



**ISO 9001, ISO 14001,
OHSAS 18001 & SA 8000
certified company
SubContract Deptt.**

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(A Govt. Of India Undertaking)
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CORRIGENDUM – 02 Dated 25/06/2018

Sub: Tender for the work of "BOUNDARY WALL, ASSOCIATED ROADS INSIDE AND OUTSIDE BOUNDARY WALL, DRAIN ALONG BOUNDARY WALL, GATE COMPLEX, GATE STRUCTURES, WATCH TOWERS, WEIGH BRIDGE, CUSTOMER'S SITE OFFICE AND CONSTRUCTION OF COAL STOCK PILES AT 1 X 660 MW PANKI THERMAL POWER PLANT, PANKI, U.P."

TENDER NO. BHEL/NR/SCT/PANKI/BOUNDARY WALL/1110

The Corrigendum contains following amendment in the BOQ cum Rate schedule (Annexure – I) of Chapter – XI (Annexures) of TCC and shall be a part of the above tender.

- 1) Description of Item modified in ST. No. 703, 703 (a) & 703 (b)
- 2) Total quantity modified in ST. No. 1001 (a) & A1002(a)
- 3) New item added as ST. No. A1838

The **revised BOQ cum Rate Schedule** is attached as Annexure - II. All other terms and conditions against this NIT shall remain unchanged.

This corrigendum is to be submitted duly signed and stamped along with the Techno-commercial bid (Part – I).

Sr. DGM / SCT

REVISED BOQ CUM RATE SCHEDULE- BOUNDARY WALL, PERIFERAL ROADS, DRAINS AND GATE COMPLEX PANKI

Project : 1X660 MW Panki thermal Power Plant, Panki U.P.

SCOPE OF WORK: Boundary wall, associated roads inside and outside Boundary wall, Drain along Boundary wall, Gate Complex, Gate Structures, Watch Towers, Weigh Bridge, Customer's Site Office and construction of Coal Stock Piles at 1X660 MW PANKI THERMAL POWER PLANT, PANKI U.P.

ST. NO.	DESCRIPTION OF ITEM	UNIT	Total Quantity	Factor (F)	RATE (Rs.) = FACTOR (F) * A / 100000 (Rounded off to two place after decimal)	AMOUNT (Rs.) = RATE * QUANTITY
100	EARTH WORK					
	Earth work: Earth work in excavation, backfilling and disposal including necessary men/women, materials, equipment, loading, transportation, unloading, dewatering etc as per specification, drawing and as directed by engineer- in-charge for the following:					
101	Earth work in excavation in all types of soil including ash which can be excavated by any means including setting out, levelling, dewatering (but excluding special type of dewatering viz. well point method), shoring & strutting (wherever required), dressing the sides & bottom, all lifts, ramming/compacting the excavated bottom, stacking, disposal of surplus excavated materials within a lead upto 1Km, spreading/levelling of disposed materials etc all complete for following depths below ground level.					
a	Depth from ground level but not exceeding 2 m	CUM	51635	0.0324	-	-
b	Depth exceeding 2 m but not exceeding 4 m	CUM	25849	0.0404	-	-
c	Depth exceeding 4 m but not exceeding 6 m	CUM	1535	0.0510	-	-
d	Depth exceeding 6 m but not exceeding 8 m	CUM	50	0.0632	-	-
107	Earthwork in Back filling upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 250 mm thickness using/with selected approved materials from compulsorily excavated earth available within a lead upto 1 Km and compacted as specified including re-excavation of stacked earth, sorting, spreading, watering, ramming/compaction by manual/mechanical means, dressing etc all complete as per specification, drawing and as directed by the engineer incharge for the following.			-	-	-
a	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII)	CUM	1384	0.0239	-	-
b	Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII)	CUM	36741	0.0266	-	-
108	Earthwork in Back filling upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 250 mm thickness using/with selected approved materials directly from excavation within a lead upto 1Km and compacted as specified including re-excavation of stacked earth, sorting, spreading, watering, ramming/compaction by manual/mechanical means, dressing etc all complete as per specification, drawing and as directed by the engineer incharge for the following			-	-	-
a	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII)	CUM	2649	0.0081	-	-
b	Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII)	CUM	15016	0.0092	-	-
109	Extra over ST No. 101 and 103 to 108 for carriage of material/earth for every 500m or part thereof beyond an initial lead of 1km.	CUM	62615	0.0027	-	-
110	Earth work in backfilling upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 250 mm thickness so as to achieve required compaction with approved borrowed soil (borrowed soil to be arranged by the bidder) and compacted as specified including supplying borrowed soil, royalty/seignorage fee (if any), sorting, spreading, breaking clods, watering, ramming/compaction by manual/mechanical means, dressing, finishing to required lines, grades and slopes, testing, all lead and lifts etc all complete as per specification, drawing and as directed by the engineer for the following:			-	-	-
a	Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII)	CUM	459	0.1373	-	-
b	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII)	CUM	1600	0.1194	-	-
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	2375	0.8077	-	-
200	CONCRETE WORKS			-	-	-
	CONCRETE WORK: Providing and placing concrete work including cost of labour, materials (unless otherwise specified in BOQ/contract specification) and equipment for handling, transportation, batching, mixing, placing, vibrating and curing (excluding cost of centering, shuttering and reinforcement) with mechanised equipments like batching plant, transit mixer, concrete pump etc. complete as per drawing, specifications and as per direction of engineer in charge for the following:			-	-	-
	Note: Cement will be supplied by BHEL and issued as FOC (free of Cost) item					

REVISED BOQ CUM RATE SCHEDULE- BOUNDARY WALL, PERIFERAL ROADS, DRAINS AND GATE COMPLEX PANKI

Project : 1X660 MW Panki thermal Power Plant, Panki U.P.

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ST. NO.	DESCRIPTION OF ITEM	UNIT	Total Quantity	Factor (F)	RATE (Rs.) = FACTOR (F) * A / 100000 (Rounded off to two place after decimal)	AMOUNT (Rs.) = RATE * QUANTITY
201	Concrete of grade M7.5 (1 part cement, 4 part sand, 8 parts of 40 mm graded aggregate by volume) as mass filling course, lean concrete, levelling course, mud mat under and around foundations/ floors, at any depth below finished floor level etc.	CUM	1661	1.2738	-	-
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	1425	1.2738	-	-
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	36	1.2738	-	-
204	Concrete of grade M20 (1 part cement, 1.5 part sand, 3 parts of 20 mm graded aggregate by volume) under floors, paving, plinth protection, pipe encasing etc complete.	CUM	4056	1.2753	-	-
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 all level below finished floor level, any shape, position or thickness etc complete including use of plasticizer/ superplasticizer conforming to IS:9103 (latest) to achieve required slump in concrete all complete as per specification & drawing for the following.			-	-	-
a	M 25 Grade	CUM	100	1.4175	-	-
b	M 30 Grade	CUM	7460	1.4267	-	-
206	Providing and laying Design Mix cement concrete of grade conforming to IS:456 & IS 10262-2009 for reinforced concrete works with coarse sand and graded hard stone aggregate of 20mm nominal size in superstructure at all level above finished floor level, any shape, position or thickness etc complete including use of plasticizer/ superplasticizer conforming to IS:9103 (latest) to achieve required slump in concrete all complete as per specification & drawing for the following.			-	-	-
a	M25 Grade	CUM	100	1.4321	-	-
b	M 30 Grade	CUM	2368	1.4414	-	-
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	50	1.2738	-	-
A213	Providing and laying Design Mix cement concrete as per IS:456 & IS 10262-2009 for reinforced concrete works using graded aggregate for Concrete in precast works like roof slabs/trench covers, fins, lintels, chajas, beams, columns, wall panels, facias, decorative copings 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	69	1.9055	-	-
b	M 30 grade	CUM	66	1.9148	-	-
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. Watertightness is to be ensured including structural grouting if required.			-	-	-
b	M 30 grade	CUM	50	1.8782	-	-
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	4	0.2573	-	-
b	Reinforced cement concrete of all grades	CUM	6	0.3459	-	-

