the scope of the contractor).	CUM	5	0.069935407300
900 DOORS, WINDOWS, VENTILATORS, LOUVERS				
Doors, windows, ventilators, louvers, roof ventilators, rolling shutters, partitions including all labour, material, equipments, transportation, handling, preparation of working drawings etc. at any level as per specification, drawings and as directed by engineer - in - charge.				
901	Providing and fixing wooden frame conforming to IS 4021 made of best quality seasoned CP teakwood free from large or loose knots, cracks or other defects including sand paper smoothening, hold fasts, beading, primer and finish painting / polishing etc. all complete with proper wood joinery, accurately set to required lines or levels and rigidly secured in place. (Finish painting / polishing paid separately)	CUM	5	0.123948946600
A901	Providing and fixing wooden frame conforming to IS 4021 made of best quality seasoned hardwood free from large or loose knots, cracks or other defects including sand paper smoothening, hold fasts, beading, primer and finish painting / polishing etc. all complete with proper wood joinery, accurately set to required lines or levels and rigidly secured in place. (Finish painting / polishing paid separately)	CUM	5	0.037460500200
902	Providing and fixing teakwood frame panel door shutter as per IS 1003 with 35 mm x 150 mm vertical rail & 35mm x 125 mm horizontal rail and 12 mm thick interlocked panels of teakwood with proper wood joinery including beading, preparation of working drawings, godrej or equivalent make mortice lock with handels on both sides, approved ISI mark anodised fittings like door stopper, 300mm long tower bolts, 16x300mm long aldrops, 125mm long handles on both sides etc. butt hinges, sliding bolt, knobs, (all fitting shall be anodised aluminium color dyed), screws, primer and finish painting / polishing etc. all complete. (Finish painting / polishing paid separately)	SQM	20	0.017211816500
A902	Providing and fixing teakwood frame panel door shutter as per IS 1003 with 35 mm x 150 mm vertical rail & 35mm x 125 mm horizontal rail and 12 mm thick interlocked panels of teakwood with proper wood joinery including beading, preparation of working drawings, godrej or equivalent make mortice lock with handels on both sides, approved ISI mark anodised fittings like door stopper, 300mm long tower bolts, 16x300mm long aldrops, 125mm long handles on both sides etc. butt hinges, sliding bolt, knobs, (all fitting shall be anodised aluminium color dyed), screws, primer and finish painting / polishing etc. all complete. (Finish painting / polishing paid separately)	SQM	10	0.008605908200
B902	Providing and fixing teakwood frame panel door with PVC lamination on both sides shutter as per IS 1003 with 35 mm x 150 mm vertical rail & 35mm x 125 mm horizontal rail and 12 mm thick interlocked panels of teakwood with proper wood joinery including beading, preparation of working drawings, godrej or equivalent make mortice lock with handels on both sides, approved ISI mark anodised fittings like door stopper, 300mm long tower bolts, 16x300mm long aldrops, 125mm long handles on both sides etc. butt hinges, sliding bolt, knobs, (all fitting shall be anodised aluminium color dyed), screws, primer and finish painting / polishing etc. all complete. (Finish painting / polishing paid separately)	SQM	10	0.008639136400

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	WEIGHTAGE
903	Providing, fitting and fixing solid core flush door shutter as per IS 2202 part II, 35mm thick homogenous particle board bonded with BWP type phenolformaldehyde synthetic resin, partial board core conforming to IS 3087 type I, 35x12 mm thick teakwood beading all around including preparation of working drawings. godrej or equivalent make mortice lock with handles on both sides, approved ISI mark anodised fittings like door stopper, 300mm long tower bolts, 16x300mm long aldrops, 125mm long handles on both sides etc. butt hinges, sliding bolt, knobs, (all fittings shall be anodised aluminium color dyed), finish synthetic paint over primer, screws etc. all complete as per drawing, specification and instruction of engineer in charge. with commercial faces and teak wood edges. (Finish painting paid separately)	SQM	60	0.054298310900
A903	Providing, fitting and fixing solid core wooden flush door shutter with PVC lamination on both sides as per IS 2202 part II, 35mm thick homogenous particle board bonded with BWP type phenolformaldehyde synthetic resin, partial board core conforming to IS 3087 type I, 35x12 mm thick teakwood beading all around including preparation of working drawings. godrej or equivalent make mortice lock with handles on both sides, approved ISI mark anodised fittings like door stopper, 300mm long tower bolts, 16x300mm long aldrops, 125mm long handles on both sides etc. butt hinges, sliding bolt, knobs, (all fittings shall be anodised aluminium color dyed), finish synthetic paint over primer, screws etc. all complete as per drawing, specification and instruction of engineer in charge. with commercial faces and teak wood edges. (Finish painting paid separately)	SQM	95	0.086355649700
904	Providing and fixing single or double steel door shutters with 45mm thk flush design shutter comprising of two outer sheets of 18 gauge steel sheets rigidly connected and reinforced inside with continuous vertical 20 gauge stiffeners, spot welded in position at not more than 150mm on centres including void filled with mineral wool (density as per specification), all fittings, Godrej or equivalent make mortice lock with handle on both sides, shop and final painting etc all complete.	SQM	90	0.123484980800
906	Providing and fixing anodized extruded aluminium doors (single or double shutter) conforming to IS:1948, IS:1949 fabricated from extruded sections of HINDALCO/JINDAL or equivalent make having minimum 3mm wall thickness as per IS:1285, IS:733 and anodized and electro color coating of required shade as per IS 1868 (minimum anodized coating of grade AC15). fixed with rawl plugs, expansion fasteners, SS screws / fixing clips necessary filling of gaps at Junctions, at top, bottom & sides with required PVC / neoprene felt for bi-metallic protection etc. Glazing shall be clear float glass of 6mm thickness including snap fit type beading, concealed screws, fixtures, Godrej or equivalent make Mortice lock with handle on both sides, etc all complete. Aluminium section shall be smooth, free of stains, straight, mitred & jointed mechanically wherever required. (Glazing shall be paid separately)	SQM	371	0.478214101700
A907	Providing and fixing fire proof steel doors (single or double shutter) with panic devices and vision panel shall be 45mm thk flush design comprising of two outer sheets of 18 gauge steel sheets rigidly connected and reinforced inside with continuous vertical 20 gauge stiffeners, spot welded in position at not more than 150mm on centers including all fittings, shop painting with approved post office/signal red color fire resistant paint and mineral wool insulation (64 kg/cum density) complete and shall be fire proof as per IS:3614, TAC requirements and as per specification. Minimum ratings shall be 2 Hrs.	SQM	67	0.232530493000
908	Providing and fixing steel windows/ventilator with steel sections as per IS:1038, IS:1361 & IS:7452 latest revision including all fittings, metal beadings, hold fasts, shop and final painting, glazing etc. all complete. (Glazing shall be paid separately)			
a	openable type	SQM	250	0.164594215200
b	fixed type	SQM	75	0.047313452700
A908	Providing and fixing windows/ventilator with M.S. grills as per approved design for security purpose made of 25 mm X 6mm M.S. Flats / 12mm – 20mm M.S. square bar of approved design shall be provided to suit security requirements.	Kg	110	0.002039363300

