

GOVERNMENT OF KHYBER PAKHTUNKHWA

KHYBER PAKHTUNKHWA CITIES IMPROVEMENT PROJECT

LOCAL GOVERNMENT, ELECTIONS AND RURAL DEVELOPMENT DEPARTMENT

KPCIP-CW-04: MINGORA GREATER WATER SUPPLY SCHEME INCLUDING NEW WATER TREATMENT PLANT (WTP), INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS AND SCADA:

LOT 1: WATER TREATMENT PLANT

SUMMARY OF BILLS

BILL NO.	DESCRIPTION OF WORK	Amount (PKR)
1	Distribution Chamber No. 1	
2	Plain Sedimentation Tank	
3	Distribution Chamber No. 2	
4	Flash Mixer and Flocculation Chamber	
5	Clarifier	
6	Primary Sludge Pumping Station	
7	Clarifier Sludge Pumping Station	
8	Rapid Sand Filter	
9	Sludge Thickener	
10	Chlorine Contact Tank and TWT	
11	Admin Building	

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SUMMARY OF BILLS

BILL NO.	DESCRIPTION OF WORK	Amount (PKR)
12	Chemical Building	
13	Chlorine Building	
14	Sub Station Building	
15	Electrical Control Room	
16	Generator Room	
17	Guard Room	
18	Workshop	
19	Operator Room	
20	Main Gate & Boundry Wall	
21	External Piping	
22	External Electrification	

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SUMMARY OF BILLS

BILL NO.	DESCRIPTION OF WORK	Amount (PKR)
23	Road Works	
23A	Operation & Maintenance of entire WTP & Client Staff Training	
24	Storm Water Drainage System	
25	External Sewerage System	
26	Flood Protection (Embankment)	
27	SCADA System	
28	Belt Filter Press Sludge Pumping Station	
29	Belt Filter Press Unit	
30	Health & Safety (H&S), Environmental Management Plan (EMP) and Traffic Management Plan (TMP) Cost - (Provisional Sums)	6,410,500
TOTAL AMOUNT (PKR)		

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SUMMARY OF BILL NO. 1: DISTRIBUTION CHAMBER NO. 1

BILL NO.	DESCRIPTION OF WORK	Amount (PKR)
1	CIVIL WORKS	
2	MECHANICAL WORKS	
TOTAL AMOUNT RS		-
		-

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BILL OF QUANTITIES

BILL NO. 1 DISTRIBUTION CHAMBER NO. 1

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
CIVIL WORKS							
1	03-67-a	Structural Excavation in Common Material by mechanical means	M3	43.47			
2	03-18-d	Filling, watering and ramming earth under floor with earth excavated from outside lead upto 30m	M3	25.00			
3	06-05-h	Plain Cement Concrete including placing, compacting, finishing & curing (Ratio 1:3:6)	M3	1.54			
4	06-07-a-01	RCC in roof slab, beam, column & other structural members, insitu or precast. (1:1:2)	M3	27.00			
5	06-07-b-01	RCC in raft foundation slab, base slab of column & ret. wall etc, not including in 06-06. (1:1:2)	Per Cft	7.15			
6	06-08-b	Supply & fabricate M.S. reinforcement for cement concrete (Hot rolled deformed bars Grade 60)	100 Kg	56.56			
7	06-25-j	Providing and fixing ribbed polyvinyl chloride (PVC) water stops 8" (203 mm) wide in vertical (Walls/Columns) or horizontal (Floors/Slabs) expansion joints including cutting and jointing etc. complete in all floors .	M	12.88			
8	25-10&11	Fabrication of heavy steel work with angle, tees, sheet iron etc for making trusses, girders etc including Erection and fitting in position iron trusses, staging of water tanks, etc (for Steel stair including duly painting red oxide)	Tonne	0.77			
9	25-33-a	Providing and fixing terrace railing 2" i/d conduit pipe 16 SWG, welded with 5/8" x 5/8" square bar 2.75 ft. high fixed at 5" centre to centre, in RCC slab with suitable arrangement, complete in all respects as per design and drawing.	M	18.86			
10	24-34	Supplying and Fixing flat iron (2"x3/8") ladder for OHR, holes @ 15" c/c, steps of MS bars 5/8" i/d & paint complete	M	4.14			

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BILL OF QUANTITIES

BILL NO. 1 DISTRIBUTION CHAMBER NO. 1

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
11	03-20-a	Transportation of earth all types beyond 250 m and upto 500 m.	M3	25.00			
12	03-20-b	Transportation of earth all types for every 100m extra lead beyond 500m upto 1.5 km.	M3	25.00			
13	03-20-c	Transportation of earth all types for every 500m extra lead beyond 1.5 km. upto 8 km.	M3	25.00			
14	03-20-d	Transportation of earth all types for every 1 km extra lead or part thereof beyond 8 km.	M3	25.00			
15	13-08-a	Bitumen coating to plastered/cement concrete surface: 20 lbs per 100 sft	m2	12.40			
SUB TOTAL OF CIVIL WORKS							-

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BILL OF QUANTITIES

BILL NO. 1 DISTRIBUTION CHAMBER NO. 1

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		MECHANICAL WORKS					
1	NS-1	Manual Penstock gate					
		Providing, installing and testing cast iron (CI) Penstocks (Manually Operated) in concrete structures, complete with sliding cover/gate & wedges, cover/gate guide & seating mechanism, stem, stem couplings, stem guides, top mounting brackets, thimbles and manual gate lifting assembly, including all jointing, fixing, sealing & installation accessories, initial lubricant charge, all painting & coatings, with all the exposed ferrous surfaces to be epoxy coated, complete in all respects, in accordance with the Contract, as follows:					
		Penstock Gate Size with clear opening (1050mm x 1050mm)	Each	2.00			-
2	NS-2	Temperature sensor					

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BILL OF QUANTITIES

BILL NO. 1 DISTRIBUTION CHAMBER NO. 1

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		Providing, installing, testing and commissioning water temperature sensor (Max water Temperature: 40°C) in Distribution chamber, of internationally reputed approved make, complete with on-site LCD display unit(with adjustable backlight and contrast), mounting arrangements (in stainless steel, Grade 316) for probe & display unit, display unit cabinet (painted metallic box with glazed front door),electric cable & conduit between probe & display unit, all the necessary provisions, instruments and accessories for integration with SCADA and power supply, including all jointing, fixing & installation accessories, all painting & coatings and a complete set of special tools, test equipment & essential spare parts, complete in all respects, in accordance with the Contract	Each	1.00			-
3	NS-3	pH Meter					
		Providing, installing, testing and commissioning water pH Meter (Range: 0 – 14.00 pH, Max water Temperature: 40°C) in Distribution Chamber, of internationally reputed approved make, complete with pH probe/sensor, relays,on-site LCD display unit(with adjustable backlight and contrast), mounting arrangements (in stainless steel, Grade 316) for probe & display unit, display unit cabinet (painted metallic box with glazed front door),electric cable & conduit between probe & display unit, all the necessary provisions, instruments and accessories for integration with SCADA and power supply, including all jointing, fixing & installation accessories, all painting & coatings and a complete set of special tools, test equipment & essential spare parts, complete in all respects, in accordance with the Contract	Each	1.00			-

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BILL OF QUANTITIES

BILL NO. 1 DISTRIBUTION CHAMBER NO. 1

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
4	NS-4	TSS Sensor					
		Providing, installing, testing and commissioning TSS sensor (with measuring range of 0.001 - 500g/l, Max water Temperature: 40°C) in Distribution chamber, of internationally reputed approved make, complete with on-site LCD display unit(with adjustable backlight and contrast), mounting arrangements (in stainless steel, Grade 316) for probe & display unit, display unit cabinet (painted metallic box with glazed front door),electric cable & conduit between probe & display unit, all the necessary provisions, instruments and accessories for integration with SCADA and power supply, including all jointing, fixing & installation accessories, all painting & coatings and a complete set of special tools, test equipment & essential spare parts, complete in all respects, in accordance with the Contract	Each	1.00			-
SUB TOTAL OF MECHANICAL WORKS							-

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LOT 1: WATER TREATMENT PLANT

SUMMARY OF BILL NO. 2: PLAIN SEDIMENTATION TANK (2 No's)

BILL NO.	DESCRIPTION OF WORK	Amount (PKR)
1	CIVIL WORKS	-
2	MECHANICAL WORKS	-
TOTAL AMOUNT RS		-
		-

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BILL OF QUANTITIES

BILL NO. 2: PLAIN SEDIMENTATION TANK (2 No's)

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	CIVIL WORKS						
1	03-67-a	Structural Excavation in Common Material by mechanical means	M3	2,415.05			-
2	03-18-d	Filling, watering and ramming earth under floor with earth excavated from outside lead upto 30m	M3	555.46			-
3	06-05-h	Plain Cement Concrete including placing, compacting, finishing & curing (Ratio 1:3:6)	M3	120.16			-
4	06-05-f	Plain Cement Concrete including placing, compacting, finishing & curing (Ratio 1:2:4)	M3	124.71			-
5	06-07-a-01	RCC in roof slab, beam, column & other structural members, insitu or precast. (1:1:2)	M3	432.86			-
6	06-07-b-01	RCC in raft foundation slab, base slab of column & ret. wall etc, not including in 06-06. (1:1:2)	M3	1,776.72			-
7	06-08-b	Supply & fabricate M.S. reinforcement for cement concrete (Hot rolled deformed bars Grade 60)	100 Kg	3,589.95			-
8	06-25-j	Providing and fixing ribbed polyvinyle chloride (PVC) water stops 8" (203 mm) wide in vertical (Walls/Columns) or horizontal (Floors/Slabs) expansion joints including cutting and jointing etc. complete in all floors	M	157.88			-

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BILL OF QUANTITIES

BILL NO. 2: PLAIN SEDIMENTATION TANK (2 No's)

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
9	03-20-a	Transportation of earth all types beyond 250 m and upto 500 m.	M3	555.46			-
10	03-20-b	Transportation of earth all types for every 100m extra lead beyond 500m upto 1.5 km.	M3	555.46			-
11	03-20-c	Transportation of earth all types for every 500m extra lead beyond 1.5 km. upto 8 km.	M3	555.46			-
12	03-20-d	Transportation of earth all types for every 1 km extra lead or part thereof beyond 8 km.	M3	555.46			-
13	13-08-a	Bitumen coating to plastered/cement concrete surface: 20 lbs per 100 sft	m ²	357.67			-
SUB TOTAL OF CIVIL WORKS							-

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 2: PLAIN SEDIMENTATION TANK (2 No's)

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		MECHANICAL WORKS					
1	24-30-b-12	Providing, laying, cutting, jointing, testing and disinfecting High Density Polyethylene Pipe (HDPE) Din-8074/Din-8075/ISO-4427 in trenches, complete in all respects except excavation. (250 mm dia) PN-10	m	40.00			-
3	NS-1	Providing, laying, cutting, jointing, testing and disinfecting High Density Polyethylene Pipe (HDPE) Din-8074/Din-8075/ISO-4427 in trenches, complete in all respects PN-10 (800mm)	m	50.00			-
4	NS-2	Providing cutting, fabricating and fixing in position SS scum and weir plates 5mm thick welded with SS angle and embedded into concrete with bolt and nut @ 500mm c/c complete in all respect as per given drawing and specification	m	66.00			-
5	NS-3	Sludge Scrappers					

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BILL OF QUANTITIES

BILL NO. 2: PLAIN SEDIMENTATION TANK (2 No's)

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		Providing, installing, testing and commissioning Mechanical Sludge Scraper (End-Driven, Rotating Half-Bridge type, Peripheral Speed: 1-2 m/min), of internationally reputed approved make, complete with the main bridge structure with decking (Min Width: 1000 mm) & safety handrails (Min Height: 1100 mm), scraper blades (discontinuous, fish bone type, furnished with sweeping strip of EPDM)& their support structure, central support/bearing unit, current collector unit, end drive unit with motor, motor starter, reduction gearbox& wheels, obstacle detection switch, electric cable & conduit from current collector unit to end drive unit, inlet drum, scum skimmer, scum collection box, scum outflow pipe & valved outlet, with all the submerged/wetted components to be of stainless steel (Grade 316) and other structural components to be of carbon steel (approved epoxy coated), including all jointing, fixing & installation accessories, all painting & coatings and a complete set of special tools, test equipment & essential spare parts, complete in all respects, in accordance with the Contract, as follows:					
		In Primary Sedimentation Tanks (Internal Diameter: 21.4 m, Side Depth: 4.665 m)	Each	2.00			-
SUB TOTAL OF MECHANICAL WORKS							-

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LOT 1: WATER TREATMENT PLANT

SUMMARY OF BILL NO. 3: DISTRIBUTION CHAMBER NO. 2

BILL NO.	DESCRIPTION OF WORK	Amount (PKR)
1	CIVIL WORKS	-
2	MECHANICAL WORKS	-
TOTAL AMOUNT RS		-
		-

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BILL OF QUANTITIES

BILL NO. 3: DISTRIBUTION CHAMBER NO. 2

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	CIVIL WORKS						
1	03-67-a	Structural Excavation in Common Material by mechanical means	M3	150.31			-
2	06-05-h	Plain Cement Concrete including placing, compacting, finishing & curing (Ratio 1:3:6)	M3	2.67			-
3	06-07-a-01	RCC in roof slab, beam, column & other structural members, insitu or precast. (1:1:2)	M3	96.00			-
4	06-07-b-01	RCC in raft foundation slab, base slab of column & ret. wall etc, not including in 06-06. (1:1:2)	M3	16.88			-
5	06-08-b	Supply & fabricate M.S. reinforcement for cement concrete (Hot rolled deformed bars Grade 60)	100 Kg	162.55			-
6	06-25-j	Providing and fixing ribbed polyvinyl chloride (PVC) water stops 8" (203 mm) wide in vertical (Walls/Columns) or horizontal (Floors/Slabs) expansion joints including cutting and jointing etc. complete in all floors .	M	20.00			-
7	25-10&11	Fabrication of heavy steel work with angle, tees, sheet iron etc for making trusses, girders etc including Erection and fitting in position iron trusses, staging of water tanks, etc (for Steel stair including duly painting red oxide)	Tonne	0.77			-
8	25-33-a	Providing and fixing terrace railing 2" i/d conduit pipe 16 SWG, welded with 5/8" x 5/8" square bar 2.75 ft. high fixed at 5" centre to centre, in RCC slab with suitable arrangement, complete in all respects as per design and drawing.	M	26.00			-
9	24-34	Supplying and Fixing flat iron (2"x3/8") ladder for OHR, holes @ 15" c/c, steps of MS bars 5/8" i/d & paint complete	M	3.60			-
10	03-20-a	Transportation of earth all types beyond 250 m and upto 500 m.	M3	75.16			-
11	03-20-b	Transportation of earth all types for every 100m extra lead beyond 500m upto 1.5 km.	M3	75.16			-

12	03-20-c	Transportation of earth all types for every 500m extra lead beyond 1.5 km. upto 8 km.	M3	75.16			-
13	03-20-d	Transportation of earth all types for every 1 km extra lead or part thereof beyond 8 km.	M3	75.16			-
14	13-08-a	Bitumen coating to plastered/cement concrete surface: 20 lbs per 100 sft	m ²	12.40			-
SUB TOTAL OF CIVIL WORKS							-

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LOT 1: WATER TREATMENT PLANT							
BILL OF QUANTITIES							
BILL NO. 3: DISTRIBUTION CHAMBER NO. 2							
Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		ECHANICAL WORKS					
1	NS-1	Manual Penstock Gate					
		Providing, installing and testing cast iron (CI) Penstocks (Manually Operated) in concrete structures, complete with sliding cover/gate & wedges, cover/gate guide & seating mechanism, stem, stem couplings, stem guides, top mounting brackets, thimbles and manual gate lifting assembly, including all jointing, fixing, sealing & installation accessories, initial lubricant charge, all painting & coatings, with all the exposed ferrous surfaces to be epoxy coated, complete in all respects, in accordance with the Contract, as follows:					
		Penstock Gate Size with clear opening (1050mm x 1050mm)	Each	4.00			-
2	NS-2	Temperature sensor					
		Providing, installing, testing and commissioning water temperature sensor (Max water Temperature: 40°C) in Distribution chamber, of internationally reputed approved make, complete with on-site LCD display unit (with adjustable backlight and contrast), mounting arrangements (in stainless steel, Grade 316) for probe & display unit, display unit cabinet (painted metallic box with glazed front door), electric cable & conduit between probe & display unit, all the necessary provisions, instruments and accessories for integration with SCADA and power supply, including all jointing, fixing & installation accessories, all painting & coatings and a complete set of special tools, test equipment & essential spare parts, complete in all respects, in accordance with the Contract	Each	1.00			-
3	NS-3	pH Meter					
		Providing, installing, testing and commissioning water pH Meter (Range: 0 – 14.00 pH, Max water Temperature: 40°C) in Distribution Chamber, of internationally reputed approved make, complete with pH probe/sensor, relays, on-site LCD display unit (with adjustable backlight and contrast), mounting arrangements (in stainless steel, Grade 316) for probe & display unit, display unit cabinet (painted metallic box with glazed front door), electric cable & conduit between probe & display unit, all the necessary provisions, instruments and accessories for integration with SCADA and power supply, including all jointing, fixing & installation accessories, all painting & coatings and a complete set of special tools, test equipment & essential spare parts, complete in all respects, in accordance with the Contract	Each	1.00			-

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LOT 1: WATER TREATMENT PLANT							
BILL OF QUANTITIES							
BILL NO. 3: DISTRIBUTION CHAMBER NO. 2							
Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
4	NS-4	TSS Sensor					
		Providing, installing, testing and commissioning TSS sensor (with measuring range of 0.001 - 500g/l, Max water Temperature: 40°C) in Distribution chamber, of internationally reputed approved make, complete with on-site LCD display unit(with adjustable backlight and contrast), mounting arrangements (in stainless steel, Grade 316) for probe & display unit, display unit cabinet (painted metallic box with glazed front door),electric cable & conduit between probe & display unit, all the necessary provisions, instruments and accessories for integration with SCADA and power supply, including all jointing, fixing & installation accessories, all painting & coatings and a complete set of special tools, test equipment & essential spare parts, complete in all respects, in accordance with the Contract	Each	1.00			-
SUB TOTAL OF MECHANICAL WORKS							-

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KPCIP-CW-04: MINGORA GREATER WATER SUPPLY SCHEME INCLUDING NEW WATER TREATMENT PLANT (WTP), INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS AND SCADA:

LOT 1: WATER TREATMENT PLANT

SUMMARY OF BILL NO. 4: FLASH MIXER & FLOCCULATION CHAMBER

BILL NO.	DESCRIPTION OF WORK	Amount (PKR)
1	CIVIL WORKS	-
2	MECHANICAL WORKS	-
TOTAL AMOUNT RS		-
		-

GOVERNMENT OF KHYBER PAKHTUNKHWA

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 4: FLASH MIXER & FLOCCULATION CHAMBER

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
CIVIL WORKS							
1	03-67-a	Structural Excavation in Common Material by mechanical means	M3	2,994.46			-
2	03-18-d	Filling, watering and ramming earth under floor with earth excavated from outside lead upto 30m	M3	1,497.23			-
2	06-05-h	Plain Cement Concrete including placing, compacting, finishing & curing (Ratio 1:3:6)	M3	85.56			-
3	06-07-a-01	RCC in roof slab, beam, column & other structural members, insitu or precast. (1:1:2)	M3	757.43			-
4	06-07-b-01	RCC in raft foundation slab, base slab of column & ret. wall etc, not including in 06-06. (1:1:2)	M3	320.84			-
5	06-08-b	Supply & fabricate M.S. reinforcement for cement concrete (Hot rolled deformed bars Grade 60)	100 Kg	2,070.28			-
6	25-10&11	Fabrication of heavy steel work with angle, tees, sheet iron etc for making trusses, girders etc including Erection and fitting in position iron trusses, staging of water tanks, etc (for Steel stair including duly painting red oxide)	Tonne	24.66			-
7	25-33-a	Providing and fixing terrace railing 2" i/d conduit pipe 16 SWG, welded with 5/8" x 5/8" square bar 2.75 ft. high fixed at 5" centre to centre, in RCC slab with suitable arrangement, complete in all respects as per design and drawing.	M	199.40			-

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 4: FLASH MIXER & FLOCCULATION CHAMBER

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
8	06-25-j	Providing and fixing ribbed polyvinyle chloride (PVC) water stops 8" (203 mm) wide in vertical (Walls/Columns) or horizontal (Floors/Slabs) expansion joints including cutting and jointing etc. complete in all floors .	M	321.80			-
9	03-20-a	Transportation of earth all types beyond 250 m and upto 500 m.	M3	1,497.23			-
10	03-20-b	Transportation of earth all types for every 100m extra lead beyond 500m upto 1.5 km.	M3	1,497.23			-
11	03-20-c	Transportation of earth all types for every 500m extra lead beyond 1.5 km. upto 8 km.	M3	1,497.23			-
12	03-20-d	Transportation of earth all types for every 1 km extra lead or part thereof beyond 8 km.	M3	1,497.23			-
13	13-08-a	Bitumen coating to plastered/cement concrete surface: 20 lbs per 100 sft	m ²	571.31			-
SUB TOTAL OF CIVIL WORKS							-

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 4: FLASH MIXER & FLOCCULATION CHAMBER

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		MECHANICAL WORKS					
1	NS-1	FLASH MIXER					
		Providing, installing, testing and commissioning Mechanical Mixers (vertical-shaft, single impeller, pitched blade or propeller type, 3-4 blades), of internationally reputed approved make, complete with motor (4 pole, installed power to be determined by the manufacturer), gear box, motor starter, support base/frame, shaft, impeller and canopy, with all the submerged/wetted components to be of stainless steel (Grade 316), including all jointing, fixing & installation accessories, all painting & coatings; and a complete set of special tools, test equipment & spare parts, complete in all respects, in accordance with the Contract, as follows:					
		In Flash Mixer Tanks (Imparted Mixing Power: 16 kW, Rotational Speed: 40 – 100 RPM, Impeller Diameter: 1.0 – 1.5 m)	Each	4.00			-

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 4: FLASH MIXER & FLOCCULATION CHAMBER

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
2	NS-2	FLOCCULATOR					
		Providing, installing, testing and commissioning Mechanical Flocculators/Mixers (vertical shaft, flat blade/paddle type), of internationally reputed approved make, complete with motor (4 pole, installed power to be determined by the manufacturer), gear box, motor starter, support base/frame, shaft, blades/paddles, connecting arms and canopy, with all the submerged/wetted components to be of stainless steel (Grade 316), including all jointing, fixing & installation accessories, all painting & coatings; and a complete set of special tools, test equipment & spare parts, complete in all respects, in accordance with the Contract, as follows:					
		In Flocculation Chambers (Imparted Mixing Power: 1.4 kW, Rotational Speed: 5 – 15 RPM, Turbine Diameter: Min 3.4)	Each	8.00			-

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 4: FLASH MIXER & FLOCCULATION CHAMBER

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
3	NS-3	pH Meter					
		Providing, installing, testing and commissioning water pH Meter (Range: 0 – 14.00 pH, Max water Temperature: 40°C) in Flash mixer, of internationally reputed approved make, complete with pH probe/sensor, relays, on-site LCD display unit (with adjustable backlight and contrast), mounting arrangements (in stainless steel, Grade 316) for probe & display unit, display unit cabinet (painted metallic box with glazed front door), electric cable & conduit between probe & display unit, all the necessary provisions, instruments and accessories for integration with SCADA and power supply, including all jointing, fixing & installation accessories, all painting & coatings and a complete set of special tools, test equipment & essential spare parts, complete in all respects, in accordance with the Contract	Each	4.00			-
4	NS-4	Providing cutting, fabricating and fixing in position weir plates 5mm thick welded with SS angle and embedded into concrete with bolt and nut @ 500mm c/c complete in all respect as per given drawing and specification.	M	3.70			-
SUB TOTAL OF MECHANICAL WORKS							-

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LOT 1: WATER TREATMENT PLANT

SUMMARY OF BILL NO. 5: CLARIFIER TANK (04 No's)

BILL NO.	DESCRIPTION OF WORK	Amount (PKR)
1	CIVIL WORKS	-
2	MECHANICAL WORKS	-
TOTAL AMOUNT RS		-

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KPCIP-CW-04: MINGORA GREATER WATER SUPPLY SCHEME INCLUDING NEW WATER TREATMENT PLANT (WTP), INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS AND SCADA:

LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 5: CLARIFIER TANK (04 No's)

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
CIVIL WORKS							
1	03-67-a	Structural Excavation in Common Material by mechanical means	M3	10,923.08			-
2	03-18-d	Filling, watering and ramming earth under floor with earth excavated from outside lead upto 30m	M3	2,184.62			-
3	06-05-h	Plain Cement Concrete including placing, compacting, finishing & curing (Ratio 1:3:6)	M3	523.38			-
4	06-05-f	Plain Cement Concrete including placing, compacting, finishing & curing (Ratio 1:2:4)	M3	620.37			-
5	06-07-a-01	RCC in roof slab, beam, column & other structural members, insitu or precast. (1:1:2)	M3	1,500.28			-
6	06-07-b-01	RCC in raft foundation slab, base slab of column & ret. wall etc, not including in 06-06. (1:1:2)	M3	4,771.88			-
7	06-08-b	Supply & fabricate M.S. reinforcement for cement concrete (Hot rolled deformed bars Grade 60)	100 Kg	10,190.51			-
8	06-25-j	Providing and fixing ribbed polyvinyle chloride (PVC) water stops 8" (203 mm) wide in vertical (Walls/Columns) or horizontal (Floors/Slabs) expansion joints including cutting and jointing etc. complete in all floors .	M	494.96			-
9	25-10&11	Fabrication of heavy steel work with angle, tees, sheet iron etc for making trusses, girders etc including Erection and fitting in position iron trusses, staging of water tanks, etc (for Steel stair including duly painting red oxide)	Tonne	1.54			-

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 5: CLARIFIER TANK (04 No's)

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
10	24-30-b-10	Providing, laying, cutting, jointing, testing and disinfecting High Density Polyethylene Pipe (HDPE) Din-8074/Din-8075/ISO-4427 in trenches, complete in all respects (160 mm dia) PN-10	M	20.00			-
11	03-20-a	Transportation of earth all types beyond 250 m and upto 500 m.	M3	2,512.31			-
12	03-20-b	Transportation of earth all types for every 100m extra lead beyond 500m upto 1.5 km.	M3	2,512.31			-
13	03-20-c	Transportation of earth all types for every 500m extra lead beyond 1.5 km. upto 8 km.	M3	2,512.31			-
14	03-20-d	Transportation of earth all types for every 1 km extra lead or part thereof beyond 8 km.	M3	2,512.31			-
15	13-08-a	Bitumen coating to plastered/cement concrete surface: 20 lbs per 100 sft	m ²	1,872.25			-
SUB TOTAL OF CIVIL WORKS							-

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 5: CLARIFIER TANK (04 No's)

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	MECHANICAL WORKS						
1	24-30-b-10	Providing, laying, cutting, jointing, testing and disinfecting High Density Polyethylene Pipe (HDPE) Din-8074/Din-8075/ISO-4427 in trenches, complete in all respects (160 mm dia) PN-10	M	80.00			-
2	NS-1	Providing, laying, cutting, jointing, testing and disinfecting High Density Polyethylene Pipe (HDPE) Din-8074/Din-8075/ISO-4427 in trenches, complete in all respects PN-10 1000mm (including fittings as Bends etc)	M	150.00			-
3	NS-2	Providing cutting, fabricating and fixing in position SS scum and weir plates 5mm thick welded with SS angle and embedded into concrete with bolt and nut @ 500mm c/c complete in all respect as per given drawing and specification	M	280.34			-
4	NS-3	Sludge Scrappers					

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 5: CLARIFIER TANK (04 No's)

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		Providing, installing, testing and commissioning Mechanical Sludge Scraper (End-Driven, Rotating Half-Bridge type, Peripheral Speed: 1-2 m/min), of internationally reputed approved make, complete with the main bridge structure with decking (Min Width: 1000 mm) & safety handrails (Min Height: 1100 mm), scraper blades (discontinuous, fish bone type, furnished with sweeping strip of EPDM)& their support structure, central support/bearing unit, current collector unit, end drive unit with motor, motor starter, reduction gearbox& wheels, obstacle detection switch, electric cable & conduit from current collector unit to end drive unit, inlet drum, scum skimmer, scum collection box, scum outflow pipe & valved outlet, with all the submerged/wetted components to be of stainless steel (Grade 316) and other structural components to be of carbon steel (approved epoxy coated), including all jointing, fixing & installation accessories, all painting & coatings and a complete set of special tools, test equipment & essential spare parts, complete in all respects, in accordance with the Contract, as follows: In Clarifier (Internal Diameter: 33.75 m, Side Depth: 4.665 m)	EACH	4.00			-
SUB TOTAL MECHANICAL WORKS							-

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LOT 1: WATER TREATMENT PLANT

SUMMARY OF BILL NO. 6: PRIMARY SLUDGE PUMPING STATION (02)

BILL NO.	DESCRIPTION OF WORK	Amount (PKR)
1	CIVIL WORKS	-
2	MECHANICAL WORKS	-
3	ELECTRICAL WORKS	-
TOTAL AMOUNT RS		-

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AND SCADA:**

LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 6: PRIMARY SLUDGE PUMPING STATION (02)

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
CIVIL WORKS							
1	03-67-b-ii	Structural Excavation in Common Material by mechanical means	M3	52.90			-
2	07-30	Supplying and filling sand under floor or plugging in wells	M3	19.14			-
3	03-18-d	Filling, watering and ramming earth under floor with earth excavated from outside lead upto 30m	M3	26.45			-
4	06-05-h	Plain Cement Concrete including placing, compacting, finishing & curing (Ratio 1:3:6)	M3	8.25			-
5	06-07-d-01	Reinforced cement concrete work as in dams, spillways, weirs, barrages, cross drainage works and other hydraulic structures using crushed stone aggregate(screening & washing) and coarse sand i/c cost of all labour and material and all kinds of form works, moulds, shuttering lifting/pumping, curing, rendering and finishing the exposed surface, cast in situ/precast excluding the cost of steel reinforcement and labour for bending binding also excludig cost of additives which have to be paid separately. (1:1:2)	M3	7.68			-
6	06-07-a-01	RCC in roof slab, beam, column & other structural members, insitu or precast. (1:1:2)	M3	18.15			-
7	06-07-b-01	RCC in raft foundation slab, base slab of column & ret. wall etc, not including in 06-06. (1:1:2)	M3	10.62			-
8	06-08-b	Supply & fabricate M.S. reinforcement for cement concrete (Hot rolled deformed bars Grade 60)	100 Kg	69.99			-
9	07-05-a-03	1st class brick work in ground floor Cement, sand mortar 1:4	M3	17.47			-

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AND SCADA:**

LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 6: PRIMARY SLUDGE PUMPING STATION (02)