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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	64	0.0119	-	-
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	36	0.0012	-	-
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	15	0.0612	-	-
219	Providing and applying curing compound (water based) of approved make where ever required as per manufacturer's specification.	SQM	185	0.0269	-	-
220	Providing & laying Plum cement concrete 1:3:6 with 75% graded metal of maximum size 40 mm and 25% plums of maximum size 150 mm.	CUM	10	1.2673	-	-
300	FORM WORKS			-	-	-
	FORMWORK: Providing, fixing and removing formwork at all elevations for all structures, as per specifications and including all labour, material, scaffoldings and centering etc. complete as per drawing, specifications and as per direction of engineer in charge for the following:			-	-	-
301	Fairface form work with good quality water proof ply wood of minimum 12mm thickness and smooth surface below finished ground floor level for foundations, footings, base of columns, walls, columns, pilasters, beams, mass concrete, trenches etc. including chamfering of edges as per drawing, specification and instruction of engineer in charge..	SQM	42387	0.1275	-	-
302	Fairface form work with good quality water proof ply wood of minimum 12mm thickness and smooth surface above finished ground floor level for columns, beams, suspended floors, roofs, lintels, cantilevers, staircases, landings, balconies, etc. including chamfering of edges as per drawing. for all heights as per specification, drawing and instruction of engineer in charge.	SQM	20729	0.1529	-	-
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	85	0.0666	-	-
b	Pockets of depths more than 150mm and upto 300 mm depth	EACH	65	0.1206	-	-
c	Pockets of depths more than 300mm and upto 600 mm depth	EACH	10	0.2269	-	-
d	Pockets of depths more than 600mm and upto 1000 mm depth	EACH	5	0.3659	-	-
305	Extra over item no.301 and 302 for curved form work for foundations, footings, beams, walls, trenches, domes, arches etc as per specification.			-	-	-
a	Extra for Curve Shuttering for Item No. 301	SQM	1802	0.0254	-	-
b	Extra for Curve Shuttering for Item No. 302	SQM	884	0.0304	-	-
400	REINFORCEMENT		0	-	-	-
	REINFORCEMENT WORK : Reinforcement work including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling etc at all level as per specification, drawings and as directed by engineer - in - charge for the following:..			-	-	-
401	Providing, straightening, cutting, bending, placing in position at all level, binding of mild steel reinforcements conforming to grade 1 of IS:432 part 1 in concrete including cost of reinforcement steel, binding wire, labour, scaffolding, transportation to & from stores etc. all complete as per specifications & drawings.	MT	3	23.9477	-	-
403	Transportation, straightening, cutting, bending, placing in position at all level, binding in position of steel reinforcements of TMT steel of grade Fe-500D or 500EQR 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. (BHEL to supply steel free of cost)	MT	165	2.5653	-	-
A403	Transportation, straightening, cutting, bending, placing in position at all 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. (BHEL to supply steel free of cost)	MT	842	2.5653	-	-

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405	Providing & fixing of Rebar in existing concrete surface by inserting reinforcement bar with Epoxy based suitable bonding compound of Hilti or equivalent make (HIT-RE-500 of Hilti or equivalent make) for interconnection of new R.C. structure with existing R.C. structure. Depth of drilled hole should be suitable to develop maximum recommended strength as per approved manufacturer's recommendation. This item includes supply of all materials including bonding chemicals, T&P required to execute the work, cost of all labour, transportation of chemical, staging to reach work place etc. all complete as directed by Engineer - in - Charge. Random Pull out non destructive test as directed by engineer shall be conducted to ensure strength of bond and same is included in this item. Reinforcement bar shall be paid separately under item no. 402, 403, 405 as applicable.			-	-	-
a	12mm Reinforcement bar	EACH	23	0.1136	-	-
b	16mm Reinforcement bar	EACH	23	0.1799	-	-
c	20mm Reinforcement bar	EACH	20	0.2550	-	-
500	WATER PROOFING WORKS			-	-	-
	Roof Treatment works: Roof treatment works including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling, curing, sampling, testing etc at all level as per specification, drawings and as directed by engineer - in - charge for the following: Note: Cement will be supplied by BHEL and issued as FOC (free of Cost) item			-	-	-
501	Providing and laying underbed grading plaster with cement mortar 1:4 (1 cement : 4 sand) and average thickness of 25 mm including preparation of surface, batching, mixing, leveling etc. all complete.	SQM	450	0.0385	-	-
A502	Providing and laying underbed P.C.C layer of grade M15 with 10 mm nominal size coarse aggregates and average thickness of 50 mm including preparation of surface, batching, mixing, leveling etc. all complete.	SQM	1000	0.0847	-	-
506	Providing and applying PU based water proofing treatment with one coat of polyurethane or any other equivalent material based primer with an application rate of minimum 6 sq.m per litre and two successive liquid coatings of high solids content urethane pre-polymers or equivalent material based finish coats as per relevant IS/ASTM standards to form an elastomeric membrane with overall dry film thickness 1.5 mm subject to minimum 500 gm/sqm/coat application rate. Item includes surface preparation, polyscrim cloth /fabric, polymerised mortar base preparation, etc all complete as per specifications and directions of engineer in charge.	SQM	950	0.2508	-	-
507	Providing and laying wearing course consisting of 25mm thick plain cement concrete of grade M15 (1:2:4) with graded aggregate of 12.5mm size cast in panels of maximum size 1.2mx1.2m and reinforced with 0.56 mm dia. galvanised chicken wire mesh and sealing of joints (in grooves of 6mm X 6mm) using silicon /elastomeric compound etc all complete.	SQM	500	0.1113	-	-
509	Providing and laying wearing course consisting of 25mm thick plain cement concrete of grade M20 (1:1.5:3) with graded aggregate of 12.5mm size cast in panels of maximum size 1.5mx1.5m and reinforced with 0.56 mm dia. galvanised chicken wire mesh and sealing of joints (in grooves of 6mm X 6mm) using silicon /elastomeric compound etc all complete.	SQM	450	0.1113	-	-
510	Providing and laying cement concrete chequered flooring tiles of 22 mm thickness and size 300x300 mm conforming to IS 13801 with 8 mm thick 1:4 cement mortar over the top most layer of roofing treatment in pathway or entire area with fine joints including sealing of joints (silicon/elastomeric sealant) and providing expansion gap in both directions including underbeds (as per drawing) filled up with (silicon/elastomeric) joint sealant, etc all complete. (Water proofing paid elsewhere)	SQM	140	0.1660	-	-
511	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	43502	0.0401	-	-
600	JOINTS AND FILLERS:			-	-	-
	Joints & fillers including all labour, material, equipment, transportation, handling etc at all level as per specification, drawings and as directed by engineer - in - charge.			-	-	-
601	Supplying & installation of bitumen impregnated fibre board conforming to IS 1838 as joint filler at joints in concrete including nailing, coating of both faces with coal tar pitch/bitumin etc. all complete.			-	-	-
a	12 mm wide joints.	SQM	2024	0.1521	-	-
b	20 mm wide joints.	SQM	24	0.2427	-	-
c	25 mm wide joints	SQM	69	0.2993	-	-
d	50 mm wide joints	SQM	19	0.5812	-	-