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	WEIGHTAGE
A909	Providing and fixing anodised aluminium work of Jindal, Hindalco or other equivalent approved make for door/window frames, door/window shutters, ventilators, partitions, railing, grills etc with extruded standard tubular and other sections including all fittings & fixtures and accessories of approved make conforming to IS733 and IS1285, anodised and electro color dyed to required shade according to IS 1868 (minimum anodic coating of grade AC15), fixed with rawl plugs, expansion fasteners, SS screws or with fixing clips, including necessary filling of gaps at junctions, at top, bottom and sides with required PVC/neoprene felt for bi-metalllic protection etc.including preparation of working drawings, aluminium cleat angle, aluminium snap-on-beading for glazing/panelling, stair case tread nosing, with all fittings and fixtures (like tower bolts, handles, door stopper with rubber shoes, 'L' drops, stays, floor springs, hydraulic door closures etc.), CP brass/stainless steel screws, providing and fixing hinges/pivots, and making provision for fixing of fitting wherever required including cost of PVC/neoprene gasket, all complete as per drawing, specification and instructions of engineer in charge (Glazing and panelling shall be paid seperately).Weight of aluminium section only shall be measure.	Kg	17680	1.896649425000
A910	Providing and fixing of aluminium composite panel(ACP) 3mm thick fixed in aluminium frame including sealant with minimum 0.2mm topping of precotaed aluminium foil on both side of approved manufacturer & approved shade, all complete as per specification.	SQM	415	0.309078813700
911	Providing and fixing of door closers as per IS 3564 ,of approved make & quality all complete of following type :			
a	Over head hydraulic door closures	Each	35	0.012692879100
b	Floor mounted Hydraulic door closers	Each	25	0.015432966400
912	Providing and fixing pressed steel frames fabricated from 16 gauge M.S sheet mortised, reinforced drilled and tapped for hinges and locks bolts strikes, hold fasts adjustable floor anchors, floor tiles/weather bars ,paintings etc all complete as per specifications.	Kg	6617	0.172746598400
913	Providing and fixing in position rolling shutter of hot rolled double dipped galvanised steel lath section of 18 SWG tested mild steel strips at 75mm rolling centres interlocked together through their entire length and jointed together at the end by end locks mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation including wire springs, top cover, primer & shop coats of approved enamel paint etc, all complete as per IS 6248 and specification of approved make of following types: The bottom lath shall be coupled to a lock plate fabricated from 3mm thick galvanised steel plate and securely rivetted with stiffening angles.(partly coiled and lath/full lath).			
a	Hand Operated	SQM	73	0.053917702000
b	Mechanically Operated	SQM	512	0.466748153700
c	Electrically operated	SQM	25	0.038745533300
914	Providing and fixing PVC doors(25 thk double skin) of sintex or equivalent make including all fitting & fixtures as per specification, drawing and instructions of engineer in charge.	SQM	272	0.171138481600
A914	Providing and fixing Solid core PVC door shutters (25 thk double skin) with PVC frame of sintex or equivalent make including all fitting & fixtures as per specification, drawing and instructions of engineer in charge.	SQM	220	0.296687349300
915	Providing, fixing and fitting of glazing of first grade class in steel/aluminium/wooden frames, where ever required, cleaning after fixing including hardware, gaskets, clips, beadings etc. all complete.			
b	4 mm thick clear float glass	SQM	300	0.037594496700
c	6 mm thick clear float glass	SQM	64	0.011240410400
d	6 mm thick wired glass	SQM	846	0.148783916200
f	4 mm thick ground glass	SQM	57	0.007602943200
h	6 mm thick clear toughened safety glass	SQM	30	0.012175452100
A915m	6 mm thick clear float glass with itching	SQM	40	0.005022740200

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	WEIGHTAGE
A915n	One outer 6mm thick tinted heat-reflecting type float glass and one inner 6mm thick toughened float glass hermetically sealed and seperated by 12 mm thick gap for thermal insulation (only single elevation area to be measured).	SQM	198	0.044503166200
916	Supplying and fixing weather stripping of approved make and quality to doors as per instructions of engineer in charge and specification complete.	RM	30	0.001623401300
917	Providing and fixing 12 mm thick BWP particle board, decorative veneer (prelaminated) on both sides, as panels in aluminium framed door shutter, fixed with necessary snap-on-beading etc. all complete (excluding aluminium works).	SQM	30	0.012681016100
918	Providing and fixing steel louvered window with ISMC 100 frame all round including verticals with 18G pressed steel louvers, painting etc. all complete.	SQM	40	0.028499609500
920	Roof skylight structure for atrium with 6mm thick Polycarbonate sheet multi (twin) wall fire retardant and ultra violet resistant with sealed open edges for sky light for approved shape like dome, pyramidal etc. Joints are properly sealed with sealant, screws with pvc cap, self tapping screws, epdm rubber gasket.etc all complete as per detailed drawing and specification.	SQM	150	0.065541012700
A920	Providing, fixing and fitting of 4mm thick profiled Fibre reinforced plastic (FRP) sheets of approved shape, matching with metal cladding profile, in roofs, and having ultra violet resistant properties, with sealed open edges, joints properly sealed with sealant, screws with pvc cap, self tapping screws, etc all complete as per detailed drawing and specification.	SQM	1200	0.371244639400
A921	Supplying, installing and commissioning of self sliding mechanism for aluminum door (double shutter) including photo operated sensors, fittings, motors, mechanical systems, electrical systems, warranty all inclusive in working condition as per specifications (aluminum and glazing to be paid seperately)	NOS	4	0.067428900400
B921	Providing and fixing M.S. grills of approved pattern made out of 25mm X 6mm M.S. flats and 12-20mm M.S. square bars on window frames including painting as per specification.	KG	20	0.000452460700
1000 BRICKWORK				
Brickwork masonry including all labour, material, equipment, transportation, handling, scaffolding etc. at all levels as per specification, drawings and as directed by engineer - in - charge.				
1001	Providing brick work in cement mortar 1:6 (1 part cement 6 parts coarse sand) in walls, chambers etc. in thickness varying from 230mm to 460mm at all depths, places and positions below plinth including raking out joints, curing, scaffolding etc. complete excluding plastering and painting.			
a	Using fly ash lime/cement bricks confirming to IS 12894 with crushing strength of 75 kg/cm2	CUM	420	0.259216940500
b	Using clay ash bricks as per IS 13757 with crushing strength of 75 kg/cm2 and minimum percentage of fly ash 25%	CUM	100	0.061765926200
1002	Providing brick work in cement mortar 1:6 (1 cement 6 coarse sand) in walls, chambers etc. in thickness 230mm at all heights, places and position above plinth including raking out joints, curing, scaffolding etc complete excluding plastering and painting.			
b	Using clay ash bricks as per IS 13757 with crushing strength of 75 kg/cm2 and minimum percentage of fly ash 25%	CUM	250	0.196898327100
c	Using burnt clay bricks of class designation 7.5 of nominal dimension	CUM	250	0.213393405500