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
10	11-08-b	Cement plaster 1:3 upto 20' height 1/2" thick	M2	87.36			-
11	11-21-a-03	Distempering New surface : Three coats	M2	87.36			-
12	11-18-b	Cement pointing struck joints, on walls, upto 20' height : Ratio 1:3	M2	87.36			-
13	11-10-a	Cement plaster 3/8" thick under soffit of RCC roof slabs only upto 20' height : (1:2)	M2	87.36			-
14	10-22-a	1.5" thick mosaic flooring, including rubbing & polishing complete : Using grey cement	M2	23.00			-
15	10-41-a-02	Mosaic dado or skirting complete as per specs Using grey cement : 1/2" thick	M2	23.00			-
16	09-01	First class tile roofing including earth, mud plaster, gobri leeping, cement plaster etc complete	M2	52.08			-
17	09-13	2 coats of bitumen laid hot using 34 lbs. for %sft over roof & blinded with sand at 1 cft per % sft	M2	52.08			-
18	06-28	Providing and laying polythene sheet 0.005" thick (0.05mm 500gauge) under cement concete.	M2	52.08			-
19	25-39-a-02	Providing and fixing steel windows with openable glazed pannels, using beam section for frame 1-1/2" x 1" x 5/8" x 1/8", z-section for leaves 3/4" x 1" x 3/4" x 1/8", T- section sashes 1"x1"x1/8" glass panes, wooden screed for glazing embed over a thin layer of putty duly screwed with leaves, brass fittings holdfast, duly painted, complete in all respects, including all cost of material and labour etc. as per approved design and as directed by the engineer - in -charge Glass pane 2.5mm thick	M2	7.20			-

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AND SCADA:**

LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 6: PRIMARY SLUDGE PUMPING STATION (02)

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
20	25-45-b	Supplying and Fixing 18 SWG MS Sheet Gate with angle iron frame (2"x2"x3/16") with side window, lock, painting etc	M2	7.20			-
21	03-20-a	Transportation of earth all types beyond 250 m and upto 500 m.	M3	26.45			-
22	03-20-b	Transportation of earth all types for every 100m extra lead beyond 500m upto 1.5 km.	M3	26.45			-
23	03-20-c	Transportation of earth all types for every 500m extra lead beyond 1.5 km. upto 8 km.	M3	26.45			-
24	03-20-d	Transportation of earth all types for every 1 km extra lead or part thereof beyond 8 km.	M3	26.45			-
SUB TOTAL OF CIVIL WORKS							-

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BILL OF QUANTITIES

BILL NO. 6: PRIMARY SLUDGE PUMPING STATION (02)

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		MECHANICAL WORKS					
1.00	NS-1	Primary Sludge Pumps					
		Providing, installing, testing and commissioning Sludge Pumps (horizontal-shaft, end-suction, non-clogging/solids-handling, centrifugal type, Min Free Passage Size: 15-50 mm), of internationally reputed approved make, complete with pump, 3 phase induction motor (4-pole, Efficiency class IE3), spacer coupling, support base/frame, pressure gauges (on suction and discharge sides), mechanical seal, temperature & vibration monitoring devices, automatic liquid level-controlled switching device (ultrasonic sensor type), motor control unit (MCU, in painted metallic box, complete with auto star-delta starter and all the required control, relay, monitoring and protection devices)and electrical & control cables (between motor and MCU), with pump impeller, shaft & sleeve to be of stainless steel of approved grade, including all jointing, fixing & installation accessories, vibration-control accessories, initial lubricant charge, all painting & coatings; and a complete set of special tools, test equipment & spare parts, complete in all respects, in accordance with the Contract, as follows:					
		Primary Sludge (Max Concentration: 5 %) Pumps: Capacity: 70 m ³ /h, Head: 10 m	No	4.00			-
2.00	NS-2	Flow Meter					

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 6: PRIMARY SLUDGE PUMPING STATION (02)

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		Providing, installing, testing and commissioning Water Flow Meter (Electromagnetic type, Range: 0 to 2000 m ³ /h, Accuracy: ± 0.5%, PN 16, Max Water Temperature: 40°C) on pipeline (HDPE, DN 150), of internationally reputed approved make, complete with meter, relays, on-site LCD display unit (with adjustable backlight and contrast) & its mounting arrangement (in stainless steel, Grade 316), display unit cabinet (painted metallic box with glazed front door), all the necessary provisions, instruments and accessories for integration with SCADA and power supply, including all jointing, fixing & installation accessories, all painting & coatings and a complete set of special tools, test equipment & essential spare parts, complete in all respects, in accordance with the Contract	No	2.00			-
3.00	NS-3	DUCTILE IRON PIPE (DI PIPE)					
		Providing at site, laying, cutting, fixing, jointing, testing and commissioning Ductile iron Pipe class-K12 conforming to specifications (ISO2531 and BS 4772) and relevant ANSI/AWWA standards with all accessories, Nut, Bolts, washers, jointing material and lubricants complete in all respect as per drawings and specifications.					
		DI Pipe 150mm	M	30.00			-
4.00	NS-4	Providing at site, laying, cutting, fixing, jointing, testing and commissioning Ductile iron (cast on flange) specials (such as bend, tee, cross collar, reducer, tail piece, flanged spigot, cap, flanged socket, taper, angle branch, plug etc) class-K12 conforming to specifications (ISO2531 and BS 4772) and relevant ANSI/AWWA standards with all accessories, Nut, Bolts, washers, jointing material and lubricants complete in all respect as per drawings and specifications.					
a)		Bend 90°					

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 6: PRIMARY SLUDGE PUMPING STATION (02)

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		150 mm	No	16.00			-
b)		DI TEE					
		150mm x 150mm	No	6.00			-
c)		DI REDUCER					
		150mm	No	4.00			-
		(CI) Check Valves (150mm)					
5.00	NS-5	Providing, installing and testing cast iron (CI) Check Valves (Swing type, Flanged, BS 5153, PN 10) on pipelines, of internationally reputed approved make, including gaskets, steel nuts & bolts and other jointing accessories, with all the exposed ferrous surfaces to be epoxy coated, complete in all respects, in accordance with the Contract, as follows:	No	4.00			-
		SLUICE VALVE (150mm)					
6	NS-6	Sluice Valves with all accessories complete in all respect for various pipe sizes as shown on the drawings	No	4.00			-
SUB TOTAL OF MECHANICAL WORKS							-

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		ELECTRICAL WORKS					
A.01		Light Circuits					
		Supply, installation and commissioning of light circuit wiring, to be wired with 4x2.5mm sq. (1P+1N+1UPS+1PE) PVC insulated 300/500 V grade wire make Pakistan Cable, Newage, AGE Cables, Golden Star, in and including cost of 1" dia. heavy duty PVC conduit make Beta, Popular recessed in walls, Roof slab, or on surface or above false ceiling or as required as per site conditions, all PVC conduit accessories, pull boxes, steel pull wires, complete in all respects. Each circuit shall have independent PE.					
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	146.34			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	73.17			-
A.02		1-Light Point Controlled By One Switch					
		Wiring of one light point controlled by one switch and wired with 3x1.5 mm sq. (P+N+PE) PVC insulated wires 300/500 V. grade make Pakistan Cable, Newage Pioneer Cables,, in and including cost of 3/4" dia. heavy duty PVC conduit make Beta, Popular installed on RCC slab, above false ceiling, recessed in wall, columns slabs or above light carrier all PVC conduit accessories, 3" high PVC junction boxes, pull boxes, steel pull wires, PVC flexiable conduit from ceiling junction box to light fixture flush type plate switches, including cost of back boxes and switches of 10 Amps.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	256.10			-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	170.73			-
A.03		Point -Point Wiring					

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BILL NO. 6: PRIMARY SLUDGE PUMPING STATION (02)

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		Same as per item No. A.02 but Loop wiring of a light point from first light point on same switch circuit, complete in all respects.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	268.30			-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	178.87			-
A.04		Gang Light Control Switches					
	15-127-b	Supply at site, installation, testing and commissioning of Two gang light control switches 10 Amps, 250Volts one way, including appropriate size concealed MS, powder coated back box, complete in all respects.	Each	4.00			-
	15-127-c	Supply at site, installation, testing and commissioning of Three gang light control switches 10 Amps, 250Volts one way, including appropriate size concealed MS, powder coated back box, complete in all respects.	Each	2.00			-
	15-127-f	Supply at site, installation, testing and commissioning of Six gang light control switches 10 Amps, 250Volts one way, including appropriate size concealed MS, powder coated back box, complete in all respects.	Each	4.00			-
A.05		Exhaust Fan Point					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	54.88			-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc: 3/4" i/d	M	36.59			-
A.06		Ceiling Fan Point					
		Same as Item No. A.02 mentioned above but wiring of Ceiling fan point including cost of 10 Amp switch with M.S box 16 SWG with earth terminal.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	82.32			-

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BILL NO. 6: PRIMARY SLUDGE PUMPING STATION (02)

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	54.88			-
A.07		1-3 pin switch & plug combined recessed type :10/15 Amp					
		Supply and wiring of one 3 pin switch & plug combined recessed type :10/15 Amp outlet point from distribution board with single core 2x4mm2(P+N) PVC insulated 300/500 volt grade cable in & including PVC conduit recessed in walls/R.C.C. slab, or installed on surface of Ceiling, all conduits accessories, junction boxes, pull boxes etc. 2.5mm2 cable as PC excluding cost of 3 pin 13 Amps switch & socket out let make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel board recessed in walls complete in all respects and as per specifications & drawings.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	109.76			-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	73.17			-
A.08		Loop-Loop- 3 pin switch & plug combined recessed type :10/15 Amp					
		Same as item No.A.12 above but loop wiring of 3 pin switch & plug combined recessed type :10/15 Amp outlet with 2x4mm2(P+N) & 1x2.5mm2 as CPC from point to point excluding cost of one 15A 3 pin switch socket outlets with make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel boards recessed in walls /columns.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	146.34			-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	97.56			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	195.12			-

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Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	15-20-b	Supply and Erection 3 pin switch & plug combined recessed type :10/15 Amp	Each	14.00			-
A.09		Loop-Loop- 5 Amps Switch Socket					
		Same as item No.A.12 above but loop wiring of 5A power socket outlet with 2x4mm2(P+N) & 1x2.5mm2 as CPC from point to point excluding cost of one 15A 3 pin switch socket outlets with make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel boards recessed in walls /columns.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	256.10			-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	170.73			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	341.47			-
	15-20-a	Supply and Erection 3 pin switch & plug combined recessed type : 5 Amp	Each	14.00			-
A.10		1-20 Amps Switch Socket					
		Supply and wiring of one 3pin 20 Amps Power plug socket outlet point from distribution board with single core 2x6mm2(P+N) PVC insulated 300/500 volt grade cable in & including PVC conduit recessed in walls/R.C.C. slab, or installed on surface of Ceiling including all conduits accessories, junction boxes, pull boxes etc. 4mm2 cable as PC including cost of 3 pin 20 Amps switch & socket out let make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel board recessed in walls complete in all respects and as per specifications & drawings.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	73.18			-

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Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	48.79			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	97.57			-
	15-81	Supply and Fixing 20 Amp power plug	Each	4.00			-
A.11		Fitting and Fixtures.					
		Supply at site, installation, testing and commissioning of the following indoor incandescent/LED light fittings, complete with brass lamp holders, fixing accessories, earthing terminal, drivery circuitry make as specified or by any one of the manufacturers mentioned in Annexure-"A", complete in all respects.					
i)	15-36-j-12	Supply, installation, connecting, testing & commissioning of 10W LED Down Light Fixture suitable for 1300 lm, as per instruction of Engineer, surface mounted circular shape or equivalent.	Nos.	12.00			-
iii)	15-36-i-15	Supply, installation, testing and commissioning of recessed Dawn Light of best quality with CFL (13-17 watt) Energy saver and with Glass Reflector	Nos.	24.00			-
iii)	15-36-k-03	Supply, installation, connecting, testing and commissioning of Wall mounted Bulkhead light fixtures with LED retrofit lamp 540 Lumens output, complete in all respects	Nos.	8.00			-
A.12		Exhaust Fans					
a)	15-69-b	Supply and Erection best quality exhaust fan complete with shutter & regulator : 16"sweep	Nos.	4.00			-
A.13		Ceiling Fan					

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BILL OF QUANTITIES

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Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	15-127-m	Supply at site, installation, testing and commissioning of Fan Dimmer with switch/ MS, powder coated back box with all associated accessories, complete in all respects.	Nos.	4.00			-
	26-01-l-01	Supply and Erection of AC ENERGY EFFICIENT CEILING FANS 56 inch, 50 W	Nos.	8.00			-
A.14		Wall Bracket Fan					
	15-68-e	Supply, installation, testing & commissioning of Direct axial Wall Bracket fan	Nos.	2.00			-
A.15		PVC Conduit					
		Supply at site of PVC conduit heavy duty to be concealed in RCC slabs, walls, floor, columns above false ceiling or as required as per site conditions including cost of all PVC conduit accessories, steel pull wires, complete in all respects.					
i)	15-02-b-08	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 4" i/d	M	18.30			-
A.16		Distribution Board					
		Fabrication, supply at site, installation, testing, commissioning and connections of wires / cables of Distribution Boards "Light / Power" concealed / open type to be installed as and where shown on drawing, made of MS sheet 16 SWG degreased and derusted, zinc phosphated, finished with electro-static powder coating of 50 micron thickness in approved colour, DB housing to comply with protection class IP-44 with hinged door, flexible earthing strap lockable handle, catcher, earthing bar, neutral strip, internal wiring from MCBs terminating on cable terminal blocks, including cost of all necessary materials complete in all respects. DBs shall be manufactured by any one of the manufacturers as mentioned in List.					

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Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	15-162-j	Supply, Installation, connecting, testing & commissioning of wall mounted DBLP-G1, DBLP-G2, Distribution Boards, complete with all metering with indication lamps complete in all respects as per SLD.	Each	2.00			-
A.17		<u>Non-maintained Emergency Lighting</u>					
	Appendix 'c' Page No-5	Supply, installation and connections of Self Test Maintained With ISO 7010 Legend Set 7 Watt Colour Temperature 6000K ,235 Lumens on main supply and 150 Lumens on battery, Avg. Rated Life (Hrs) 30000 hr, IP65 rating with hanging arrangment on wall or ceiling as required complete in all respect as approved by the engineer incharge make Delpro (uk) or eqv.	Nos.	4.00			-
SUB TOTAL OF ELECTRICAL WORKS							-

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SUMMARY OF BILL NO. 7: CLARIFIER PUMPING STATION (04)

BILL NO.	DESCRIPTION OF WORK	Amount (PKR)
1	CIVIL WORKS	-
2	MECHANICAL WORKS	-
3	ELECTRICAL WORKS	-
TOTAL AMOUNT RS		-

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BILL OF QUANTITIES

BILL NO. 7: CLARIFIER PUMPING STATION (04)

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	CIVIL WORKS						
1	03-67-b-ii	Structural Excavation in Common Material by mechanical means	M3	105.80			-
2	07-30	Supplying and filling sand under floor or plugging in wells	M3	38.28			-
3	03-18-d	Filling, watering and ramming earth under floor with earth excavated from outside lead upto 30m	M3	52.90			-
4	06-05-h	Plain Cement Concrete including placing, compacting, finishing & curing (Ratio 1:3:6)	M3	16.50			-
5	06-07-d-01	Reinforced cement concrete work as in dams, spillways, weirs, barrages, cross drainage works and other hydraulic structures using crushed stone aggregate(screening & washing) and coarse sand i/c cost of all labour and material and all kinds of form works, moulds, shuttering lifting/pumping, curing, rendering and finishing the exposed surface, cast in situ/precast excluding the cost of steel reinforcement and labour for bending binding also excluding cost of additives which have to be paid separately. (1:1:2)	M3	25.83			-
6	06-07-a-01	RCC in roof slab, beam, column & other structural members, insitu or precast. (1:1:2)	M3	25.83			-
7	06-07-b-01	RCC in raft foundation slab, base slab of column & ret. wall etc, not including in 06-06. (1:1:2)	M3	21.24			-
8	06-08-b	Supply & fabricate M.S. reinforcement for cement concrete (Hot rolled deformed bars Grade 60)	100 Kg	139.98			-
9	07-05-a-03	1st class brick work in ground floor Cement, sand mortar 1:4	M3	34.94			-
10	11-08-b	Cement plaster 1:3 upto 20' height 1/2" thick	M2	174.72			-

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
11	11-21-a-03	Distempering New surface : Three coats	M2	174.72			-
12	11-18-b	Cement pointing struck joints, on walls, upto 20' height : Ratio 1:3	M2	174.72			-
13	11-10-a	Cement plaster 3/8" thick under soffit of RCC roof slabs only upto 20' height : (1:2)	M2	174.72			-
14	10-22-a	1.5" thick mosaic flooring, including rubbing & polishing complete : Using grey cement	M2	46.00			-
15	10-41-a-02	Mosaic dado or skirting complete as per specs Using grey cement : 1/2" thick	M2	46.00			-
16	09-01	First class tile roofing including earth, mud plaster, gobri leeping, cement plaster etc complete	M2	104.16			-
17	09-13	2 coats of bitumen laid hot using 34 lbs. for %sft over roof & blinded with sand at 1 cft per % sft	M2	104.16			-
18	06-28	Providing and laying polythene sheet 0.005" thick (0.05mm 500gauge) under cement concete.	M2	104.16			-
19	25-39-a-02	Providing and fixing steel windows with openable glazed pannels, using beam section for frame 1-1/2" x 1" x 5/8" x 1/8", z-section for leaves 3/4" x 1" x 3/4" x 1/8", T- section sashes 1"x1"x1/8" glass panes, wooden screed for glazing embded over a thin layer of putty duly screwed with leaves, brass fittings holdfast, duly painted, complete in all respects, including all cost of material and labour etc. as per approved design and as directed by the engineer - in - charge Glass pane 2.5mm thick	M2	14.40			-
20	25-45-b	Supplying and Fixing 18 SWG MS Sheet Gate with angle iron frame (2"x2"x3/16") with side window, lock, painting etc	M2	14.40			-

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BILL OF QUANTITIES

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Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
21	03-20-a	Transportation of earth all types beyond 250 m and upto 500 m.	M3	52.90			-
22	03-20-b	Transportation of earth all types for every 100m extra lead beyond 500m upto 1.5 km.	M3	52.90			-
23	03-20-c	Transportation of earth all types for every 500m extra lead beyond 1.5 km. upto 8 km.	M3	52.90			-
24	03-20-d	Transportation of earth all types for every 1 km extra lead or part thereof beyond 8 km.	M3	52.90			-
SUB TOTAL OF CIVIL WORKS							-

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Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		MECHANICAL WORKS					
1	NS-1	Clarifier Sludge Pumps					
		Providing, installing, testing and commissioning Sludge Pumps (horizontal-shaft, end-suction, non-clogging/solids-handling, centrifugal type, Min Free Passage Size: 15-50 mm), of internationally reputed approved make, complete with pump, 3-phase induction motor (4-pole, Efficiency class IE3), spacer coupling, support base/frame, pressure gauges (on suction and discharge sides), mechanical seal, temperature & vibration monitoring devices, automatic liquid level-controlled switching device (ultrasonic sensor type), motor control unit (MCU, in painted metallic box, complete with auto star-delta starter and all the required control, relay, monitoring and protection devices)and electrical & control cables (between motor and MCU), with pump impeller, shaft & sleeve to be of stainless steel of approved grade, including all jointing, fixing & installation accessories, vibration-control accessories, initial lubricant charge, all painting & coatings; and a complete set of special tools, test equipment & spare parts, complete in all respects, in accordance with the Contract, as follows:					
		Primary Sludge (Max Concentration: 5 %) Pumps: Capacity: 70 m ³ /h, Head: 10 m	No	8.00			-
2.00	NS-2	Flow Meter					

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 7: CLARIFIER PUMPING STATION (04)

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		Providing, installing, testing and commissioning Water Flow Meter (Electromagnetic type, Range: 0 to 2000 m ³ /h, Accuracy: ± 0.5%, PN 16, Max Water Temperature: 40°C) on pipeline (HDPE, DN 150), of internationally reputed approved make, complete with meter, relays, on-site LCD display unit (with adjustable backlight and contrast) & its mounting arrangement (in stainless steel, Grade 316), display unit cabinet (painted metallic box with glazed front door), all the necessary provisions, instruments and accessories for integration with SCADA and power supply, including all jointing, fixing & installation accessories, all painting & coatings and a complete set of special tools, test equipment & essential spare parts, complete in all respects, in accordance with the Contract	No	4.00			-
3.00	NS-3	DUCTILE IRON PIPE (DI PIPE)					
		Providing at site, laying, cutting, fixing, jointing, testing and commissioning Ductile iron Pipe class-K12 conforming to specifications (ISO2531 and BS 4772) and relevant ANSI/AWWA standards with all accessories, Nut, Bolts, washers, jointing material and lubricants complete in all respect as per drawings and specifications.					
		DI Pipe 150mm	M	30.00			-

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 7: CLARIFIER PUMPING STATION (04)

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
4.00	NS-4	Providing at site, laying, cutting, fixing, jointing, testing and commissioning Ductile iron (cast on flange) specials (such as bend, tee, cross collar, reducer, tail piece, flanged spigot, cap, flanged socket, taper, angle branch, plug etc) class-K12 conforming to specifications (ISO2531 and BS 4772) and relevant ANSI/AWWA standards with all accessories, Nut, Bolts, washers, jointing material and lubricants complete in all respect as per drawings and specifications.					
a)		Bend 90°					
		150 mm	No	16.00			-
b)		DI TEE					
		150mm x 150mm	No	6.00			-
c)		DI REDUCER					
		150mm	No	4.00			-
5.00	NS-5	(CI) Check Valves (150mm)					

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BILL OF QUANTITIES

BILL NO. 7: CLARIFIER PUMPING STATION (04)

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		Providing, installing and testing cast iron (CI) Check Valves (Swing type, Flanged, BS 5153, PN 10) on pipelines, of internationally reputed approved make, including gaskets, steel nuts & bolts and other jointing accessories, with all the exposed ferrous surfaces to be epoxy coated, complete in all respects, in accordance with the Contract, as follows:	No	8.00			-
6	NS-6	SLUICE VALVE (150mm)					
		Sluice Valves with all accessories complete in all respect for various pipe sizes as shown on the drawings	No	8.00			-
SUB TOTAL OF MECHANICAL WORKS							-

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 7: CLARIFIER PUMPING STATION (04)

1	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	ELECTRICAL WORKS						
A.01		Light Circuits					
		Supply, installation and commissioning of light circuit wiring, to be wired with 4x2.5mm sq. (1P+1N+1UPS+1PE) PVC insulated 300/500 V grade wire make Pakistan Cable, Newage, AGE Cables, Golden Star, in and including cost of 1" dia. heavy duty PVC conduit make Beta, Popular recessed in walls, Roof slab, or on surface or above false ceiling or as required as per site conditions, all PVC conduit accessories, pull boxes, steel pull wires, complete in all respects. Each circuit shall have independent PE.					
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	146.34			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	73.17			-
A.02		1-Light Point Controlled By One Switch					
		Wiring of one light point controlled by one switch and wired with 3x1.5 mm sq. (P+N+PE) PVC insulated wires 300/500 V. grade make Pakistan Cable, Newage Pioneer Cables,, in and including cost of 3/4" dia. heavy duty PVC conduit make Beta, Popular installed on RCC slab, above false ceiling, recessed in wall, columns slabs or above light carrier all PVC conduit accessories, 3" high PVC junction boxes, pull boxes, steel pull wires, PVC flexiable conduit from ceiling junction box to light fixture flush type plate switches, including cost of back boxes and switches of 10 Amps.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	256.10			-

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BILL NO. 7: CLARIFIER PUMPING STATION (04)

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	170.73			-
A.03		Point -Point Wiring					
		Same as per item No. A.02 but Loop wiring of a light point from first light point on same switch circuit, complete in all respects.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	268.30			-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	178.87			-
A.04		Gang Light Control Switches					
	15-127-b	Supply at site, installation, testing and commissioning of Two gang light control switches 10 Amps, 250Volts one way, including appropriate size concealed MS, powder coated back box, complete in all respects.	Each	4.00			-
	15-127-c	Supply at site, installation, testing and commissioning of Three gang light control switches 10 Amps, 250Volts one way, including appropriate size concealed MS, powder coated back box, complete in all respects.	Each	2.00			-
	15-127-f	Supply at site, installation, testing and commissioning of Six gang light control switches 10 Amps, 250Volts one way, including appropriate size concealed MS, powder coated back box, complete in all respects.	Each	4.00			-
A.05		Exhaust Fan Point					
		Same as Item No. A.02 mentioned above but wiring of exhaust fan point including cost of 10 Amp switch with M.S box 16 SWG with earth terminal.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	54.88			-

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1	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	36.59			-
A.06		Ceiling Fan Point					
		Same as Item No. A.02 mentioned above but wiring of Ceiling fan point including cost of 10 Amp switch with M.S box 16 SWG with earth terminal.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	82.32			-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	54.88			-
A.07		1-3 pin switch & plug combined recessed type :10/15 Amp					
		Supply and wiring of one 3 pin switch & plug combined recessed type :10/15 Amp outlet point from distribution board with single core 2x4mm2(P+N) PVC insulated 300/500 volt grade cable in & including PVC conduit recessed in walls/R.C.C. slab, or installed on surface of Ceiling, all conduits accessories, junction boxes, pull boxes etc. 2.5mm2 cable as PC excluding cost of 3 pin 13 Amps switch & socket out let make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel board recessed in walls complete in all respects and as per specifications & drawings.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	109.76			-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	73.17			-
A.08		Loop-Loop- 3 pin switch & plug combined recessed type :10/15 Amp					

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1	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		Same as item No.A.12 above but loop wiring of 3 pin switch & plug combined recessed type :10/15 Amp outlet with 2x4mm ² (P+N) & 1x2.5mm ² as CPC from point to point excluding cost of one 15A 3 pin switch socket outlets with make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel boards recessed in walls /columns.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	146.34			-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	97.56			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	195.12			-
	15-20-b	Supply and Erection 3 pin switch & plug combined recessed type :10/15 Amp	Each	14.00			-
A.09		Loop-Loop- 5 Amps Switch Socket					
		Same as item No.A.12 above but loop wiring of 5A power socket outlet with 2x4mm ² (P+N) & 1x2.5mm ² as CPC from point to point excluding cost of one 15A 3 pin switch socket outlets with make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel boards recessed in walls /columns.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	256.10			-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	170.73			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	341.47			-

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BILL OF QUANTITIES

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1	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	15-20-a	Supply and Erection 3 pin switch & plug combined recessed type : 5 Amp	Each	14.00			-
A.10		1-20 Amps Switch Socket					
		Supply and wiring of one 3pin 20 Amps Power plug socket outlet point from distribution board with single core 2x6mm ² (P+N) PVC insulated 300/500 volt grade cable in & including PVC conduit recessed in walls/R.C.C. slab, or installed on surface of Ceiling including all conduits accessories, junction boxes, pull boxes etc. 4mm ² cable as PC including cost of 3 pin 20 Amps switch & socket out let make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel board recessed in walls complete in all respects and as per specifications & drawings.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	73.18			-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	48.79			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	97.57			-
	15-81	Supply and Fixing 20 Amp power plug	Each	4.00			-
A.11		Fitting and Fixtures.					
		Supply at site, installation, testing and commissioning of the following indoor incandescent/LED light fittings, complete with brass lamp holders, fixing accessories, earthing terminal, drivery circuitry make as specified or by any one of the manufacturers mentioned in Annexure-"A", complete in all respects.					