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602	Supplying and installation of Dura board HD100 or its equivalent as approved by the Engineer, as filler material in joints including nailing, installation as per manufacturer's recommendation etc. all complete.			-	-	-
a	12 mm wide joints.	SQM	120	0.1884	-	-
b	20 mm wide joints.	SQM	20	0.3028	-	-
c	25 mm wide joints	SQM	55	0.3744	-	-
d	50 mm wide joints	SQM	5	0.7322	-	-
603	Providing and applying polysulphide based sealant conforming to IS:12118 in joints in concrete including cleaning of joints, raking out groove, application of primer, scaffolding etc. all complete for following size grooves:			-	-	-
a	25mmX25mm	RM	5	0.2041	-	-
b	50mmX25mm	RM	5	0.3971	-	-
610	Providing and fixing PVC water stops in joints conforming to IS 12200 & IS 15058 all complete for the following: (Bulb or Kicker type)			-	-	-
a	150 mm wide and 8 mm thick	RM	44	0.1086	-	-
b	230 mm wide and 8 mm thick	RM	44	0.0820	-	-
c	150 mm wide and 6 mm thick	RM	25	0.0820	-	-
d	230 mm wide and 6 mm thick	RM	48	0.1248	-	-
700	MS EMBEDMENTS			-	-	-
	Embedments including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling etc. at all level as per specification, drawings and as directed by engineer - in - charge.			-	-	-
703	Fabricating and fixing of mild steel embedment, mild steel foundation bolts, inserts, pipe sleeves, angle pieces, rungs of various diameters, plates of dimensions as required etc. including loading, transportation, unloading etc. all complete from BHEL store to plant site. Mild steel material will be supplied by BHEL free of cost.			-	-	-
a	Mild steel embedment, 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	6	4.9311	-	-
b	Mild steel foundation bolt assembly conforming to IS:2062 and grade 1 of IS:432 in concrete along with nuts, lock nuts (as per IS:1363, 1364 and IS:3138), washers, anchor plates, stiffner plates, protective tape, pipe sleeves, templates etc. including welding, cutting, grinding, threading, drilling etc. all complete.	MT	2	4.3410	-	-
704	Supplying, fabricating, erecting and installing following items in concrete/brickwall for all kind of works, including setting material in concrete, layout, scaffolding, cutting, forming, grinding, drilling, bolting, welding, jointing, testing etc. all complete.			-	-	-
a	MS pipes of all diameters	Kg	350	0.0223	-	-
b	PVC pipes / conduits of all diameters	Kg	350	0.1198	-	-
c	UPVC pipes / conduits of all diameters	Kg	200	0.1252	-	-
d	Expansion anchor fasteners (galvanised) of HILTI make(HUD-1 Universal Fastners) or equivalent of safe tensile capacity as specified below for brick work with expansion sleeve of A6 polyamide:			-	-	-
i	8mm Dia	EACH	10	0.0150	-	-
ii	10mm Dia	EACH	21	0.0185	-	-
iii	12mm Dia	EACH	21	0.0212	-	-
iv	14mm Dia	EACH	14	0.0289	-	-
e	Expansion fasteners (mechanical galvanised) of HILTI make or equivalent of safe tensile capacity as specified below for concrete work with expansion sleeve of stainless steel:			-	-	-
i	HST M8	EACH	10	0.0377	-	-
ii	HST M10	EACH	16	0.0535	-	-
iii	HST M12	EACH	23	0.0790	-	-
iv	HST M16	EACH	15	0.1537	-	-
v	HST M20	EACH	14	0.2997	-	-
f	Chemical Epoxy fasteners (galvanised) of HILTI make or equivalent of safe tensile capacity as specified below for concrete work with anchoring rod,nuts,washers,chemicals all complete,etc:			-	-	-
i	HAS-E5.8 M8	EACH	10	0.0847	-	-
ii	HAS-E5.8 M10	EACH	10	0.1048	-	-
iii	HAS-E5.8 M12	EACH	10	0.1348	-	-
iv	HAS-E5.8 M16	EACH	10	0.2045	-	-
800	GROUTING:			-	-	-
	Grouting including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, roughening surface, cleaning, ramming, curing etc. at all level , drawings and as directed by engineer - in - charge.			-	-	-

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804	Providing & grouting of pocket holes, pipe sleeves and under base plates of structural steel work/ machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing etc. all complete with ConbextraGP-1 or equivalent as per specification, drawing and direction of engineer-in-charge. (Cost of all material and cleaning of the pockets by compressed air shall be in the scope of the contractor).	CUM	2	15.0969	-	-
805	Providing & grouting of pocket holes, pipe sleeves and under base plates of structural steel work/ machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing, etc. all complete with Conbextra GP-2 or equivalent as per specification, drawing and direction of engineer-in-charge.(Cost of all material and cleaning of the pockets by compressed air shall be in the scope of the contractor).	CUM	5	26.2330	-	-
806	Providing Chemical (epoxy) injection grouting with pressure pump for water retaining concrete structures conforming to IS:6494, including fixing nozzles, cost of approved chemical, admixture, curing etc. all complete . Payment shall be made as per the consumption of chemical grout.	Kg	58	0.5539	-	-
900	DOORS, WINDOWS, VENTILATORS, LOUVERS			-	-	-
	DOORS & WINDOWS: Doors, windows, ventilators, louvers, roof ventilators, rolling shutters, partitions including all labour, material (unless otherwise specified in BOQ/contract specification), equipments, transportation, handling, preparation of working drawings etc. at all level as per specification, drawings and as directed by engineer - in - charge for the following:			-	-	-
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	1	41.6339	-	-
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	57	1.6236	-	-
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	200	0.1599	-	-
907	Providing and fixing fire proof steel doors (single or double shutter) with panic devices shall be 45mm thk flush design comprising of two outer sheets of 18 gauge steel sheets rigidly connected and reinforced inside with continuous vertical 20 gauge stiffeners, spot welded in position at not more than 150mm on centers including all fittings, shop painting with approved post office/signal red color fire resistant paint and mineral wool insulation (64 kg/cum density) complete and shall be fire proof as per IS:3614, TAC requirements and as per specification. Minimum ratings shall be 2 Hrs.	SQM	10	2.4983	-	-
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)		0	-	-	-
a	Openable type	SQM	90	0.6436	-	-
b	fixed type	SQM	90	0.4249	-	-
A908	Providing and fixing M.S. grills in windows/ventilator 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	325	0.0277	-	-
	Providing and fixing anodised aluminium work of Jindal, Hindalco or other		2675	0.1356	-	-

REVISED BOQ CUM RATE SCHEDULE- BOUNDARY WALL, PERIFERAL ROADS, DRAINS AND GATE COMPLEX PANKI

Project : 1X660 MW Panki thermal Power Plant, Panki U.P.

SCOPE OF WORK: Boundary wall, associated roads inside and outside Boundary wall, Drain along Boundary wall, Gate Complex, Gate Structures, Watch Towers, Weigh Bridge, Customer's Site Office and construction of Coal Stock Piles at 1X660 MW PANKI THERMAL POWER PLANT, PANKI U.P.

ST. NO.	DESCRIPTION OF ITEM	UNIT	Total Quantity	Factor (F)	RATE (Rs.) = FACTOR (F) * A / 100000 (Rounded off to two place after decimal)	AMOUNT (Rs.) = RATE * QUANTITY
A909	equivalent approved make for door frames, windows, 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-metalic 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, 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 measured.	Kg	0	-	-	-
B910	Providing and fixing full ht. double skin compact laminated Partitions at any levels, finished with 12mm thick compact laminates on both sides of Greenlam or equivalent as per approved shade and colour up-to false ceiling height. Main frame shall be of 50x50mm Aluminium section of min. 16 Gauge verticals at minimum 450-600mm C/C spacing approx. and 50X25mm size Aluminium sections horizontal at 450-600mm C/C spacing approx. Additional frame shall be provided below slab soffit for conduit to run above. Main frame shall be erected up-to RCC ceiling/beam. Finish of Partition shall be complete as per technical specification & as approved by engineer In-charge.	SQM	50	1.3778	-	-
911	Providing and fixing of door closers as per specification, of approved make & quality all complete of following type :		0	-	-	-
a	Over head hydraulic door closures as per IS 3564	EACH	20	0.3802	-	-
b	Floor mounted Hydraulic door closers as per IS 6315	EACH	20	0.7534	-	-
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	1000	0.0358	-	-
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	14	0.8882	-	-
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.			-	-	-
a	4 mm thick clear sheet glass	SQM	54	0.2993	-	-
b	4 mm thick clear float glass	SQM	165	0.3043	-	-
c	6 mm thick wired glass	SQM	100	0.3836	-	-
d	4 mm thick ground glass	SQM	3	0.4006	-	-
e	6 mm thick clear toughened safety glass	SQM	8	0.5708	-	-
f	Two nos. 6 mm thick tinted toughened float glass hermetically sealed and separated by 12 mm thick air gap for thermal insulation (only single elevation area to be measured)	SQM	5	1.0801	-	-
g	6 mm thick laminated glass	SQM	100	0.3836	-	-
916	Supplying and fixing weather stripping of approved make and quality to doors as per instructions of engineer in charge and specification complete.	RM	110	0.0628	-	-
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	25	0.8582	-	-
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	2	1.7584	-	-
1000	BRICKWORK			-	-	-
	BRICKWORK: Brickwork masonry including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling, scaffolding etc. at all levels as per specification, drawings and as directed by engineer - in - charge for the following: Note: Cement will be supplied by BHEL and issued as FOC (free of Cost) item			-	-	-
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.			-	-	-

REVISED BOQ CUM RATE SCHEDULE- BOUNDARY WALL, PERIFERAL ROADS, DRAINS AND GATE COMPLEX PANKI

Project : 1X660 MW Panki thermal Power Plant, Panki U.P.