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	WEIGHTAGE
A1002	Providing brick work in cement mortar 1:6 (1 cement 6 coarse sand) in walls, chambers etc. in thickness 230mm at all heights, places and position above plinth including raking out joints, curing, scaffolding etc complete excluding plastering and painting.			
a	Using fly ash lime/cement bricks confirming to IS 12894 with crushing strength of 75 kg/cm ²	CUM	5294	4.329087934100
A1003	Providing brick work in cement mortar 1:4 (1 cement 4 coarse sand) in partition walls , chambers etc. in thickness 115mm at all heights, places and position above or below plinth/graded level including providing two nos. 6 mm diameter MS bars at every third layer, raking out joints, curing, scaffolding etc complete excluding plastering and painting as per specification.			
a	Using fly ash lime/cement bricks confirming to IS 12894 with crushing strength of 75 kg/cm ²	CUM	595	0.067653586500
A1004	Providing brick soling including spreading of earth, ramming, watering including 25mm thick cushion of sand complete but excluding excavation and disposal of surplus earth (excavation and disposal of surplus earth shall be measured under applicable item). Using brick on edge.			
a	Using fly ash lime/cement bricks confirming to IS 12894 with crushing strength of 75 kg/cm ²	CUM	20	0.016857240500
1006	Breaking of existing brick work at all levels including plastering, removing the rubbish up to a distance of 500 m including transportation, loading, unloading etc. all complete as directed by the engineer.	CUM	5	0.001018181800
1007	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. (Chicken wire mesh to paid separately)	CUM	5	0.001533102700
1008	Providing and laying 75 mm thick bed of dry brick aggregate including of excavation, disposal of surplus earth spreading of earth, ramming, watering etc. complete in all respects as directed by the engineer.	SQM	5	0.000192247400
1009	Making openings in existing brick wall or partition wall including making good the broken edges/surface with cement mortar etc. complete.	CUM	5	0.001364697500
1010	Supply and placing in position mild steel wire fabric of square mesh 25 mm size and wire diameter of 2 mm for encasing of steel sections in concrete including cutting, bending, fixing etc. complete.	SQM	150	0.008935906600
1011	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 upto a lead of 1 km including loading, unloading, transportation etc. all complete.	SQM	20	0.003156620200
1012	Providing and filling brick bats in soak pits all complete.	CUM	5	0.001272134600
1100 DAMP PROOF COURSE				
Damp proof course including all labour, material, equipment, transportation, handling, shuttering, centering, curing etc at any level as per specification, drawings and as directed by engineer - in - charge.				
1101	Providing Damp Proof Course 40mm thick 1:1.5:3 concrete (10mm and down graded aggregate) with 2% of approved admixture of water proofing compound all complete. Two layers of hot bitumen coating 85/25 grade as per IS:702 @ 1.7Kg./sqm shall be applied one before & one after the DPC.	SQM	343	0.024537651700
1200 CEMENT MORTAR PLASTER				
Cement mortar plaster including making grooves wherever required including all labour, material, scaffolding, curing etc at any level as per specification, drawings and as directed by engineer - in - charge.				

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	WEIGHTAGE
A1201	Providing 20mm thick plaster in two layers outside of the building wall/rough surface of internal wall in 1:4 cement sand mortar of 12mm thick first layer and 1:3 cement sand mortar with 8mm second layer, finished to a smooth finish including providing 3mmx3mm size grooves at junctions of two dissimilar materials all complete.	SQM	15759	1.377696715700
A1202	Providing 12mm thick plaster inside the building/boundary wall in cement mortar 1:4 on walls finished to a smooth finish as per specification all complete.	SQM	13404	1.043205123700
A1204	Providing 6mm thick plaster on ceiling in cement mortar 1:3 finished to a smooth all complete.	SQM	11650	0.341408451400
1205	Providing 12mm thick plaster in walls, drains/culverts with a paste of neat cement @ 1kg/sqm and rubbed smooth with trowel etc. all complete.	SQM	125	0.002999874800
1206	Providing and making decorative plaster of all types and design on walls, ceilings, arcs, columns with various thickness upto 18 mm including finishing all complete.	SQM	30	0.001255665700
1207	Forming groove of uniform size from 12X12 mm upto 20X15 mm in plastered surface as per approved pattern, using wooden battens nailed to the under layer, including removal of wooden battens, repair of the edges of plaster panel and finishing the groove etc. complete as per specification, drawing and the instructions of engineer in charge.	RM	150	0.001139086400
1208	Providing drip coarse on plastered surface at all elevations for all type of work such as chajjas, parapet, projections etc. including scaffolding, finishing etc. complete with all labour, tools and plants as per specification, drawing and instructions of engineer in charge.	RM	130	0.000740406100
1209	Providing and laying encasement to box type steel beams at all levels with lath plaster 50 mm nominal thickness with cement plaster (1:4) over chicken wire mesh including all labour, materials, equipment, handling, transporting, mixing, placing, leveling, curing and cleaning, finishing the exposed surfaces etc including centering and shuttering all complete as per specification, drawing and instructions of enginner in charge (chicken wire mesh to be paid separately)	SQM	100	0.004378883500
1210	Ruled pointing in masonry in CM 1:3 (1 cement and 3 fine sand) including raking out joints, curing etc. complete.	SQM	50	0.000776324300
1300 FINISHES TO CONCRETE / PLASTERED SURFACES				
Finishes, painting to concrete, plastered surfaces including all labour, material, equipment, surface preparation, scaffolding etc. at any level as per specification, drawings and as directed by engineer - in - charge.				
1301	Two or more coats of white wash/ colour wash as per IS 627 of approved brand and manufacture to give an even shade including a priming coat as per specifications.	SQM	175	0.000664467000
1302	Two or more coats of Exterior masonry paint (water or solvent base) of special resins, adhesives and additives mixed with fine, hard stone aggregate and suitable pigment. The paint shall be applied on a coat of primer over dried, prepared plaster surface as manufacturers guidlines. The final finished coating shall be fungus resistant, UV resistant, water repellant, alkali resistant and extremely durable with color fastness as per specification.	SQM	225	0.005767278100
1303	Providing and applying two or more coats of oil bound distemper as per IS 428 of approved brand, shade and manufacture to give smooth, hard, durable & glossy finish over a coat of primer over prepared plaster surface as per manufacturers guideline.	SQM	300	0.005340120700
1304	Two or more coats of acrylic distemper of approved brand and manufacture to give an even shade including a priming coat with distemper primer complete as per spec.	SQM	11165	0.198741495100
1305	Providing and applying two or more coats of acrylic emulsion paint as per IS 5411 of approved brand, shade and manufacture to give smooth, hard, durable & glossy finish over a coat of primer over prepared plaster surface as per manufacturers guideline.	SQM	12064	0.340723501700

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	WEIGHTAGE
A1305	Providing and applying two or more coats of external quality acrylic emulsion paint as per IS 5411 of approved brand, shade and manufacture to give smooth, hard, durable & glossy finish over a coat of primer over prepared plaster surface as per manufacturers guideline.	SQM	14183	0.400570409900
1306	Providing and applying 2 or more coats of acid/alkali resistant paint of approved brand and colour to floors, walls and ceiling including preparation of surface to receive paint, providing and applying bitumen primer confirming to IS 158 complete all as per manufacturer's recommendations and as approved by engineer, at all heights above or below grade level, complete as per specifications.	SQM	900	0.067286218500
1309	Two or more coats of synthetic enamel paint of approved make made from synthetic resins and drying oil with rutile titanium dioxide and other selected pigments to give smooth, hard, durable & glossy finish to all interior and exterior surfaces complete.	SQM	2000	0.042722514400
1310	Providing and applying 3 coats of water proof cement paint of approved make and color on exterior surface at all heights including material, labour, scaffolding, curing etc including primer coat complete as per specification.	SQM	930	0.012580460600
1312	Providing and applying 2 mm thick plaster of paris punning on walls including preparation of surface, staging, etc. to achieve a smooth even surface all complete as per specification and as directed by Engineer.	SQM	1500	0.024209940900
A1312	Providing and applying 3 mm thick white cement putty punning on walls (Birla White/ JK White or Similar approved) including preparation of surface, staging, etc. to achieve a smooth even surface all complete as per specification and as directed by Engineer.	SQM	12000	0.403661576100
A1313	Providing and applying ready made Acid/Alkali resistant 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 250 micron thickness over epoxy primer.	SQM	600	0.042659425400
1314	Providing and applying Synthetic plaster for external applications composed of synthetic fibre and petroleum based chemical similar to RENOVO or equivalent and of approved natural color/shade applied on cured and dried plaster surface. The final finish Paint shall have UV resistance, fungus, bacterial resistance properties all complete with grooves filled with poly sulfide sealant of matching color and shade as per specification/drawing/approval of engineer in charge.	SQM	600	0.068923437500
1400 FLOORING AND SKIRTING				
Flooring and skirting at any level including base layer, labour, material, equipments, transportation, handling, curing, polishing etc. at any level as per specification, drawings and as directed by engineer - in - charge.				
1401	Providing and laying 50 mm thick heavy duty cement concrete in flooring with metallic hardener pigmented topping 12mm thick uniform graded treated iron paricles in flooring. Under layer of 38mm thick cement concrete mix 1:2:4 (1 cement: 2 sand : 4 stone aggregates 12.5mm well graded) and top layer of 12mm thick metallic concrete of mix 1:2 (1 cement hardner mix with approved quality metallic hardening compound :2 stone aggregate 6mm nominal size) by volume including cement slurry, rounding off edges, glass strips etc. all complete as per specification. (Quoted item rate shall be inclusive of providing glass joint strips):	SQM	9858	0.648335390400