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BILL NO. 7: CLARIFIER PUMPING STATION (04)

1	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
i)	15-36-j-12	Supply, installation, connecting, testing & commissioning of 10W LED Down Light Fixture suitable for 1300 lm, as per instruction of Engineer, surface mounted circular shape or equivalent.	Nos.	12.00			-
iii)	15-36-i-15	Supply, installation, testing and commissioning of recessed Dawn Light of best quality with CFL (13-17 watt) Energy saver and with Glass Reflector	Nos.	24.00			-
iii)	15-36-k-03	Supply, installation, connecting, testing and commissioning of Wall mounted Bulkhead light fixtures with LED retrofit lamp 540 Lumens output, complete in all respects	Nos.	8.00			-
A.12		Exhaust Fans					
a)	15-69-b	Supply and Erection best quality exhaust fan complete with shutter & regulator : 16"sweep	No	4.00			-
A.13		Ceiling Fan					
	15-127-m	Supply at site, installation, testing and commissioning of Fan Dimmer with switch/ MS, powder coated back box with all associated accessories, complete in all respects.	Nos.	4.00			-
	26-01-l-01	Supply and Erection of AC Energy Efficient Ceiling Fans 56 inch, 50 W	Nos.	8.00			-
A.14		Wall Bracket Fan					
	15-68-e	Supply, installation, testing & commissioning of Direct axial Wall Bracket fan	Nos.	2.00			-
A.15		PVC Conduit					

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BILL OF QUANTITIES

BILL NO. 7: CLARIFIER PUMPING STATION (04)

1	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		Supply at site of PVC conduit heavy duty to be concealed in RCC slabs, walls, floor, columns above false ceiling or as required as per site conditions including cost of all PVC conduit accessories, steel pull wires, complete in all respects.					
i)	15-02-b-08	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 4" i/d	M	18.30			-
A.16		<u>Distribution Board</u>					
		Fabrication, supply at site, installation, testing, commissioning and connections of wires / cables of Distribution Boards "Light / Power" concealed / open type to be installed as and where shown on drawing, made of MS sheet 16 SWG degreased and derusted, zinc phosphated, finished with electro-static powder coating of 50 micron thickness in approved colour, DB housing to comply with protection class IP-44 with hinged door, flexible earthing strap lockable handle, catcher, earthing bar, neutral strip, internal wiring from MCBs terminating on cable terminal blocks, including cost of all necessary materials complete in all respects. DBs shall be manufactured by any one of the manufacturers as mentioned in List.					
	15-162-j	Supply, Installation, connecting, testing & commissioning of wall mounted DBLP-G1, DBLP-G2, Distribution Boards, complete with all metering with indication lamps complete in all respects as per SLD.	Each	2.00			-
A.17		<u>Non-maintained Emergency Lighting</u>					
	Appendix 'c' Page No-5	Supply, installation and connections of Self Test Maintained With ISO 7010 Legend Set 7 Watt Colour Temperature 6000K ,235 Lumens on main supply and 150 Lumens on battery, Avg. Rated Life (Hrs) 30000 hr, IP65 rating with hanging arrangement on wall or ceiling as required complete in all respect as approved by the engineer incharge make Delpro (uk) or eqv.	Nos.	4.00			-
SUB TOTAL OF ELECTRICAL WORKS							-

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SUMMARY OF BILL NO. 8: RAPID GRAVITY FILTER

BILL NO.	DESCRIPTION OF WORK	Amount (PKR)
1	CIVIL WORKS	-
2	MECHANICAL WORKS	-
3	ELECTRICAL WORKS	-
TOTAL AMOUNT RS		-

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LOT 1: WATER TREATMENT PLANT						
BILL OF QUANTITIES						
BILL NO. 8: RAPID GRAVITY FILTER						
Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount		
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words
CIVIL WORKS						
1	03-67-a	Structural Excavation in Common Material by mechanical means	M3	15,374.03		-
2	03-18-d	Filling, watering and ramming earth under floor with earth excavated from outside lead upto 30m	M3	7,687.02		-
3	06-05-h	Plain Cement Concrete including placing, compacting, finishing & curing (Ratio 1:3:6)	M3	301.87		-
4	06-07-a-01	RCC in roof slab, beam, column & other structural members, insitu or precast. (1:1:2)	M3	4,805.72		-
5	06-07-b-01	RCC in raft foundation slab, base slab of column & ret. wall etc, not including in 06-06. (1:1:2)	M3	1,509.33		-
6	06-08-b	Supply & fabricate M.S. reinforcement for cement concrete (Hot rolled deformed bars Grade 60)	100 Kg	12,124.90		-
7	23-03-c-07	Providing & laying R.C.C. pipe sewers, moulded with cement concrete 1:1-1/2:3 conforming to ASTM specification C-76-79, Class IV, Wall B, including carriage, lowering in trenches to correct alignment and grade, jointing with rubber ring, cutting pipes where necessary, testing, etc. complete:- 30" i/d, Wall B	M	25.00		-
8	06-25-j	Providing and fixing ribbed polyvinyle chloride (PVC) water stops 8" (203 mm) wide in vertical (Walls/Columns) or horizontal (Floors/Slabs) expansion joints including cutting and jointing etc. complete in all floors .	M	1,478.07		-
9	07-05-a-03	1st class brick work in ground floor Cement, sand mortar 1:4	M3	274.36		-
10	11-08-b	Cement plaster 1:3 upto 20' height 1/2" thick	M2	1,316.79		-
11	11-21-a-03	Distempering New surface : Three coats	M2	1,316.79		-
12	11-18-b	Cement pointing struck joints, on walls, upto 20' height : Ratio 1:3	M2	1,034.52		-
13	11-10-a	Cement plaster 3/8" thick under soffit of RCC roof slabs only upto 20' height : (1:2)	M2	136.17		-
14	25-33-a	Providing and fixing terrace railing 2" i/d conduit pipe 16 SWG, welded with 5/8" x 5/8" square bar 2.75 ft. high fixed at 5" centre to centre, in RCC slab with suitable arrangement, complete in all respects as per design and drawing.	M	470.80		-
15	24-34	Supplying and Fixing flat iron (2"x3/8") ladder for OHR, holes @ 15" c/c, steps of MS bars 5/8" i/d & paint comple (for screen chamber)	M	49.75		-
16	09-01	First class tile roofing including earth, mud plaster, gobri leeping, cement plaster etc complete	M2	1,214.90		-
17	09-13	2 coats of bitumen laid hot using 34 lbs. for %sft over roof & blinded with sand at 1 cft per % sft	M2	1,214.90		-
18	06-28	Providing and laying polythene sheet 0.005" thick (0.05mm 500gauge) under cement concete.	M2	1,214.90		-

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LOT 1: WATER TREATMENT PLANT							
BILL OF QUANTITIES							
BILL NO. 8: RAPID GRAVITY FILTER							
Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
19	25-39-a-02	Providing and fixing steel windows with openable glazed pannels, using beam section for frame 1-1/2" x 1" x 5/8" x 1/8", z-section for leaves 3/4" x 1" x 3/4" x 1/8", T- section sashes 1"x1"x1/8" glass panes, wooden screed for glazing embeded over a thin layer of putty duly screwed with leaves, brass fittings holdfast, duly painted, complete in all respects, including all cost of material and labour etc. as per approved design and as directed by the engineer - in -charge Glass pane 2.5mm thick	M2	24.00			-
20	25-45-b	Supplying and Fixing 18 SWG MS Sheet Gate with angle iron frame (2"x2"x3/16") with side window, lock, painting etc	M2	17.55			-
21	25-35	Providing and Fixing 24 SWG GI sheet rolling shutter of steel frame of MS channel 2"x1.25"x1/8" complete	M2	35.10			-
22	06-08-a	Supply & fabricate M.S. reinforcement for cement concrete (Plain bars) (Rungs for UGWT)	100 Kg	4.00			-
23	14-37-c	Supply and Fixing cast iron (CI) manhole cover with frame etc (Heavey Type) of approved uality complete: 24" (610 mm) dia	Each	6.00			-
24	03-20-a	Transportation of earth all types beyond 250 m and upto 500 m.	M3	7,687.02			-
25	03-20-b	Transportation of earth all types for every 100m extra lead beyond 500m upto 1.5 km.	M3	7,687.02			-
26	03-20-c	Transportation of earth all types for every 500m extra lead beyond 1.5 km. upto 8 km.	M3	7,687.02			-
27	03-20-d	Transportation of earth all types for every 1 km extra lead or part thereof beyond 8 km.	M3	7,687.02			-
28	13-08-a	Bitumen coating to plastered/cement concrete surface: 20 lbs per 100 sft	m ²	1,929.20			-
SUB TOTAL OF CIVIL WORKS							-

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LOCAL GOVERNMENT, ELECTIONS AND RURAL DEVELOPMENT DEPARTMENT

KPCIP-CW-04: MINGORA GREATER WATER SUPPLY SCHEME INCLUDING NEW WATER TREATMENT PLANT (WTP), INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS AND SCADA:

LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 8: RAPID GRAVITY FILTER

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	MECHANICAL WORKS						
1	NS-1	Providing cutting, fabricating and fixing in position SS scum and weir plates 5mm thick welded with SS angle and embedded into concrete with bolt and nut @ 500mm c/c complete in all respect as per given drawing and specification	M	61.30			-
2	NS-2	Backwash Pumps					
		Providing, installing, testing and commissioning backwash Pumps (vertical-shaft, non-clogging/solids-handling, submersible, centrifugal type), of internationally reputed approved make, complete with pump, motor (4-pole), automatic liquid level-controlled switching device (ultrasonic sensor type) and starter, with pump impeller, shaft & sleeve to be of stainless steel of approved grade, including all jointing, fixing & installation accessories, all painting & coatings; and a complete set of special tools, test equipment & spare parts, complete in all respects, in accordance with the Contract, as follows:					
		Capacity: 14.5 ft ³ /s, Head: 55 ft	No.	6.00			-
3	NS-3	Motorized Penstock Gates					
		Providing, installing, testing and commissioning cast iron (CI) Penstocks (Motor Operated, with Manual Override) in concrete structures, of internationally reputed approved make, complete withsliding cover/gate & wedges, cover/gate guide & seating mechanism, stem, stem couplings, stem guides, top mounting brackets, thimbles, manual gate lifting assembly, geared motor, motor starter and on/off control device,including all jointing, fixing, sealing& installation accessories,initial lubricant charge, all painting & coatings, with all the exposed ferrous surfaces to be epoxy coated, and a complete set of special tools, test equipment & spare parts, complete in all respects, in accordance with the Contract, as follows:					
		1000mm x 600mm (For all installation depths)	No.	20.00			-
		450mm x 450mm (For all installation depths)	No.	20.00			-

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BILL OF QUANTITIES

BILL NO. 8: RAPID GRAVITY FILTER

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
4	NS-4	Top-Running Double-Girder Bridge Cranes					
		Providing, installing, testing and commissioning Top-Running Double-Girder Bridge Cranes, of internationally reputed approved make, complete with all its moving components, drives, drive controls, safety mechanisms, cables, cables collapsing mechanisms, operation-control equipment, and side rails, to be supported on the structure, including all jointing, fixing & installation accessories, initial charging of lubricants, all painting & coatings; and a complete set of special tools, test equipment & spare parts, complete in all respects, in accordance with the Contract, as follows:					
		Capacity: 5 Tons	Each	2.00			-
5	NS-5	Air Blowers					
		Providing, installing, testing and commissioning Air Blowers (Screw Type) for Backwashing in rapid sand filters, of internationally reputed approved make, complete with 3-phase motor, support base/frame, sound absorber canopy (Maximum Sound Level: 75 dB-A), silencer, air filter, pressure gauge, check valve, blow off valve, safety valve, inlet & outlet connections, all necessary devices for automatic switching ON/OFF of blower, motor control unit (MCU, in painted metallic box, complete with starter and all the required control, relay, monitoring and protection devices) and electrical & control cables (between blower and MCU), including all jointing, fixing & installation accessories, vibration-control accessories, initial lubricant charge, all painting & coatings; and a complete set of special tools, test equipment & spare parts, complete in all respects, in accordance with the Contract, as follows:					
		In Rapid Gravity Filters; Air Flow rate: 2700 m3/hr, Differential Pressure = 1bar	No.	4.00			-
6	NS-6	Ductile Iron (DI) Pipe					
		Providing, laying, cutting, jointing, testing and disinfecting DI PIPE in filtration assembly, complete in all respects.(including fittings as Bends etc)					
a)		200mm	M	192.00			-

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BILL OF QUANTITIES

BILL NO. 8: RAPID GRAVITY FILTER

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
b)		300mm	M	48.00			-
c)		600mm	M	168.00			-
7	NS-7	Motorized Butterfly valve					
		200mm	No.	20.00			-
		300mm	No.	20.00			-
		600mm	No.	40.00			-
9	NS-9	Ultrasonic Level Sensor					
		Providing, installing, testing and commissioning Ultrasonic level sensors (Max Water Temperature: 40C, With automatic temperature compensation) in Rapid Sand Filtration Tank, of internationally reputed approved make, complete with on-site LCD display unit (with adjustable backlight and contrast), mounting arrangements (in stainless steel, Grade 316) for probe & display unit, display unit cabinet (painted metallic box with glazed front door),electric cable & conduit between probe & display unit, all the necessary provisions, instruments and accessories for integration with SCADA and power supply, including all jointing, fixing & installation accessories, all painting & coatings and a complete set of special tools, test equipment & essential spare parts, complete in all respects, in accordance with the Contract	No.	20.00			-
6	NS-6	Provide , Place & compact filter media containing layers of silica sand (800mm depth) and well graded gravel (460mm depth) as per given specification and drawing complete in all respect	per sq.m	1,250.70			-
7	NS-7	Supply, installation, testing and commissioning of Filter Nozzles with threaded sleeves to be embedded into precast plenum floor in PP / PVDF / FRP material of construction complete in all respect s as per drawings and specifications.	No.	38,880.00			-
SUB TOTAL OF MECHANICAL WORKS							-

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BILL OF QUANTITIES

BILL NO. 8: RAPID GRAVITY FILTER

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		ELECTRICAL WORKS					
1.0		Light Circuits					
		Supply, installation and commissioning of light circuit wiring, to be wired with 4x2.5mm sq. (1P+1N+1UPS+1PE) PVC insulated 300/500 V grade wire make Pakistan Cable, Newage, AGE Cables, Golden Star, in and including cost of 1" dia. heavy duty PVC conduit make Beta, Popular recessed in walls, Roof slab, or on surface or above false ceiling or as required as per site conditions, all PVC conduit accessories, pull boxes, steel pull wires, complete in all respects. Each circuit shall have independent PE.					
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	97.56			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	24.39			-
2.0		1-Light Point Controlled By One Switch					
		Wiring of one light point controlled by one switch and wired with 3x1.5 mm sq. (P+N+PE) PVC insulated wires 300/500 V. grade make Pakistan Cable, Newage Pioneer Cables,, in and including cost of 3/4" dia. heavy duty PVC conduit make Beta, Popular installed on RCC slab, above false ceiling, recessed in wall, columns slabs or above light carrier all PVC conduit accessories, 3" high PVC junction boxes, pull boxes, steel pull wires, PVC flexible conduit from ceiling junction box to light fixture flush type plate switches, including cost of back boxes and switches of 10 Amps.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	146.34			-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	48.78			-
3.0		Point -Point Wiring					

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BILL OF QUANTITIES

BILL NO. 8: RAPID GRAVITY FILTER

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		Same as per item No. A.02 but Loop wiring of a light point from first light point on same switch circuit, complete in all respects.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	390.24			-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	130.08			-
4.0		Gang Light Control Switches					
	15-127-f	Supply at site, installation, testing and commissioning of Six gang light control switches 10 Amps, 250Volts one way, including appropriate size concealed MS, powder coated back box, complete in all respects.	Each	8.00			-
5.0		Exhaust Fan Point					
		Same as Item No. A.02 mentioned above but wiring of exhaust fan point including cost of 10 Amp switch with M.S box 16 SWG with earth terminal.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	109.76			-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	36.59			-
6		Ceiling Fan Point					
		Same as Item No. A.02 mentioned above but wiring of Ceiling fan point including cost of 10 Amp switch with M.S box 16 SWG with earth terminal.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	439.02			-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	146.34			-

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BILL OF QUANTITIES

BILL NO. 8: RAPID GRAVITY FILTER

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
7.0		1-3 pin switch & plug combined recessed type :10/15 Amp					
		Supply and wiring of one 3 pin switch & plug combined recessed type :10/15 Amp outlet point from distribution board with single core 2x4mm2(P+N) PVC insulated 300/500 volt grade cable in & including PVC conduit recessed in walls/R.C.C. slab, or installed on surface of Ceiling, all conduits accessories, junction boxes, pull boxes etc. 2.5mm2 cable as PC excluding cost of 3 pin 13 Amps switch & socket out let make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel board recessed in walls complete in all respects and as per specifications & drawings.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	109.76			-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	36.59			-
8.0		Loop-Loop- 3 pin switch & plug combined recessed type :10/15 Amp					
		Same as item No.A.12 above but loop wiring of 3 pin switch & plug combined recessed type :10/15 Amp outlet with 2x4mm2(P+N) & 1x2.5mm2 as CPC from point to point excluding cost of one 15A 3 pin switch socket outlets with make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel boards recessed in walls /columns.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	329.27			-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	109.76			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	109.76			-
	15-20-b	Supply and Erection 3 pin switch & plug combined recessed type :10/15 Amp	Each	18.00			-
9.0		Loop-Loop- 5 Amps Switch Socket					

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 8: RAPID GRAVITY FILTER

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		Same as item No.A.12 above but loop wiring of 5A power socket outlet with 2x4mm2(P+N) & 1x2.5mm2 as CPC from point to point excluding cost of one 15A 3 pin switch socket outlets with make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel boards recessed in walls /columns.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	329.27			-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	109.76			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	109.76			-
	15-20-a	Supply and Erection 3 pin switch & plug combined recessed type : 5 Amp	Each	18.00			-
10.0		1-20 Amps Switch Socket					
		Supply and wiring of one 3pin 20 Amps Power plug socket outlet point from distribution board with single core 2x6mm2(P+N) PVC insulated 300/500 volt grade cable in & including PVC conduit recessed in walls/R.C.C. slab, or installed on surface of Ceiling including all conduits accessories, junction boxes, pull boxes etc. 4mm2 cable as PC including cost of 3 pin 20 Amps switch & socket out let make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel board recessed in walls complete in all respects and as per specifications & drawings.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	73.17			-

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BILL OF QUANTITIES

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Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	24.39			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	24.39			-
	15-81	Supply and Fixing 20 Amp power plug	Each	4.00			-
11.0		Fitting and Fixtures.					
		Supply at site, installation, testing and commissioning of the following indoor incandescent/LED light fittings, complete with brass lamp holders, fixing accessories, earthing terminal, drivery circuitry make as specified or by any one of the manufacturers mentioned in Annexure-"A", complete in all respects.					
i)	15-36-k-01	Supply, installation, connecting, testing and commissioning of Surface mounting LED tube light with 2x2000 lumens, complete in all respects	Nos.	40.00			-
iii)	15-36-k-03	Supply, installation, connecting, testing and commissioning of Wall mounted Bulkhead light fixtures with LED retrofit lamp 540 Lumens output, complete in all respects	Nos.	12.00			-
12.0		Exhaust Fans					
a)	15-69-b	Supply and Erection best quality exhaust fan complete with shutter & regulator : 16"sweep	Nos.	8.00			-
13.0		Ceiling Fan					
	15-127-m	Supply at site, installation, testing and commissioning of Fan Dimmer with switch/ MS, powder coated back box with all associated accessories, complete in all respects.	Nos.	12.00			-

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	26-01-l-01	Supply and Erection of AC ENERGY EFFICIENT CEILING FANS 56 inch, 50 W	Nos.	12.00			-
14.0		<u>Distribution Board</u>					
		Fabrication, supply at site, installation, testing, commissioning and connections of wires / cables of Distribution Boards "Light / Power" concealed / open type to be installed as and where shown on drawing, made of MS sheet 16 SWG degreased and derusted, zinc phosphated, finished with electro-static powder coating of 50 micron thickness in approved colour, DB housing to comply with protection class IP-44 with hinged door, flexible earthing strap lockable handle, catcher, earthing bar, neutral strip, internal wiring from MCBs terminating on cable terminal blocks, including cost of all necessary materials complete in all respects. DBs shall be manufactured by any one of the manufacturers as mentioned in List.					
	15-162-j	Supply, Installation, connecting, testing & commissioning of wall mounted DBLP-G1, DBLP-G2, Distribution Boards, complete with all metering with indication lamps complete in all respects as per SLD.	Each	2.00			-
	15-135-e	Supply at site, fabrication and installation of GI perforated cable tray 14 SWG 8 ft. to 10 ft. long, 12" wide with sides 3" high to be installed on wall, or in vertical, or above false ceiling in horizontal position or floor mounted or as shown on drawing, including cost of hanging arrangement brackets made of angle iron 38mm x 38mm x 6mm installed at every 3 ft., cost of all necessary fixing accessories, complete in all respects.	M	42.68			-
15.0		<u>Fire Extinguisher</u>					
	14-145-a	Providing and fixing of Dry powder type Fire Extinguisher of approved quality and manufacturer best design including all fittings complete in all respects. : 6kg	Each	4.00			-

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	14-172-a	Supplying and fixing of Dry Chemical Powder Fire Extinguisher 6Kg Capacity complete in all respect	Each	4.00			-
16		<u>Non-maintained Emergency Lighting</u>					
	Appendix ' c' Page No-5	Supply, installation and connections of Self Test Maintained With ISO 7010 Legend Set 7 Watt Colour Temperature 6000K ,235 Lumens on main supply and 150 Lumens on battery, Avg. Rated Life (Hrs) 30000 hr, IP65 rating with hanging arrangment on wall or ceiling as required complete in all respect as approved by the engineer incharge make Delpro (uk) or eqv.	Nos.	6.00			-
SUB TOTAL OF ELECTRICAL WORKS							-

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SUMMARY OF BILL NO. 9: SLUDGE THICKENER

BILL NO.	DESCRIPTION OF WORK	Amount (PKR)
1	CIVIL WORKS	-
2	MECHANICAL WORKS	-
TOTAL AMOUNT RS		-

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BILL NO. 9: SLUDGE THICKENER

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
CIVIL WORKS							
1	03-67-a	Structural Excavation in Common Material by mechanical means	M3	4,355.63			-
2	03-18-d	Filling, watering and ramming earth under floor with earth excavated from outside lead upto 30m	M3	871.13			-
2	06-05-h	Plain Cement Concrete including placing, compacting, finishing & curing (Ratio 1:3:6)	M3	54.00			-
3	06-05-f	Plain Cement Concrete including placing, compacting, finishing & curing (Ratio 1:2:4)	M3	80.04			-
4	06-07-a-01	RCC in roof slab, beam, column & other structural members, insitu or precast. (1:1:2)	M3	255.86			-
5	06-07-b-01	RCC in raft foundation slab, base slab of column & ret. wall etc, not including in 06-06. (1:1:2)	Per Cft	420.39			-
6	06-08-b	Supply & fabricate M.S. reinforcement for cement concrete (Hot rolled deformed bars Grade 60)	100 Kg	955.41			-
7	06-25-j	Providing and fixing ribbed polyvinyle chloride (PVC) water stops 8" (203 mm) wide in vertical (Walls/Columns) or horizontal (Floors/Slabs) expansion joints including cutting and jointing etc. complete in all floors .	M	83.25			-
8	25-10&11	Fabrication of heavy steel work with angle, tees, sheet iron etc for making trusses, girders etc including Erection and fitting in position iron trusses, staging of water tanks, etc (for Steel stair including duly painting red oxide)	Tonne	1.54			-

GOVERNMENT OF KHYBER PAKHTUNKHWA

KHYBER PAKHTUNKHWA CITIES IMPROVEMENT PROJECT

LOCAL GOVERNMENT, ELECTIONS AND RURAL DEVELOPMENT DEPARTMENT

KPCIP-CW-04: MINGORA GREATER WATER SUPPLY SCHEME INCLUDING NEW WATER TREATMENT PLANT (WTP), INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS AND SCADA:

LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 9: SLUDGE THICKENER

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
9	25-33-a	Providing and fixing terrace railing 2" i/d conduit pipe 16 SWG, welded with 5/8" x 5/8" square bar 2.75 ft. high fixed at 5" centre to centre, in RCC slab with suitable arrangement, complete in all respects as per design and drawing.	M	59.60			-
10	03-20-a	Transportation of earth all types beyond 250 m and upto 500 m.	M3	871.13			-
11	03-20-b	Transportation of earth all types for every 100m extra lead beyond 500m upto 1.5 km.	M3	871.13			-
12	03-20-c	Transportation of earth all types for every 500m extra lead beyond 1.5 km. upto 8 km.	M3	871.13			-
13	03-20-d	Transportation of earth all types for every 1 km extra lead or part thereof beyond 8 km.	M3	871.13			-
14	13-08-a	Bitumen coating to plastered/cement concrete surface: 20 lbs per 100 sft	m ²	169.56			-
SUB TOTAL OF CIVIL WORKS							-

GOVERNMENT OF KHYBER PAKHTUNKHWA

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 9: SLUDGE THICKENER

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	MECHANICAL WORKS						
1	24-30-b-10	Providing, laying, cutting, jointing, testing and disinfecting High Density Polyethylene Pipe (HDPE) Din-8074/Din-8075/ISO-4427 in trenches, complete in all respects (160 mm dia) PN-10	M	25.00			-
2	24-30-b-12	Providing, laying, cutting, jointing, testing and disinfecting High Density Polyethylene Pipe (HDPE) Din-8074/Din-8075/ISO-4427 in trenches, complete in all respects (250 mm dia) PN-10	M	45.00			-
3	NS-1	Providing, laying, cutting, jointing, testing and disinfecting High Density Polyethylene Pipe (HDPE) Din-8074/Din-8075/ISO-4427 in trenches, complete in all respects PN-10 710mm (including fittings as Bends etc)	M	30.00			-
4	NS-2	Providing cutting, fabricating and fixing in position SS scum and weir plates 5mm thick welded with SS angle and embedded into concrete with bolt and nut @ 500mm c/c complete in all respect as per given drawing and specification	M	36.14			-
5	NS-3	Sludge Scrappers					
		Providing, installing, testing and commissioning Mechanical Sludge Scraper (End-Driven, Rotating Half-Bridge type, Peripheral Speed: 1-2 m/min), of internationally reputed approved make, complete with the main bridge structure with decking (Min Width: 1000 mm) & safety handrails (Min Height: 1100 mm), scraper blades (discontinuous, fish bone type, furnished with sweeping strip of EPDM)& their support structure, central support/bearing unit, current collector unit, end drive unit with motor, motor starter, reduction gearbox& wheels, obstacle detection switch, electric cable & conduit from current collector unit to end drive unit, inlet drum, scum skimmer, scum collection box, scum outflow pipe & valved outlet, with all the submerged/wetted components to be of stainless steel (Grade 316) and other structural components to be of carbon steel (approved epoxy coated), including all jointing, fixing & installation accessories, all painting & coatings and a complete set of special tools, test equipment & essential spare parts, complete in all respects, in accordance with the Contract, as follows:	EACH	1.00			-
		In Sludge Thickener (Internal Diameter: 18.0 m, Side Depth:4.5m)					

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 9: SLUDGE THICKENER

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
6	NS-4	Tractor with Trolley					
		Providing Tractor with trolley at site including registration or any other Govt dues with following details The tractor having capacity of 75HP and should be 4WD with trolley 7Cu.m capacity as per given specification	Each	2.00			-
SUB TOTAL OF MECHANICAL WORKS							-

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LOT 1: WATER TREATMENT PLANT

SUMMARY OF BILL NO. 10: CHLORINE CONTACT TANK & TREATED WATER TANK

BILL NO.	DESCRIPTION OF WORK	Amount (PKR)
1	CIVIL WORKS	-
2	MECHANICAL WORKS	-
TOTAL AMOUNT RS		-

GOVERNMENT OF KHYBER PAKHTUNKHWA							
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<u>KPCIP-CW-04: MINGORA GREATER WATER SUPPLY SCHEME INCLUDING NEW WATER TREATMENT PLANT (WTP), INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS AND SCADA:</u>							
LOT 1: WATER TREATMENT PLANT							
BILL OF QUANTITIES							
BILL NO. 10: CHLORINE CONTACT TANK & TREATED WATER TANK							
Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
CIVIL WORKS							
1	03-67-a	Structural Excavation in Common Material by mechanical means	M3	58,174.05			-
2	03-18-d	Filling, watering and ramming earth under floor with earth excavated from outside lead upto 30m	M3	14,543.51			-
3	06-05-h	Plain Cement Concrete including placing, compacting, finishing & curing (Ratio 1:3:6)	M3	956.66			-
4	06-07-a-01	RCC in roof slab, beam, column & other structural members, insitu or precast. (1:1:2)	M3	5,304.50			-
5	06-07-b-01	RCC in raft foundation slab, base slab of column & ret. wall etc, not including in 06-06. (1:1:2)	M3	4,632.29			-
6	06-08-b	Supply & fabricate M.S. reinforcement for cement concrete (Hot rolled deformed bars Grade 60)	100 Kg	19,078.64			-
7	06-25-j	Providing and fixing ribbed polyvinyle chloride (PVC) water stops 8" (203 mm) wide in vertical (Walls/Columns) or horizontal (Floors/Slabs) expansion joints including cutting and jointing etc. complete in all floors .	M	615.00			-
8	25-33-a	Providing and fixing terrace railing 2" i/d conduit pipe 16 SWG, welded with 5/8" x 5/8" square bar 2.75 ft. high fixed at 5" centre to centre, in RCC slab with suitable arrangement, complete in all respects as per design and drawing.	M	338.30			-
8a	24-34	Supplying and Fixing flat iron (2"x3/8") ladder for OHR, holes @ 15" c/c, steps of MS bars 5/8" i/d & paint complete	M	3.96			-
9	25-10&11	Fabrication of heavy steel work with angle, tees, sheet iron etc for making trusses, girders etc including Erection and fitting in position iron trusses, staging of water tanks, etc (for Steel stair including duly painting red oxide)	Ton	0.58			-
10	03-20-a	Transportation of earth all types beyond 250 m and upto 500 m.	M3	14,543.51			-
11	03-20-b	Transportation of earth all types for every 100m extra lead beyond 500m upto 1.5 km.	M3	14,543.51			-
12	03-20-c	Transportation of earth all types for every 500m extra lead beyond 1.5 km. upto 8 km.	M3	14,543.51			-
13	03-20-d	Transportation of earth all types for every 1 km extra lead or part thereof beyond 8 km.	M3	14,543.51			-
14	13-08-a	Bitumen coating to plastered/cement concrete surface: 20 lbs per 100 sft	m ²	2,048.65			-
SUB TOTAL OF CIVIL WORKS							-

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LOT 1: WATER TREATMENT PLANT							
BILL OF QUANTITIES							
BILL NO. 10: CHLORINE CONTACT TANK & TREATED WATER TANK							
Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
MECHANICAL WORKS							
1	NS-1	Providing, installing and testing cast iron (CI) Penstocks (Manually Operated) in concrete structures, of internationally reputed approved make, complete with sliding cover/gate & wedges, cover/gate guide & seating mechanism, stem, stem couplings, stem guides, top mounting brackets, thimbles and manual gate lifting assembly, including all jointing, fixing, sealing & installation accessories, initial lubricant charge, all painting & coatings, with all the exposed ferrous surfaces to be epoxy coated, complete in all respects, in accordance with the Contract, as follows:					
		1050 mm x 1050 mm(for all Installation Depths)	No.	2.00			-
2	NS-2	Providing cutting, fabricating and fixing in position weir plates 5mm thick welded with SS angle and embedded into concrete with bolt and nut @ 500mm c/c complete in all respect as per given drawing and specification.	M	60.00			-
SUB TOTAL OF MECHANICAL WORKS							-

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LOT 1: WATER TREATMENT PLANT

SUMMARY OF BILL NO. 11: ADMIN BUILDING

BILL NO.	DESCRIPTION OF WORK	Amount (PKR)
1	CIVIL WORKS	-
2	MECHANICAL WORKS	-
3	ELECTRICAL WORKS	-
4	PLUMBING WORKS	-
TOTAL AMOUNT RS		-

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 11: ADMIN BUILDING

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		CIVIL WORKS					
1	03-67-b-i	Structural Excavation in Common Material by mechanical means	M3	315.92			-
2	03-18-d	Filling, watering and ramming earth under floor with earth excavated from outside lead upto 30m	M3	210.61			-
		Anti-Termite					
3	28-15	Pre anti Termite Treatment in the building mixed with water of mixing ratio as per the manufacturer's certified manual	M2	370.57			-
		Plain and Reinforcement Concrete					
4	06-03-b	Cement Concrete (brick/stone ballast, 1.5" to 2"/nullah shingle well graded and cleaned) in foundation & plinth (Ratio 1:4:8)	M3	5.28			-
5	06-07-b-01	RCC in raft foundation slab, base slab of column & ret. wall etc, not including in 06-06. (1:1:2)	M3	24.52			-
		GROUND FLOOR					
6	06-07-a-03	RCC in roof slab, beam, column & other structural members, insitu or precast. (1:2:4)	M3	43.40			-
		FIRST FLOOR					
7	06-07-a-03	RCC in roof slab, beam, column & other structural members, insitu or precast. (1:2:4)	M3	37.06			-
		MUMTY					

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 11: ADMIN BUILDING

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
8	06-07-a-03	RCC in roof slab, beam, column & other structural members, insitu or precast. (1:2:4)	M3	5.04			-
		Steel Reinforcement					
9	06-08-b	Supply & fabricate M.S. reinforcement for cement concrete (Hot rolled deformed bars Grade 60)	Tonne	26.67			-
10	06-26-a-02	Damp proof course of cem. conc. 1:2:4 including bitumen coat, 1 layer polythene & 1 coat bitumen (2" thick)	M2	30.50			-
11	06-30-a-04	V. Damp proof c/s plaster, 1 layer polythene 1 coat bitumen Ratio 1:3 (0.75" thick)	M2	55.23			-
		Brick Work					
12	07-04-a-04	1st class brick work in foundation and plinth in Cement, sand mortar 1:5	M3	17.32			-
		GROUND FLOOR					
13	07-05-a-04	1st class brick work in ground floor Cement, sand mortar 1:5	M3	61.82			-
		FIRST FLOOR					
14	07-05-a-04	1st class brick work in first floor Cement, sand mortar 1:5	M3	66.62			-
		MUMTY					
15	07-05-a-04	1st class brick work in second floor Cement, sand mortar 1:5	M3	12.17			-
		Flooring					