SCOPE OF WORK: Boundary wall, associated roads inside and outside Boundary wall, Drain along Boundary wall, Gate Complex, Gate Structures, Watch Towers, Weigh Bridge, Customer's Site Office and construction of Coal Stock Piles at 1X660 MW PANKI THERMAL POWER PLANT, PANKI U.P.

ST. NO.	DESCRIPTION OF ITEM	UNIT	Total Quantity	Factor (F)	RATE (Rs.) = FACTOR (F) * A / 100000 (Rounded off to two place after decimal)	AMOUNT (Rs.) = RATE * QUANTITY
a	Using fly ash lime bricks confirming to IS 12894 with crushing strength of 75 kg/cm2(including cost of cement for brick making)	CUM	205	1.8735	-	-
A1001	Providing and Laying Face brick work conforming to IS 2691 in cement sand mortar 1:5 (1 cement 5 coarse sand) in exterior walls, etc. at all heights, places and position above plinth superstructure including raking out joints, pointing, curing, scaffolding etc complete excluding plastering and painting and as directed by engineer incharge. The face brick shall be of superior quality bricks to suit the exposed brick work, standard shape and size with finished edges with crushing strength of 75 kg/cm2.	CUM	25	3.4262	-	-
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.			-	-	-
a	Using fly ash lime bricks confirming to IS 12894 with crushing strength of 75 kg/cm2(including cost of cement for brick making)	CUM	115	2.0985	-	-
A1002	Providing brick work in cement mortar 1:5 (1 cement 5 coarse sand) in walls, chambers etc. at all heights, places and position above plinth including raking out joints, curing, scaffolding etc complete excluding plastering and painting.			-	-	-
a	Using fly ash bricks confirming to IS 12894 with crushing strength of 75 kg/cm2 (including cost of cement for brick making)	CUM	1050	2.0985	-	-
1003	Providing brick work in cement mortar 1:4 (1 cement 4 coarse sand) in partition walls, chambers etc. in thickness 115mm at all heights, places and position above or below plinth/graded level including providing two nos. 6 mm diameter MS bars at every third layer, raking out joints, curing, scaffolding etc complete excluding plastering and painting as per specification.			-	-	-
a	Using fly ash lime bricks confirming to IS 12894 with crushing strength of 75 kg/cm2(including cost of cement for brick making)	SQM	120	0.2538	-	-
1004	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 bricks confirming to IS 12894 with crushing strength of 75 kg/cm2(including cost of cement for brick making)	SQM	75	0.2065	-	-
1005	Breaking of existing brick work at all levels including plastering, removing the rubbish up to a distance of 500 m including transportation, loading, unloading etc. all complete as directed by the engineer.	CUM	10	0.3116	-	-
1007	Providing and laying 75 mm thick bed of dry brick aggregate including of excavation, disposal of surplus earth spreading of earth, ramming, watering etc. complete in all respects as directed by the engineer.	SQM	5	0.0485	-	-
1008	Making openings in existing brick wall or partition wall including making good the broken edges/surface with cement mortar 1:6 etc. complete.	CUM	5	0.3621	-	-
1009	Supply and placing in position mild steel wire fabric of square mesh 25 mm size and wire diameter of 2 mm for encasing of steel sections in concrete including cutting, bending, fixing etc. complete.	SQM	5	0.0239	-	-
1010	Filling existing brick wall/ partition wall opening at all level including making good the broken edges/surface with cement mortar 1:6, painting, finishing to match with existing finishing, scaffolding/supporting at all level, removal of debris upto a lead of 1 km including loading, unloading, transportation etc. all complete.	SQM	2	0.2280	-	-
1100	DAMP PROOF COURSE			-	-	-
	DAMP PROOF COURSE: Damp proof course including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling, shuttering, centering, curing etc at all level as per specification, drawings and as directed by engineer - in - charge for the following: Note: Cement will be supplied by BHEL and issued as FOC (free of Cost) item			-	-	-
1101	Providing Damp Proof Course of following thickness with 1:1.5:3 concrete (10mm and down graded aggregate) with 2% of approved admixture of water proofing compound all complete. Two layers of hot bitumen coating 85/25 grade as per IS:702 @ 1.7Kg./sqm shall be applied one before & one after the DPC.			-	-	-
a	50mm thick	SQM	111	0.1075	-	-
1200	CEMENT MORTAR PLASTER			-	-	-

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	PLASTERING: Cement mortar plaster including making grooves wherever required including all labour, material (unless otherwise specified in BOQ/contract specification), scaffolding, curing etc at all level as per specification, drawings and as directed by engineer - in - charge for the following: Note: Cement will be supplied by BHEL and issued as FOC (free of Cost) item					
1201	Providing 18mm thick plaster in two layers outside the building/boundary wall in cement mortar 1:6 on walls, finished to a smooth finish including providing 3mmx3mm size grooves at junctions of two dissimilar materials all complete	SQM	19023	0.0851	-	-
1202	Providing 12mm thick plaster inside the building/boundary wall in cement mortar 1:6 on walls finished to a smooth finish as per specification all complete.	SQM	18603	0.0666	-	-
1203	Providing 12mm thick plaster in cement mortar 1:6 on walls with rough finish all complete.	SQM	4363	0.0651	-	-
1204	Providing 6mm thick plaster on ceiling in cement mortar 1:4 finished to a smooth all complete.	SQM	900	0.0620	-	-
1300	FINISHES TO CONCRETE / PLASTERED SURFACES					
1304	Two or more coats of acrylic distemper of approved brand and manufacture to give an even shade including a priming coat with distemper primer complete.	SQM	2485	0.0175	-	-
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	2175	0.0265	-	-
A1312	Providing and applying 02 or more coats of water proof cement paint of approved make and color on brick/concrete surface at all heights and painting Project Logo of different colour shade in each panel in between concrete columns of boundary wall including material, labour, scaffolding, curing etc including primer coat complete as per specification and direction of engineer incharge.	SQM	46100	0.0240	-	-
1315	Providing and applying resin bonded granular textured finish , for internal applications shall consist of crushed stone/quartz chips of .5 mm to 1.2 mm size and of approved natural color/shade and bonded with synthetic resins, adhesives and additives altogether in a single pack mix, applied on cured and dried plaster surface with a dry film nominal thickness of 1.2 mm. The final finish shall have UV resistance, fungus, bacterial resistance properties all complete with grooves filled with poly sulfide sealant of matching color and shade as per specification/drawing/approval of engineer in charge.	SQM	450	0.0825	-	-
A1319	Providing and applying Silicon coating of approved make to exposed brick surfaces/exposed concrete surfaces and wherever instructed by Engineer-In-Charge. The treatment shall be in 2 coats or as recommended by approved manufacturer including preparation of surfaces by cleaning, curing, protecting, complete at all heights.	SQM	800	0.0468	-	-
1400	FLOORING AND SKIRTING					
	FLOORING AND SKIRTING: Flooring and skirting at all level including base layer, labour, material (unless otherwise specified in BOQ/contract specification), equipments, transportation, handling, curing, polishing etc. at all level as per specification, drawings and as directed by engineer - in - charge for the following: Note: Cement will be supplied by BHEL and issued as FOC (free of Cost) item					
A1401	Providing and laying 50 mm thick heavy duty cement concrete in flooring with non-metallic hardener pigmented topping 12mm thick flooring. Under layer of 38mm thick cement concrete mix 1:1:2 (1 cement: 1 sand : 2 stone aggregates 12.5 mm well graded) and top layer of 12mm thick non-metallic concrete of mix 1:2 (1 cement hardner mix with approved quality non-metallic hardening compound :2 stone aggregate 6mm nominal size) by volume including cement slurry, rounding off edges, aluminium strips etc. all complete for following (Quoted item rate shall be inclusive of providing glass joint strips):	SQM	550	0.1298	-	-
B1401	Providing and laying 50 mm thick heavy duty cement concrete in flooring with cement concrete mix 1:1:2 (1 cement: 1 sand: 2 stone aggregate 12.5 mm well graded) including cement slurry, rounding off edges, aluminium strips etc all complete (Quoted item rate shall be inclusive of providing glass joint strips)	SQM	40	0.1298	-	-