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	WEIGHTAGE
A1401	Providing and laying 50 mm thick heavy duty patent stone cement concrete in flooring with metallic hardener pigmented topping 12mm thick uniform graded treated iron particles in flooring. Under layer of 38mm thick cement concrete mix 1:2:4 (1 cement: 2 sand : 4 stone aggregates 12.5mm well graded) and top layer of 12mm thick metallic concrete of mix 1:2 (1 cement hardner mix with approved quality metallic hardening compound :2 stone aggregate 6mm nominal size) by volume including cement slurry, rounding off edges, glass strips etc. all complete as per specification. (Quoted item rate shall be inclusive of providing glass joint strips):	SQM	600	0.062304892500
1402	Providing and laying 25 mm thick heavy duty cement concrete mix 1:2:4 (1 cement: 2 sand : 4 stone aggregates) flooring with metallic hardener pigmented topping of 10 mm thick uniform graded treated iron particles in skirting and dado complete as per specification.	SQM	600	0.049065480200
A1404	Providing and laying 50 mm thick coloured interlocking M30 concrete tile in paving with approved colour and pattern and should be laid on the subbase and bedding as per specifications and recommendations of manufacturer.	SQM	250	0.035244719700
1406	Providing and laying of polished Kota stone/Shahabad stone 18mm to 20mm thk in flooring. Under bed shall average 30mm thk of 1 cement : 2 sand : 4 stone aggregates by volume and brought to proper level. The kota stone slabs/tiles laid over under bed, pressed and tapped down with wooden mallet to the proper level, lifted and pressed again with thick cement slurry spread over the surface with fine joint finished including pigments, curing, grinding, granite polishing etc. all complete as per specification or as directed by engineer-in-charge.	SQM	600	0.135077536500
1408	Providing and laying of polished Kota stone/Shahabad stone 18mm to 20mm thk in skirting projecting 6mm from adjacent plaster including cutting brickwall upto the required depth, edging, finishing etc. all complete as per specification or as directed by engineer-in-charge.	SQM	100	0.021848358900
1410	Marble stone Flooring laid in 50mm overall thickness with 18-20mm thick marble slabs (grade -1) with minium 30mm thick underbed of 1 cement : 2 sand : 4 stone aggregate by volume and brought to proper level. The marbel slabs/tiles laid over underbed with mortar 1:3, 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. all complete.	SQM	200	0.091287539800
1412	Providing and laying 18-20mm thick polished Granite stone of approved color and texture in flooring with brass/ stainless steel strips. Under bed shall average 30mm thk of 1 cement : 2 sand : 4 stone aggregate by volume and brought to proper level. The granite stone slabs/tiles laid over under bed, pressed and tapped down with wooden mallet to the proper level, lifted and pressed again with thick cement slurry spread over the surface with fine joint finished including pigments, curing, grinding, granite polishing etc. all complete.	SQM	200	0.157979637500
1414	Providing and laying polished Granite stone 18-20mm thk in skirting and dado with 6mm thick projection from adjacent plaster including mortar, cement slurry, pigments, curing, grinding, moulding, granite polishing etc. all complete.	SQM	100	0.081458032800
A1417	Providing and laying 1st quality coloured glazed ceramic tiles rom reputed / approved manufacturer including underbed of cement mortar 1:3 with neat cement slurry etc. all complete for following.			
a	7mm thick tiles In flooring		250	0.065578266200
c	5mm thick tiles In skirting and dado upto specific height		250	0.065103646800
d	7mm thick tiles In skirting and dado upto specific height		200	0.065326200300
1418	Providing and laying 10 mm thk non-skid fully vitrified tiles of make 'MARBONITE' or 'FERRASTONE of BOSS Profile limited' or equivalent in flooring and skirting over 30 mm thick underbed of 1 part cement and 3 parts coarse sand by weight mixed with sufficient water, complete as per specification laid in pattern of following sizes			

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	WEIGHTAGE
a	400X400 mm	SQM	1297	0.378768862600
b	600X600 mm	SQM	7825	2.235016026100
1419	Providing and laying granite stone slab of 20mm thickness single piece for wash basin / sink slab / fascia of black or approved colour with cutting, making corners, moulding and opening etc. all complete.	SQM	60	0.051336337900
A1423	Providing & fixing Acid / Alkali resistant (Chemical resistant) tiles conforming to IS:4457 in flooring / Dado bedded and jointed with epoxy mortar all complete for following thicknesses. The tiles should be abrasion resistant & durable.			
a	20mm thick	SQM	300	0.179000871800
b	40 mm thick	SQM	300	0.273841138200
B1423	Providing & fixing acid / alkali resistant vitrified tiles in flooring/Dado bedded and jointed with epoxy mortar all complete for following thicknesses. The tiles should be abrasion resistant & durable.			
a	20 mm thick	SQM	250	0.149167393200
b	40 mm thick	SQM	250	0.228200948500
A1425	Providing and laying polished Marble slabs (Aranga white and Abu green marble or Baroda green & Jaisalmer yellow combination or equivalent approved shade/color /design) 20 mm thk in staircase landing/skirting and corridors over minimum 20 mm thick underbed of 1 cement : 2 sand : 4 stone aggregates by volume mixed with sufficient water to form a stiff workable mass. The marble slabs shall be 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 moulded marble nosing, pigments, curing, grinding, making corners, granite polishing etc. complete as per spec.	SQM	535	0.336655707200
1426	Providing and laying marble skirting /dado (Aranga white or approved shade/color /design) equivalent of minimum 20mm thickness projecting 6mm from adjacent plaster all complete including underbed cement mortar 1:3, scaffolding etc. all complete.	SQM	10	0.007754399500
1427	Providing and fixing glazed ceramic tiles of approved color and design of size 200x300mm / 300x300mm in dado of approved size , projecting 6mm uniformly from adjacent plaster or wall finish. The mix for underbed plaster shall consist of 1part cement and 3 parts sand by weight. fairly moist but firm, tiles shall be pressed over under bed by applying cement slurry including pigments, curing etc all complete for following thicknesses:			
a	5mm thick	SQM	400	0.060210181100
A1428	Providing and laying flexible electric insulated PVC synthetic sheet as per IS 15652-2006 of Suntex Insulatic Pvt. Ltd. Or similar all complete as per specification.	SQM	745	0.125585865700