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KPCIP-CW-04: MINGORA GREATER WATER SUPPLY SCHEME INCLUDING NEW WATER TREATMENT PLANT (WTP), INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS AND SCADA:

LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 11: ADMIN BUILDING

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
16	07-30	Supplying and filling sand under floor or plugging in wells	M3	10.49			-
17	10-03-b	Provide, lay, water & ram brick ballast 1.5" to 2" guage mixed with 25% sand for floor foundations	M3	18.37			-
18	06-05-f	Plain Cement Concrete including placing, compacting, finishing & curing (Ratio 1:2:4)	M3	9.16			-
19	10-55-g	Providing and Fixing of Porcelain Floor Tile 24" x 24" of approved quality	M2	143.12			-
20	10-51	Providing and Fixing of Ceramic Tiles 12"x24" of Imported Approved Quality with jointing and finishing	M2	22.27			-
21	10-42	Providing and fixing on walls 1/4"(6mm approx.) thick of imported first grade ceramic tiles of size 24 in x 24 in of approved colour on walls, over 1/2" (13mm) thick base of cement mortar 1:3 setting of tiles in slurry of grey cement over mortar base including filling the joint with white cement and washing the tile, curing and cleaning etc. complete.	M2	116.30			-
		Surface Rendering					
22	11-10-b	Cement plaster 3/8" thick under soffit of RCC roof slabs only upto 20' height : (1:3) (ceiling plaster)	M2	173.77			-
23	11-09-b	Cement plaster 1:5, upto 20' height 1/2" thick (Internal walls)	M2	1,017.88			-
24	11-09-c	Cement Plaster 1:5, upto 20' height 3/4" thick (External walls)	M2	338.66			-
		Wood Work					

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KPCIP-CW-04: MINGORA GREATER WATER SUPPLY SCHEME INCLUDING NEW WATER TREATMENT PLANT (WTP), INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS AND SCADA:

LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 11: ADMIN BUILDING

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
25	12-49-c	First class deodar wood wrought joinery in doors and windows etc. panelled or panelled or glazed or fully glazed fixed in position including chowkhat, holdfast, hinges, tower bolt rubber stop cleats/G I clamp, handles and chord with hooks etc. complete (excluding sliding bolts or lock) : 1½" (40mm) thick.	M2	5.38			-
26	12-56-c	Providing and fixing 1.5" (38 mm) thick pressed veneered door shutters fully flushed with First class wood veneering on all faces and sides fixed over partial wood cavited core and frame work of not less than 4" (100mm) wide strips all round with approved iron hinges, tower bolts as required.	M2	33.94			-
27	12-57-a	Providing and fixing single leaf steel door with frame fully panelled with M.S sheet 16 gauge (1.59mm) painted with two coats of red oxide paint with brass fitting of approved make including cost of fabrication, iron lugs, cutting holes and making good the damages to walls	M2	2.35			-
28	12-70-a	Supply and Fixing MS Sheet 16 guage(10" x 2") box type chowkats including fixing in position with all charges for Hold fast, Hinges and Painting etc	M	81.84			-
29	12-24-a-01	providing/fixing approved quality Rim locks : Imported	Each	13.00			-
30	12-22-a-01	Providing and fixing sliding bolt to doors Iron sliding bolts : 10" long	Each	8.00			-
31	12-21-b	P/F hydraulic Door Closer (Best Quality)	Each	7.00			-
32	12-78-a	Kitchen Floor Cabinet as per MES Design/Specification.	M2	5.02			-
33	12-78-b	Kitchen Wall Cabinet as per MES Design/Specification.	M2	3.65			-

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 11: ADMIN BUILDING

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		Painting and Warnishing					
34	11-20-b	Providing and applying wall putty of 2mm thickness over plastered surface to prepare the surface even and smooth complete.	M2	1,251.24			-
35	13-03-i	Providing and applying 3 coats of approved type of Plastic emulsion paint to Plastic surface as per manufacture specification.	M2	1,251.24			-
36	Ch-13 item 25-a+(bx2) P-102	Preparing surface & painting with snowcem / weathershield paint: 3 Coats	M2	355.59			-
37	Ch-13 item 06 P-100	Applying lacquer polish to wood work of any type	M2	78.63			-
38	Ch-13 item 03-c-01+(c-02x2) P-100	Prepare & Paint new surface, doors & windows: 3 Coats	M2	4.70			-
		Metal Work					
39	12-66	Supply and Fixing of double glazed aluminium (color as approved) Premium model (Gauge 2 mm) 4" sect. Sliding window, including all necessary fittings and fly screen shutters complete.	M2	37.28			-
40	12-61	MS flat 1/2"x1/8" grill in windows of approved design	M2	18.56			-
41	25-47	Supply and fixing of fancy type stainless steel chromium plate 2" dia pipes stair railing 3/4" dia pipe fixed on specified space on steps in horizontal positions, complete in all respects	M	16.00			-
		Roofing & Water Proofing					

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 11: ADMIN BUILDING

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
42	Ch-9 item 06+13 P-56&57 + Ch-6 item 28 P-34	Single layer of tiles 10"x5"x1.25" laid over 4" earth and 1" mud plaster on top of RC roof slab, provided with 2 coats of bitumen laid hot using 34 lbs. for %sft over roof & blinded with sand at 1 cft per % sft.i/c P/L Providing and laying polythene sheet 0.005" thick (0.05mm 500gauge)	M2	104.94			-
43	09-16	Khuras on roof 2'x2'x6"	Each	2.00			-
44	09-17	Bottom khuras of brick masonry in c/s mortar 1:6,4'x2'x4.5" over 3" cem. concrete 1:4:8	Each	2.00			-
45	03-20-a	Transportation of earth all types beyond 250 m and upto 500 m.	M3	210.61			-
46	03-20-b	Transportation of earth all types for every 100m extra lead beyond 500m upto 1.5 km.	M3	210.61			-
47	03-20-c	Transportation of earth all types for every 500m extra lead beyond 1.5 km. upto 8 km.	M3	210.61			-
48	03-20-d	Transportation of earth all types for every 1 km extra lead or part thereof beyond 8 km.	M3	210.61			-
		Windows Sill					
1	N.S	ProvidinProviding and fixing 1/2" thick Pre-polished Sunny White Marble Slab uniform texture full width area above 3-8 sft laid ove 3/4" thick cement sand mortar (1:2) i/c filling joints in white cement & matching pigment i/c beveling charges on exposed edges, complete in all respect as approved / directed by The Engineer.	M2	9.82			-
		Entrance Steps / Podium					

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 11: ADMIN BUILDING

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
2	N.S	Providing and fixing 3/4" thick pre-polished Granite Marble Slab uniform texture full width area above 2 sft laid over 3/4" thick cement sand mortar (1:2) i/c filling joints in white cement & matching pigment i/c beveling charges on exposed edges complete in all respect as approved / directed by The Engineer.	M2	3.22			-
		Stair Steps					
3	N.S	Providing and laying Pre-polished Black Granite (supreme quality) slabs laid over 3/4" thick cement sand mortar (1:2) i/c filling joints in white cement & matching pigment, making rounding edge and chemical polishing etc; complete in all respect as per Specifications, and as per sample approved by The Engineer.					
3.1	a)	3/4" thick Pre-polished Black Granite (supreme quality) one-piece slab of length and width as shown on drawings, over treads and projecting edge of treads will be doubled by bounding and rounded smooth of stairs and entrance steps.	M2	17.07			-
3.2	b)	1/2" thick Pre-polished Black Granite (supreme quality) slabs of length and height as shown on drawings, over risers of stairs and entrance steps.	M2	6.83			-
4	N.S	Providing and laying Pre-polished Black Granite one-piece marble slabs Kitchen / Vanity Counter etc; laid over 3/4" thick cement sand mortar (1:2) i/c filling joints in white cement & matching pigment, making rounding edge and chemical polishing etc; complete in all respect, as per drawings and Specifications, sample as approved by The Engineer.	M2	3.65			-
		Miscellenious					
5	N.S	Supply, provide and fix in position uPVC rain water down pipe lines conforming to ISO 3633:1991 and BS 3505 1968 (wall thickness 3.2mm) including proper joints complete in all respects, and system leak-free:					

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 11: ADMIN BUILDING

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		4" dia	M	19.20			-
6	N.S	Provide and fix uPVC plain bends with grating (as rain water inlets at roof), water tight connection leak-free:					
		4" dia	Each	2.00			-
7	N.S	Provide and fix uPVC shoe bends (as rain water outlets), water tight connection leak-free					
		4" dia	Each	2.00			-
SUB TOTAL OF CIVIL WORKS							-

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BILL OF QUANTITIES						
BILL NO. 11: ADMIN BUILDING						
Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount		
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words
		MECHANICAL WORKS				
1	NS-1	laboratory Equipments				
		Providing laboratory equipment at water treatment plant site laboratory to check different water quality parameters.(i.e. Drying oven & sterilizers, Ultrasonic washers, Colony counter, Double beam spectrophotometer, Turbidity meter, pH meters,Conductivity meter, Refrigerator and medical freezer, Centrifuges, Nitrogen digester and distillation apparatus, Jar testers, Furniture and glassware, Microscopes, and any equipment/instrument for testing of parameters specified by engineer.)	LS	1.00		-
2	NS-2	Potable water Pumps				
		Designing, manufacturing, testing at manufacturer's workshop, supplying at site, installaiton, testing, commissioning, gurantee and maintenance for one yerar during defect liability period of each item of Horizontal shaft split centrifugal pump including all accessories with suitable motor, control panel and delivery pipe, complete in all respects as per drawings and specificaitons. The pump and motor shall be of approved manufacturer.	No	2.00		-
		Capacity:17m3/hr, Head:20m				
SUB TOTAL OF MECHANICAL WORKS						-

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		ELECTRICAL WORKS					
A.01		Light Circuits					
		Supply, installation and commissioning of light circuit wiring, to be wired with 4x2.5mm sq. (1P+1N+1UPS+1PE) PVC insulated 300/500 V grade wire make Pakistan Cable, Newage, AGE Cables, Golden Star, in and including cost of 1" dia. heavy duty PVC conduit make Beta , Popular recessed in , walls, Roof slab, or on surface or above false ceiling or as required as per site conditions, all PVC conduit accessories, pull boxes, steel pull wires , complete in all respects. Each circuit shall have independent PE.					
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	m	402.44			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	m	100.61			-
A.02		1-Light Point Controlled By One Switch					
		Wiring of one light point controlled by one switch and wired with 3x1.5 mm sq. (P+N+PE) PVC insulated wires 300/500 V. grade make Pakistan Cable, Newage Pioneer Cables,, in and including cost of 3/4" dia. heavy duty PVC conduit make Beta , Popular installed on RCC slab, above false ceiling, recessed in wall, columns slabs or above light carrier all PVC conduit accessories, 3" high PVC junction boxes, pull boxes, steel pull wires, PVC flexible conduit from ceiling junction box to light fixture flush type plate switches, including cost of back boxes and switches of 10 Amps.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	m	768.29			-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	m	256.10			-
A.03		Point -Point Wiring					

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		Same as per item No. A.02 but Loop wiring of a light point from first light point on same switch circuit, complete in all respects.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	m	914.63			-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	m	304.88			-
A.04		Gang Light Control Switches					
	15-127-b	Supply at site, installation, testing and commissioning of Two gang light control switches 10 Amps, 250Volts one way, including appropriate size concealed MS, powder coated back box, complete in all respects.	Each	10.00			-
	15-127-c	Supply at site, installation, testing and commissioning of Three gang light control switches 10 Amps, 250Volts one way, including appropriate size concealed MS, powder coated back box, complete in all respects.	Each	6.00			-
	15-127-d	Supply at site, installation, testing and commissioning of Four gang light control switches 10 Amps, 250Volts one way, including appropriate size concealed MS, powder coated back box, complete in all respects.	Each	14.00			-
	15-127-f	Supply at site, installation, testing and commissioning of Six gang light control switches 10 Amps, 250Volts one way, including appropriate size concealed MS, powder coated back box, complete in all respects.	Each	12.00			-
A.05		Exhaust Fan Point					
		Same as Item No. A.02 mentioned above but wiring of exhaust fan point including cost of 10 Amp switch with M.S box 16 SWG with earth terminal.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	m	96.04			-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	m	32.01			-
A.06		Ceiling Fan Point					

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Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		Same as Item No. A.02 mentioned above but wiring of Ceiling fan point including cost of 10 Amp switch with M.S box 16 SWG with earth terminal.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	m	178.35			-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	m	59.45			-
A.07		1-3 pin switch & plug combined recessed type :10/15 Amp					
		Supply and wiring of one 3 pin switch & plug combined recessed type :10/15 Amp outlet point from distribution board with single core 2x4mm2(P+N) PVC insulated 300/500 volt grade cable in & including PVC conduit recessed in walls/R.C.C. slab, or installed on surface of Ceiling, all conduits accessories, junction boxes, pull boxes etc. 2.5mm2 cable as PC excluding cost of 3 pin 13 Amps switch & socket out let make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel board recessed in walls complete in all respects and as per specifications & drawings.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	m	219.51			-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	m	73.17			-
A.08		Loop-Loop- 3 pin switch & plug combined recessed type :10/15 Amp					
		Same as item No.A.12 above but loop wiring of 3 pin switch & plug combined recessed type :10/15 Amp outlet with 2x4mm2(P+N) & 1x2.5mm2 as CPC from point to point excluding cost of one 15A 3 pin switch socket outlets with make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel boards recessed in walls /columns.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	m	219.51			-

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	m	73.17			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	m	73.17			-
	15-20-b	Supply and Erection 3 pin switch & plug combined recessed type :10/15 Amp	Each	24.00			-
A.09		Loop-Loop- 5 Amps Switch Socket					
		Same as item No.A.12 above but loop wiring of 5A power socket outlet with 2x4mm2(P+N) & 1x2.5mm2 as CPC from point to point excluding cost of one 15A 3 pin switch socket outlets with make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel boards recessed in walls /columns.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	m	402.44			-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	m	134.15			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	m	134.15			-
	15-20-a	Supply and Erection 3 pin switch & plug combined recessed type : 5 Amp	Each	22.00			-
A.10		1-20 Amps Switch Socket					

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Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		Supply and wiring of one 3pin 20 Amps Power plug socket outlet point from distribution board with single core 2x6mm ² (P+N) PVC insulated 300/500 volt grade cable in & including PVC conduit recessed in walls/R.C.C. slab, or installed on surface of Ceiling including all conduits accessories, junction boxes, pull boxes etc. 4mm ² cable as PC including cost of 3 pin 20 Amps switch & socket out let make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel board recessed in walls complete in all respects and as per specifications & drawings.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	m	219.51			-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	m	73.17			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	m	73.17			-
	15-81	Supply and Fixing 20 Amp power plug	Each	12.00			-
A.11		Fitting and Fixtures.					
		Supply at site, installation, testing and commissioning of the following indoor incandescent/LED light fittings, complete with brass lamp holders, fixing accessories, earthing terminal, driveway circuitry make as specified or by any one of the manufacturers mentioned in Annexure-"A", complete in all respects.					
i)	15-36-j-12	Supply, installation, connecting, testing & commissioning of 10W LED Down Light Fixture suitable for 1300 lm, as per instruction of Engineer, surface mounted circular shape or equivalent.	No	27.00			-
iii)	15-36-i-15	Supply, installation, testing and commissioning of recessed Dawn Light of best quality with CFL (13-17 watt) Energy saver and with Glass Reflector	Nos.	48.00			-
i)	15-36-k-01	Supply, installation, connecting, testing and commissioning of Surface mounting LED tube light with 2x2000 lumens, complete in all respects	No	2.00			-

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
iii)	15-36-k-03	Supply, installation, connecting, testing and commissioning of Wall mounted Bulkhead light fixtures with LED retrofit lamp 540 Lumens output, complete in all respects	No	27.00			-
A.12		Exhaust Fans					
a)	15-69-b	Supply and Erection best quality exhaust fan complete with shutter & regulator : 16"sweep	No	7.00			-
A.13		Ceiling Fan					
	15-127-m	Supply at site, installation, testing and commissioning of Fan Dimmer with switch/ MS, powder coated back box with all associated accessories, complete in all respects.	No	13.00			-
	26-01-l-01	Supply and Erection of AC ENERGY EFFICIENT CEILING FANS 56 inch, 50 W	No	13.00			-
A.14		Wall Bracket Fan					
	15-68-e	Supply, installation, testing & commissioning of Direct axial Wall Bracket fan	No	1.00			-
A.15		PVC Conduit					
		Supply at site of PVC conduit heavy duty to be concealed in RCC slabs, walls, floor, columns above false ceiling or as required as per site conditions including cost of all PVC conduit accessories, steel pull wires, complete in all respects.					
i)	15-02-b-08	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 4" i/d	m	106.71			-
A.16		<u>Distribution Board</u>					

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		Fabrication, supply at site, installation, testing, commissioning and connections of wires / cables of Distribution Boards "Light / Power" concealed / open type to be installed as and where shown on drawing, made of MS sheet 16 SWG degreased and derusted, zinc phosphated, finished with electro-static powder coating of 50 micron thickness in approved colour, DB housing to comply with protection class IP-44 with hinged door, flexible earthing strap lockable handle, catcher, earthing bar, neutral strip, internal wiring from MCBs terminating on cable terminal blocks, including cost of all necessary materials complete in all respects. DBs shall be manufactured by any one of the manufacturers as mentioned in List.					
	15-162-j	Supply, Installation, connecting, testing & commissioning of wall mounted DBLP-GF, DBLP-1F, Distribution Boards, complete with all metering with indication lamps complete in all respects as per SLD.	Each	2.00			-
	15-135-e	Supply at site, fabrication and installation of GI perforated cable tray 14 SWG 8 ft. to 10 ft. long, 12" wide with sides 3" high to be installed on wall, or in vertical, or above false ceiling in horizontal position or floor mounted or as shown on drawing, including cost of hanging arrangement brackets made of angle iron 38mm x 38mm x 6mm installed at every 3 ft., cost of all necessary fixing accessories, complete in all respects.	m	15.24			-
A.17		Fire Extinguisher					
	14-145-a	Providing and fixing of Dry powder type Fire Extinguisher of approved quality and manufacturer best design including all fittings complete in all respects. : 6kg	Each	2.00			-
	14-172-a	Supplying and fixing of Dry Chemical Powder Fire Extinguisher 6Kg Capacity complete in all respect	Each	3.00			-
A.18		Fire Alarm System					
	15-131-a	Supply, testing and commissioning of 2 core 1.5mm. Sqmm stranded copper conductor tin coated with drain PVC insulated wires 600/1000 V. grade, fire resistant, LSZH Cu Conductor to be pulled in already installed 20mm dia. heavy duty PVC conduit recessed in wall, columns, slab, floor or above false ceiling with all necessary fixing accessories as per site conditions	Point	20.00			-

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	15-131-b	Supply, installation, testing & commissioning of Analogue Addressable Manual Call Point / Pull Station with Base and Back Box with Key UL Listed complete in all respects.	Each	4.00			-
	15-131-c	Supply, installation, testing & commissioning of Analogue Addressable Sounder with Flasher, 24 VDC, Mounting Base and with Base and Back Box with Key UL Listed complete in all respects.	Each	4.00			-
	15-131-d	Supply, installation, testing & commissioning of Analogue Addressable Optical Smoke Detector with Base; 24 VDC; UL LISTED, low voltage, solid state, Not Radio Active type, uni-polar and dual chamber with LED alarm indication to be installed on RCC slab, complete in all respects.	Each	16.00			-
	15-131-e	Supply, installation, testing & commissioning of Addressable Heat Detector	Each	1.00			-
	15-131-g	Supply, installation, testing & commissioning of Microprocessor based Fire Alarm Control Panel, suppression consisting of loops and can address around 125points, indicating circuits, including 2x12V VDC Batteries, suppression zone built in power supply, including stand by battery, alarm and trouble indication, silence alarm and reset system, general alarm and reset system, general alarm facility, complete in all respects.	Each	1.00			-
A.19		CCTV System					
	15-139-a	Supply and Installation of Outdoor True Day & Night Color Camera 1/3" CCD, 530TVL, 0 Lux, 49 IR LEDs, 2.8 to 10mm Auto Iris Varifocal Lens, IP66 Rating Outdoor Weatherproof Housing, DC12V/ AC24V, PAL, HCD-92534X-Honyewell completed in all respect	Each	2.00			-
	15-139-b	Supply and Installation of True Day & Night Color Indoor Camera 1/3" CCD, 550TVL, Color 0.3Lux & B/W 0.002Lux, Day/Night, DC12V/ AC24V, PAL, HCC-690P completed in all respect	Each	4.00			-
	15-140-b	Supply, installation, testing and commissioning of Patch Panel 24 Port Loaded with RJ-45 I/Os Suitable for CAT-VI FTP CABLE; Rack Mount, complete in all respects.	Each	1.00			-

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	15-139-f	Supply Installation of 32-Channel Digital Video Recorder, real time display 400ips andwith Built-in DVD writer, XtraStor/MPEG4 compression,1TB,HDD,SATA port with remoteviewing and management software HNDR-E1648L-N-D-E,Honyewell.complated with all respect	Each	1.00			-
	15-141-a	Supply, installation, testing and commissioning of Cable Manager / Organizer	Each	1.00			-
	15-181	Supply and installation of structure cable as required for CAT-6 PVC shielded cable in already installed Trunking/ conduit/ Channel , inducing Balun for vedio and power facility at both ends of cable to be provided. The CAT- 6 cable should be 3M Australian or equivalent, complete in all respects	m	300.00			-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	m	300.00			-
A.20		Telephone System.					
	15-138-a-03	Supply and Installation of 50-Pair Telephone Junction Box with back mounting frame and connection strip Recessed in wall Type where shown on drawings, made of 16 SWG M.S. Sheet with hinged door. Completed in all respects	Each	1.00			-
	15-138-g	Supply and Erection of 3M Cat-6 Cable in 3/4",1"pvc conduit, complete in all respect	m	455.79			-
	15-138-j	Supply and Installation of Double Port Telephone outlet of CAT-5,1 x RJ-45 I/Os and back box of 16 SWG, complete in all respects	Each	2.00			-
	15-138-i	Supply and Installation of Single Port Telephone outlet of CAT-5,1 x RJ-45 I/Os and back box of 16 SWG, complete in all respects	Each	23.00			-
	15-138-k-01	Supply installation, connection, testing and Commissioning of Telephone Exchange comprising 4 Trunk lines, 12 Digital Estentions, 200 Auto Dial Extention and attendeant console with UPS builtin 16+ 34 Kx-Txa 600.	Each	1.00			-
A.21		Computer System					

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	15-136-c	Supply at site, installation, testing and commissioning of U/UTP, 4 pair Cat 6a (500 MHz) Network Cable supports (10 Giga) laid in PVC Conduit , with pure copper conductor PVC insulated PVC sheathed including cost of Single Shutter Face plate with UTP Cat-6a Keystone Jack with Back Box to be installed on walls, from Data Cabinet to Computer Points, PVC conduit & Cable tray. Complete in all respects.	Each	23.00			-
	15-136-b	Supply at site, installation, testing and commissioning of Layer 2 (Edge) Level Network Switch, Manageable for Data Rack, 24 Port Giga Ethernet (10/100/1000) with Copper & Fiber Uplink Ports (Support 04 Nos 1.0 Giga SFP Modules). 1.0 Gigabit uplink flexibility with Small Form-Factor Pluggable Plus (SFP+). 8 ports of Gigabit Ethernet for desktop connectivity, complete in all respects.	Each	1.00			-
	15-136-f	Supply at site, installation, testing and commissioning of data cabinet of approximate size as mentioned below, powder coated, having lockable glass door at front, 4 exhaust fans on top, suitable for under mentioned patch panels, consisting of the following voice and data points to be terminated on modular patch panel, including cost of power bus bar, input / output RJ-45 connectors suitable for Cat. 6a cables patch guides, patch cords, both for Voice and Data, all necessary accessories / materials for active and passive equipment, 24 ports switch. The data cabinet shall be complete in all respects including cost of all necessary materials / accessories required for proper functioning for the data cabinet. Data cabinet shall be installed after obtaining necessary permission from the computer specialist of the Client.	Each	1.00			-
	15-136-h	Supply, Installation, testing and commissioning of 42 port DATA cabinet with 3 no's cabinet tray, 4 no's power socket and with flexi glass door	Each	1.00			-
	15-138-f	Supply, Installation, testing and commissioning of Patch Cord CAT-6, 1m for computer complete in all respects	Each	23.00			-
A.22		Earthing System					
	15-105-h	Providing & fixing of Plate type Earthing compressed with execveted hole 6"up 63 feet, GI pipe 2"(50mm)with Tees , Sockets , Endcap of 60 (Mtr) Copper Plate of 1/2"x 2"x 48", 2x 70mmsq S/Core copper bare conductor 125 (Mtr) Earth Connection Point of 200 x 50 x 50mm (L x W x T) Inspection Pit of 300 x 300 x 450 mm (L x W x D) completed with all respect	Each	4.00			-

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 11: ADMIN BUILDING

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	15-105-i	Construction of water tight brick type Grounding inspection pit.	Each	4.00			-
B.01		Switch & Sockets.					
i	Appendix ' c' Page No-1	Supply and installation of Floor Box / Technology Box, Suiteable for 1 No. Telephone outlet and 1 no. Data outlet, including cost of 2 No. 10/13 Amp socket and 1 no. 5 Amp Socket.	Each	35.00			-
B.02		<u>5-KVA Online UPS Un-Intruptible Power Supply for Main Data / Server Cabinet.</u>					
	Appendix ' c' Page No-2	Supply at Site, Installation of Online5 KVA UPS with 0.8 Power Factor with dry gel battries for standard backup upto 15 minutes. Make : APC, I-Power - Emerson.	Each	2.00			-
B.03		<u>WIFI ACCESS POINT</u>					
	Appendix ' c' Page No-3	Supply, installation and connections of wireless wave two Wi-Fi access point or equivalent 2533Mbps dual-band, 802.11 abgn/ac with 20,40,80 MHz Channel width Support 4x4:4 streams, Beam Flex, Dual Polarized Integrated smart Directional antenna array. Auto-sensing 10/100/1000 Mbps, RJ-45 Power over Ethernet (PoE) Integrated 24 Antenna elements with more than 3000 Antenna Patterns, 15db interference mitigation, make Ruckus, Aruba, Linksys or as specified in appendix-A as approved by engineer's Incharge or consultants, Actual quantities shall be measured as per site & paid accordingly. Complete in all respects	Each	1.00			-
		<u>Server Machine</u>					
	Appendix ' c' Page No-4	Supply at site, 2 x Intel Xeon E5-2630 v4 2.2GHz, 25 M cache, 8.0 GT/s, QPI, Turbo, HT, 10C/20T(85W)85W, Chipset: Genuine Intel, Memory: 32GB(2x16GB) RDIMM, multi Slots, Storage: 3 x 1TB 7.2k RPM Near Line SAS 12 Gbps, Drive bays: 2.5" Drive, Raid Controller: RAID 5 for H330/H730P/H730, Network: Dual Port Ethernet, DVD +/- RW, Display: 18.5" LCD, Power Supply: 2 x power cord 12A 4M C13/C14, hot plug, Redundant, Ready Rail Sloding Rails with Cable Management arm, Chasis: 2U, Windows Server 2012, Warranty : 03 Years	Each	1.00			-

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
B.04		<u>MONITOR</u>					
	Appendix ' c' Page No-5	Supply, installation and connections of 32" BACKLIT LED 1080p monitor with operation capacity of 24/7 wit 3 year warranty. make by Samsung, TCL, LG or as specified in appendix-A approved equivalent by consultant or Engineer Incharge, Complete in all respectsActual quantities shall be measured as per site & paid accordingly. Complete in all respects.	Nos.	1.00			-
B.05		<u>Non-maintained Emergency Lighting</u>					
	Appendix ' c' Page No-5	Supply, installation and connections of Self Test Maintained With ISO 7010 Legend Set 7 Watt Colour Temperature 6000K ,235 Lumens on main supply and 150 Lumens on battery, Avg. Rated Life (Hrs) 30000 hr, IP65 rating with hanging arrangment on wall or ceiling as required complete in all respect as approved by the engineer incharge make Delpro (uk) or eqv.	Nos.	12.00			-
B.06		<u>2-KVA Online UPS Un-Intruptible Power Supply for Building</u>					
	Appendix ' c' Page No-2	Supply at Site, Installation of Online 02 KVA UPS with 0.8 Power Factor with dry gel battries for standard backup upto 60 minutes including cost of rack complete by all respect as approved by engineer incharge. Make : APC,Delpro(uk) - Emerson.	Each	2.00			-
SUB TOTAL ELECTRICAL WORKS							-

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BILL NO. 11: ADMIN BUILDING

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		PLUMBING WORKS					
		Indian W.C					
1	14-03-a	Providing and fitting glazed earthenware water closet (WC), squatter type (orisa pattern) combined with foot rest. complete in all respects : White	Each	1.00			-
		WC European					
2	14-01-a	Providing and Fixing glazed earthen ware WC European type of approved size excluding cost of seat & cover, complete in all respects: White	Each	3.00			-
3	14-10-a	Providing and Fixing glazed earthen ware low down flushing cistern 3 gallons (13.63 Liters) capacity including bracket set, copper connection,etc. complete in all respects: White	Each	4.00			-
4	14-05-a-01	Providing and Fixing glazed earthen ware wash hand basin (WHB) complete size 56x40 cm (22"x16"), including bracket set, waste coupling, complete in all respects: White with pedestal (Best Quality)	Each	4.00			-
5	14-102	Providing & Fixing of SHOWER SET locally made complete with concealed T-STOP COCK for cold and hot water supply with mixer, swivel shower rose, long bib cock etc Complete in all respect.	Each	4.00			-
6	14-27-a	Providing and fixing chromium plated (CP) mixing valve for wash hand basin (WHB), sink or shower of approved (Best) quality	Each	12.00			-
7	14-06-a	Providing and Fixing stainless steel sink with drain board size (120 x 60 cm) 48"x24", including set of brackets, waste pipe etc - (Best Quality)	Each	1.00			-

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
8	14-13	Providing and fixing chromic plated soap dish complete.	Each	4.00			-
9	14-16-a	Providing and Fixing chromium plated (CP) towel 60 cm (24") long and 2 cm (3/4") dia	Each	4.00			-
10	14-17-a	Providing and fixing best quality looking glass 5 mm thick neatly fitted on masonry wall etc. as per instruction of Engineer In-charge complete. Mirror 60 x 45 cm (24"x18") size	Each	4.00			-
11	14-21-c	Providing and fixing chromium plated (CP) double bib cock, heavy duty of approved quality : 1.5 cm (1/2")	Each	4.00			-
12	14-25-a	Providing and fixing chromium plated (CP) tee stop cock 1.5 cm (1/2") of approved quality	Each	12.00			-
13	14-31-a	Providing and Fixing cast iron (CI) floor trap of approved quality including CI grating & concrete chamber all round : 4"x2" (100mm x 50 mm)	Each	12.00			-
14	14-33	Providing and Fixing 4" gully trap of approved quality including cement concrete cost of PVC grating 6" x6" (150 x 150 mm) and masonry chamber 12"x12" (300 x 300 mm).	Each	4.00			-
15	14-157	P-Trap (uPVC) for squatting type WC.					
	14-157	ii) 10 cm (4") glazed.	Each	4.00			-