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A1404	Providing and laying interlocking M35 Grade concrete blocks in paving with approved colour and pattern and should be laid on subbase of 63 mm down aggregate with sand mix bedding of minimum 200 mm thickness as per specifications and recommendations of manufacturer.(inclusive of cost of cement for paver manufacturing)			-	-	-
a	75mm	SQM	40	0.3713	-	-
b	80mm	SQM	200	0.3821	-	-
1416	Providing and laying vitrified ceramic tiles of polished variety of size 600x600 from reputed / approved manufacturer, complete including underbed of cement mortar 1:3 minimum 20mm thick underbed for flooring and 12mm thick underbed for dado/skirting with neat cement slurry @3.3Kg/sqm etc. all complete for following			-	-	-
a	7mm thick tiles In flooring	SQM	67	0.3521	-	-
b	10mm thick tiles In flooring	SQM	863	0.4156	-	-
1417	Providing and laying vitrified ceramic tiles of matt finish of size 600x600mm from reputed / approved manufacturer complete including underbed of cement mortar 1:3 minimum 20mm thick underbed for flooring and 12mm thick underbed for dado/skirting with neat cement slurry @3.3Kg/sqm etc. all complete for following			-	-	-
a	10mm thick tiles In flooring	SQM	159	0.4156	-	-
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, cement slurry 3.3kg/sqm complete as per specification laid in pattern of following sizes:			-	-	-
a	400X400 mm	SQM	100	0.4749	-	-
b	600X600 mm	SQM	500	0.4792	-	-
1420	Providing and laying Heavy Duty dust pressed Ceramic Tiles of 7mm thick of reputed manufacturer of approved finish shade and colour including 20mm underbed of cement mortar 1:3 with neat cement slurry @3.3kg/sqm etc. all complete.			-	-	-
a	600X600 mm	SQM	112	0.2142	-	-
1427	Providing and fixing glazed ceramic tiles of approved color and design of size 200x300mm / 300x300mm in dado of approved size, projecting 6mm uniformly from adjacent plaster or wall finish. The mix for 20mm thick underbed plaster shall consist of 1part cement and 3 parts sand by weight. fairly moist but firm, tiles shall be pressed over under bed by applying cement slurry @ 3.3kg/sqm including pigments, curing etc all complete for following thicknesses:			-	-	-
a	5mm thick	SQM	752	0.2812	-	-
1431	Providing and laying wodden panel flooring and skirting of PERGO or equivalent of approved color,shade all complete as per manufacturer specification.	SQM	110	0.7068	-	-
1500	ROOFING / SIDE CLADDING			-	-	-
	ROOFING / SIDE CLADDING: Roofing / side cladding work including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling, scaffolding, laps, hooks, washers, corner pieces etc. at all level as per specification, drawings and as directed by engineer - in - charge for the following:			-	-	-
1502	Designing, providing, erection and fixing 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 polyster 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	700	0.4942	-	-

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1507	Designing, providing and fixing External sheet of Permanent colour coated metal cladding with high strength tensile steel sheet 0.5mm bare metal thickness having minimum yield strength 350 MPa and zinc-aluminium alloy coating not less than 275 gm/sqm total on both sides including fixing to supports / rails by concealed fixing system, corrosion resistant self tapping / self drilling type fasteners with suitable cap, flashing etc. all complete. The exposed face of the sheet shall be permanently colour coated with Polyfluro Vinyl Coating (PVF2) of minimum dry film thickness (DFT) 20 microns over suitable primer. Inner face of the sheet shall be provided with suitable pre-coating of minimum DFT 7 microns over suitable primer. The permanent colour coated sheet shall meet the general requirements of IS : 14246 and shall conform to class 3 for the durability.	SQM	500	0.3147	-	-
A1511	Providing and installing under deck insulation below RCC slabs with PUF material of 50 mm nominal thickness conforming to relevant IS/ASTM standard having a density of 36kg/cum including application of glue and tying with lacing wire as per manufacturer's recommendations.	SQM	250	0.2357	-	-
A1514	Providing and installing under deck insulation with PUF material of 50 mm nominal thickness conforming to relevant IS/ASTM standard having a density of 36kg/cum using minimum 0.05 mm thick aluminium foil on exposed surface followed by 24G and 25 mm mesh GI wire netting, fixed at various elevations with 100X50X6 slotted mild steel plate welded to MS plate inserts at the soffit of slab @600 mm c/c including clips etc. (But excluding cost of insulation)	SQM	250	0.2357	-	-
1600	FALSE CEILING			-	-	-
	FALSE CEILING: False ceiling including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling, suspension system etc at all level as per specification, drawings and as directed by engineer - in - charge for the following:			-	-	-
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	820	0.6849	-	-
1607	Providing and Fixing 12mm thick Gypsum board plain/ mineral fibre based acoustic ceiling board in plan or elevation with aluminium grid, metal suspension system, anchor fastener adjustable hangers etc. including two or more coats of acrylic emulsion paint of approved colour to give an even shade with smooth finish all complete as per architectural design and detail. Metal suspension system as per ASTM C-635 shall be hot dipped M.S.galvanized (grade 180 as per IS :277) and nominal size of T-section shall be 24 x 38 mm or 24 x 25 mm cross runners. 24mm wide exposed flange surface shall be permanently color coated. Suspension system shall be as per manufacturer's specification. Movement platform of structural steel shall be provided if required for the movement of personnel to facilitate maintenance of lighting fixtures, AC ducts etc. (Structural steel works for platform for movement is separately payable under relevant items of BOQ). Work shall include 25mm thick resin bonded mineral wool insulation (as per IS:8183) bound in polythene bags on top of ceiling. The work to be complete as per specifications, drawings and direction of engineer. Payment terms - a) On receipt of Gypsum board false ceiling at site - 50%; b) On completion of erection & fixing - 50%.	SQM	500	0.4653	-	-
1700	RAIN WATER DOWN TAKE PIPES			-	-	-
	RAIN WATER DOWN TAKE PIPES: Rain water down take pipes at all level including all labour, material (unless otherwise specified in BOQ/contract specification), transportation, 2 coats of approved paint over one primary coat, fixtures, accessories etc as per specification, drawings and as directed by engineer - in - charge for the following:			-	-	-
1701	Providing and fixing HCI down take pipes of 100 mm dia. with water tight lead joint, fixing clamps etc. all complete.	RM	90	0.3609	-	-
1702	Providing and fixing HCI down take pipes of 150mm dia with water tight lead joint etc. all complete.	RM	210	0.6128	-	-
1703	Providing and fixing galvanised MS down take pipes of 100 mm dia- Medium quality as per IS:1239(part-I) / IS:3589 all complete.	RM	70	0.4314	-	-
1704	Providing and fixing galvanised MS down take pipes of 150 mm dia- Medium quality as per IS:1239(part-I) all complete.	RM	96	0.5655	-	-

REVISED BOQ CUM RATE SCHEDULE- BOUNDARY WALL, PERIFERAL ROADS, DRAINS AND GATE COMPLEX PANKI

Project : 1X660 MW Panki thermal Power Plant, Panki U.P.

SCOPE OF WORK: Boundary wall, associated roads inside and outside Boundary wall, Drain along Boundary wall, Gate Complex, Gate Structures, Watch Towers, Weigh Bridge, Customer's Site Office and construction of Coal Stock Piles at 1X660 MW PANKI THERMAL POWER PLANT, PANKI U.P.