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	WEIGHTAGE
1429	Providing and fixing of removable type flooring system consisting of steel cementitious core panel with CRCA (electrical resistant) coating of 40-60 micron of size 600X600X35 mm with 2 mm thick anti static PVC high pressure laminate and edge trim for protection including proprietary floor supporting system consisting of following min requirements: a. Base plate size 150x150x4 mm hot dip Galvanized (60-80 micron) b. Pedestal stud 32 mm dia at bottom and 2 mm thick crca (electrically resistant) and 19 mm dia - 90 mm long threaded portion MS Rod stud. fixed at bottom with 6mm dia and 40mm length dash fasteners as per grid c. Top head attachment of aluminium die cast alloy with check nuts at bottom portion for attaching the top head thread in the stud allowing for adjustment up to 25 mm up&down. d. Stringer made of hot dip Galvanized (60-80 micron) mild steel channel 30x20x1.2 mm thick e. Heavy duty removable type flooring shall be designed for distributed load of 1250 kg/sqm (minimum).	SQM	100	0.144515543000
1430	Providing and fixing dividing strips in joints of cast in situ floorings at various elevations, finishing, all labour, material etc. complete as per drawing, specification and instructions of engineer in charge.			
a	Glass strips 50 mm wide and minimum 6 mm thick.	RM	150	0.001281617300
b	Aluminium strips 50 mm wide and minimum 3 mm thick	RM	50	0.001044259300
c	Brass strips 50 mm wide and minimum 4 mm thick.	RM	50	0.001435856500
A1432	Providing and fixing 10 mm thick high polished decorated colored background first quality digital series dual charged glazed tiles of size 450mmx300 mm for dadoing etc complete as per specification and instruction of engineer in charge.	SQM	100	0.022476346500
A1433	Providing and laying self levelling epoxy flooring consisting of first coat of solvent free resin based dispersion primer @ 200gm/sqm , first layer of epoxy floorin @4.4kg/sqm of 2mm thickness,second layer of primer@100gm/sqm,final decorative epoxy topping @3.6 Kg/Sqm of approx 2mm thickness complete as per specification. including all material, labour, etc all complete.	SQM	500	0.140476682400
1500 ROOFING / SIDE CLADDING				
Roofing / side cladding work including all labour, material, equipment, transportation, handling, scaffolding, laps, hooks, washers, corner pieces etc. at any level as per specification, drawings and as directed by engineer - in - charge.				

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	WEIGHTAGE
A1501	Fixing of permanently color coated galvanised MS troughed metal sheet decking plate of approved colour and conforming to class3 of IS 14246 over roof purlins for cast-in-situ roof slab as per relevant IS code and specification. Bare metal thickness of deck plate shall be minimum 0.8mm with minimum trough depth of 44 mm having minimum yield strength of 250 MPa and shall serve as permanent shuttering to the roof slab 100mm thick measured over crest of metal decking & shall have adequate strength to support weight of green concrete and imposed loads of min 150 kg/sqm during construction between purlins as per manufacturer's recommendations/ calculations/ test certificates for approval including fixing of plates to purlins, side lapping, end lapping etc. all complete for below mentioned spans. The sheet shall be permanently coated with silicon modified polyester paint of minimum 20 micron DFT on exposed surface (facing operating floor) and minimum 7 micron on other face over epoxy primer applied over hot dipped galvanising @ 275 gm/sqm including fixing of sheet to purlin with self drilling white zinc plated heat treated carbon steel screws of minimum 5.6 mm dia @ 260mm c/c in the trough and stich screws between two adjacent sheets and sealing with epoxy sealant. Measurement of profile sheeting shall be of the plan area of roof covered by MS trough metal decking.			
a	Span Upto 1800mm	SQM	6750	2.045796614200
1502	Providing and fixing shear connectors of mild steel studs having 16mm dia and minimum 75 mm projected length above purlin passing through metal decking as per relevant IS codes and specification.	QUINTAL	10	0.016829682600
A1503	Designing, providing and fixing external sheet of Permanent colour coated metal cladding with troughed M.S. sheets manufactured out of 0.55 mm TCT(Total coated thickness) permanently colour coated zincalume sheet (150 gsm zinc-aluminium alloy coating total of both sides as per AS 1397:1993) having 300 Mpa yield strength. The colour coating shall be comprise of SMP.The colour coating shall comprise of 20 microns finish coat over a 5-micron primer coat on the exposed side and a back coat of 5 microns over a primer coat of 5 micron on the reverse side.The metal cladding shall have 500 mm cover width,47 mm high crests at 250 mm centers with special male/female side laps and anti siphoning feature to prevent leakage .The sheet shall be fixed with the help of concealed compatible interlocking clips and wafer head zinc cotted self drilling fastner/screws 4.2X25 mm long on to the sub-girts.The clips shall be concealed and no fastner are to be penetrate the external sheeting all complete as per specification.	SQM	1000	0.196667548800
1508	Providing and installing under deck insulation using minimum 0.05 mm thick aluminium foil on exposed surface followed by 0.56 mm dia and 25 mm mesh GI wire netting, fixed at various elevations with rawl plugs including clips but excluding cost of insulation.	SQM	3600	0.373383474500
A1511	Providing and installing under deck insulation using Closed Cell Elastomeric Nitrile Rubber of density 40 to 60 kg/cum fixed at various elevations with rawl plugs including clips etc as per specification.	SQM	500	0.051508536100
1600 FALSE CEILING				
False ceiling including all labour, material, equipment, transportation, handling, suspension system etc at any level as per specification, drawings and as directed by engineer - in - charge.				
A1601	Providing and fixing Moisture and fire resistant glass fibre reinforced gypsum plaster board (GRG) ceiling (having gypsum core mixed with glass fibre) system consisting of metal supporting grid system forming panels of specified size, suspended from RCC slab/structural steel or catwalkway grid above with 4 mm (minimum) galvanised wires (rods) with special height adjustment clips, including preperation of working drawing, providing openings for AC ducts, return air grills, light fixtures etc (but excluding the cost of catwalkway grid) all complete as per drawings, specification and instructions of the engineer.			
a	12.5 mm thick GRG board with galvanised light gauge steel load bearing supporting GI frame and finished flat (seamless).	SQM	2300	0.617932906600
b	12.5 mm thick GRG board in profile (dome ,curved profiled etc.) with galvanised light gauge steel load bearing supporting GI frame and finished smooth (seamless).	SQM	650	0.179107600700

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	WEIGHTAGE
1603	Providing and fixing permanently colour coated aluminium false ceiling of approved colour and Luxalon 84 C or approved equivalent with corrosion resistant aluminium alloy panels of minimum thickness 0.5mm including 50mm thick mineral wool insulation(density 48 kg/cum) conforming to 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 all complete. Suitable M.S. channel grid with minimum MC 75 shall also be provided above the false ceiling level for movement of personnel to facilitate maintenance of lighting fixtures, AC ducts etc. (Materials for structural platform grid made up of MS Channels/ Beams / Angles shall be supplied by BHEL and shall be paid under ST No 2301)	SQM	700	0.390588788600
A1604	Providing, fixing and laying Acoustic permanently colour coated aluminium false ceiling of approved colour with stove enamel finish of approved make of either lineal panel system or aluminium tile/plank system with corrosion resistance aluminium alloys 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 1200 c/c maximum shall also be provided above the false ceiling level for movement of personnel to facilitate maintenance of lighting fixtures, AC ducts etc.The work to be complete as per specifications, drawings and direction of engineer.(Materials for structural platform grid for movement made up of MS Channels/ Beams / Angles shall be supplied by BHEL and shall be paid under ST No 2301)	SQM	6150	1.555085205500
1700 RAIN WATER DOWN TAKE PIPES				
Rain water down take pipes including all labour, material, transportation, 2 coats of approved paint over one primary coat, fixtures, accessories etc at any level as per specification, drawings and as directed by engineer - in - charge.				
1706	Providing and fixing UPVC down take pipes of 160mm diameter- Class 3 as per IS:4985 all complete.	RM	100	0.019770290600
1707	Providing and fixing GI down take pipes conforming to IS:1239 /IS:3589 of medium duty all complete for following diameters.			
a	100 mm Dia	RM	500	0.124602818200
b	150 mm Dia	RM	500	0.179784453400
c	200 mm Dia	RM	100	0.054516684200
A1707	Providing and fixing GI down take pipes conforming to IS:1239 /IS:3589 of heavy duty all complete for following diameters.			
a	100 mm Dia	RM	500	0.163763510400
b	150 mm Dia	RM	500	0.215978411800
c	200 mm Dia	RM	100	0.061708062300
1708	Providing and fixing HDPE down take pipes conforming to IS:4984 as per specification of following diameters.			
a	110 mm Dia	RM	100	0.008259440900
b	160 mm Dia	RM	100	0.011653283700
c	200 mm Dia	RM	100	0.015545646200
1800 MISCELLANEOUS WORKS				
Miscellaneous works including all labour, material, equipment etc. at any level unless otherwise specified as per specification, drawings and as directed by engineer - in - charge.				