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		SEWERAGE SYSTEM					
16	14-95-a	Making connection with the existing system PVC pipe line including cutting the pipe for providing & fixing required fittings : Class B PVC					
		a) 3" i/d (75 mm)	M	40.00			-
		b) 4" i/d (100 mm)	M	25.00			-
		d) 6" i/d (150 mm)	M	30.00			-
1	NS-1	Providing, fixing, jointing and testing Polypropylene Random (PPR) PN20 pressure pipe for cold, hot and hot water return water as per DIN 8077-8078 for pipes and DIN 16962,PN25 for fittings (polyfusion welded joints) inside building including fittings and specials (sockets, tees, elbows, bends, crosses, reducers, adaptor, plugs and union etc.) supported on walls or suspended from roof slab or run in chases including pipe hangers, supports, walls cutting for pipelines, complete in all respect as per specifications and drawings as well as directed by the Engineer.					
		20 mm dia	M	40.00			-
		25 mm dia	M	20.00			-
		32 mm dia	M	35.00			-

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BILL NO. 11: ADMIN BUILDING

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
2	NS-2	Providing and making Manhole 2'x2' internal size including 9" thick brick masonry (1:4), 1/2" th. Plastering (1:3) i/side, benching with PCC 1:2:4 4" th. with cement finish, excluding manhole cover, complete in all respects.	Each	2.00			-
3	NS-3	Providing and fixing food grade plastic over head water tank (200 gallon) including all necessary accessories required for installation, complete in all respect as per specifications and drawings as well as directed by the Engineer.	Each	1.00			-
SUB TOTAL OF PLUMBING WORKS							-

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SUMMARY OF BILL NO. 12: CHEMICAL BUILDING

BILL NO.	DESCRIPTION OF WORK	Amount (PKR)
1	CIVIL WORKS	-
2	MECHANICAL WORKS	-
3	ELECTRICAL WORKS	-
TOTAL AMOUNT RS		-

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BILL NO. 12: CHEMICAL BUILDING

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		CIVIL WORKS					
		Earth Work					
1	03-25-d	Excavation in foundation of building, bridges etc complete : in shingle/gravel	M3	900.11			-
2	03-18-d	Filling, watering and ramming earth under floor with earth excavated from outside lead upto 30m	M3	270.03			-
		Anti-Termite					
2	28-15	Pre anti Termite Treatment in the building mixed with water of mixing ratio as per the manufacturer's certified manual	M2	2,751.69			-
		Plain and Reinforcement Concrete					
3	06-05-i	Plain Cement Concrete including placing, compacting, finishing & curing (Ratio 1:4:8)	M3	356.44			-
		FOUNDATION					
4	06-07-b-01	RCC in raft foundation slab, base slab of column & ret. wall etc, not including in 06-06. (1:1:2)	M3	468.14			-
		GROUND FLOOR					
5	06-07-a-01	RCC in roof slab, beam, column & other structural members, insitu or precast. (1:1:2)	M3	111.96			-
6	06-07-a-02	RCC in roof slab, beam, column & other structural members, insitu or precast. (1:1.5:3)	M3	170.40			-
		FIRST FLOOR					

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BILL OF QUANTITIES

BILL NO. 12: CHEMICAL BUILDING

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
7	06-07-a-01	RCC in roof slab, beam, column & other structural members, insitu or precast. (1:1:2)	M3	5.07			-
8	06-07-a-02	RCC in roof slab, beam, column & other structural members, insitu or precast. (1:1.5:3)	M3	136.73			-
		Steel Reinforcement					
9	06-08-b	Supply & fabricate M.S. reinforcement for cement concrete (Hot rolled deformed bars Grade 60)	Tonne	210.15			-
10	06-26-a-02	Damp proof course of cem. conc. 1:2:4 including bitumen coat, 1 layer polythene & 1 coat bitumen (2" thick)	M2	26.88			-
11	06-30-a-04	V. Damp proof c/s plaster, 1 layer polythene 1 coat bitumen Ratio 1:3 (0.75" thick)	M2	35.28			-
		Brick Work					
12	07-04-a-04	1st class brick work in foundation and plinth in Cement, sand mortar 1:5	M3	50.09			-
		GROUND FLOOR					
13	07-05-a-04	1st class brick work in ground floor Cement, sand mortar 1:5	M3	115.64			-
		FIRST FLOOR					
14	07-05-a-04	1st class brick work in first floor Cement, sand mortar 1:5	M3	22.59			-
		Flooring					
15	07-30	Supplying and filling sand under floor or plugging in wells	M3	2,478.32			-

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BILL NO. 12: CHEMICAL BUILDING

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
16	06-05-f	Plain Cement Concrete including placing, compacting, finishing & curing (Ratio 1:2:4)	M3	3.21			-
17	10-22-b	1.5" thick mosaic flooring, including rubbing & polishing complete : Using grey cement	M2	135.66			-
18	10-41-b-02	Mosaic dado or skirting complete as per specs Using grey cement : 1/2" thick	M2	20.67			-
		Surface Rendring					
19	11-10-b	Cement plaster 3/8" thick under soffit of RCC roof slabs only upto 20' height : (1:3) (ceiling plaster)	M2	945.00			-
20	11-09-b	Cement plaster 1:5, upto 20' height 1/2" thick (Internal walls)	M2	695.15			-
21	11-18-b	Cement pointing struck joints, on walls, upto 20' height : Ratio 1:3 (External walls)	M2	560.18			-
22	11-18-b	Cement pointing struck joints, on walls, upto 30' height : Ratio 1:3 (External walls)	M2	425.83			-
		Painting and Warnishing					
23	11-20-a	Priming coat of chalk under distemper	M2	1,722.16			-
24	11-21-a-03	Distempering New surface : Three coats	M2	1,722.16			-
25	13-25-a+(bx2)	Preparing surface & painting with snowcem / weathershield paint: 3 Coats	M2	1,014.01			-
26	13-03-c-01+(c-02x2)	Prepare & Paint new surface, doors & windows: 3 Coats	M2	10.58			-
		Metal Work					

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
27	12-57-b	Providing and fixing double leaf steel door with frame fully panelled with M.S sheet 16 gauge (1.59mm) painted with two coats of red oxide paint with brass fitting of approved make including cost of fabrication, iron lugs, cutting holes and making good the damages to walls.	M2	5.29			-
28	25-39-a-01	Providing and fixing steel windows with openable glazed pannels, using beam section for frame 1-1/2" x 1" x 5/8" x 1/8", z-section for leaves 3/4" x 1" x 3/4" x 1/8", T- section sashes 1"x1"x1/8" glass panes, wooden screed for glazing embded over a thin layer of putty duly screwed with leaves, brass fittings holdfast, duly painted, complete in all respects, including all cost of material and labour etc. as per approved design and as directed by the engineer - in -charge Glass pane 2.5mm thick	M2	34.02			-
29	25-35	Providing and Fixing 24 SWG GI sheet rolling shutter of steel frame of MS channel 2"x1.25"x1/8" complete	M2	40.82			-
30	25-10	Fabrication of heavy steel work with angle, tees, sheet iron etc for making trusses, girders etc including Erection and fitting in position iron trusses, staging of water tanks, etc (for Louvre Gate including duly painting red oxide)	Tonne	0.15			-
		Roofing & Water Proofing					
31	9-06+13 + 6- 28	Single layer of tiles 10"x5"x1.25" laid over 4" earth and 1" mud plaster on top of RC roof slab, provided with 2 coats of bitumen laid hot using 34 lbs. for %sft over roof & blinded with sand at 1 cft per % sft.i/c P/L Providing and laying polythene sheet 0.005" thick (0.05mm 500gauge)	M2	945.00			-
32	09-16	Khuras on roof 2'x2'x6"	Each	5.00			-
33	9-17	Bottom khuras of brick masonry in c/s mortar 1:6,4'x2'x4.5" over 3" cem. concrete 1:4:8	Each	5.00			-
34	03-20-a	Transportation of earth all types beyond 250 m and upto 500 m.	M3	270.03			-
35	03-20-b	Transportation of earth all types for every 100m extra lead beyond 500m upto 1.5 km.	M3	270.03			-

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
36	03-20-c	Transportation of earth all types for every 500m extra lead beyond 1.5 km. upto 8 km.	M3	270.03			-
37	03-20-d	Transportation of earth all types for every 1 km extra lead or part thereof beyond 8 km.	M3	270.03			-
		Windows Sill					
1	N.S	ProvidinProviding and fixing 1/2" thick Pre-polished Sunny White Marble Slab uniform texture full width area above 3-8 sft laid ove 3/4" thick cement sand mortar (1:2) i/c filling joints in white cement & matching pigment i/c beveling charges on exposed edges, complete in all respect as approved / directed by The Engineer.	M2	11.52			-
		Miscellenious					
2	N.S	Supply, provide and fix in position uPVC rain water down pipe lines conforming to ISO 3633:1991 and BS 3505 1968 (wall thickness 3.2mm) including proper joints complete in all respects, and system leak-free:4" dia	M	1.75			-
3	N.S	Provide and fix uPVC plain bends with grating (as rain water inlets at roof), water tight connection leak-free:4" dia	Each	5.00			-
SUB TOTAL OF CIVIL WORKS							-

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		MECHANICAL WORKS					
1	NS-1	Top-Running Double-Girder Bridge Cranes					
		Providing, installing, testing and commissioning Top-Running Double-Girder Bridge Cranes, of internationally reputed approved make, complete with all its moving components, drives, drive controls, safety mechanisms, cables, cables collapsing mechanisms, operation-control equipment, and side rails, to be supported on the structure, including all jointing, fixing & installation accessories, initial charging of lubricants, all painting & coatings; and a complete set of special tools, test equipment & spare parts, complete in all respects, in accordance with the Contract, as follows:					
		In Chemical Building: Capacity: 5 Tons	Each	1.00			-
2	NS-2	MIXER					
		Providing, installing, testing and commissioning Mechanical Mixers (vertical-shaft, single impeller, pitched blade or propeller type, 3-4 blades), of internationally reputed approved make, complete with motor (4 pole, installed power to be determined by the manufacturer), gear box, motor starter, support base/frame, shaft, impeller and canopy, with all the submerged/wetted components to be of stainless steel (Grade 316), including all jointing, fixing & installation accessories, all painting & coatings; and a complete set of special tools, test equipment & spare parts, complete in all respects, in accordance with the Contract, as follows:					
		In Alum Dosing Tanks (Imparted Mixing Power: 2.9 kW, Rotational Speed: 40 – 100 RPM, Impeller Diameter: 0.9 – 1.2 m)	Each	2.00			-
		In Lime Dosing Tanks (Imparted Mixing Power: 2.9 kW, Rotational Speed: 40 – 100 RPM, Impeller Diameter: 0.9 – 1.2 m)	Each	2.00			-
		In Polymer 1 Dosing Tanks (Imparted Mixing Power: 2.9 kW, Rotational Speed: 40 – 100 RPM, Impeller Diameter: 0.9 – 1.2 m)	Each	2.00			-

GOVERNMENT OF KHYBER PAKHTUNKHWA

KHYBER PAKHTUNKHWA CITIES IMPROVEMENT PROJECT

LOCAL GOVERNMENT, ELECTIONS AND RURAL DEVELOPMENT DEPARTMENT

KPCIP-CW-04: MINGORA GREATER WATER SUPPLY SCHEME INCLUDING NEW WATER TREATMENT PLANT (WTP), INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS AND SCADA:

LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 12: CHEMICAL BUILDING

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
3	NS-3	Stock Solution Transfer Pumps					
		Providing, installing, testing and commissioning Alum Water Transfer Pumps (horizontal-shaft, end-suction, non-clogging/solids-handling, centrifugal type, Min Free Passage Size: 100 mm), of internationally reputed approved make, complete with pump, 3-phase induction motor (4-pole, Min Efficiency 90%), spacer coupling, support base/frame, pressure gauges (on suction and discharge sides), mechanical seal, temperature & vibration monitoring devices, automatic liquid level-controlled switching device (ultrasonic sensor type), motor control unit (MCU, in painted metallic box, complete with auto star-delta starter and all the required control, relay, monitoring and protection devices)and electrical & control cables (between motor and MCU), with pump impeller, shaft & sleeve to be of stainless steel of approved grade, including all jointing, fixing & installation accessories, vibration-control accessories, initial lubricant charge, all painting & coatings; and a complete set of special tools, test equipment & spare mplete in all respects, in accordance with the Contract, as follows:t, as fol					
		Alum Stock Solution Transfer pump: Capacity: 20m ³ /hr, Head:3m	Each	2.00			-
		Lime Stock Solution Transfer pump: Capacity: 20m ³ /hr, Head:3m	Each	2.00			-
		Polymer Stock Solution Transfer pump: Capacity: 20m ³ /hr, Head:3m	Each	2.00			-
4	NS-4	Dosing Pumps					

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 12: CHEMICAL BUILDING

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		Providing, installing, testing and commissioning Alum Dosing Pumps (horizontal-diaphragm), of internationally reputed approved make, complete with pump, 3-phase induction motor (4-pole, Min Efficiency 90%), spacer coupling, support base/frame, pressure gauges (on suction and discharge sides), mechanical seal, temperature & vibration monitoring devices, automatic liquid level-controlled switching device (ultrasonic sensor type), motor control unit (MCU, in painted metallic box, complete with auto star-delta starter and all the required control, relay, monitoring and protection devices)and electrical & control cables (between motor and MCU), with pump impeller, shaft & sleeve to be of stainless steel of approved grade, including all jointing, fixing & installation accessories, vibration-control accessories, initial lubricant charge, all painting & coatings; and a complete set of special tools, test equipment & spare parts, complete in all respects, in accordance with the Contract, as follows:					
		Alum Dosing Pump; Capacity: 1.2m ³ /hr, Head: 40ft	Each	5.00			-
		Lime Dosing Pump; Capacity: 1.2m ³ /hr, Head: 40ft	Each	5.00			-
		Polymer Dosing Pump; Capacity: 1.2m ³ /hr, Head: 40ft	Each	5.00			-
5	NS-5	Sluice Valves					
		Providing, installing and testing cast iron (CI) Sluice Valves (Swing type, Flanged, BS 5153, PN 10) on pipelines, of internationally reputed approved make, including gaskets, steel nuts & bolts and other jointing accessories, with all the exposed ferrous surfaces to be epoxy coated, complete in all respects, in accordance with the Contract, as follows:					
		32mm	Each	54.00			-
6	NS_6	Providing, laying, cutting, jointing, testing and disinfecting High Density Polyethylene Pipe (HDPE) Din-8074/Din-8075/ISO-4427 in trenches, complete in all respects PN-10 32mm (including fittings as Bends etc)	M	158.00			-

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 12: CHEMICAL BUILDING

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
7	NS-7	Providing, laying, cutting, jointing, testing and disinfecting High Density Polyethylene Pipe (HDPE) Din-8074/Din-8075/ISO-4427 in trenches, complete in all respects PN-10, 90mm (including fittings as Bends etc)	M	34.00			-
SUB TOTAL OF MECHANICAL WORKS							-

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 12: CHEMICAL BUILDING

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
ELECTRICAL WORKS							
A.01		Light Circuits					
		Supply, installation and commissioning of light circuit wiring, to be wired with 4x2.5mm sq. (1P+1N+1UPS+1PE) PVC insulated 300/500 V grade wire make Pakistan Cable, Newage, AGE Cables, Golden Star, in and including cost of 1" dia. heavy duty PVC conduit make Beta , Popular recessed in , walls, Roof slab, or on surface or above false ceiling or as required as per site conditions, all PVC conduit accessories, pull boxes, steel pull wires , complete in all respects. Each circuit shall have independent PE.					
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	170.73			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	42.68			-
A.02		1-Light Point Controlled By One Switch					
		Wiring of one light point controlled by one switch and wired with 3x1.5 mm sq. (P+N+PE) PVC insulated wires 300/500 V. grade make Pakistan Cable, Newage Pioneer Cables,, in and including cost of 3/4" dia. heavy duty PVC conduit make Beta , Popular installed on RCC slab, above false ceiling, recessed in wall, columns slabs or above light carrier all PVC conduit accessories, 3" high PVC junction boxes, pull boxes, steel pull wires, PVC flexiable conduit from ceiling junction box to light fixture flush type plate switches, including cost of back boxes and switches of 10 Amps.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	676.83			-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	225.61			-
A.03		Point -Point Wiring					
		Same as per item No. A.02 but Loop wiring of a light point from first light point on same switch circuit, complete in all respects.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	768.29			-

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BILL OF QUANTITIES

BILL NO. 12: CHEMICAL BUILDING

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	256.10			-
A.04		Gang Light Control Switches					
	15-127-d	Supply at site, installation, testing and commissioning of Four gang light control switches 10 Amps, 250Volts one way, including appropriate size concealed MS, powder coated back box, complete in all respects.	Each	5.00			-
	15-127-f	Supply at site, installation, testing and commissioning of Six gang light control switches 10 Amps, 250Volts one way, including appropriate size concealed MS, powder coated back box, complete in all respects.	Each	12.00			-
A.05		Exhaust Fan Point					
		Same as Item No. A.02 mentioned above but wiring of exhaust fan point including cost of 10 Amp switch with M.S box 16 SWG with earth terminal.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	137.20			-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	45.73			-
A.06		Ceiling Fan Point					
		Same as Item No. A.02 mentioned above but wiring of Ceiling fan point including cost of 10 Amp switch with M.S box 16 SWG with earth terminal.					

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BILL OF QUANTITIES

BILL NO. 12: CHEMICAL BUILDING

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	493.90			-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	164.63			-
A.07		1-3 pin switch & plug combined recessed type :10/15 Amp					
		Supply and wiring of one 3 pin switch & plug combined recessed type :10/15 Amp outlet point from distribution board with single core 2x4mm2(P+N) PVC insulated 300/500 volt grade cable in & including PVC conduit recessed in walls/R.C.C. slab, or installed on surface of Ceiling, all conduits accessories, junction boxes, pull boxes etc. 2.5mm2 cable as PC excluding cost of 3 pin 13 Amps switch & socket out let make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel board recessed in walls complete in all respects and as per specifications & drawings.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	201.22			-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	67.07			-
A.08		Loop-Loop- 3 pin switch & plug combined recessed type :10/15 Amp					
		Same as item No.A.12 above but loop wiring of 3 pin switch & plug combined recessed type :10/15 Amp outlet with 2x4mm2(P+N) & 1x2.5mm2 as CPC from point to point excluding cost of one 15A 3 pin switch socket outlets with make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel boards recessed in walls /columns.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	548.78			-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	182.93			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	182.93			-
	15-20-b	Supply and Erection 3 pin switch & plug combined recessed type :10/15 Amp	Each	30.00			-

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 12: CHEMICAL BUILDING

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
A.09		Loop-Loop- 5 Amps Switch Socket					
		Same as item No.A.12 above but loop wiring of 5A power socket outlet with 2x4mm2(P+N) & 1x2.5mm2 as CPC from point to point excluding cost of one 15A 3 pin switch socket outlets with make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel boards recessed in walls /columns.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	548.78			-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	182.93			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	182.93			-
	15-20-a	Supply and Erection 3 pin switch & plug combined recessed type : 5 Amp	Each	30.00			-
A.10		1-20 Amps Switch Socket					
		Supply and wiring of one 3pin 20 Amps Power plug socket outlet point from distribution board with single core 2x6mm2(P+N) PVC insulated 300/500 volt grade cable in & including PVC conduit recessed in walls/R.C.C. slab, or installed on surface of Ceiling including all conduits accessories, junction boxes, pull boxes etc. 4mm2 cable as PC including cost of 3 pin 20 Amps switch & socket out let make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel board recessed in walls complete in all respects and as per specifications & drawings.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	109.76			-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	36.59			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	36.59			-

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 12: CHEMICAL BUILDING

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	15-81	Supply and Fixing 20 Amp power plug	Each	6.00			-
A.11		Fitting and Fixtures.					
		Supply at site, installation, testing and commissioning of the following indoor incandescent/LED light fittings, complete with brass lamp holders, fixing accessories, earthing terminal, driveway circuitry make as specified or by any one of the manufacturers mentioned in Annexure-"A", complete in all respects.					
i)	15-36-k-01	Supply, installation, connecting, testing and commissioning of Surface mounting LED tube light with 2x2000 lumens, complete in all respects	Nos.	100.00			-
iii)	15-36-k-03	Supply, installation, connecting, testing and commissioning of Wall mounted Bulkhead light fixtures with LED retrofit lamp 540 Lumens output, complete in all respects	Nos.	6.00			-
A.12		Exhaust Fans					
a)	15-69-b	Supply and Erection best quality exhaust fan complete with shutter & regulator : 16"sweep	Nos.	10.00			-
A.13		Ceiling Fan					
	15-127-m	Supply at site, installation, testing and commissioning of Fan Dimmer with switch/ MS, powder coated back box with all associated accessories, complete in all respects.	Nos.	36.00			-
	26-01-l-01	Supply and Erection of AC ENERGY EFFICIENT CEILING FANS 56 inch, 50 W	Nos.	36.00			-
A.14		<u>Distribution Board</u>					
		Fabrication, supply at site, installation, testing, commissioning and connections of wires / cables of Distribution Boards "Light / Power" concealed / open type to be installed as and where shown on drawing, made of MS sheet 16 SWG degreased and derusted, zinc phosphated, finished with electro-static powder coating of 50 micron thickness in approved colour, DB housing to comply with protection class IP-44 with hinged door, flexible earthing strap lockable handle, catcher, earthing bar, neutral strip, internal wiring from MCBs terminating on cable terminal blocks, including cost of all necessary materials complete in all respects. DBs shall be manufactured by any one of the manufacturers as mentioned in List.					

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BILL OF QUANTITIES

BILL NO. 12: CHEMICAL BUILDING

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	15-162-j	Supply, Installation, connecting, testing & commissioning of wall mounted DBLP-G1, Distribution Boards, complete with all metering with indication lamps complete in all respects as per SLD.	Each	1.00			-
	15-135-e	Supply at site, fabrication and installation of GI perforated cable tray 14 SWG 8 ft. to 10 ft. long, 12" wide with sides 3" high to be installed on wall, or in vertical, or above false ceiling in horizontal position or floor mounted or as shown on drawing, including cost of hanging arrangement brackets made of angle iron 38mm x 38mm x 6mm installed at every 3 ft., cost of all necessary fixing accessories, complete in all respects.	M	21.34			-
A.15		<u>Non-maintained Emergency Lighting</u>					
	Appendix 'c' Page No-5	Supply, installation and connections of Self Test Maintained With ISO 7010 Legend Set 7 Watt Colour Temperature 6000K ,235 Lumens on main supply and 150 Lumens on battery, Avg. Rated Life (Hrs) 30000 hr, IP65 rating with hanging arrangement on wall or ceiling as required complete in all respect as approved by the engineer incharge make Delpro (uk) or eqv.	Nos.	6.00			-
A.16		Fire Extinguisher					
	14-145-a	Providing and fixing of Dry powder type Fire Extinguisher of approved quality and manufacturer best design including all fittings complete in all respects. : 6kg	Each	2.00			-
	14-172-a	Supplying and fixing of Dry Chemical Powder Fire Extinguisher 6Kg Capacity complete in all respect	Each	2.00			-
SUB TOTAL OF ELECTRICAL WORKS							-

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INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS AND SCADA:**

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SUMMARY OF BILL NO. 13: CHLORINATION BUILDING

BILL NO.	DESCRIPTION OF WORK	Amount (PKR)
1	CIVIL WORKS	-
2	MECHANICAL WORKS	-
3	ELECTRICAL WORKS	-
TOTAL AMOUNT RS		-

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LOT 1: WATER TREATMENT PLANT							
BILL OF QUANTITIES							
BILL NO. 13: CHLORINATION BUILDING							
Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		CIVIL WORKS					
		Earth Work					
1	03-25-d	Excavation in foundation of building, bridges etc complete : in shingle/gravel	M3	259.15			-
2	03-18-d	Filling, watering and ramming earth under floor with earth excavated from outside lead upto 30m	M3	77.75			-
		Anti-Termite					
3	28-15	Pre anti Termite Treatment in the building mixed with water of mixing ratio as per the manufacturer's certified manual	M2	821.59			-
		Plain and Reinforcement Concrete					
4	06-05-i	Plain Cement Concrete including placing, compacting, finishing & curing (Ratio 1:4:8)	M3	71.56			-
		FOUNDATION					
5	06-07-a-01	RCC in raft foundation slab, base slab of column & ret. wall etc, not including in 06-06. (1:1:2)	M3	155.67			-
		GROUND FLOOR					
6	06-07-a-01	RCC in roof slab, beam, column & other structural members, insitu or precast. (1:1:2)	M3	51.22			-
7	06-07-a-02	RCC in roof slab, beam, column & other structural members, insitu or precast. (1:1.5:3)	M3	28.87			-
		FIRST FLOOR					
8	06-07-a-01	RCC in roof slab, beam, column & other structural members, insitu or precast. (1:1:2)	M3	4.89			-
9	06-07-a-02	RCC in roof slab, beam, column & other structural members, insitu or precast. (1:1.5:3)	M3	56.28			-
		Steel Reinforcement					
10	06-08-b	Supply & fabricate M.S. reinforcement for cement concrete (Hot rolled deformed bars Grade 60)	Tonne	69.93			-
11	06-26-a-02	Damp proof course of cem. conc. 1:2:4 including bitumen coat, 1 layer polythene & 1 coat bitumen (2" thick)	M2	13.15			-
12	06-30-a-04	V. Damp proof c/s plaster, 1 layer polythene 1 coat bitumen Ratio 1:3 (0.75" thick)	M2	34.52			-
		Brick Work					
13	07-04-a-04	1st class brick work in foundation and plinth in Cement, sand mortar 1:5	M3	28.22			-
		GROUND FLOOR					
14	07-05-a-04	1st class brick work in ground floor Cement, sand mortar 1:5	M3	63.87			-
		FIRST FLOOR					
15	07-05-a-04	1st class brick work in first floor Cement, sand mortar 1:5	M3	16.31			-
		Flooring					
16	07-10	Supplying and filling sand under floor or plugging in wells	M3	535.77			-
17	06-05-f	Plain Cement Concrete including placing, compacting, finishing & curing (Ratio 1:2:4)	M3	2.14			-

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BILL OF QUANTITIES							
BILL NO. 13: CHLORINATION BUILDING							
Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
18	10-22-b	1.5" thick mosaic flooring, including rubbing & polishing complete : Using grey cement	M2	63.00			-
19	10-41-b-02	Mosaic dado or skirting complete as per specs Using grey cement : 1/2" thick	M2	9.60			-
		Surface Rendering					
20	11-10-b	Cement plaster 3/8" thick under soffit of RCC roof slabs only upto 20' height : (1:3) (ceiling plaster)	M2	192.22			-
21	11-09-b	Cement plaster 1:5, upto 20' height 1/2" thick (Internal walls)	M2	402.78			-
22	11-18-b	Cement pointing struck joints, on walls, upto 20' height : Ratio 1:3 (External walls)	M2	316.47			-
23	11-18-b	Cement pointing struck joints, on walls, upto 30' height : Ratio 1:3 (External walls)	M2	84.61			-
		Painting and Warnings					
24	11-20-a	Priming coat of chalk under distemper	M2	624.75			-
25	11-21-a-03	Distemping New surface : Three coats	M2	624.75			-
26	13-25-a+(bx2)	Preparing surface & painting with snowcem / weathershield paint: 3 Coats	M2	416.90			-
27	13-03-c-01+(c-02x2)	Prepare & Paint new surface, doors & windows: 3 Coats	M2	10.58			-
		Metal Work					
28	12-57-b	Providing and fixing double leaf steel door with frame fully panelled with M.S sheet 16 gauge (1.59mm) painted with two coats of red oxide paint with brass fitting of approved make including cost of fabrication, iron lugs, cutting holes and making good the damages to walls.	M2	5.29			-
29	25-39-a-01	Providing and fixing steel windows with openable glazed pannels, using beam section for frame 1-1/2" x 1" x 5/8" x 1/8", z-section for leaves 3/4" x 1" x 3/4" x 1/8", T- section sashes 1"x1"x1/8" glass panes, wooden screed for glazing embeded over a thin layer of putty duly screwed with leaves, brass fittings holdfast, duly painted, complete in all respects, including all cost of material and labour etc. as per approved design and as directed by the engineer - in -charge Glass pane 2.5mm thick	M2	13.61			-
30	25-35	Providing and Fixing 24 SWG GI sheet rolling shutter of steel frame of MS channel 2"x1.25"x1/8" complete	M2	27.22			-
31	25-10	Fabrication of heavy steel work with angle, tees, sheet iron etc for making trusses, girders etc including Erection and fitting in position iron trusses, staging of water tanks, etc (for Louvre Gate including duly painting red oxide)	Tonne	0.15			-
		Roofing & Water Proofing					
32	9-06+13 + 6-28	Single layer of tiles 10"x5"x1.25" laid over 4" earth and 1" mud plaster on top of RC roof slab, provided with 2 coats of bitumen laid hot using 34 lbs. for %sft over roof & blinded with sand at 1 cft per % sft./c P/L Providing and laying polythene sheet 0.005" thick (0.05mm 500gauge)	M2	201.60			-
33	09-16	Khuras on roof 2'x2'x6"	Each	2.00			-
34	09-17	Bottom khuras of brick masonry in c/s mortar 1:6.4'x2'x4.5" over 3" cem. concrete 1:4:8	Each	2.00			-
35	03-20-a	Transportation of earth all types beyond 250 m and upto 500 m.	M3	77.75			-
36	03-20-b	Transportation of earth all types for every 100m extra lead beyond 500m upto 1.5 km.	M3	77.75			-
37	03-20-c	Transportation of earth all types for every 500m extra lead beyond 1.5 km. upto 8 km.	M3	77.75			-
	03-20-d	Transportation of earth all types for every 1 km extra lead or part thereof beyond 8 km.	M3	77.75			-
		Windows Sill					

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LOT 1: WATER TREATMENT PLANT							
BILL OF QUANTITIES							
BILL NO. 13: CHLORINATION BUILDING							
Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
1	N.S	ProvidinProviding and fixing 1/2" thick Pre-polished Sunny White Marble Slab uniform texture full width area above 3-8 sft laid ove 3/4" thick cement sand mortar (1:2) i/c filling joints in white cement & matching pigment i/c beveling charges on exposed edges, complete in all respect as approved / directed by The Engineer.	M2	4.61			-
		Miscellenious					
2	N.S	Supply, provide and fix in position uPVC rain water down pipe lines conforming to ISO 3633:1991 and BS 3505 1968 (wall thickness 3.2mm) including proper joints complete in all respects, and system leak-free:4" dia	M	0.70			-
3	N.S	Provide and fix uPVC plain bends with grating (as rain water inlets at roof), water tight connection leak-free:4" dia	Each	2.00			-
SUB TOTAL OF CIVIL WORKS							-