ST. NO.	DESCRIPTION OF ITEM	UNIT	Total Quantity	Factor (F)	RATE (Rs.) = FACTOR (F) * A / 100000 (Rounded off to two place after decimal)	AMOUNT (Rs.) = RATE * QUANTITY
1709	Providing and fixing HDPE down take pipes conforming to IS:4984 as per specification of following diameters.			-	-	-
a	110 mm Dia	RM	30	0.1367	-	-
b	160 mm Dia	RM	30	0.2061	-	-
1800	MISCELLANEOUS WORKS			-	-	-
	MISCELLANEOUS: Miscellaneous works including all labour, material (unless otherwise specified in BOQ/contract specification), equipment etc. at all level unless otherwise specified as per specification, drawings and as directed by engineer - in - charge for the following:			-	-	-
	Note: Cement will be supplied by BHEL and issued as FOC (free of Cost) item			-	-	-
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	3740	0.8070	-	-
1804	Providing and fixing weep holes in Retaining wall, drains, etc consisting of 100 mm dia HDPE pipe sleeves with single side covering for the pipe mouth with galvanised welded wire fabric of 20 mm sq. opening all complete.	EACH	1159	0.0562	-	-
1807	Anti termite chemical treatment of soil with Chlorpyriphos/Lindane E.C. 20% with 1% concentration conforming to IS:8944 and as per IS 6313 all complete. (Plinth area of building at ground floor only shall be measured for payment).	SQM	820	0.0428	-	-
1808	Laying of earthing mats/rods including risers, transportation from yard stores, loading, unloading, cutting to length, welding, protective painting of joints etc. all complete. (Excavation & Back filling shall be paid separately under respective item of earth work. Earthing mats/rods shall be supplied by BHEL free of cost)	MT	5	2.7614	-	-
1815	Providing and fixing GI rungs in concrete/brick walls having zinc coating of minimum 900 g/sqm etc. all complete.	Kg		-	-	-
A1815	Providing and fixing GI rungs in concrete/brick walls having zinc coating of minimum 610 g/sqm etc. all complete.	Kg	652	0.0235	-	-
1817	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	950	0.9248	-	-
1821	Sprinkling of water by water tanker fitted with perforated GI pipe (portable tanker minimum 3000 litre capacity) for roads and miscellaneous area within plant boundary, for dust supression 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	5	0.1645	-	-
A1838	Providing and laying factory made Autoclave Aerated concrete blocks (AAC) of dimensions 625 mmX 250 mm in cement mortar 1:6 (1 part cement: 6 part coarse sand) conforming to IS 2185 Part III, in Boundary walls, chambers etc. at all depths, places and positions below/ above plinth including raking out joints, curing, scaffolding etc. complete excluding plastering and painting all complete as per specification and drawings and as directed by engineer in charge. AAC blocks shall have min. compressive strength of 30 kg/sq. cm, Density in the range of 550-650 kg/cum, average thermal conductivity of 0.162 W/mk, 2-6 hrs. of fire resistance depending on thickness and average drying shrinkage of 0.02%. The blocks shall be made of a mixture of fine fly ash, quicklime, cement, gypsum as binding agents and water, aluminium powder as foaming agent. The moulded blocks shall be steam cured in high pressure autoclaves 1 no. 6 mm diameter MS bar shall be placed at every alternate course and anchored properly with main structure. The item includes the rate of 6mm MS bar placed at every alternate course. All AAC blocks should have fly-ash content more than 40%. The contractor should submit the documents certifying the percentage of fly-ash content of required quality in AAC blocks. (including cost of cement for AAC block making)	CUM	4756	2.0985	-	-
2100	WATER SUPPLY			-	-	-
	WATER SUPPLY: Water supply work including men, material (unless otherwise specified in BOQ/contract specification), equipment etc. at all level as per specification, drawings and as directed by engineer - in - charge for the following:			-	-	-
2101	Providing and fixing in position tested heavy duty type chromium plated (CP) brass long neck bib cocks including sockets, union, nuts etc all complete - 15mm nominal bore.	EACH	12	0.2669	-	-
2102	Providing and fixing in position heavy duty brass stop cock of approved quality including all specials etc all complete - 15mm nominal bore.	EACH	5	0.0851	-	-

REVISED BOQ CUM RATE SCHEDULE- BOUNDARY WALL, PERIFERAL ROADS, DRAINS AND GATE COMPLEX PANKI

Project : 1X660 MW Panki thermal Power Plant, Panki U.P.

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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	5	0.1421	-	-
b	50mm nominal bore.	EACH	5	0.2515	-	-
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	25	0.0971	-	-
b	20 mm nominal bore.	RM	25	0.1121	-	-
c	25 mm nominal bore.	RM	25	0.1398	-	-
d	50 mm nominal bore.	RM	50	0.2334	-	-
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	65	0.0797	-	-
b	20 mm nominal bore.	RM	70	0.0948	-	-
c	25 mm nominal bore.	RM	25	0.1225	-	-
d	50 mm nominal bore.	RM	50	0.2157	-	-
2106	Providing and fixing 610mmx453mmx6mm thk mirror from reputed mirror manufacturer. Mirror shall be mounted with glass adjustable revolving CP brackets with CP screws etc all complete.	EACH		-	-	-
A2106	Providing and fixing 600mmx900mmx6mm thk mirror from reputed mirror manufacturer. Mirror shall be mounted with glass adjustable revolving CP brackets with CP screws, edge mounted with teak beading and minimum 12 mm thick plywood backing etc all complete.	EACH	10	0.4668	-	-
2107	Providing and fixing 610mmx127mmx6mm thk clear glass with C.P Guard rails and mounted on C.P. brackets etc all complete.	EACH	6	0.1691	-	-
A2108	Providing and fixing 20 mm diameter stainless steel towel rails (600mm X 20mm) with C.P. mounting brackets all complete.	EACH	10	0.1507	-	-
2109	Providing and fixing 20mm dia chromium plated M.S. pipes wall mounted towel rod with C.P. Brackets etc all complete.	EACH	6	0.1498	-	-
2110	Providing and fixing C.P. Soap holder mounted with C.P. screws etc all complete.	EACH	10	0.1167	-	-
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	6	0.2115	-	-
2112	Providing and fixing glazed vitreous wall mounted paper holder with suitable cover cum cutter fitted with CP screws etc. sll complete.	EACH	16	0.0967	-	-
2113	Providing and fixing chromium plated brass shower rose 100mm dia with 15 or 20 mm inlet dia all complete.	EACH	7	0.0162	-	-
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	7	1.0951	-	-
b	1000 litres capacity	EACH	2	2.1902	-	-
A2114	Providing and fixing in position HDPE water tank including making all necessary inlet and outlet pipes, fixtures, ball cocks, valves etc. all complete as per specification for following capacities. GI pipes shall be paid seperately under ST no. 2105			-	-	-
a	500 litres capacity	EACH	2	1.4236	-	-
A2115	Providing and fixing approved Geyser of 25 Litres capacity with inlet and outlet connections and all other fittings etc. all complete.	EACH	3	5.7778	-	-
2200	SANITARY WORKS			-	-	-
	SANITARY: Sanitary work including all labour, material (unless otherwise specified in BOQ/contract specification), equipment etc. at all level as per specification, drawings and as directed by engineer - in - charge for the following: Note: Cement will be supplied by BHEL and issued as FOC (free of Cost) item			-	-	-
2201	Supply and fixing glazed vitreous china Wash Basin of approved make conforming to IS:2556 part 4 of oval shape with R.S. or C.I. brackets painted white, 15mm chromium plated brass hot & cold faucets with nylon washers, chromium plated brass chain with rubber plug, 32mm chromium plated brass bottle trap and waste of standard pattern, 32mm dia chromium plated brass trap unions, plastic connection pipe with chromium plated nuts, fittings, cutting and making good the walls where required etc all complete.			-	-	-
a	White	EACH	16	1.0046	-	-
b	Colored	EACH	5	1.0797	-	-