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	WEIGHTAGE
1801	Providing and Filling in trenches, plinths, area paving and other underground structures with graded stone aggregate of size range 63 mm to 45 mm in layers not exceeding 230 mm in thickness including breaking of stone boulders to required sizes, filling the interstices with selected sand and compacting to 85 % of original volume of stone stack for all lifts etc. all complete. Payment shall be made for the measurement of the volume of the compacted fill.	CUM	2500	0.787369787400
1803	Anti termite chemical treatment of soil with Chlorpyrifos/Lindane E.C. 20% with 1% concentration conforming to IS:8944 and as per IS 6313 all complete. (Plinth area of building at ground floor only shall be measured for payment)	SQM	500	0.008781183600
1804	Supply and installation of approved 25mm thick vibration damping resilient pads on/around foundation of vibrating equipment and at other locations all complete.	SQM	60	0.233170992000
1805	Providing 50mm thick premix carpet surfacing laid to slope in two layers 30mm and 20mm respectively with 12mm downgraded stone chips mixed with 80/100 grade bitumen @ 52 Kg/Cu.M including compaction etc. all complete.	SQM	150	0.012958704700
1806	Providing 50mm thick anti corrosive layer laid to required slope consisting of clean & well graded coarse sand mixed with A90 grade bitumen for softening point upto 45 degree Celcius or A65 grade bitumen for softening point above 45 degree celcius as per IS: 73 or its equivalent quality 8 to 10% by volume and rolled or compacted all complete.	SQM	100	0.011771914400
1807	Providing and fixing G.I strips minimum 1.5mm thk and 150mm wide including fixing accessories etc. all complete.	Kg	60	0.003617092900
1808	Providing and fixing aluminium strips minimum 18 SWG thk and 300mm wide over expansion joints with minimum lap of 50mm length including brass / aluminium screws, rawl plugs etc. all complete.	Kg	150	0.016518785200
1809	Providing Chemical injection grouting with pressure pump for water retaining concrete structures conforming to IS:6494, including fixing nozzles, cost of approved cement, admixture, curing etc. all complete . Payment shall be made as per the consumption of chemical grout.	Kg	600	0.153226283600
1812	Laying of earthing mats/rods including risers, transportation from yard stores, loading, unloading, cutting to length, welding, protective painting of joints etc. all complete. (Excavation & Back filling shall be paid separately under respective item of earth work. Earthing mats/rods shall be supplied by BHEL free of cost)	MT	50	0.144859629900
1813	Providing Earthing pit as per drawing with charcoal & salt, GI pipes, GI earth electrodes, GI wire, GI strips, brick chamber with covers including associated earthwork etc. all complete.	EACH	10	0.024123106300
1814	Construction of below ground earthing system test pits as per drawing/ sketches including brickwork, plaster, concreting, reinforcement, formwork, providing & fixing GI strips/pipes, GI wires, covers etc as per drawing & specification including associated earthwork.	EACH	10	0.011223755700
1815	Providing and fixing GI rungs in concrete/brick walls having zinc coating of minimum 900 g/sqm etc. all complete.	Kg	500	0.012104002800
1817	Providing and fixing HDPE pipes in concrete/ brick work of following sizes including cutting, fixing and levelling in position etc. all complete.			
a	Upto 75 mm dia	RM	50	0.003429548100
b	100 mm dia	RM	50	0.003916069200
c	150 mm dia	RM	50	0.006408183600
d	200 mm dia	RM	50	0.010336057800
1818	Providing and laying dry stone pitching of 230 mm thickness for slope protection in cement mortar 1:6 including hammer dressing, raking of joints, pointing, preparing the bedding surface and voids filling with stone aggregate etc. all complete.	SQM	60	0.015781165800
1822	Cutting of groove of 10mm X 40mm size with groove cutting machine in concrete paving all complete.	RM	70	0.000548236100

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	WEIGHTAGE
1823	Fire proofing of steel structures with VERMICULITE cementitious coating including supply of all materials for vermiculite materials, reinforcement mesh (3mm thick wire, 50x50 size mesh) , nuts, tie wires, weldings, surface preparation, curing, staging, compatible paintings etc. all complete.	CUM	3	0.050571675300
1824	Supply & fixing expanded metal steel sheet conforming to IS:412. Size of mesh shall be 10mmX40mm with strands of 2.5mm width and 1mm thickness to the structural steel for facilitating fireproofing works.	SQM	5	0.000427205700
1828	Dismantling old existing reinforced/non-reinforced brickwork/blockwork/stone masonry work in mud/lime/ cement mortar at any level including clearing/cleaning, stacking the serviceable materials at plant site and disposal of unserviceable materials within a lead upto 1km all complete.	CUM	10	0.001886846500
1829	Dismantling old existing plain/re-inforced concrete work at any level including clearing/cleaning, stacking the serviceable materials at plant site and disposal of unserviceable materials within a lead upto 1km all complete.	CUM	5	0.002804153600
1830	Dismantling old existing structural steel work at any level including plates, bolts, cutting rivets, welding, dismembering and stacking the dismantled materials within a lead upto 1km etc all complete.	MT	5	0.011622474600
1831	Sprinkling of water by water tanker fitted with perforated GI pipe (portable tanker minimum 3000 litre capacity) for roads and miscellaneous area within plant boundary, for dust suppression and reduction of suspended material at site for day to day work, as directed by BHEL site engineer (water for this purpose shall be provided by BHEL free of cost and utilisation of machine will be in terms of Tank-hour put in actual use for water sprinkling).	TANK-HR	25	0.001311275000
1833	Supply & fixing FRP (fibre reinforced plastic) sheets 2 mm thick including GI hooks/ J or L bolts, nuts, washers, bitumen washers etc. complete including overlap 100mm .	SQM	5	0.001031235100
A1834	Providing and fixing sliding layer of bitumen paper or craft paper over the screed layer for water retaining structures to destroy the bond between the screed and the base slab concrete of the water retaining structure etc all complete.	Sqm	25	0.000468233000
2000 FENCING AND GATES				
Fencing and gates including all labour, material, equipment etc at any level as per specification, drawings and as directed by engineer - in - charge.				
A2001	Supplying and erecting in position 2.4 m high PVC coated gavanised chain linked fencing of minimum 8 gauge (including PVC coating) of mesh size 75mm x 75mm. The diameter of the hot dip galvanised steel wire for chain link fencing excluding PVC coating shall not be less than 12 gauge. GI barbed wire fencing of height of 600 mm confirming to IS 298 at top of chain link fencing shall be provided with 4 strands of barbed wire hot dip galvanised wire of 12G comprising of 3 ply of wires with barbs of 16G spaced at 100mm. Cost to include for GI hook bolts, rings & washers, hot dip galvanised tension wires, 25X6 mm GI flat stretcher bar at end posts, accessories etc. all complete. (Structural post shall be separately under item 2007)	RM	250	0.102292806100
A2003	Supplying and erecting in position 2.4 m high PVC coated gavanised chain linked fencing of minimum 4 mm (including PVC coating) of mesh size 75mm x 75mm. The diameter of the hot dip galvanised steel wire for chain link fencing excluding PVC coating shall not be less than 2.5 mm. Concertina of height of 600 mm at top of chain link fencing shall be provided with all accessories. Concertina shall be from tensile serrated galvanised wire (HTSW) made with wire diameter of 2.5 mm which will be stretched to 6m and attached on two strands of galvanised HTSSW (high tensile spring steel wire) of 2.5mm dia by means of clips at 1m interval. These two HTSSW strands will be attached to the fence posts/ angles with 12 mm security fasteners. Cost to include for GI hook bolts, rings & washers, hot dip galvanised tension wires, 25X6 mm GI flat stretcher bar at end posts etc. all complete. (Structural post shall be separately under ST No. 2007)	RM	280	0.117691276800
2007	Supply and fixing of hot dip galvanised mild steel posts for fencing. Rate of zinc coating shall not be less than 710 g/m2 on steel posts.	MT	10	0.226791372600