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BILL NO. 13: CHLORINATION BUILDING						
Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount		
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words
MECHANICAL WORKS						
1	NS-1	Top-Running Double-Girder Bridge Cranes				
		Providing, installing, testing and commissioning Top-Running Double-Girder Bridge Cranes, of internationally reputed approved make, complete with all its moving components, drives, drive controls, safety mechanisms, cables, cables collapsing mechanisms, operation-control equipment, and side rails, to be supported on the structure, including all jointing, fixing & installation accessories, initial charging of lubricants, all painting & coatings; and a complete set of special tools, test equipment & spare parts, complete in all respects, in accordance with the Contract, as follows:				
		In Chlorine Building: Capacity: 5 Tons	Each	1.00		-
2	NS-2	MIXER				
		Providing, installing, testing and commissioning Mechanical Mixers (vertical-shaft, single impeller, pitched blade or propeller type, 3-4 blades), of internationally reputed approved make, complete with motor (4 pole, installed power to be determined by the manufacturer), gear box, motor starter, support base/frame, shaft, impeller and canopy, with all the submerged/wetted components to be of stainless steel (Grade 316), including all jointing, fixing & installation accessories, all painting & coatings; and a complete set of special tools, test equipment & spare parts, complete in all respects, in accordance with the Contract, as follows:				
		In Sodium Hypochlorite Dosing Tank (Imparted Mixing Power: 0.45 kW, Rotational Speed: 40 – 100 RPM, Impeller Diameter: 0.6 – 0.8 m)	Each	2.00		-
		In polymer 2 Dosing Tank (Imparted Mixing Power: 0.45 kW, Rotational Speed: 40 – 100 RPM, Impeller Diameter: 0.6 – 0.8 m)	Each	2.00		-
1		Stock Solution Transfer Pumps				
		Providing, installing, testing and commissioning Sodium Hypochlorite Water Transfer Pumps (horizontal-shaft, end-suction, non-clogging/solids-handling, centrifugal type, Min Free Passage Size: 100 mm), of internationally reputed approved make, complete with pump, 3-phase induction motor (4-pole, Min Efficiency 90%), spacer coupling, support base/frame, pressure gauges (on suction and discharge sides), mechanical seal, temperature & vibration monitoring devices, automatic liquid level-controlled switching device (ultrasonic sensor type), motor control unit (MCU, in painted metallic box, complete with auto star-delta starter and all the required control, relay, monitoring and protection devices) and electrical & control cables (between motor and MCU), with pump impeller, shaft & sleeve to be of stainless steel of approved grade, including all jointing, fixing & installation accessories, vibration-control accessories, initial lubricant charge, all painting & coatings; and a complete set of special tools, test equipare parts, complete in all respects, in accordance with the Contract, as follows: tions and				
		NaOCL Stock Solution Transfer pump: Capacity: 10m ³ /hr, Head:3m	Each	2.00		-
		Polymer Stock Solution Transfer pump: Capacity: 10m ³ /hr, Head:3m	Each	2.00		-

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BILL NO. 13: CHLORINATION BUILDING						
Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount		
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words
2		Sodium Hypochlorite Dosing Pumps				
		Providing, installing, testing and commissioning Sodium Hypochlorite Dosing Pumps (horizontal-diaphragm), of internationally reputed approved make, complete with pump, 3-phase induction motor (4-pole, Min Efficiency 90%), spacer coupling, support base/frame, pressure gauges (on suction and discharge sides), mechanical seal, temperature & vibration monitoring devices, automatic liquid level-controlled switching device (ultrasonic sensor type), motor control unit (MCU, in painted metallic box, complete with auto star-delta starter and all the required control, relay, monitoring and protection devices) and electrical & control cables (between motor and MCU), with pump impeller, shaft & sleeve to be of stainless steel of approved grade, including all jointing, fixing & installation accessories, vibration-control accessories, initial lubricant charge, all painting & coatings; and a complete set of special tools, test equipment & spare parts, complete in all respects, in accordance with the Contract, as follows:				
		NaOCl Dosing Pump; Capacity: 0.2m ³ /hr, Head: 40ft	Each	3.00		-
		Polymer Dosing Pump; Capacity: 0.2m ³ /hr, Head: 40ft	Each	3.00		-
6	NS-6	Sluice Valves				
		Providing, installing and testing cast iron (CI) Sluice Valves (Swing type, Flanged, BS 5153, PN 10) on pipelines, of internationally reputed approved make, including gaskets, steel nuts & bolts and other jointing accessories, with all the exposed ferrous surfaces to be epoxy coated, complete in all respects, in accordance with the Contract, as follows:				
		32mm	Each	20.00		-
7	NS-7	Providing, laying, cutting, jointing, testing and disinfecting High Density Polyethylene Pipe (HDPE) Din-8074/Din-8075/ISO-4427 in trenches, complete in all respects PN-10 32mm (including fittings as Bends etc)	M	48.00		-
8	NS-8	Providing, laying, cutting, jointing, testing and disinfecting High Density Polyethylene Pipe (HDPE) Din-8074/Din-8075/ISO-4427 in trenches, complete in all respects PN-10 90mm (including fittings as Bends etc)	M	26.00		-
SUB TOTAL OF MECHANICAL WORKS						-

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LOT 1: WATER TREATMENT PLANT						
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BILL NO. 13: CHLORINATION BUILDING						
Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount		
				Qty	Unit Rate (PKR)	Amount (PKR)
ELECTRICAL WORKS						
A.01		Light Circuits				
		Supply, installation and commissioning of light circuit wiring, to be wired with 4x2.5mm sq. (1P+1N+1UPS+1PE) PVC insulated 300/500 V grade wire make Pakistan Cable, Newage, AGE Cables, Golden Star, in and including cost of 1" dia. heavy duty PVC conduit make Beta, Popular recessed in walls, Roof slab, or on surface or above false ceiling or as required as per site conditions, all PVC conduit accessories, pull boxes, steel pull wires, complete in all respects. Each circuit shall have independent PE.				
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	170.73		-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	42.68		-
A.02		1-Light Point Controlled By One Switch				
		Wiring of one light point controlled by one switch and wired with 3x1.5 mm sq. (P+N+PE) PVC insulated wires 300/500 V. grade make Pakistan Cable, Newage Pioneer Cables, in and including cost of 3/4" dia. heavy duty PVC conduit make Beta, Popular installed on RCC slab, above false ceiling, recessed in wall, columns slabs or above light carrier all PVC conduit accessories, 3" high PVC junction boxes, pull boxes, steel pull wires, PVC flexible conduit from ceiling junction box to light fixture flush type plate switches, including cost of back boxes and switches of 10 Amps.				
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	567.07		-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	189.02		-
A.03		Point -Point Wiring				
		Same as per item No. A.02 but Loop wiring of a light point from first light point on same switch circuit, complete in all respects.				
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	414.63		-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	138.21		-
A.04		Gang Light Control Switches				
	15-127-d	Supply at site, installation, testing and commissioning of Four gang light control switches 10 Amps, 250Volts one way, including appropriate size concealed MS, powder coated back box, complete in all respects.	Each	6.00		-
	15-127-f	Supply at site, installation, testing and commissioning of Six gang light control switches 10 Amps, 250Volts one way, including appropriate size concealed MS, powder coated back box, complete in all respects.	Each	12.00		-
A.05		Exhaust Fan Point				
		Same as Item No. A.02 mentioned above but wiring of exhaust fan point including cost of 10 Amp switch with M.S box 16 SWG with earth terminal.				
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	54.88		-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	18.29		-
A.06		Ceiling Fan Point				
		Same as Item No. A.02 mentioned above but wiring of Ceiling fan point including cost of 10 Amp switch with M.S box 16 SWG with earth terminal.				
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	109.76		-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	36.59		-

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LOT 1: WATER TREATMENT PLANT						
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BILL NO. 13: CHLORINATION BUILDING						
Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount		
				Qty	Unit Rate (PKR)	Amount (PKR)
A.07		1-3 pin switch & plug combined recessed type :10/15 Amp				
		Supply and wiring of one 3 pin switch & plug combined recessed type :10/15 Amp outlet point from distribution board with single core 2x4mm2(P+N) PVC insulated 300/500 volt grade cable in & including PVC conduit recessed in walls/R.C.C. slab, or installed on surface of Ceiling, all conduits accessories, junction boxes, pull boxes etc. 2.5mm2 cable as PC excluding cost of 3 pin 13 Amps switch & socket out let make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel board recessed in walls complete in all respects and as per specifications & drawings.				
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	182.93		-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	60.98		-
A.08		Loop-Loop- 3 pin switch & plug combined recessed type :10/15 Amp				
		Same as item No.A.12 above but loop wiring of 3 pin switch & plug combined recessed type :10/15 Amp outlet with 2x4mm2(P+N) & 1x2.5mm2 as CPC from point to point excluding cost of one 15A 3 pin switch socket outlets with make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel boards recessed in walls /columns.				
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	548.78		-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	182.93		-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	182.93		-
	15-20-b	Supply and Erection 3 pin switch & plug combined recessed type :10/15 Amp	Each	30.00		-
A.09		Loop-Loop- 5 Amps Switch Socket				
		Same as item No.A.12 above but loop wiring of 5A power socket outlet with 2x4mm2(P+N) & 1x2.5mm2 as CPC from point to point excluding cost of one 15A 3 pin switch socket outlets with make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel boards recessed in walls /columns.				
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	548.78		-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	182.93		-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	182.93		-
	15-20-a	Supply and Erection 3 pin switch & plug combined recessed type : 5 Amp	Each	30.00		-
A.10		1-20 Amps Switch Socket				
		Supply and wiring of one 3pin 20 Amps Power plug socket outlet point from distribution board with single core 2x6mm2(P+N) PVC insulated 300/500 volt grade cable in & including PVC conduit recessed in walls/R.C.C. slab, or installed on surface of Ceiling including all conduits accessories, junction boxes, pull boxes etc. 4mm2 cable as PC including cost of 3 pin 20 Amps switch & socket out let make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel board recessed in walls complete in all respects and as per specifications & drawings.				
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	109.76		-

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LOT 1: WATER TREATMENT PLANT						
BILL OF QUANTITIES						
BILL NO. 13: CHLORINATION BUILDING						
Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount		
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	36.59		-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	36.59		-
	15-81	Supply and Fixing 20 Amp power plug	Each	6.00		-
A.11		Fitting and Fixtures.				
		Supply at site, installation, testing and commissioning of the following indoor incandescent/LED light fittings, complete with brass lamp holders, fixing accessories, earthing terminal, drivey circuitry make as specified or by any one of the manufacturers mentioned in Annexure-"A", complete in all respects.				
i)	15-36-k-01	Supply, installation, connecting, testing and commissioning of Surface mounting LED tube light with 2x2000 lumens, complete in all respects	Nos.	43.00		-
iii)	15-36-k-03	Supply, installation, connecting, testing and commissioning of Wall mounted Bulkhead light fixtures with LED retrofit lamp 540 Lumens output, complete in all respects	Nos.	6.00		-
i)	15-36-j-12	Supply, installation, connecting, testing & commissioning of 10W LED Down Light Fixture suitable for 1300 lm, as per instruction of Engineer, surface mounted circular shape or equivalent.	Nos.	22.00		-
A.12		Exhaust Fans				
a)	15-69-b	Supply and Erection best quality exhaust fan complete with shutter & regulator : 16" sweep	Nos.	4.00		-
A.13		Ceiling Fan				
	15-127-m	Supply at site, installation, testing and commissioning of Fan Dimmer with switch/ MS, powder coated back box with all associated accessories, complete in all respects.	Nos.	8.00		-
	26-01-I-01	Supply and Erection of ACEnergy Efficient Ceiling Fans 56 inch, 50 W	Nos.	8.00		-
A.14		Distribution Board				
		Fabrication, supply at site, installation, testing, commissioning and connections of wires / cables of Distribution Boards "Light / Power" concealed / open type to be installed as and where shown on drawing, made of MS sheet 16 SWG degreased and derusted, zinc phosphated, finished with electro-static powder coating of 50 micron thickness in approved colour, DB housing to comply with protection class IP-44 with hinged door, flexible earthing strap lockable handle, catcher, earthing bar, neutral strip, internal wiring from MCBs terminating on cable terminal blocks, including cost of all necessary materials complete in all respects. DBs shall be manufactured by any one of the manufacturers as mentioned in List.				
	15-162-j	Supply, Installation, connecting, testing & commissioning of wall mounted DBLP-G1, Distribution Boards, complete with all metering with indication lamps complete in all respects as per SLD.	Each	1.00		-
	15-135-e	Supply at site, fabrication and installation of GI perforated cable tray 14 SWG 8 ft. to 10 ft. long, 12" Wide with sides 3" high to be installed on wall, or in vertical, or above false ceiling in horizontal position or floor mounted or as shown on drawing, including cost of hanging arrangement brackets made of angle iron 38mm x 38mm x 6mm installed at every 3 ft., cost of all necessary fixing accessories, complete in all respects.	M	21.34		-
A.15		Non-maintained Emergency Lighting				
	Appendix 'c' Page No-5	Supply, installation and connections of Self Test Maintained With ISO 7010 Legend Set 7 Watt Colour Temperature 6000K ,235 Lumens on main supply and 150 Lumens on battery, Avg. Rated Life (Hrs) 30000 hr, IP65 rating with hanging arrangement on wall or ceiling as required complete in all respect as approved by the engineer incharge make Delpro (uk) or eqv.	Nos.	6.00		-

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LOT 1: WATER TREATMENT PLANT							
BILL OF QUANTITIES							
BILL NO. 13: CHLORINATION BUILDING							
Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
A.15		Fire Extinguisher					
	14-145-a	Providing and fixing of Dry powder type Fire Extinguisher of approved quality and manufacturer best design including all fittings complete in all respects. : 6kg	Each	2.00			-
	14-172-a	Supplying and fixing of Dry Chemical Powder Fire Extinguisher 6Kg Capacity complete in all respect	Each	2.00			-
SUB TOTAL OF ELECTRICAL WORKS							-

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LOT 1: WATER TREATMENT PLANT

SUMMARY OF BILL NO. 14: SUB-STATION BUILDING

BILL NO.	DESCRIPTION OF WORK	Amount (PKR)
1	CIVIL WORKS	-
2	ELECTRICAL WORKS	-
TOTAL AMOUNT		-

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 14: SUB-STATION BUILDING

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		CIVIL WORKS					
		Earth Work					
1	03-67-b-i	Excavation in foundation of building, bridges etc complete : in shingle/gravel	M3	59.95			-
2	03-67-b-ii	Structural Excavation In Medium Rock Material	M3	179.85			-
3	03-18-a	Filling, watering and ramming earth under floor with surplus earth from foundation, etc	M3	159.86			-
4	03-18-d	Filling, watering and ramming earth under floor with earth excavated from outside lead upto 8 km. (as per actual borrow pit lead)	M3	239.79			-
		Anti-Termite					
5	28-15	Pre anti Termite Treatment in the building mixed with water of mixing ratio as per the manufacturer's certified manual	M2	326.81			-
		Plain and Reinforement Concrete					
6	06-05-h	Plain Cement Concrete including placing, compacting, finishing & curing (Ratio 1:3:6)	M3	9.18			-
		GROUND FLOOR					
	06-07-b-01	RCC in raft foundation slab, base slab of column & ret. wall etc, not including in 06-06. (1:1:2)	M3	25.92			-
7	06-07-a-03	RCC in roof slab, beam, column & other structural members, insitu or precast. (1:2:4)	M3	69.54			-
		Steel Reinforcement					
8	06-08-b	Supply & fabricate M.S. reinforcement for cement concrete (Hot rolled deformed bars Grade 60)	Tonne	22.39			-

GOVERNMENT OF KHYBER PAKHTUNKHWA

KHYBER PAKHTUNKHWA CITIES IMPROVEMENT PROJECT

LOCAL GOVERNMENT, ELECTIONS AND RURAL DEVELOPMENT DEPARTMENT

KPCIP-CW-04: MINGORA GREATER WATER SUPPLY SCHEME INCLUDING NEW WATER TREATMENT PLANT (WTP), INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS AND SCADA:

LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 14: SUB-STATION BUILDING

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
9	06-26-a-02	Damp proof course of cem. conc. 1:2:4 including bitumen coat, 1 layer polythene & 1 coat bitumen (2" thick)	M2	12.80			-
10	06-30-a-04	V. Damp proof c/s plaster, 1 layer polythene 1 coat bitumen Ratio 1:3 (0.75" thick)	M2	12.80			-
		Brick Work					
11	07-04-a-04	1st class brick work in foundation and plinth in Cement, sand mortar 1:5	M3	24.32			-
		GROUND FLOOR					
12	07-05-a-04	1st class brick work in ground floor Cement, sand mortar 1:5	M3	27.24			-
		Flooring					
13	07-30	Supplying and filling sand under floor or plugging in wells	M3	8.85			-
14	10-03-b	Provide, lay, water & ram brick ballast 1.5" to 2" guage mixed with 25% sand for floor foundations	M3	8.85			-
15	06-05-f	Plain Cement Concrete including placing, compacting, finishing & curing (Ratio 1:2:4)	M3	4.41			-
16	10-22-a	1.5" thick mosaic flooring, including rubbing & polishing complete : Using grey cement	M2	89.29			-
17	10-41-a-02	Mosaic dado or skirting complete as per specs Using grey cement : 1/2" thick	M2	6.20			-
		Surface Rendring					
18	11-10-b	Cement plaster 3/8" thick under soffit of RCC roof slabs only upto 20' height : (1:3) (ceiling plaster)	M2	88.20			-

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 14: SUB-STATION BUILDING

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
19	11-09-b	Cement plaster 1:5, upto 20' height 1/2" thick (Internal walls)	M2	166.32			-
20	11-09-c	Cement Plaster 1:5, upto 20' height 3/4" thick (External walls)	M2	137.74			-
		Painting and Warnishing					
21	11-20-a	Priming coat of chalk under distemper	M2	267.25			-
22	11-21-a-03	Distempering New surface : Three coats	M2	267.25			-
23	Ch-13 item 25-a+(bx2) P-102	Preparing surface & painting with snowcem / weathershield paint: 3 Coats	M2	144.63			-
24	Ch-13 item U3-c-01+(c-02x2) P-100	Prepare & Paint new surface, doors & windows: 3 Coats	M2	32.77			-
		Metal Work					
25	12-57-a	Providing and fixing single leaf steel door with frame fully panelled with M.S sheet 16 gauge (1.59mm) painted with two coats of red oxide paint with brass fitting of approved make including cost of fabrication, iron lugs, cutting holes and making good the damages to walls.	M2	8.70			-
26	25-35	Providing and Fixing 24 SWG GI sheet rolling shutter of steel frame of MS channel 2"x1.25"x1/8" complete	M2	7.68			-
27	12-66	Supply and Fixing of double glazed aluminium (color as approved) Premium model (Gauge 2 mm) 4" sect. Sliding window, including all necessary fittings and fly screen shutters complete.	M2	10.75			-
28	12-61	MS flat 1/2"x1/8" grill in windows of approved design	M2	10.75			-

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 14: SUB-STATION BUILDING

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
29	25-47	Supply and fixing of fancy type stainless steel chromium plate 2" dia pipes stair railing 3/4" dia pipe fixed on specified space on steps in horizontal positions, complete in all respects	M	4.20			-
		Roofing & Water Proofing					
30	Ch-9 item 06+13 P-56&57 + Ch-6 item 28 P-34	Single layer of tiles 10"x5"x1.25" laid over 4" earth and 1" mud plaster on top of RC roof slab, provided with 2 coats of bitumen laid hot using 34 lbs. for %sft over roof & blinded with sand at 1 cft per % sft.i/c P/L Providing and laying polythene sheet 0.005" thick (0.05mm 500gauge)	M2	80.85			-
31	09-16	Khuras on roof 2'x2'x6"	Each	2.00			-
32	09-17	Bottom khuras of brick masonry in c/s mortar 1:6,4'x2'x4.5" over 3" cem. concrete 1:4:8	Each	2.00			-
33	03-20-a	Transportation of earth all types beyond 250 m and upto 500 m.	M3	159.86			-
34	03-20-b	Transportation of earth all types for every 100m extra lead beyond 500m upto 1.5 km.	M3	159.86			-
35	03-20-c	Transportation of earth all types for every 500m extra lead beyond 1.5 km. upto 8 km.	M3	159.86			-
36	03-20-d	Transportation of earth all types for every 1 km extra lead or part thereof beyond 8 km.	M3	159.86			-
		Windows Sill					
1	N.S	ProvidinProviding and fixing 1/2" thick Pre-polished Sunny White Marble Slab uniform texture full width area above 3-8 sft laid ove 3/4" thick cement sand mortar (1:2) i/c filling joints in white cement & matching pigment i/c beveling charges on exposed edges, complete in all respect as approved / directed by The Engineer.	M2	1.92			-
		Miscellenious					

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BILL NO. 14: SUB-STATION BUILDING

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
2	N.S	Supply, provide and fix in position uPVC rain water down pipe lines conforming to ISO 3633:1991 and BS 3505 1968 (wall thickness 3.2mm) including proper joints complete in all respects, and system leak-free:					
		4" dia	M	9.60			-
3	N.S	Provide and fix uPVC plain bends with grating (as rain water inlets at roof), water tight connection leak-free:					
		4" dia	Each	2.00			-
4	N.S	Provide and fix uPVC shoe bends (as rain water outlets), water tight connection leak-free					
		4" dia	Each	2.00			-
SUB TOTAL OF CIVIL WORKS							-

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BILL OF QUANTITIES						
BILL NO. 14: SUB-STATION BUILDING						
Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount		
				Qty	Unit Rate (PKR)	Amount (PKR)
Unit Rate (Rs) in Words						
ELECTRICAL WORKS						
A.01		Light Circuits				
		Supply, installation and commissioning of light circuit wiring, to be wired with 4x2.5mm sq. (1P+1N+1UPS+1PE) PVC insulated 300/500 V grade wire make Pakistan Cable, Newage, AGE Cables, Golden Star, in and including cost of 1" dia. heavy duty PVC conduit make Beta, Popular recessed in walls, Roof slab, or on surface or above false ceiling or as required as per site conditions, all PVC conduit accessories, pull boxes, steel pull wires, complete in all respects. Each circuit shall have independent PE.				
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	48.78		-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	12.20		-
A.02		1-Light Point Controlled By One Switch				
		Wiring of one light point controlled by one switch and wired with 3x1.5 mm sq. (P+N+PE) PVC insulated wires 300/500 V. grade make Pakistan Cable, Newage Pioneer Cables., in and including cost of 3/4" dia. heavy duty PVC conduit make Beta, Popular installed on RCC slab, above false ceiling, recessed in wall, columns slabs or above light carrier all PVC conduit accessories, 3" high PVC junction boxes, pull boxes, steel pull wires, PVC flexible conduit from ceiling junction box to light fixture flush type plate switches, including cost of back boxes and switches of 10 Amps.				
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	73.17		-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	24.39		-
A.03		Point -Point Wiring				
		Same as per item No. A.02 but Loop wiring of a light point from first light point on same switch circuit, complete in all respects.				
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	134.15		-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	44.72		-
A.04		Gang Light Control Switches				
	15-127-d	Supply at site, installation, testing and commissioning of Four gang light control switches 10 Amps, 250Volts one way, including appropriate size concealed MS, powder coated back box complete in all respects.	Each	1.00		-
	15-127-f	Supply at site, installation, testing and commissioning of Six gang light control switches 10 Amps, 250Volts one way, including appropriate size concealed MS, powder coated back box complete in all respects.	Each	2.00		-
A.05		Exhaust Fan Point				
		Same as Item No. A.02 mentioned above but wiring of exhaust fan point including cost of 10 Amp switch with M.S box 16 SWG with earth terminal.				
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	54.88		-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	18.29		-
A.06		Ceiling Fan Point				
		Same as Item No. A.02 mentioned above but wiring of Ceiling fan point including cost of 10 Amp switch with M.S box 16 SWG with earth terminal.				
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	54.88		-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	18.29		-
A.07		1-3 pin switch & plug combined recessed type :10/15 Amp				

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BILL NO. 14: SUB-STATION BUILDING						
Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount		
				Qty	Unit Rate (PKR)	Amount (PKR)
				Unit Rate (Rs) in Words		
		Supply and wiring of one 3 pin switch & plug combined recessed type :10/15 Amp outlet point from distribution board with single core 2x4mm2(P+N) PVC insulated 300/500 volt grade cable in & including PVC conduit recessed in walls/R.C.C. slab, or installed on surface of Ceiling, all conduits accessories, junction boxes, pull boxes etc. 2.5mm2 cable as PC excluding cost of 3 pin 13 Amps switch & socket out let make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel board recessed in walls complete in all respects and as per specifications & drawings.				
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	36.59		-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	12.20		-
A.08		Loop-Loop- 3 pin switch & plug combined recessed type :10/15 Amp				
		Same as item No.A.12 above but loop wiring of 3 pin switch & plug combined recessed type :10/15 Amp outlet with 2x4mm2(P+N) & 1x2.5mm2 as CPC from point to point excluding cost of one 15A 3 pin switch socket outlets with make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel boards recessed in walls /columns.				
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	54.88		-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	18.29		-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	18.29		-
	15-20-b	Supply and Erection 3 pin switch & plug combined recessed type :10/15 Amp	Each	5.00		-
A.09		Loop-Loop- 5 Amps Switch Socket				
		Same as item No.A.12 above but loop wiring of 5A power socket outlet with 2x4mm2(P+N) & 1x2.5mm2 as CPC from point to point excluding cost of one 15A 3 pin switch socket outlets with make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel boards recessed in walls /columns.				
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	91.46		-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	30.49		-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	30.49		-
	15-20-a	Supply and Erection 3 pin switch & plug combined recessed type : 5 Amp	Each	5.00		-
A.10		1-20 Amps Switch Socket				
		Supply and wiring of one 3pin 20 Amps Power plug socket outlet point from distribution board with single core 2x6mm2(P+N) PVC insulated 300/500 volt grade cable in & including PVC conduit recessed in walls/R.C.C. slab, or installed on surface of Ceiling including all conduits accessories, junction boxes, pull boxes etc. 4mm2 cable as PC including cost of 3 pin 20 Amps switch & socket out let make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel board recessed in walls complete in all respects and as per specifications & drawings.				
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	36.59		-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	12.20		-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	12.20		-
	15-81	Supply and Fixing 20 Amp power plug	Each	2.00		-
A.11		Fitting and Fixtures.				

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LOT 1: WATER TREATMENT PLANT						
BILL OF QUANTITIES						
BILL NO. 14: SUB-STATION BUILDING						
Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount		
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words
		Supply at site, installation, testing and commissioning of the following indoor incandescent/LED light fittings, complete with brass lamp holders, fixing accessories, earthing terminal, drivey circuitry make as specified or by any one of the manufacturers mentioned in Annexure-'A', complete in all respects.				
i)	15-36-k-01	Supply, installation, connecting, testing and commissioning of Surface mounting LED tube light with 2x2000 lumens, complete in all respects	Nos.	9.00		-
iii)	15-36-k-03	Supply, installation, connecting, testing and commissioning of Wall mounted Bulkhead light fixtures with LED retrofit lamp 540 Lumens output, complete in all respects	Nos.	6.00		-
A.12		Exhaust Fans				
a)	15-69-b	Supply and Erection best quality exhaust fan complete with shutter & regulator : 16"sweep	Nos.	4.00		-
A.13		Ceiling Fan				
	15-127-m	Supply at site, installation, testing and commissioning of Fan Dimmer with switch/ MS, powder coated back box with all associated accessories, complete in all respects.	Nos.	4.00		-
	26-01-l-01	Supply and Erection of AC ENERGY EFFICIENT CEILING FANS 56 inch, 50 W	Nos.	4.00		-
A.14		Distribution Board				
		Fabrication, supply at site, installation, testing, commissioning and connections of wires / cables of Distribution Boards "Light / Power" concealed / open type to be installed as and where shown on drawing, made of MS sheet 16 SWG degreased and derusted, zinc phosphated, finished with electro-static powder coating of 50 micron thickness in approved colour, DB housing to comply with protection class IP-44 with hinged door, flexible earthing strap lockable handle, catcher, earthing bar, neutral strip, internal wiring from MCBs terminating on cable terminal blocks, including cost of all necessary materials complete in all respects. DBs shall be manufactured by any one of the manufacturers as mentioned in List.				
	15-162-j	Supply, Installation, connecting, testing & commissioning of wall mounted DBLP-G1, Distribution Boards, complete with all metering with indication lamps complete in all respects as per SLD.	Each	1.00		-
	15-135-e	Supply at site, fabrication and installation of GI perforated cable tray 14 SWG 8 ft. to 10 ft. long, 12" Wide with sides 3" high to be installed on wall, or in vertical, or above false ceiling in horizontal position or floor mounted or as shown on drawing, including cost of hanging arrangement brackets made of angle iron 38mm x 38mm x 6mm installed at every 3 ft., cost of all necessary fixing accessories, complete in all respects.	M	21.34		-
A.15		Non-maintained Emergency Lighting				
	Appendix 'c' Page No-5	Supply, installation and connections of Self Test Maintained With ISO 7010 Legend Set 7 Watt Colour Temperature 6000K ,235 Lumens on main supply and 150 Lumens on battery, Avg. Rated Life (Hrs) 30000 hr, IP65 rating with hanging arrangement on wall or ceiling as required complete in all respect as approved by the engineer incharge make Delpro (uk) or eqv.	Nos.	6.00		-
A.16		Fire Extinguisher				
	14-145-a	Providing and fixing of Dry powder type Fire Extinguisher of approved quality and manufacturer best design including all fittings complete in all respects. : 6kg	Each	2.00		-
	14-172-a	Supplying and fixing of Dry Chemical Powder Fire Extinguisher 6Kg Capacity complete in all respect	Each	2.00		-
SUB TOTAL OF ELECTRICAL WORKS						-

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SUMMARY OF BILL NO. 15: ELECTRICAL CONTROL ROOM

BILL NO.	DESCRIPTION OF WORK	Amount (PKR)
1	CIVIL WORKS	-
2	ELECTRICAL WORKS	-
TOTAL AMOUNT RS		-

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BILL NO. 15: ELECTRICAL CONTROL ROOM

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	CIVIL WORKS						
		Earth Work					
1	03-67-b-i	Structural Excavation in Common Material by mechanical means	M3	239.79			-
2	03-18-a	Filling, watering and ramming earth under floor with surplus earth from foundation, etc	M3	159.86			-
3	03-18-d	Filling, watering and ramming earth under floor with earth excavated from outside lead upto 8 km. (as per actual borrow pit lead)	M3	176.25			-
		Anti-Termite					
4	28-15	Pre anti Termite Treatment in the building mixed with water of mixing ratio as per the manufacturer's certified manual	M2	497.51			-
		Plain and Reinforcement Concrete					
5	06-05-h	Plain Cement Concrete including placing, compacting, finishing & curing (Ratio 1:3:6)	M3	9.18			-
		GROUND FLOOR					
6	06-07-b-01	RCC in raft foundation slab, base slab of column & ret. wall etc, not including in 06-06. (1:1:2)	M3	25.92			-
7	06-07-a-03	RCC in roof slab, beam, column & other structural members, insitu or precast. (1:2:4)	M3	47.59			-
		Steel Reinforcement					