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ST. NO.	DESCRIPTION OF ITEM	UNIT	Total Quantity	Factor (F)	RATE (Rs.) = FACTOR (F) * A / 100000 (Rounded off to two place after decimal)	AMOUNT (Rs.) = RATE * QUANTITY
2202	Providing and fixing approved vitreous china laboratory sink of size 600x400x200mm conforming to IS:2556 (part-5) with R.S. or C.I. brackets, chromium plated brass chain with rubber plug 40mm, 40mm CP brass waste and 40mm CP brass trap with necessary union complete including painting the fittings, cutting and making good the wall where required etc. all complete.	EACH	1	0.7688	-	-
2203	Providing and fixing stainless steel kitchen sink of size 610x510x200mm conforming to IS: 13983 including all fittings etc. all complete.	EACH	4	1.4429	-	-
2204	Providing and fixing colour glazed vitreous china European type water closet conforming to IS:2556 with siphon, open front solid plastic seat and plastic cover, low level 12.5 litre PVC flushing cistern (same colour as WC) with valveless fittings, necessary C.P connections etc all complete.			-	-	-
a	Floor mounted	EACH	13	1.3385	-	-
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	6	1.3524	-	-
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	23	1.6282	-	-
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	10	0.0728	-	-
b	110mm dia pipes	RM	10	0.1055	-	-
c	160mm dia pipes	RM	10	0.1383	-	-
d	200mm dia pipes	RM	10	0.1687	-	-
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	38	0.1606	-	-
b	300mm dia	RM	76	0.2003	-	-
c	450mm dia	RM	152	0.6286	-	-
d	600mm dia	RM	171	0.8197	-	-
e	900mm dia	RM	19	1.2857	-	-
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	38	0.1071	-	-
b	250mm dia	RM	30	0.1402	-	-
c	300mm dia	RM	23	0.1545	-	-
d	450mm dia	RM	15	0.2049	-	-
e	500mm dia	RM	8	0.2781	-	-
2211	Providing and fixing C.I Manhole heavy duty cover of size 600mmx450mm including frame from reputed manufacture etc. all complete.	EACH	6	0.8601	-	-
2212	Providing and fixing circular heavy duty C.I. manhole cover of 600 mm dia with frame etc. all complete.	EACH	6	0.7446	-	-
A2212	Providing and fixing circular heavy duty C.I. Grill cover with frame, painting etc. all complete.	EACH	2	0.7446	-	-
2213	Providing and fixing square mouth S.W Gully trap grade 'A' complete with CI grating, brick masonry chamber(Clay Brickwork in 1:6 mortar, 12mm plaster in 1:6 mortar & 1:2:4 Cement Concrete) and water tight CI cover with 300x300mm (inside). The weight of cover to be not less than 4.53 Kg and frame to be not less than 2.72 Kg etc all complete for following sizes:			-	-	-
a	100x100mm P or S Type.	EACH	15	0.3994	-	-
b	150x100mm P or S Type.	EACH	10	0.4195	-	-
c	150x150mm P or S Type.	EACH	3	0.4561	-	-
2214	Providing and fixing C.I. floor traps size 100 mm Inlet and 100 mm Outlet Sand Cast Iron S&S as per IS: 1729 with C.P jalli all complete.	EACH	20	0.2723	-	-
2215	Providing and fixing 100mm heavy duty UPVC floor traps with 100 mm inlet and 100 mm outlet & C.P jalli all complete.	EACH	10	0.2619	-	-
2217	Providing and installing approved brand single tap water cooler of 150 L cooling capacity all complete.	EACH	3	13.1583	-	-
2218	Providing and fixing white viterous urinal partitions of size 675x325x85mm all complete.	EACH	25	0.3671	-	-
2220	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	25	0.4014	-	-
b	100mm dia pipes	RM	35	0.5154	-	-
c	150mm dia pipes	RM	10	0.7276	-	-

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2221	Providing, laying spun CI pipes with conforming to IS 1536 complete for following.(Excavation,backfilling,concrete to be paid seperately)			-	-	-
a	75mm dia	RM	25	0.4692	-	-
b	100mm dia	RM	25	0.6883	-	-
c	150mm dia	RM	10	1.0454	-	-
d	200mm dia	RM	5	1.6135	-	-
2222	Providing and fixing HDPE pipes in concrete/ brick work of following sizes including cutting, fixing and levelling in position etc. all complete.			-	-	-
a	Upto 75 mm dia	RM	15	0.0412	-	-
b	100 mm dia	RM	15	0.0859	-	-
c	150 mm dia	RM	11	0.1760	-	-
d	200 mm dia	RM	8	0.2727	-	-
2300	STRUCTURAL STEEL		0	-	-	-
	STRUCTURAL WORKS: Structural steel works including all labour, material (unless otherwise specified in BOQ/contract specification), equipments unless otherwise specified, transportation, handling etc. at all level as per specification, drawings and as directed by engineer - in - charge for the following: Note: Structure Steel will be supplied by BHEL and issued as FOC (free of Cost) item			-	-	-
2301	Supply, Fabrication,erection and alignment 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 red oxide zinc-chromate 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 20° C for welding over 20 mm and upto 40 mm & 66° C for welding over 40 mm and upto 63 mm & 110° 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 (BHEL to supply steel free of cost).	MT	25	8.8747	-	-
A2301	Supply & Fabrication of Hollow steel sections (square & rectangular) of minimim grade Yst 240 conforming to IS:4923, in columns, beams, ties, struts, bracings, roof truss,connections to other members(tubular/non-tubular), special connections if required etc. including straightening, cutting, bending, rolling, grinding, machining, drilling, welding, electrodes and other consumables, assembly, edge preparation, preheating / post heating (if required), inspection of welds, visual inspection, non destructive and special testing, rectification and correction of defective welding works, production test plate, protection against damage in transit etc all complete. Hollow section to section connection shall be direct as per cut profile of sections and field conenctions/splicing shall be bolted with gusset/splice plates. Payment shall be made for net weight of finished structure along with gussets, stiffeners but not for Nuts & Bolts/washers. Nuts & Bolts/washers shall be paid under separate item.	MT	20	8.8747	-	-
2302	Extra over ST NO. 2301 for blast cleaning of steel structures to near white metal surface(Sa 2 1/2) and applying epoxy based zinc phosphate primer in coats of minimum 25 micron (DFT) at shop and 25 micron (DFT) after erection, instead of primer coat of red oxide zinc-chromate, including touch-up painting etc all complete.	MT	0	-	-	-

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A2302	Extra over ST NO. 2301 for blast cleaning of steel structures to near white metal surface(Sa 2 1/2) and applying zinc silicate primer in coats of minimum 25 micron (DFT) at shop and 25 micron (DFT) after erection, instead of primer coat of red oxide zinc-chromate, including touch-up painting etc all complete.	MT	45	1.4460	-	-
2304	Extra over ST No. 2301 for providing and applying two coats of synthetic enamel paint with minimum 50 micron total dry film thickness (DFT) of approved make and shade to achieve an even shade over steel sections already having primer coats and keeping overall DFT with primer not less than 110 microns including protection and cleaning, scaffolding etc. all complete.	MT		-	-	-
A2304	Extra over ST No. 2301 for providing and applying two coats of synthetic enamel paint with minimum 50 micron total dry film thickness (DFT) of approved make and shade to achieve an even shade over steel sections already having primer coats of different tint to distinguish the same and keeping overall DFT with primer not less than 100 microns including protection and cleaning, scaffolding etc. all complete.	MT	45	0.5855	-	-
2307	Supplying, fabrication, erection and alignment of factory made electroforged galvanised grating units with mild steel having minimum galvanisation conforming to IS:2062 in flooring, platforms, drain and trench covers, walk-ways, passages, staircases with edge binding strips and anti-skid nosing in treads etc. including fixing clamps, fittings, fixtures, all taxes, duties, packing, grinding, drilling, welding, edge preparation, etc. all complete. (Supply of galvanised grating is in contractor scope)			-	-	-
a	Minimum galvanisation of 610 g/sqm	MT	2	37.7293	-	-
2311	Providing and fixing in position of permanent mild steel bolts (class 4.6 as per IS : 1367 and grade 'C' as per IS: 1363) and nuts, washers etc. up to and inclusive of 39 mm diameter and upto 300mm long for structural steel work etc all complete. (Supply of permanent mild steel bolts is in contractor scope)	KG	500	0.0289	-	-
2312	Providing and fixing in positing of high strength structural bolts (of property class 8.8 and product grade 'C' as per IS: 1367) and conforming to IS: 3757 and high strength structural hardened and tempered nuts (of property class '8' as per IS:1367) conforming to IS:6623 with hardened and tempered washers as per IS:6649 etc. up to and inclusive of 39 mm diameter and upto 300 mm long for structural steel work etc all complete. (Supply of high strength structural bolts is in contractor scope)	KG	1400	0.0320	-	-
2322	Supply, fabrication and fixing of GI pipe hand railing (900 mm high) of 32 mm/40 mm dia (Medium Grade) including transportation, loading/unloading, painting etc. all complete. (Supply of GI pipe Hand Rails is in Contractor Scope)	MT	4	42.8530	-	-
2400	ROAD WORKS			-	-	-