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	WEIGHTAGE
2009	Supply, fabrication and installing in position and testing galvanised MS Gates out of channels, joists, angles, flats, plates, pipes, welded steel wire mesh & sheets including stiffeners, bracings, fabricated hinges, MS Aldrops with locking arrangement, tempered steel pivot, guide track of MS Tee, bronze aluminium ball bearing arrangements, castor wheels, paintings etc. all complete.	MT	10	0.229390235300
2100 WATER SUPPLY				
Water supply work including men, material, equipment etc. at any level as per specification, drawings and as directed by engineer - in - charge.				
2101	Providing and fixing in position tested heavy duty type chromium plated (CP) brass long neck bib cocks including sockets, union, nuts etc all complete - 15mm nominal bore.	EACH	25	0.004497562500
2102	Providing and fixing in position heavy duty brass stop cock of approved quality including all specials etc all complete - 15mm nominal bore.	EACH	25	0.003874558100
2103	Providing and fixing in position heavy duty brass full way valve with wheel of approved quality including all specials etc all complete for following sizes:			
a	25mm nominal bore.	EACH	25	0.006948069100
b	50mm nominal bore.	EACH	18	0.012436071800
2104	Providing and fixing GI pipes class B medium class conforming to IS:1239 pipes shall be concealed and painted with anticorrosive paint, complete for internal works with GI sockets, unions, elbows, tees, nipples etc and clamps including cutting and making good the walls etc all complete for following sizes:			
a	15 mm nominal bore.	RM	50	0.003085364400
b	20 mm nominal bore.	RM	50	0.003631297600
c	25 mm nominal bore.	RM	50	0.004545024500
A2104	Providing and fixing Galvanised MS pipes class B medium class conforming to IS:1239 pipes shall be concealed and painted with anticorrosive paint, complete for internal works with MS sockets, unions, elbows, tees, nipples etc and clamps including cutting and making good the walls etc all complete for following sizes:			
a	15 mm nominal bore.	RM	110	0.006787801700
b	20 mm nominal bore.	RM	110	0.007988854700
c	25 mm nominal bore.	RM	110	0.009999053900
2105	Providing and fixing GI pipes class B complete for external work with GI sockets, unions, elbows, tees, nipples etc including trenching & refilling, anti-corrosive paint etc all complete for following sizes:			
a	15 mm nominal bore.	RM	110	0.007701683400
b	20 mm nominal bore.	RM	110	0.008563197300
c	25 mm nominal bore.	RM	110	0.010703890200
d	50 mm nominal bore.	RM	110	0.016995901000
A2106	Providing and fixing 450X 750 mm high square edge 6 mm thick float glass mirror of adequate width to match toilet lay-out and interior decor and as per spec.	EACH	50	0.011143055900
2107	Providing and fixing 610mmx127mmx6mm thk clear glass with C.P Guard rails and mounted on C.P. brackets etc all complete.	EACH	20	0.003659745700
2108	Providing and fixing 25 mm diameter stainless steel towel rails (600mm X 25mm) all complete.	EACH	20	0.004395526600
2109	Providing and fixing 20mm dia chromium plated M.S. pipes wall mounted towel rod with C.P. Brackets etc all complete.	EACH	20	0.002943007600
2110	Providing and fixing C.P. soap holder mounted with C.P. screws etc all complete.	EACH	25	0.002397142100
2111	Providing and fixing stainless steel / C.P. liquid soap dispenser . Dispenser shall be round and easily revolving with removable threaded nozzle and mounted on C.P. brackets etc all complete.	EACH	25	0.003660955200
2112	Providing and fixing glazed vitreous wall mounted paper holder with suitable cover cum cutter fitted with CP screws etc. sll complete.	EACH	12	0.001606309200
2113	Providing and fixing chromium plated brass shower rose with 15 or 20 mm inlet all complete.	EACH	5	0.001059721900

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	WEIGHTAGE
2114	Providing & fixing in position P.V.C. water tank of Syntex or approved equivalent including making all necessary inlet & outlet pipes, fixture, ball cocks, valves etc all complete for following capacities. GI pipes shall be paid separately under ST No. 2105.			
a	500 litres capacity	EACH	10	0.011399379300
b	1000 litres capacity	EACH	5	0.009499479500
c	2000 litres capacity	EACH	2	0.007498002500
d	5000 litres capacity	EACH	10	0.095300990600
2200 SANITARY WORKS				
Sanitary work including all labour, material, equipment etc. at any level as per specification, drawings and as directed by engineer - in - charge.				
2201	Supply and fixing glazed vitreous china Wash Basin conforming to IS:2556 part 4 of oval shape with R.S. or C.I. brackets painted white, 15mm chromium plated brass hot & cold faucets with nylon washers, chromium plated brass chain with rubber plug, 32mm chromium plated brass bottle trap and waste of standard pattern, 32mm dia chromium plated brass trap unions, plastic connection pipe with chromium plated nuts, fittings, cutting and making good the walls where required etc all complete.			
a	White	EACH	20	0.022100986000
b	Colored	EACH	10	0.012671514000
2202	Providing and fixing approved vitreous china laboratory sink of size 600x400x200mm conforming to IS:2556 (part-5) with R.S. or C.I. brackets, chromium plated brass chain with rubber plug 40mm, CP brass waste and 40mm CP brass trap with necessary union complete including painting the fittings, cutting and making good the wall where required etc. all complete.	EACH	2	0.002733192000
2203	Providing and fixing stainless steel kitchen sink of size 610x510x200mm conforming to IS: 13983 including all fittings etc. all complete.	EACH	5	0.004886808500
2204	Providing and fixing colour glazed vitreous china European type water closet conforming to IS:2556 with siphon, open front solid plastic seat and plastic cover, low level 12.5 litre PVC flushing cistern (same colour as WC) with valveless fittings, necessary C.P connections etc all complete.			
b	Wall mounted	EACH	10	0.015011672800
2205	Providing and fixing colour glazed vitreous indian type Orissa pattern (580x440mm) water closet conforming to IS:2556 part 3 with all fittings including foot rests, low level 12.5 litre PVC flushing cistern with valveless fittings, necessary C.P connections etc all complete.	EACH	5	0.006258618000
2206	Providing and fixing white flat back glazed vitreous china urinals of size 440x265x355 mm with photo voltaic control flushing system as per IS:2556 (part 6, section 1) with flush pipes, lead pipes, gratings, traps and necessary C.P. fittings etc. all complete.	EACH	25	0.053804706800
2207	Supply, laying and jointing UPVC pipes of class 3 as per IS:4985 including bends, branches and all other necessary fittings, M.S holder bats/clamps, cutting and making good the walls and floors, jointing, testing etc all complete for following.			
a	75mm dia pipes	RM	25	0.005648647500
b	110mm dia pipes	RM	100	0.032088138200
d	200mm dia pipes	RM	100	0.049651279500
2208	Providing, laying light duty non pressure NP3 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc all complete for following.			
a	200mm dia	RM	50	0.009351113800
b	300mm dia	RM	50	0.014465778300
c	450mm dia	RM	50	0.028005928000
b	600mm dia	RM	50	0.033073179000
e	900mm dia	RM	50	0.063096505300