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BILL NO. 15: ELECTRICAL CONTROL ROOM

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
8	06-08-b	Supply & fabricate M.S. reinforcement for cement concrete (Hot rolled deformed bars Grade 60)	Tonne	17.09			-
9	06-26-a-02	Damp proof course of cem. conc. 1:2:4 including bitumen coat, 1 layer polythene & 1 coat bitumen (2" thick)	M2	9.60			-
10	06-30-a-04	V. Damp proof c/s plaster, 1 layer polythene 1 coat bitumen Ratio 1:3 (0.75" thick)	M2	25.60			-
		Brick Work					
11	07-04-a-04	1st class brick work in foundation and plinth in Cement, sand mortar 1:5	M3	15.80			-
		GROUND FLOOR					
12	07-05-a-04	1st class brick work in ground floor Cement, sand mortar 1:5	M3	27.24			-
		Flooring					
13	07-30	Supplying and filling sand under floor or plugging in wells	M3	10.34			-
14	10-03-b	Provide, lay, water & ram brick ballast 1.5" to 2" guage mixed with 25% sand for floor foundations	M3	10.34			-
15	06-05-f	Plain Cement Concrete including placing, compacting, finishing & curing (Ratio 1:2:4)	M3	5.15			-
16	10-22-a	1.5" thick mosaic flooring, including rubbing & polishing complete : Using grey cement	M2	101.85			-
17	10-41-a-02	Mosaic dado or skirting complete as per specs Using grey cement : 1/2" thick	M2	6.63			-

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BILL OF QUANTITIES

BILL NO. 15: ELECTRICAL CONTROL ROOM

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		Surface Rendring					
18	11-10-b	Cement plaster 3/8" thick under soffit of RCC roof slabs only upto 20' height : (1:3) (ceiling plaster)	M2	95.55			-
19	11-09-b	Cement plaster 1:5, upto 20' height 1/2" thick (Internal walls)	M2	307.22			-
20	11-09-c	Cement Plaster 1:5, upto 20' height 3/4" thick (External walls)	M2	159.50			-
		Painting and Warnishing					
21	11-20-a	Priming coat of chalk under distemper	M2	422.91			-
22	11-21-a-03	Distemping New surface : Three coats	M2	422.91			-
23	Ch-13 item 25-a+(bx2) P-102	Preparing surface & painting with snowcem / weathershield paint: 3 Coats	M2	167.48			-
24	Ch-13 item 03-c-01+(c-02x2) P-100	Prepare & Paint new surface, doors & windows: 3 Coats	M2	15.36			-
		Metal Work					
25	25-35	Providing and Fixing 24 SWG GI sheet rolling shutter of steel frame of MS channel 2"x1.25"x1/8" complete	M2	7.68			-
26	12-66	Supply and Fixing of double glazed aluminium (color as approved) Premium model (Gauge 2 mm) 4" sect. Sliding window, including all necessary fittngs and fly screen shutters complete.	M2	13.83			-

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LOCAL GOVERNMENT, ELECTIONS AND RURAL DEVELOPMENT DEPARTMENT

**KPCIP-CW-04: MINGORA GREATER WATER SUPPLY SCHEME INCLUDING NEW WATER TREATMENT PLANT (WTP), INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS
AND SCADA:**

LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 15: ELECTRICAL CONTROL ROOM

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
27	12-61	MS flat 1/2"x1/8" grill in windows of approved design	M2	13.83			-
28	25-47	Supply and fixing of fancy type stainless steel chromium plate 2" dia pipes stair railing 3/4" dia pipe fixed on specified space on steps in horizontal positions, complete in all respects	M	4.20			-
		Roofing & Water Proofing					
29	Ch-9 item 06+13 P-56&57 + Ch-6 item 28 P-34	Single layer of tiles 10"x5"x1.25" laid over 4" earth and 1" mud plaster on top of RC roof slab, provided with 2 coats of bitumen laid hot using 34 lbs. for %sft over roof & blinded with sand at 1 cft per % sft.i/c P/L Providing and laying polythene sheet 0.005" thick (0.05mm 500gauge)	M2	95.55			-
30	09-16	Khuras on roof 2'x2'x6"	Each	2.00			-
31	09-17	Bottom khuras of brick masonry in c/s mortar 1:6,4'x2'x4.5" over 3" cem. concrete 1:4:8	Each	2.00			-
31	03-20-a	Transportation of earth all types beyond 250 m and upto 500 m.	M3	159.86			-
32	03-20-b	Transportation of earth all types for every 100m extra lead beyond 500m upto 1.5 km.	M3	159.86			-
33	03-20-c	Transportation of earth all types for every 500m extra lead beyond 1.5 km. upto 8 km.	M3	159.86			-
33	03-20-d	Transportation of earth all types for every 1 km extra lead or part thereof beyond 8 km.	M3	159.86			-
		Windows Sill					

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AND SCADA:**

LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 15: ELECTRICAL CONTROL ROOM

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
1	N.S	ProvidinProviding and fixing 1/2" thick Pre-polished Sunny White Marble Slab uniform texture full width area above 3-8 sft laid ove 3/4" thick cement sand mortar (1:2) i/c filling joints in white cement & matching pigment i/c beveling charges on exposed edges, complete in all respect as approved / directed by The Engineer.	M2	2.30			-
		Miscellenious					
2	N.S	Supply, provide and fix in position uPVC rain water down pipe lines conforming to ISO 3633:1991 and BS 3505 1968 (wall thickness 3.2mm) including proper joints complete in all respects, and system leak-free:					
		4" dia	M	9.60			-
3	N.S	Provide and fix uPVC plain bends with grating (as rain water inlets at roof), water tight connection leak-free:					
		4" dia	Each	2.00			-
4	N.S	Provide and fix uPVC shoe bends (as rain water outlets), water tight connection leak-free					
		4" dia	Each	2.00			-
SUB TOTAL OF CIVIL WORKS							-

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 15: ELECTRICAL CONTROL ROOM

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		ELECTRICAL WORKS					
A.01		Light Circuits					
		Supply, installation and commissioning of light circuit wiring, to be wired with 4x2.5mm sq. (1P+1N+1UPS+1PE) PVC insulated 300/500 V grade wire make Pakistan Cable, Newage, AGE Cables, Golden Star, in and including cost of 1" dia. heavy duty PVC conduit make Beta , Popular recessed in , walls, Roof slab, or on surface or above false ceiling or as required as per site conditions, all PVC conduit accessories, pull boxes, steel pull wires , complete in all respects. Each circuit shall have independent PE.					
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	48.78			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	12.20			-
A.02		1-Light Point Controlled By One Switch					
		Wiring of one light point controlled by one switch and wired with 3x1.5 mm sq. (P+N+PE) PVC insulated wires 300/500 V. grade make Pakistan Cable, Newage Pioneer Cables,, in and including cost of 3/4" dia. heavy duty PVC conduit make Beta , Popular installed on RCC slab, above false ceiling, recessed in wall, columns slabs or above light carrier all PVC conduit accessories, 3" high PVC junction boxes, pull boxes, steel pull wires, PVC flexiable conduit from ceiling junction box to light fixture flush type plate switches, including cost of back boxes and switches of 10 Amps.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	128.05			-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	42.68			-

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BILL OF QUANTITIES

BILL NO. 15: ELECTRICAL CONTROL ROOM

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
A.03		Point -Point Wiring					
		Same as per item No. A.02 but Loop wiring of a light point from first light point on same switch circuit, complete in all respects.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	134.15			-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	44.72			-
A.04		Gang Light Control Switches					
	15-127-d	Supply at site, installation, testing and commissioning of Four gang light control switches 10 Amps, 250Volts one way, including appropriate size concealed MS, powder coated back box, complete in all respects.	Each	1.00			-
	15-127-f	Supply at site, installation, testing and commissioning of Six gang light control switches 10 Amps, 250Volts one way, including appropriate size concealed MS, powder coated back box, complete in all respects.	Each	2.00			-
A.05		Exhaust Fan Point					
		Same as Item No. A.02 mentioned above but wiring of exhaust fan point including cost of 10 Amp switch with M.S box 16 SWG with earth terminal.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	54.88			-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	18			-
A.06		Ceiling Fan Point					

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BILL OF QUANTITIES

BILL NO. 15: ELECTRICAL CONTROL ROOM

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		Same as Item No. A.02 mentioned above but wiring of Ceiling fan point including cost of 10 Amp switch with M.S box 16 SWG with earth terminal.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	54.88			-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	18.29			-
A.07		1-3 pin switch & plug combined recessed type :10/15 Amp					
		Supply and wiring of one 3 pin switch & plug combined recessed type :10/15 Amp outlet point from distribution board with single core 2x4mm2(P+N) PVC insulated 300/500 volt grade cable in & including PVC conduit recessed in walls/R.C.C. slab, or installed on surface of Ceiling, all conduits accessories, junction boxes, pull boxes etc. 2.5mm2 cable as PC excluding cost of 3 pin 13 Amps switch & socket out let make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel board recessed in walls complete in all respects and as per specifications & drawings.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	36.59			-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	12.20			-
A.08		Loop-Loop- 3 pin switch & plug combined recessed type :10/15 Amp					
		Same as item No.A.12 above but loop wiring of 3 pin switch & plug combined recessed type :10/15 Amp outlet with 2x4mm2(P+N) & 1x2.5mm2 as CPC from point to point excluding cost of one 15A 3 pin switch socket outlets with make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel boards recessed in walls /columns.					

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BILL OF QUANTITIES

BILL NO. 15: ELECTRICAL CONTROL ROOM

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	73.17			-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	24.39			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	24.39			-
	15-20-b	Supply and Erection 3 pin switch & plug combined recessed type :10/15 Amp	Each	6.00			-
A.09		Loop-Loop- 5 Amps Switch Socket					
		Same as item No.A.12 above but loop wiring of 5A power socket outlet with 2x4mm2(P+N) & 1x2.5mm2 as CPC from point to point excluding cost of one 15A 3 pin switch socket outlets with make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel boards recessed in walls /columns.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	109.76			-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	36.59			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	36.59			-
	15-20-a	Supply and Erection 3 pin switch & plug combined recessed type : 5 Amp	Each	6.00			-
A.10		1-20 Amps Switch Socket					

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 15: ELECTRICAL CONTROL ROOM

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		Supply and wiring of one 3pin 20 Amps Power plug socket outlet point from distribution board with single core 2x6mm2(P+N) PVC insulated 300/500 volt grade cable in & including PVC conduit recessed in walls/R.C.C. slab, or installed on surface of Ceiling including all conduits accessories, junction boxes, pull boxes etc. 4mm2 cable as PC including cost of 3 pin 20 Amps switch & socket out let make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel board recessed in walls complete in all respects and as per specifications & drawings.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	36.59			-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	12.20			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	12.20			-
	15-81	Supply and Fixing 20 Amp power plug	Each	2.00			-
A.11		Fitting and Fixtures.					
		Supply at site, installation, testing and commissioning of the following indoor incandescent/LED light fittings, complete with brass lamp holders, fixing accessories, earthing terminal, drivery circuitry make as specified or by any one of the manufacturers mentioned in Annexure-"A", complete in all respects.					
i)	15-36-k-01	Supply, installation, connecting, testing and commissioning of Surface mounting LED tube light with 2x2000 lumens, complete in all respects	Nos.	12.00			-
iii)	15-36-k-03	Supply, installation, connecting, testing and commissioning of Wall mounted Bulkhead light fixtures with LED retrofit lamp 540 Lumens output, complete in all respects	Nos.	6.00			-
A.12		Exhaust Fans					

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BILL OF QUANTITIES

BILL NO. 15: ELECTRICAL CONTROL ROOM

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
a)	15-69-b	Supply and Erection best quality exhaust fan complete with shutter & regulator : 16"sweep	Nos.	4.00			-
A.13		Ceiling Fan					
	15-127-m	Supply at site, installation, testing and commissioning of Fan Dimmer with switch/ MS, powder coated back box with all associated accessories, complete in all respects.	Nos.	4.00			-
	26-01-l-01	Supply and Erection of AC Energy Efficient Ceiling Fans 56 inch, 50 W	Nos.	4.00			-
A.14		<u>Distribution Board</u>					
		Fabrication, supply at site, installation, testing, commissioning and connections of wires / cables of Distribution Boards "Light / Power" concealed / open type to be installed as and where shown on drawing, made of MS sheet 16 SWG degreased and derusted, zinc phosphated, finished with electro-static powder coating of 50 micron thickness in approved colour, DB housing to comply with protection class IP-44 with hinged door, flexible earthing strap lockable handle, catcher, earthing bar, neutral strip, internal wiring from MCBs terminating on cable terminal blocks, including cost of all necessary materials complete in all respects. DBs shall be manufactured by any one of the manufacturers as mentioned in List.					
	15-162-j	Supply, Installation, connecting, testing & commissioning of wall mounted DBLP-G1, Distribution Boards, complete with all metering with indication lamps complete in all respects as per SLD.	Each	1.00			-
	15-135-e	Supply at site, fabrication and installation of GI perforated cable tray 14 SWG 8 ft. to 10 ft. long, 12" wide with sides 3" high to be installed on wall, or in vertical, or above false ceiling in horizontal position or floor mounted or as shown on drawing, including cost of hanging arrangement brackets made of angle iron 38mm x 38mm x 6mm installed at every 3 ft., cost of all necessary fixing accessories, complete in all respects.	M	21.34			-

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
A.15		<u>Non-maintained Emergency Lighting</u>					
	Appendix 'c' Page No-5	Supply, installation and connections of Self Test Maintained With ISO 7010 Legend Set 7 Watt Colour Temperature 6000K ,235 Lumens on main supply and 150 Lumens on battery, Avg. Rated Life (Hrs) 30000 hr, IP65 rating with hanging arrangement on wall or ceiling as required complete in all respect as approved by the engineer incharge make Delpro (uk) or eqv.	Nos.	6.00			-
A.16		Fire Extinguisher					
	14-145-a	Providing and fixing of Dry powder type Fire Extinguisher of approved quality and manufacturer best design including all fittings complete in all respects. : 6kg	Each	2.00			-
	14-172-a	Supplying and fixing of Dry Chemical Powder Fire Extinguisher 6Kg Capacity complete in all respect	Each	2.00			-
Sub Total of Electrical Works							-

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SUMMARY OF BILL NO. 16: GENERATOR ROOM

BILL NO.	DESCRIPTION OF WORK	Amount (PKR)
1	CIVIL WORKS	-
2	ELECTRICAL WORKS	-
TOTAL AMOUNT RS		-

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BILL NO. 16: GENERATOR ROOM

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	CIVIL WORKS						
		Earth Work					
1	03-67-b-i	Structural Excavation in Common Material by mechanical means	M3	239.79			-
3	03-18-a	Filling, watering and ramming earth under floor with surplus earth from foundation, etc	M3	159.86			-
		Anti-Termite					
4	28-15	Pre anti Termite Treatment in the building mixed with water of mixing ratio as per the manufacturer's certified manual	M2	326.81			-
5		Plain and Reinforcement Concrete					
6	06-05-h	Plain Cement Concrete including placing, compacting, finishing & curing (Ratio 1:3:6)	M3	9.18			-
		GROUND FLOOR					
7	06-07-b-01	RCC in raft foundation slab, base slab of column & ret. wall etc, not including in 06-06. (1:1:2)	M3	25.92			-
8	06-07-a-03	RCC in roof slab, beam, column & other structural members, insitu or precast. (1:2:4)	M3	75.93			-
		Steel Reinforcement					
9	06-08-b	Supply & fabricate M.S. reinforcement for cement concrete (Hot rolled deformed bars Grade 60)	Tonne	22.54			-

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
10	06-26-a-02	Damp proof course of cem. conc. 1:2:4 including bitumen coat, 1 layer polythene & 1 coat bitumen (2" thick)	M2	12.80			-
11	06-30-a-04	V. Damp proof c/s plaster, 1 layer polythene 1 coat bitumen Ratio 1:3 (0.75" thick)	M2	12.80			-
		Brick Work					
12	07-04-a-04	1st class brick work in foundation and plinth in Cement, sand mortar 1:5	M3	22.48			-
13		GROUND FLOOR					
14	07-05-a-04	1st class brick work in ground floor Cement, sand mortar 1:5	M3	27.24			-
		Flooring					
15	07-30	Supplying and filling sand under floor or plugging in wells	M3	10.34			-
16	10-03-b	Provide, lay, water & ram brick ballast 1.5" to 2" guage mixed with 25% sand for floor foundations	M3	10.34			-
17	06-05-f	Plain Cement Concrete including placing, compacting, finishing & curing (Ratio 1:2:4)	M3	5.15			-
18	10-22-a	1.5" thick mosaic flooring, including rubbing & polishing complete : Using grey cement	M2	103.99			-
19	10-41-a-02	Mosaic dado or skirting complete as per specs Using grey cement : 1/2" thick	M2	6.63			-

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		Surface Rendring					
20	11-10-b	Cement plaster 3/8" thick under soffit of RCC roof slabs only upto 20' height : (1:3) (ceiling plaster)	M2	95.55			-
21	11-09-b	Cement plaster 1:5, upto 20' height 1/2" thick (Internal walls)	M2	166.32			-
22	11-09-c	Cement Plaster 1:5, upto 20' height 3/4" thick (External walls)	M2	151.44			-
		Painting and Warnishing					
23	11-20-a	Priming coat of chalk under distemper	M2	274.96			-
24	11-21-a-03	Distempering New surface : Three coats	M2	274.96			-
25	Ch-13 item 25-a+(bx2) P-102	Preparing surface & painting with snowcem / weathershield paint: 3 Coats	M2	159.01			-
26	Ch-13 item 03-c-01+(c-02x2) P-100	Prepare & Paint new surface, doors & windows: 3 Coats	M2	32.77			-
		Metal Work					
27	12-57-a	Providing and fixing single leaf steel door with frame fully panelled with M.S sheet 16 gauge (1.59mm) painted with two coats of red oxide paint with brass fitting of approved make including cost of fabrication, iron lugs, cutting holes and making good the damages to walls.	M2	8.70			-
28	25-35	Providing and Fixing 24 SWG GI sheet rolling shutter of steel frame of MS channel 2"x1.25"x1/8" complete	M2	7.68			-

GOVERNMENT OF KHYBER PAKHTUNKHWA

KHYBER PAKHTUNKHWA CITIES IMPROVEMENT PROJECT

LOCAL GOVERNMENT, ELECTIONS AND RURAL DEVELOPMENT DEPARTMENT

KPCIP-CW-04: MINGORA GREATER WATER SUPPLY SCHEME INCLUDING NEW WATER TREATMENT PLANT (WTP), INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS AND SCADA:

LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 16: GENERATOR ROOM

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
29	12-66	Supply and Fixing of double glazed aluminium (color as approved) Premium model (Gauge 2 mm) 4" sect. Sliding window, including all necessary fittings and fly screen shutters complete.	M2	10.75			-
30	12-61	MS flat 1/2"x1/8" grill in windows of approved design	M2	10.75			-
31	25-47	Supply and fixing of fancy type stainless steel chromium plate 2" dia pipes stair railing 3/4" dia pipe fixed on specified space on steps in horizontal positions, complete in all respects	M	4.20			-
		Roofing & Water Proofing					
32	Ch-9 item 06+13 P-56&57 + Ch-6 item 28 P-34	Single layer of tiles 10"x5"x1.25" laid over 4" earth and 1" mud plaster on top of RC roof slab, provided with 2 coats of bitumen laid hot using 34 lbs. for %sft over roof & blinded with sand at 1 cft per % sft.i/c P/L Providing and laying polythene sheet 0.005" thick (0.05mm 500gauge)	M2	95.55			-
33	09-16	Khuras on roof 2'x2'x6"	Each	2.00			-
34	09-17	Bottom khuras of brick masonry in c/s mortar 1:6,4'x2'x4.5" over 3" cem. concrete 1:4:8	Each	2.00			-
35	03-20-a	Transportation of earth all types beyond 250 m and upto 500 m.	M3	37.16			-
36	03-20-b	Transportation of earth all types for every 100m extra lead beyond 500m upto 1.5 km.	M3	37.16			-
37	03-20-c	Transportation of earth all types for every 500m extra lead beyond 1.5 km. upto 8 km.	M3	37.16			-

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 16: GENERATOR ROOM

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
38	03-20-d	Transportation of earth all types for every 1 km extra lead or part thereof beyond 8 km.	M3	37.16			-
		NON SCHEDULE ITEMS-B					
		Windows Sill					
1	N.S	ProvidinProviding and fixing 1/2" thick Pre-polished Sunny White Marble Slab uniform texture full width area above 3-8 sft laid ove 3/4" thick cement sand mortar (1:2) i/c filling joints in white cement & matching pigment i/c beveling charges on exposed edges, complete in all respect as approved / directed by The Engineer.	M2	1.92			-
		Miscellenious					
2	N.S	Supply, provide and fix in position uPVC rain water down pipe lines conforming to ISO 3633:1991 and BS 3505 1968 (wall thickness 3.2mm) including proper joints complete in all respects, and system leak-free:					
		4" dia	M	9.60			-
3	N.S	Provide and fix uPVC plain bends with grating (as rain water inlets at roof), water tight connection leak-free:					
		4" dia	Each	2.00			-
4	N.S	Provide and fix uPVC shoe bends (as rain water outlets), water tight connection leak-free					
		4" dia	Each	2.00			-
SUB TOTAL OF CIVIL WORK							-

GOVERNMENT OF KHYBER PAKHTUNKHWA							
KHYBER PAKHTUNKHWA CITIES IMPROVEMENT PROJECT							
LOCAL GOVERNMENT, ELECTIONS AND RURAL DEVELOPMENT DEPARTMENT							
KPCIP-CW-04: MINGORA GREATER WATER SUPPLY SCHEME INCLUDING NEW WATER TREATMENT PLANT (WTP), INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS AND SCADA:							
LOT 1: WATER TREATMENT PLANT							
BILL OF QUANTITIES							
BILL NO. 16: GENERATOR ROOM							
Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		ELECTRICAL WORKS					
A.01		Light Circuits					
		Supply, installation and commissioning of light circuit wiring, to be wired with 4x2.5mm sq. (1P+1N+1UPS+1PE) PVC insulated 300/500 V grade wire make Pakistan Cable, Newage, AGE Cables, Golden Star, in and including cost of 1" dia. heavy duty PVC conduit make Beta, Popular recessed in walls, Roof slab, or on surface or above false ceiling or as required as per site conditions, all PVC conduit accessories, pull boxes, steel pull wires, complete in all respects. Each circuit shall have independent PE.					
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	48.78			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	12.20			-
A.02		1-Light Point Controlled By One Switch					
		Wiring of one light point controlled by one switch and wired with 3x1.5 mm sq. (P+N+PE) PVC insulated wires 300/500 V. grade make Pakistan Cable, Newage Pioneer Cables, in and including cost of 3/4" dia. heavy duty PVC conduit make Beta, Popular installed on RCC slab, above false ceiling, recessed in wall, columns slabs or above light carrier all PVC conduit accessories, 3" high PVC junction boxes, pull boxes, steel pull wires, PVC flexible conduit from ceiling junction box to light fixture flush type plate switches, including cost of back boxes and switches of 10 Amps.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	128.05			-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	42.68			-
A.03		Point -Point Wiring					
		Same as per item No. A.02 but Loop wiring of a light point from first light point on same switch circuit, complete in all respects.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	134.15			-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	44.72			-
A.04		Gang Light Control Switches					
	15-127-d	Supply at site, installation, testing and commissioning of Four gang light control switches 10 Amps, 250Volts one way, including appropriate size concealed MS, powder coated back box, complete in all respects.	Each	1.00			-
	15-127-f	Supply at site, installation, testing and commissioning of Six gang light control switches 10 Amps, 250Volts one way, including appropriate size concealed MS, powder coated back box, complete in all respects.	Each	2.00			-
A.05		Exhaust Fan Point					
		Same as Item No. A.02 mentioned above but wiring of exhaust fan point including cost of 10 Amp switch with M.S box 16 SWG with earth terminal.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	54.88			-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	18.29			-
A.06		Ceiling Fan Point					

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LOT 1: WATER TREATMENT PLANT							
BILL OF QUANTITIES							
BILL NO. 16: GENERATOR ROOM							
Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		Same as Item No. A.02 mentioned above but wiring of Ceiling fan point including cost of 10 Amp switch with M.S box 16 SWG with earth terminal.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	54.88			-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	18.29			-
A.07		1-3 pin switch & plug combined recessed type :10/15 Amp					
		Supply and wiring of one 3 pin switch & plug combined recessed type :10/15 Amp outlet point from distribution board with single core 2x4mm2(P+N) PVC insulated 300/500 volt grade cable in & including PVC conduit recessed in walls/R.C.C. slab, or installed on surface of Ceiling, all conduits accessories, junction boxes, pull boxes etc. 2.5mm2 cable as PC excluding cost of 3 pin 13 Amps switch & socket out let make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel board recessed in walls complete in all respects and as per specifications & drawings.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	36.59			-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	12.20			-
A.08		Loop-Loop- 3 pin switch & plug combined recessed type :10/15 Amp					
		Same as item No.A.12 above but loop wiring of 3 pin switch & plug combined recessed type :10/15 Amp outlet with 2x4mm2(P+N) & 1x2.5mm2 as CPC from point to point excluding cost of one 15A 3 pin switch socket outlets with make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel boards recessed in walls /columns.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	73.17			-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	24.39			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	24.39			-
	15-20-b	Supply and Erection 3 pin switch & plug combined recessed type :10/15 Amp	Each	6.00			-
A.09		Loop-Loop- 5 Amps Switch Socket					
		Same as item No.A.12 above but loop wiring of 5A power socket outlet with 2x4mm2(P+N) & 1x2.5mm2 as CPC from point to point excluding cost of one 15A 3 pin switch socket outlets with make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel boards recessed in walls /columns.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	109.76			-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	36.59			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	36.59			-
	15-20-a	Supply and Erection 3 pin switch & plug combined recessed type : 5 Amp	Each	6.00			-
A.10		1-20 Amps Switch Socket					

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<u>KPCIP-CW-04: MINGORA GREATER WATER SUPPLY SCHEME INCLUDING NEW WATER TREATMENT PLANT (WTP), INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS AND SCADA:</u>							
LOT 1: WATER TREATMENT PLANT							
BILL OF QUANTITIES							
BILL NO. 16: GENERATOR ROOM							
Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		Supply and wiring of one 3pin 20 Amps Power plug socket outlet point from distribution board with single core 2x6mm2(P+N) PVC insulated 300/500 volt grade cable in & including PVC conduit recessed in walls/R.C.C. slab, or installed on surface of Ceiling including all conduits accessories, junction boxes, pull boxes etc. 4mm2 cable as PC including cost of 3 pin 20 Amps switch & socket out let make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel board recessed in walls complete in all respects and as per specifications & drawings.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	36.59			-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	12.20			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	12.20			-
	15-81	Supply and Fixing 20 Amp power plug	Each	2.00			-
A.11		Fitting and Fixtures.					
		Supply at site, installation, testing and commissioning of the following indoor incandescent/LED light fittings, complete with brass lamp holders, fixing accessories, earthing terminal, driveway circuitry make as specified or by any one of the manufacturers mentioned in Annexure-"A", complete in all respects.					
	i) 15-36-k-01	Supply, installation, connecting, testing and commissioning of Surface mounting LED tube light with 2x2000 lumens, complete in all respects	Nos.	12.00			-
	iii) 15-36-k-03	Supply, installation, connecting, testing and commissioning of Wall mounted Bulkhead light fixtures with LED retrofit lamp 540 Lumens output, complete in all respects	Nos.	6.00			-
A.12		Exhaust Fans					
	a) 15-69-b	Supply and Erection best quality exhaust fan complete with shutter & regulator : 16"sweep	Nos.	4.00			-
A.13		Ceiling Fan					
	15-127-m	Supply at site, installation, testing and commissioning of Fan Dimmer with switch/MS, powder coated back box with all associated accessories, complete in all respects.	Nos.	4.00			-
	26-01-l-01	Supply and Erection of AC Energy Efficient Ceiling Fans 56 inch, 50 W	Nos.	4.00			-
A.14		Distribution Board					
		Fabrication, supply at site, installation, testing, commissioning and connections of wires / cables of Distribution Boards "Light / Power" concealed / open type to be installed as and where shown on drawing, made of MS sheet 16 SWG degreased and derusted, zinc phosphated, finished with electro-static powder coating of 50 micron thickness in approved colour, DB housing to comply with protection class IP-44 with hinged door, flexible earthing strap lockable handle, catcher, earthing bar, neutral strip, internal wiring from MCBs terminating on cable terminal blocks, including cost of all necessary materials complete in all respects. DBs shall be manufactured by any one of the manufacturers as mentioned in List.					
	15-162-j	Supply, Installation, connecting, testing & commissioning of wall mounted DBLP-G1, Distribution Boards, complete with all metering with indication lamps complete in all respects as per SLD.	Each	1.00			-

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LOT 1: WATER TREATMENT PLANT							
BILL OF QUANTITIES							
BILL NO. 16: GENERATOR ROOM							
Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	15-135-e	Supply at site, fabrication and installation of GI perforated cable tray 14 SWG 8 ft. to 10 ft. long, 12" wide with sides 3" high to be installed on wall, or in vertical, or above false ceiling in horizontal position or floor mounted or as shown on drawing, including cost of hanging arrangement brackets made of angle iron 38mm x 38mm x 6mm installed at every 3 ft., cost of all necessary fixing accessories, complete in all respects.	M	21.34			-
A.15		<u>Non-maintained Emergency Lighting</u>					
	Appendix 'c' Page No-5	Supply, installation and connections of Self Test Maintained With ISO 7010 Legend Set 7 Watt Colour Temperature 6000K ,235 Lumens on main supply and 150 Lumens on battery, Avg. Rated Life (Hrs) 30000 hr, IP65 rating with hanging arrangement on wall or ceiling as required complete in all respect as approved by the engineer incharge make Delpro (uk) or eqv.	Nos.	6.00			-
A.16		Fire Extinguisher					
	14-145-a	Providing and fixing of Dry powder type Fire Extinguisher of approved quality and manufacturer best design including all fittings complete in all respects. : 6kg	Each	2.00			-
	14-172-a	Supplying and fixing of Dry Chemical Powder Fire Extinguisher 6Kg Capacity complete in all respect	Each	2.00			-
SUB TOTAL OF ELECTRICAL WORKS							-

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LOT 1: WATER TREATMENT PLANT