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	ROAD WORKS: Road works including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation etc. as per specification, drawing, relevant IRC & IS codes and as directed by the Engineer-in-charge for the following: Note: Cement will be supplied by BHEL and issued as FOC (Free of Cost) item			-	-	-
2401	Preparation of sub grade by excavating earth to required depth for all types of soil/ rock, dressing to camber and consolidating the base including making good the undulation etc and disposal of surplus earth within a lead upto 1 km etc. all complete.	CUM	28507	0.0173	-	-
2402	Supplying and filling with selected good earth of approved quality in layers not exceeding 300 mm loose thickness using borrowed soil (borrowed soil to be arranged by the bidder) and compacted so as to achieve at least 95 % maximum dry density as per IS-2720 (Part-VII) including royalty/seignorage fee (if any), sorting, spreading, breaking clods, watering, ramming/compaction by manual/mechanical means, dressing, finishing to required lines, grades and slopes, tesing etc all complete.	CUM	792	0.0578	-	-
2404	Providing & laying water bound macadam sub base course in layers of required thickness with crushed stone aggregates 90 to 40 mm down size (IRC 19 - grading - 1), stone screening & blinding material including screening, sorting, spreading to template & consolidation with road roller including carriage, spreading & consolidation of blinding material moorum etc all complete.	CUM	7919	1.0377	-	-
2413	Supplying and laying 400mmx150mmx350mm deep precast concrete kerb stone of grade M-20 with 20 mm nominal size stone aggregate and of shape as per detailed drawing including fixing with cement mortar (1:2) in 13mm thick joints, finishing of joints with neat cement paste, making drainage opening where required etc all complete. (including cost of cement for kerb stone making)	RM	2500	0.0998	-	-
2415	Supply and laying 150mm dia R.C.C NP-2 type Hume pipe in raised shoulders as rain water drains as per detailed drawing including fixing with cement mortar (1:3) in 13mm thick joints, finishing of joints with neat cement paste etc all complete. Payment terms - a) On receipt of materials at site - 50%; b) On completion of erection & fixing - 50%.	RM		-	-	-
A2415	Supply and laying 150mm dia R.C.C NP-3 type Hume pipe in raised shoulders as rain water drains as per detailed drawing including fixing with cement mortar (1:3) in 13mm thick joints, finishing of joints with neat cement paste etc all complete. Payment terms - a) On receipt of materials at site - 50%; b) On completion of erection & fixing - 50%.	RM	1839	0.2230	-	-
2416	Dismantling of existing road consisting of premix carpet, kerb stone/ brick on edge, bitumen macadem course, WBM, preparing subgrade to receive new WBM including camber consolidation including disposal of debris within a lead of 1 km etc all complete.	SQM	500	0.0254	-	-
2417	Providing 25 mm compacted thick premix carpet on existing/damaged road surfaces in a single course composed of suitable small size aggregate premixed with a bituminous binder using medium setting grade bitumen on the existing base including tack coat, cleaning of existing surface, mixing, applying, rolling etc all complete.	SQM	250	0.0736	-	-
2419	Providing and laying cement concrete of grade M30 using 20 mm nominal size stone aggregate with approved admixture (if required), provision for necessary joints including compaction, finishing to lines and grades, curing and providing & fixing forwork etc. all complete. (Excluding the cost of reinforcement and dowel bar)	CUM	7919	1.4267	-	-
2421	Providing & laying dry lean cement concrete of grade M15 with 20 mm nominal size graded stone aggregate over a prepared sub-grade including compaction, finishing, curing etc all complete.	CUM	5010	1.2738	-	-
	(Reinforcement Steel will be supplied by BHEL and issued as FOC (Free of Cost) Item)			-	-	-
A2422	Providing and fixing in position MS dowel bar reinforcement including surface painted with bitumen and greasing, dowel end caps with cotton fills etc all complete as per specification, drawing and as directed by Engineer.	MT	45	2.8219	-	-
A2423	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 all complete as per specification, drawing and as directed by Engineer.	MT	187	2.5653	-	-

REVISED BOQ CUM RATE SCHEDULE- BOUNDARY WALL, PERIFERAL ROADS, DRAINS AND GATE COMPLEX PANKI

Project : 1X660 MW Panki thermal Power Plant, Panki U.P.

SCOPE OF WORK: Boundary wall, associated roads inside and outside Boundary wall, Drain along Boundary wall, Gate Complex, Gate Structures, Watch Towers, Weigh Bridge, Customer's Site Office and construction of Coal Stock Piles at 1X660 MW PANKI THERMAL POWER PLANT, PANKI U.P.

ST. NO.	DESCRIPTION OF ITEM	UNIT	Total Quantity	Factor (F)	RATE (Rs.) = FACTOR (F) * A / 100000 (Rounded off to two place after decimal)	AMOUNT (Rs.) = RATE * QUANTITY
A2424	Providing, straightening cutting, bending, placing in position at any level, binding in position of steel reinforcement of mild steel reinforcements including cost of binding wire, labour, scaffolding transportation to & from stores etc all complete as per specifications, drawings and as directed by Engineer.	MT	12	2.5653	-	-
	MISCELLANEOUS				-	-
A2425	Providing & installation of bitumen impregnated fibre board of specified thickness confirming to IS 1838 as joint filler including nailing, coating of both faces with coal tar pitch/bitumin etc. all complete as per specification, drawing and as directed by engineer.	RM	1056	0.0076	-	-
A2426	Providing and filling in position hot applied bitumen sealing compound (Grade A) of specified thick confirming to IS 1834 including cleaning, mixing, heating, pouring/injecting sealing compound in gaps in joints, sealant primer etc all complete as per specification, drawing and as directed by Engineer.	RM	25429	0.0108	-	-
A2430	Providing and laying Impermeable plastic sheeting 125 microns thick laid flat without creases as per IRC 15-2002 etc all complete as per specification, drawing and as directed by Engineer.	SQM	31674	0.0060	-	-
A2431	Providing and laying Inverted Choke with 25 mm course of screenings (Grading-B) over prepared subgrade including compaction etc all complete as per specification, drawing and as directed by Engineer.	CUM	792	0.5759	-	-
A2433	Providing and installation of Variable message signs including Cantilever type MS supports etc. all complete as per drawings, specifications, manufacturer's recommendations, indian standards.	EACH	50	0.1442	-	-
	Total Amount (INR)					-

NOTES:

1	Bidder's quoted price above shall be complete in all respect for the full scope defined in specification and in accordance with all terms & conditions of tender.
2	Contractor shall fully understand description and Specifications of items mentioned in BOQ.
3	Conditional price bids with any deviation / clarification etc. are liable to be rejected. No cutting / erasing / over writing shall be done.
4	Quantities mentioned in rate schedules are approximate only and liable for variation on either side depending upon site / design requirement. The tentative contract value (CV) of entire scope of work shall be calculated as per finally quoted / accepted rates & the Quantities indicated in BOQ cum Rate Schedule .
5	Contractor's total quoted price as per rate schedule will be taken as tentative only. The contractor undertakes to execute actual quantities as per advice of BHEL Engineer and accordingly the final contract price shall be worked out on the basis of quantities actually executed at site and payments will also be regulated for the same.
6	In case of any mis-match in rate and amount on price discrepancy, the same will be dealt as per clause no. 1.4 of GCC.
7	Taxes (GST) shall be payable extra as per relevant clauses in Technical Conditions of Contract.