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	WEIGHTAGE
2209	Providing, laying light duty non pressure NP2 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc complete for following:			
a	150mm dia	RM	50	0.007084552400
b	250mm dia	RM	50	0.008520505800
c	300mm dia	RM	50	0.011688892300
d	500mm dia	RM	50	0.017480022400
2210	Providing, laying light duty non pressure NP4 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc complete for following:			
b	600mm dia	RM	100	0.067380465000
c	900mm dia	RM	100	0.122988822200
2211	Providing and fixing C.I Manhole heavy duty cover of size 600mmx450mm including frame from reputed manufacture etc. all complete.	EACH	25	0.032717141900
2212	Providing and fixing circular heavy duty C.I. manhole cover of 600 mm dia with frame etc. all complete.	EACH	25	0.062437892400
2213	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 etc all complete for following sizes:			
a	100x100mm P or S Type.	EACH	10	0.004620982900
b	150x100mm P or S Type.	EACH	10	0.005029203900
c	150x150mm P or S Type.	EACH	10	0.005380470600
2215	Providing and fixing C.I. floor traps with C.P jalli all complete.	EACH	5	0.000866284300
2216	Providing and fixing heavy duty UPVC floor traps with C.P jalli all complete.	EACH	25	0.002753130800
2217	Providing and installing approved brand single tap water cooler of 80 L cooling capacity all complete.	EACH	25	0.167994250800
2218	Providing and installing approved brand single tap water cooler of 150 L cooling capacity all complete.	EACH	10	0.109961396800
2219	Providing and fixing white vitreous urinal partitions of size 675x325x85mm all complete.	EACH	15	0.006440192600
2220	Providing and fixing eye and face drinking water fountain (combined unit with receptacle conforming to IS: 10592) all complete as per specification.	EACH	25	0.227625599600
A2221	Providing and fixing heavy duty cast iron pipes for above and below ground sanitary works with water tight lead joint, fixing clamps, excavation, filling, disposal etc. all complete for the following.			
a	75mm dia pipes	RM	50	0.012424286200
b	100mm dia pipes	RM	50	0.017175317800
c	150mm dia pipes	RM	50	0.028138492400
d	200mm dia pipes	RM	50	0.040843389500
e	250mm dia pipes	RM	50	0.055057779300
2300 STRUCTURAL STEEL				
Structural steel works including all labour, material, equipments, transportation, handling etc. at any level as per specification, drawings and as directed by engineer - in - charge.				

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	WEIGHTAGE
A2301	Fabrication and erection of structural steel with mild steel rolled section / built up section / combination of both conforming to IS:2062, pipes conforming to IS:1161/ IS:1239, chequered plate conforming to IS: 3052, mild steel rounds, monorails, stays, safety chains, ladders, MS grating etc. in columns, beams, gantry girders, bunkers, silos, hoppers, roof trusses, portals, laced purlins, space frames, 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, steel frame grid over false ceiling, walkway platforms, ladders, stairs, stringers, treads, landings, hand-rails etc including 2 coats of zinc-phosphate primer (one coat at shop and one coat after erection), connection design & preparation of fabrication drgs, collection of steel from stores, fabrication, straightening, cutting, bending, rolling, grinding, machining, drilling, welding, electrodes and other consumables, alignment, erection bolts & nuts (weight of erection bolts, nuts and welds not payable), assembly, edge preparation, preheating (min preheat and interpass temperature of 20o C for welding over 20 mm and upto 40 mm & 66o C for welding over 40 mm and upto 63 mm & 110o C for thickness over 63 mm & use of low hydrogen/ radiogenic electrodes), 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, setting column bases, surface preparation by means of manual or mechanical power tools as per IS:1477 part 1, touch-up painting, rectification, dismantling and removal of all temporary structures (weight of temporary structures not payable), return of surplus / waste steel materials to store etc all complete. Including appointment of a seperate agency, approved by BHEL, for review and approval of fabrication drgs, in consultation with BHEL.	MT	20	0.069301933200
2600 RAIN WATER HARVESTING WELL				
2603	Supply & fixing 150mm dia perforated PVC pipe ISI mark 6 Kg/ cm2 with air vent at top as per the drawing & specification complete.	RM	200	0.013546729500
2604	Providing & fixing 150 dia PVC pipe ISI mark 6 Kg/cm2 as per drg.	RM	100	0.006773364700
A2605	Supply & packing uniformly 0.0625mm to 2mm size sand bed in the dug pit surrounding the perforated PVC pipe.	CUM	32	0.003690903200
B2606	Supply & packing Mastic Pad of approve thickness at top of dug pit for rain water harvesting.	SQM	97	0.006570163800
A2607	Supply & packing uniformly downgraded 20mm size Hand Broken Grade Metal (HBG) at all depth in the dug pit for rain water harvesting.	CUM	35	0.004440617900
B2607	Supply & packing uniformly downgraded 40mm size Hand Broken Grade Metal (HBG) at all depth in the dug pit for rain water harvesting.	CUM	50	0.005709365900
A2609	Supply & packing uniformly downgraded 90mm-150mm size Hand Broken Grade Metal (HBG) at all depth in the dug pit for rain water harvesting.	CUM	74	0.007604932600
2610	Supply & fixing Netlon jali/ PVT net in the well dug for rain water harvesting.	SQM	80	0.004954232500
2700 STRUCTURAL GLAZING				

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	WEIGHTAGE
2701	Providing fixing Semi Unitised Structural Glazing to fixed panels with no aluminium section exposed to outside and only glass panels with silicon joint visible from outside. The system specially designed with aluminium sections of grade 63400 WP IS: 733 and IS: 1285 with pure polyester powder coated 60- 80 microns , as per AAMA 2604 in approved colour ,with mullion fixed to beams / columns through adequately designed MS powder coated members and bracket which shall be fixed with appropriate bolts and expansion fasteners, so as to withstand the dead load of the structural glazing as well as stresses due to wind pressure. The Structural glazing system shall be designed as per IS code for required wind pressure (IS: 875 part III) as per the prevailing site conditions and building profiles and use of aluminium section alloy as per IS : 8147. The System design shall considered for thermal movements, air infiltration, water penetration, seismic movement and structural movement. Silicon sealant structural grade and weathering grade shall be GE/Dow corning/Sikka or Equivalent. (The item includes cost of material such as cleats, sleeves, screws etc. necessary for fabrication of extruded aluminium frame work. Nothing extra shall be paid on this account.) The structural glazing panels shall be factory glazed with structural silicon as per standard practice and under the strict supervision of the engineering staff (on site glazing is not permitted, except for replacement of damaged/broken glasses). The contractor shall submit the structural stability report of the structural glazing system from a consultant to be get approved by the engineer in-charge.	Kg	600	0.134858079500
2702	Vision Glass 24mm thick (6mm+12air gap+6mm) double insulated glass with external Glass of 6mm thick Toughened and internal 6mm thick clear toughened glass of properties U value 1.6 W/Sq. mtr-K & as per specification.	SQM	240	0.337144502200
2703	Openable glazing panel with two point locking with friction stays, as per design required.	SQM	25	0.011706406300
2704	Providing and fixing G. I. flashing at soffit level / sill level made out of 1.5mm Thick G.I. Sheet with powder coated bent to required profile and shape to seal the soffit area.	SQM	25	0.002575426800
Grand Total of Weighatages				100.0000000

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