SUMMARY OF BILL NO. 17: GUARD ROOM

BILL NO.	DESCRIPTION OF WORK	Amount (PKR)
1	CIVIL WORKS	-
2	ELECTRICAL WORKS	-
3	PLUMBING WORKS	-
TOTAL AMOUNT		-

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 17: GUARD ROOM

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
CIVIL WORKS							
		Earth Work					
1	03-67-b-i	Structural Excavation in Common Material by mechanical means	M3	37.74			-
2	03-18-d	Filling, watering and ramming earth under floor with earth excavated from outside lead upto 30m	M3	25.16			-
		Anti-Termite					
3	28-15	Pre anti Termite Treatment in the building mixed with water of mixing ratio as per the manufacturer's certified manual	M2	162.28			-
		Plain and Reinforcement Concrete					
4	06-03-b	Cement Concrete (brick/stone ballast, 1.5" to 2"/nullah shingle well graded and cleaned) in foundation & plinth (Ratio 1:4:8)	M3	5.85			-
		GROUND FLOOR					
5	06-07-a-03	RCC in roof slab, beam, column & other structural members, insitu or precast. (1:2:4)	M3	12.29			-
		Steel Reinforcement					
6	06-08-b	Supply & fabricate M.S. reinforcement for cement concrete (Hot rolled deformed bars Grade 60)	Tonne	1.01			-
7	06-26-a-02	Damp proof course of cem. conc. 1:2:4 including bitumen coat, 1 layer polythene & 1 coat bitumen (2" thick)	M2	15.60			-

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BILL OF QUANTITIES

BILL NO. 17: GUARD ROOM

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
8	06-26-a-02	V. Damp proof c/s plaster, 1 layer polythene 1 coat bitumen Ratio 1:3 (0.75" thick)	M2	24.26			-
		Brick Work					
9	07-04-a-04	1st class brick work in foundation and plinth in Cement, sand mortar 1:5	M3	30.45			-
		GROUND FLOOR					
10	07-05-a-04	1st class brick work in ground floor Cement, sand mortar 1:5	M3	27.49			-
		Flooring					
11	07-30	Supplying and filling sand under floor or plugging in wells	M3	7.43			-
12	10-03-b	Provide, lay, water & ram brick ballast 1.5" to 2" guage mixed with 25% sand for floor foundations	M3	7.43			-
13	06-05-f	Plain Cement Concrete including placing, compacting, finishing & curing (Ratio 1:2:4)	M3	3.70			-
14	10-22-a	1.5" thick mosaic flooring, including rubbing & polishing complete : Using grey cement	M2	65.26			-
15	10-41-a-02	Mosaic dado or skirting complete as per specs Using grey cement : 1/2" thick	M2	8.94			-
16	10-51	Providing and Fixing of Ceramic Tiles 12"x24" of Imported Approved Quality with jointing and finishing	M2	7.91			-

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 17: GUARD ROOM

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		Surface Rending					
17	11-10-b	Cement plaster 3/8" thick under soffit of RCC roof slabs only upto 20' height : (1:3) (ceiling plaster)	M2	60.66			-
18	11-09-b	Cement plaster 1:5, upto 20' height 1/2" thick (Internal walls)	M2	172.58			-
19	11-09-c	Cement Plaster 1:5, upto 20' height 3/4" thick (External walls)	M2	117.61			-
		Wood Work					
20	12-56-b	Providing and fixing 1.5" (38 mm) thick pressed veneered door shutters fully flushed with First class wood veneering on all faces and sides fixed over partial wood cavited core and frame work of not less than 4" (100mm) wide strips all round with approved iron hinges, tower bolts as required.	M2	8.18			-
21	12-70-a	Supply and Fixing MS Sheet 16 guage(10" x 2") box type chowkats including fixing in position with all charges for Hold fast, Hinges and Painting etc	M2	20.70			-
22	12-24-a-02	providing/fixing approved quality Rim locks : Imported	Each	4.00			-
23	12-22-a-01	Providing and fixing sliding bolt to doors Iron sliding bolts : 10" long	Each	3.00			-
24	12-78-a	Kitchen Floor Cabinet as per MES Design/Specification.	M2	1.52			-
25	12-78-b	Kitchen Wall Cabinet as per MES Design/Specification.	M2	1.10			-

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 17: GUARD ROOM

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		Painting and Warnishing					
26	11-20-a	Priming coat of chalk under distemper	M2	244.91			-
27	11-21-a-03	Distempering New surface : Three coats	M2	244.91			-
28	Ch-13 item 25-a+(bx2) P-102	Preparing surface & painting with snowcem / weathershield paint: 3 Coats	M2	123.49			-
29	Ch-13 item 03-c-01+(c- 02x2) P-100	Prepare & Paint new surface, doors & windows: 3 Coats	M2	16.35			-
		Metal Work					
30	25-39-a-02	Providing and fixing steel windows with openable glazed pannels, using beam section for frame 1-1/2" x 1" x 5/8" x 1/8", z-section for leaves 3/4" x 1" x 3/4" x 1/8", T- section sashes 1"x1"x1/8" glass panes, wooden screed for glazing embeded over a thin layer of putty duly screwed with leaves, brass fittings holdfast, duly painted, complete in all respects, including all cost of material and labour etc. as per approved design and as directed by the engineer - in -charge Glass pane 2.5mm thick	M2	7.68			-
		Roofing & Water Proofing					

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 17: GUARD ROOM

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
31	Ch-9 item 06+13 P-56&57 + Ch-6 item 28 P-34	Single layer of tiles 10"x5"x1.25" laid over 4" earth and 1" mud plaster on top of RC roof slab, provided with 2 coats of bitumen laid hot using 34 lbs. for %sft over roof & blinded with sand at 1 cft per % sft.i/c P/L Providing and laying polythene sheet 0.005" thick (0.05mm 500gauge)	M2	73.90			-
32	09-16	Khuras on roof 2'x2'x6"	Each	1.00			-
33	09-17	Bottom khuras of brick masonry in c/s mortar 1:6,4'x2'x4.5" over 3" cem. concrete 1:4:8	Each	1.00			-
34	03-20-a	Transportation of earth all types beyond 250 m and upto 500 m.	M3	25.16			-
35	03-20-b	Transportation of earth all types for every 100m extra lead beyond 500m upto 1.5 km.	M3	25.16			-
36	03-20-c	Transportation of earth all types for every 500m extra lead beyond 1.5 km. upto 8 km.	M3	25.16			-
37	03-20-d	Transportation of earth all types for every 1 km extra lead or part thereof beyond 8 km.	M3	25.16			-
		NON SCHEDULE ITEMS-B					
		Windows Sill					
1	N.S	ProvidinProviding and fixing 1/2" thick Pre-polished Sunny White Marble Slab uniform texture full width area above 3-8 sft laid ove 3/4" thick cement sand mortar (1:2) i/c filling joints in white cement & matching pigment i/c beveling charges on exposed edges, complete in all respect as approved / directed by The Engineer.	M2	2.08			-

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
2	N.S	Providing and laying Pre-polished Black Granite one-piece marble slabs Kitchen / Vanity Counter etc; laid over 3/4" thick cement sand mortar (1:2) i/c filling joints in white cement & matching pigment, making rounding edge and chemical polishing etc; complete in all respect, as per drawings and Specifications, sample as approved by The Engineer.	M2	1.10			-
		Miscellenious					
3	N.S	Supply, provide and fix in position uPVC rain water down pipe lines conforming to ISO 3633:1991 and BS 3505 1968 (wall thickness 3.2mm) including proper joints complete in all respects, and system leak-free:					
		4" dia	M	9.60			-
4	N.S	Provide and fix uPVC plain bends with grating (as rain water inlets at roof), water tight connection leak-free:					
		4" dia	Each	1.00			-
5	N.S	Provide and fix uPVC shoe bends (as rain water outlets), water tight connection leak-free					
		4" dia	Each	1.00			-
SUB TOTAL OF CIVIL WORKS							-

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BILL NO. 17: GUARD ROOM

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		ELECTRICAL WORKS					
A.01		Light Circuits					
		Supply, installation and commissioning of light circuit wiring, to be wired with 4x2.5mm sq. (1P+1N+1UPS+1PE) PVC insulated 300/500 V grade wire make Pakistan Cable, Newage,AGE Cables,Golden Star, in and including cost of 1" dia. heavy duty PVC conduit make Beta , Popular recessed in , walls, Roof slab, or on surface or above false ceiling or as required as per site conditions, all PVC conduit accessories, pull boxes, steel pull wires , complete in all respects. Each circuit shall have independent PE.					
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	73.17			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	18.29			-
A.02		1-Light Point Controlled By One Switch					
		Wiring of one light point controlled by one switch and wired with 3x1.5 mm sq. (P+N+PE) PVC insulated wires 300/500 V. grade make Pakistan Cable, Newage Pioneer Cables,, in and including cost of 3/4" dia. heavy duty PVC conduit make Beta , Popular installed on RCC slab, above false ceiling, recessed in wall, columns slabs or above light carrier all PVC conduit accessories, 3" high PVC junction boxes, pull boxes, steel pull wires, PVC flexiable conduit from ceiling junction box to light fixture flush type plate switches, including cost of back boxes and switches of 10 Amps.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	128.05			-

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	42.68			-
A.03		Point -Point Wiring					
		Same as per item No. A.02 but Loop wiring of a light point from first light point on same switch circuit, complete in all respects.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	134.15			-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	44.72			-
A.04		Gang Light Control Switches					
	15-127-b	Supply at site, installation, testing and commissioning of Two gang light control switches 10 Amps, 250Volts one way, including appropriate size concealed MS, powder coated back box, complete in all respects.	Each	2.00			-
	15-127-c	Supply at site, installation, testing and commissioning of Three gang light control switches 10 Amps, 250Volts one way, including appropriate size concealed MS, powder coated back box, complete in all respects.	Each	1.00			-
	15-127-f	Supply at site, installation, testing and commissioning of Six gang light control switches 10 Amps, 250Volts one way, including appropriate size concealed MS, powder coated back box, complete in all respects.	Each	2.00			-
A.05		Exhaust Fan Point					
		Same as Item No. A.02 mentioned above but wiring of exhaust fan point including cost of 10 Amp switch with M.S box 16 SWG with earth terminal.					

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	27.44			-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	9.15			-
A.06		Ceiling Fan Point					
		Same as Item No. A.02 mentioned above but wiring of Ceiling fan point including cost of 10 Amp switch with M.S box 16 SWG with earth terminal.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	41.16			-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	13.72			-
A.07		1-3 pin switch & plug combined recessed type :10/15 Amp					
		Supply and wiring of one 3 pin switch & plug combined recessed type :10/15 Amp outlet point from distribution board with single core 2x4mm2(P+N) PVC insulated 300/500 volt grade cable in & including PVC conduit recessed in walls/R.C.C. slab, or installed on surface of Ceiling, all conduits accessories, junction boxes, pull boxes etc. 2.5mm2 cable as PC excluding cost of 3 pin 13 Amps switch & socket out let make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel board recessed in walls complete in all respects and as per specifications & drawings.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	54.88			-

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	18.29			-
A.08		Loop-Loop- 3 pin switch & plug combined recessed type :10/15 Amp					
		Same as item No.A.12 above but loop wiring of 3 pin switch & plug combined recessed type :10/15 Amp outlet with 2x4mm ² (P+N) & 1x2.5mm ² as CPC from point to point excluding cost of one 15A 3 pin switch socket outlets with make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel boards recessed in walls /columns.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	73.17			-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	24.39			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	24.39			-
	15-20-b	Supply and Erection 3 pin switch & plug combined recessed type :10/15 Amp	Each	7.00			-
A.09		Loop-Loop- 5 Amps Switch Socket					
		Same as item No.A.12 above but loop wiring of 5A power socket outlet with 2x4mm ² (P+N) & 1x2.5mm ² as CPC from point to point excluding cost of one 15A 3 pin switch socket outlets with make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel boards recessed in walls /columns.					

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	128.05			-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	42.68			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	42.68			-
	15-20-a	Supply and Erection 3 pin switch & plug combined recessed type : 5 Amp	Each	7.00			-
A.10		1-20 Amps Switch Socket					
		Supply and wiring of one 3pin 20 Amps Power plug socket outlet point from distribution board with single core 2x6mm2(P+N) PVC insulated 300/500 volt grade cable in & including PVC conduit recessed in walls/R.C.C. slab, or installed on surface of Ceiling including all conduits accessories, junction boxes, pull boxes etc. 4mm2 cable as PC including cost of 3 pin 20 Amps switch & socket out let make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel board recessed in walls complete in all respects and as per specifications & drawings.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	36.59			-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	12.20			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	12.20			-
	15-81	Supply and Fixing 20 Amp power plug	Each	2.00			-

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
A.11		Fitting and Fixtures.					
		Supply at site, installation, testing and commissioning of the following indoor incandescent/LED light fittings, complete with brass lamp holders, fixing accessories, earthing terminal, drivery circuitry make as specified or by any one of the manufacturers mentioned in Annexure-"A", complete in all respects.					
i)	15-36-j-12	Supply, installation, connecting, testing & commissioning of 10W LED Down Light Fixture suitable for 1300 lm, as per instruction of Engineer, surface mounted circular shape or equivalent.	Nos.	6.00			-
iii)	15-36-i-15	Supply, installation, testing and commissioning of recessed Dawn Light of best quality with CFL (13-17 watt) Energy saver and with Glass Reflector	Nos.	12.00			-
iii)	15-36-k-03	Supply, installation, connecting, testing and commissioning of Wall mounted Bulkhead light fixtures with LED retrofit lamp 540 Lumens output, complete in all respects	Nos.	4.00			-
A.12		Exhaust Fans					
a)	15-69-b	Supply and Erection best quality exhaust fan complete with shutter & regulator : 16"sweep	Nos.	2.00			-
A.13		Ceiling Fan					

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	15-127-m	Supply at site, installation, testing and commissioning of Fan Dimmer with switch/MS, powder coated back box with all associated accessories, complete in all respects.	Nos.	2.00			-
	26-01-I-01	Supply and Erection of AC ENERGY EFFICIENT CEILING FANS 56 inch, 50 W	Nos.	2.00			-
A.14		Wall Bracket Fan					
	15-68-e	Supply, installation, testing & commissioning of Direct axial Wall Bracket fan	Nos.	1.00			-
A.15		PVC Conduit					
		Supply at site of PVC conduit heavy duty to be concealed in RCC slabs, walls, floor, columns above false ceiling or as required as per site conditions including cost of all PVC conduit accessories, steel pull wires, complete in all respects.					
i)	15-02-b-08	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 4" i/d	M	9.15			-
A.16		<u>Distribution Board</u>					

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		Fabrication, supply at site, installation, testing, commissioning and connections of wires / cables of Distribution Boards "Light / Power" concealed / open type to be installed as and where shown on drawing, made of MS sheet 16 SWG degreased and derusted, zinc phosphated, finished with electro-static powder coating of 50 micron thickness in approved colour, DB housing to comply with protection class IP-44 with hinged door, flexible earthing strap lockable handle, catcher, earthing bar, neutral strip, internal wiring from MCBs terminating on cable terminal blocks, including cost of all necessary materials complete in all respects. DBs shall be manufactured by any one of the manufacturers as mentioned in List.					
	15-162-j	Supply, Installation, connecting, testing & commissioning of wall mounted DBLP-G1, Distribution Boards, complete with all metering with indication lamps complete in all respects as per SLD.	Each	1.00			-
A.17		<u>Non-maintained Emergency Lighting</u>					
	Appendix 'c' Page No-5	Supply, installation and connections of Self Test Maintained With ISO 7010 Legend Set 7 Watt Colour Temperature 6000K ,235 Lumens on main supply and 150 Lumens on battery, Avg. Rated Life (Hrs) 30000 hr, IP65 rating with hanging arrangement on wall or ceiling as required complete in all respect as approved by the engineer incharge make Delpro (uk) or eqv.	Nos.	1.00			-
SUB TOTAL OF ELECTRICAL WORKS							-

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		PLUMBING WORKS					
		Indian W.C					
1	14-03-a	Providing and fitting glazed earthenware water closet (WC), squatter type (orisa pattern) combined with foot rest. complete in all respects : White	Each	1.00			-
2	14-10-a	Providing and Fixing glazed earthen ware low down flushing cistern 3 gallons (13.63 Liters) capacity including bracket set, copper connection,etc. complete in all respects: White	Each	1.00			-
3	14-05-a-01	Providing and Fixing glazed earthen ware wash hand basin (WHB) complete size 56x40 cm (22"x16"), including bracket set, waste coupling, complete in all respects: White with pedestal (Best Quality)	Each	1.00			-
4	14-102	Providing & Fixing of SHOWER SET locally made complete with concealed T-STOP COCK for cold and hot water supply with mixer, swivel shower rose, long bib cock etc Complete in all respect.	Each	1.00			-
5	14-27-a	Providing and fixing chromum plated (CP) mixing valve for wash hand basin (WHB), sink or shower of approved (Best) quality	Each	3.00			-
6	14-06-a	Providing and Fixing stainless steel sink with drain board size (120 x 60 cm) 48"x24", including set of brackets, waste pipe etc - (Best Quality)	Each	1.00			-
7	14-13	Providing and fixing chromum plated soap dish complete.	Each	2.00			-
8	14-16-a	Providing and Fixing chromium plated (CP) towel 60 cm (24") long and 2 cm (3/4") dia	Each	2.00			-

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
9	14-17-a	Providing and fixing best quality looking glass 5 mm thick neatly fitted on masonry wall etc. as per instruction of Engineer In-charge complete. Mirror 60 x 45 cm (24"x18") size	Each	1.00			-
10	14-21-c	Providing and fixing chromium plated (CP) double bib cock, heavy duty of approved quality : 1.5 cm (1/2")	Each	1.00			-
11	14-25-a	Providing and fixing chromium plated (CP) tee stop cock 1.5 cm (1/2") of approved quality	Each	3.00			-
12	14-31-a	Providing and Fixing cast iron (CI) floor trap of approved quality including CI grating & concrete chamber all round : 4"x2" (100mm x 50 mm)	Each	3.00			-
13	14-33	Providing and Fixing 4" gully trap of approved quality including cement concrete cost of PVC grating 6" x6" (150 x 150 mm) and masonry chamber 12"x12" (300 x 300 mm).	Each	1.00			-
14	14-157	P-Trap (uPVC) for squatting type WC.					
	14-157	ii) 10 cm (4") glazed.	Each	1.00			-
		SEWERAGE SYSTEM					
15	14-95-a	Making connection with the existing system PVC pipe line including cutting the pipe for providing & fixing required fittings : Class B PVC					
		a) 3" i/d (75 mm)	m	20.00			-
		b) 4" i/d (100 mm)	m	20.00			-

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		d) 6" i/d (150 mm)	m	20.00			-
		NON-SCHEDULE ITEM					
1	NS-1	Providing, fixing, jointing and testing Polypropylene Random (PPR) PN20 pressure pipe for cold, hot and hot water return water as per DIN 8077-8078 for pipes and DIN 16962,PN25 for fittings (polyfusion welded joints) inside building including fittings and specials (sockets, tees, elbows, bends, crosses, reducers, adaptor, plugs and union etc.) supported on walls or suspended from roof slab or run in chases including pipe hangers, supports, walls cutting for pipelines, complete in all respect as per specifications and drawings as well as directed by the Engineer.					
		20 mm dia	m	25.00			-
		25 mm dia	m	20.00			-
		32 mm dia	m	20.00			-
2	NS-2	Providing and making Manhole 2'x2' internal size including 9" thick brick masonry (1:4), 1/2" th. Plastering (1:3) i/side, benching with PCC 1:2:4 4" th. with cement finish, excluding manhole cover, complete in all respects.	Each	2.00			-

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BILL OF QUANTITIES

BILL NO. 17: GUARD ROOM

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
3	NS-3	Providing and fixing food grade plastic over head water tank (200 gallon) including all necessary accessories required for installation, complete in all respect as per specifications and drawings as well as directed by the Engineer.	Each	1.00			-
SUB TOTAL OF PLUMBING WORKS							-

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SUMMARY OF BILL NO. 18: WORKSHOP

BILL NO.	DESCRIPTION OF WORK	Amount (PKR)
1	CIVIL WORKS	-
2	MECHANICAL WORKS	-
3	ELECTRICAL WORKS	-
TOTAL AMOUNT RS		-

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BILL NO. 18: WORKSHOP

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		CIVIL WORKS					
		Earth Work					
1	03-67-b-i	Structural Excavation in Common Material by mechanical means	M3	85.02			-
2	03-18-d	Filling, watering and ramming earth under floor with earth excavated from outside lead upto 30m	M3	56.68			-
3	03-18-d	Filling, watering and ramming earth under floor with earth excavated from outside lead upto 8 km. (as per actual borrow pit lead)	M3	170.65			-
		Anti-Termite					
4	28-15	Pre anti Termite Treatment in the building mixed with water of mixing ratio as per the manufacturer's certified manual	M2	523.48			-
		Plain and Reinforement Concrete					
5	06-03-b	Cement Concrete (brick/stone ballast, 1.5" to 2"/nullah shingle well graded and cleaned) in foundation & plinth (Ratio 1:4:8)	M3	14.17			-
		GROUND FLOOR					
6	06-07-a-03	RCC in roof slab, beam, column & other structural members, insitu or precast. (1:2:4)	M3	22.90			-
		FIRST FLOOR					
7	06-07-a-03	RCC in roof slab, beam, column & other structural members, insitu or precast. (1:2:4)	M3	35.35			-
		Steel Reinforcement					

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Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
8	06-08-b	Supply & fabricate M.S. reinforcement for cement concrete (Hot rolled deformed bars Grade 60)	Tonne	7.38			-
9	06-26-a-02	Damp proof course of cem. conc. 1:2:4 including bitumen coat, 1 layer polythene & 1 coat bitumen (2" thick)	M2	66.11			-
10	06-30-a-04	V. Damp proof c/s plaster, 1 layer polythene 1 coat bitumen Ratio 1:3 (0.75" thick)	M2	67.62			-
		Brick Work					
11	07-04-a-04	1st class brick work in foundation and plinth in Cement, sand mortar 1:5	M3	95.16			-
		GROUND FLOOR					
12	07-04-a-04	1st class brick work in ground floor Cement, sand mortar 1:5	M3	99.31			-
		FIRST FLOOR					
13	07-05-a-04	1st class brick work in first floor Cement, sand mortar 1:5	M3	60.04			-
		Flooring					
14	07-30	Supplying and filling sand under floor or plugging in wells	M3	19.16			-
15	10-03-b	Provide, lay, water & ram brick ballast 1.5" to 2" guage mixed with 25% sand for floor foundations	M3	19.16			-
16	06-05-f	Plain Cement Concrete including placing, compacting, finishing & curing (Ratio 1:2:4)	M3	9.55			-

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Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
17	10-55-g	Providing and Fixing of Porcelain Floor Tile 24" x 24" of approved quality	M2	21.00			-
18	10-51	Providing and Fixing of Ceramic Tiles 12"x24" of Imported Approved Quality with jointing and finishing	M2	21.00			-
19	10-42	Providing and fixing on walls 1/4"(6mm approx.) thick of imported first grade ceramic tiles of size 24 in x 24 in of approved colour on walls, over 1/2" (13mm) thick base of cement mortar 1:3 setting of tiles in slurry of grey cement over mortar base including filling the joint with white cement and washing the tile, curing and cleaning etc. complete.	M2	64.24			-
20	10-22-a	1.5" thick mosaic flooring, including rubbing & polishing complete : Using grey cement	M2	142.80			-
21	10-41-a-02	Mosaic dado or skirting complete as per specs Using grey cement : 1/2" thick	M2	9.15			-
		Surface Rendering					
22	11-10-b	Cement plaster 3/8" thick under soffit of RCC roof slabs only upto 20' height : (1:3) (ceiling plaster)	M2	188.79			-
23	11-09-b	Cement plaster 1:5, upto 20' height 1/2" thick (Internal walls)	M2	798.01			-
24	11-09-c	Cement Plaster 1:5, upto 20' height 3/4" thick (External walls)	M2	424.16			-
		Wood Work					
25	12-49-c	First class deodar wood wrought joinery in doors and windows etc. panelled or panelled or glazed or fully glazed fixed in position including chowkhat, holdfast, hinges, tower bolt rubber stop cleats/G I clamp, handles and chord with hooks etc. complete (excluding sliding bolts or lock) : 1½" (40mm) thick.	M2	2.35			-

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Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
26	12-56-b	Providing and fixing 1.5" (38 mm) thick pressed veneered door shutters fully flushed with First class wood veneering on all faces and sides fixed over partial wood cavited core and frame work of not less than 4" (100mm) wide strips all round with approved iron hinges, tower bolts as required.	M2	20.16			-
27	25-35	Providing and Fixing 24 SWG GI sheet rolling shutter of steel frame of MS channel 2"x1.25"x1/8" complete	M2	19.20			-
28	12-70-a	Supply and Fixing MS Sheet 16 guage(10" x 2") box type chowkats including fixing in position with all charges for Hold fast, Hinges and Painting etc	M	44.73			-
29	12-24-a-01	providing/fixing approved quality Rim locks : Imported	Each	8.00			-
30	12-22-a-01	Providing and fixing sliding bolt to doors Iron sliding bolts : 10" long	Each	3.00			-
31	12-21-b	P/F hydraulic Door Closer (Best Quality)	Each	2.00			-
		Painting and Warnishing					
32	11-20-b	Providing and applying wall putty of 2mm thickness over plastered surface to prepare the surface even and smooth complete.	M2	1,036.14			-
33	13-03-i	Providing and applying 3 coats of approved type of Plastic emulsion paint to Plastic surface as per manufacture specification.	M2	1,036.14			-
34	Ch-13 item 25-a+(bx2) P-102	Preparing surface & painting with snowcem / weathershield paint: 3 Coats	M2	445.37			-
35	13-06	Applying lacquer polish to wood work of any type	M2	45.03			-
36	Ch-13 item 03-c-01+(c-02x2) P-100	Prepare & Paint new surface, doors & windows: 3 Coats	M2	38.40			-

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		Metal Work					
37	12-66	Supply and Fixing of double glazed aluminium (color as approved) Premium model (Gauge 2 mm) 4" sect. Sliding window, including all necessary fittings and fly screen shutters complete.	M2	28.67			-
38	12-61	MS flat 1/2"x1/8" grill in windows of approved design	M2	28.67			-
39	25-47	Supply and fixing of fancy type stainless steel chromium plate 2" dia pipes stair railing 3/4" dia pipe fixed on specified space on steps in horizontal positions, complete in all respects	M	2.10			-
40	25-44	Supplying and Fixing 18SWG Steel Almirah, 12" max depth including box shelves, back, shelves, lock, spray paint complete	M2	18.31			-
		Roofing & Water Proofing					
41	Ch-9 item 06+13 P-56&57 + Ch-6 item 28 P-34	Single layer of tiles 10"x5"x1.25" laid over 4" earth and 1" mud plaster on top of RC roof slab, provided with 2 coats of bitumen laid hot using 34 lbs. for %sft over roof & blinded with sand at 1 cft per % sft.i/c P/L Providing and laying polythene sheet 0.005" thick (0.05mm 500gauge)	M2	208.32			-
42	09-16	Khuras on roof 2'x2'x6"	Each	3.00			-
43	09-17	Bottom khuras of brick masonry in c/s mortar 1:6,4'x2'x4.5" over 3" cem. concrete 1:4:8	Each	3.00			-
44	03-20-a	Transportation of earth all types beyond 250 m and upto 500 m.	M3	56.58			-
45	03-20-b	Transportation of earth all types for every 100m extra lead beyond 500m upto 1.5 km.	M3	56.58			-

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
46	03-20-c	Transportation of earth all types for every 500m extra lead beyond 1.5 km. upto 8 km.	M3	56.58			-
47	03-20-d	Transportation of earth all types for every 1 km extra lead or part thereof beyond 8 km.	M3	56.58			-
		NON SCHEDULE ITEMS-B					
		Windows Sill					
1	N.S	ProvidinProviding and fixing 1/2" thick Pre-polished Sunny White Marble Slab uniform texture full width area above 3-8 sft laid ove 3/4" thick cement sand mortar (1:2) i/c filling joints in white cement & matching pigment i/c beveling charges on exposed edges, complete in all respect as approved / directed by The Engineer.	M2	6.40			-
		Entrance Steps / Podium					
2	N.S	Providing and fixing 3/4" thick pre-polished Granite Marble Slab uniform texture full width area above 2 sft laid over 3/4" thick cement sand mortar (1:2) i/c filling joints in white cement & matching pigment i/c beveling charges on exposed edges complete in all respect as approved / directed by The Engineer.	M2	3.22			-
		Stair Steps					
3	N.S	Providing and laying Pre-polished Black Granite one-piece marble slabs Kitchen / Vanity Counter etc; laid over 3/4" thick cement sand mortar (1:2) i/c filling joints in white cement & matching pigment, making rounding edge and chemical polishing etc; complete in all respect, as per drawings and Specifications, sample as approved by The Engineer.	M2	1.52			-
		Miscellenious					

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
4	N.S	Supply, provide and fix in position uPVC rain water down pipe lines conforming to ISO 3633:1991 and BS 3505 1968 (wall thickness 3.2mm) including proper joints complete in all respects, and system leak-free:					
		4" dia	M	19.20			-
5	N.S	Provide and fix uPVC plain bends with grating (as rain water inlets at roof), water tight connection leak-free:					
		4" dia	Each	3.00			-
6	N.S	Provide and fix uPVC shoe bends (as rain water outlets), water tight connection leak-free					
		4" dia	Each	3.00			-
SUB TOTAL OF CIVIL WORKS							-

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Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		MECHANICAL WORKS					
1	NS-1	Single-Girder Bridge Cranes					
		Providing, installing, testing and commissioning Top-Running Single-Girder Bridge Cranes, of internationally reputed approved make, complete with all its moving components, drives, drive controls, safety mechanisms, cables, cables collapsing mechanisms, operation-control equipment, and side rails, to be supported on the structure, including all jointing, fixing & installation accessories, initial charging of lubricants, all painting & coatings; and a complete set of special tools, test equipment & spare parts, complete in all respects, in accordance with the Contract, as follows:					
		In WORKSHOP: Capacity: 2 Tons	Nos:	1.00			
		Providing Tools and equipment as per requirement to development of the workshop or directed by the Engineer	LS	1.00			
SUB TOTAL OF MECHANICAL WORKS							-

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		ELECTRICAL WORKS					
A.01		Light Circuits					
		Supply, installation and commissioning of light circuit wiring, to be wired with 4x2.5mm sq. (1P+1N+1UPS+1PE) PVC insulated 300/500 V grade wire make Pakistan Cable, Newage, AGE Cables, Golden Star, in and including cost of 1" dia. heavy duty PVC conduit make Beta , Popular recessed in , walls, Roof slab, or on surface or above false ceiling or as required as per site conditions, all PVC conduit accessories, pull boxes, steel pull wires , complete in all respects. Each circuit shall have independent PE.					
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	48.78			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	12.20			-
A.02		1-Light Point Controlled By One Switch					
		Wiring of one light point controlled by one switch and wired with 3x1.5 mm sq. (P+N+PE) PVC insulated wires 300/500 V. grade make Pakistan Cable, Newage Pioneer Cables,, in and including cost of 3/4" dia. heavy duty PVC conduit make Beta , Popular installed on RCC slab, above false ceiling, recessed in wall, columns slabs or above light carrier all PVC conduit accessories, 3" high PVC junction boxes, pull boxes, steel pull wires, PVC flexiable conduit from ceiling junction box to light fixture flush type plate switches, including cost of back boxes and switches of 10 Amps.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	128.05			-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	42.68			-

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
A.03		Point -Point Wiring					
		Same as per item No. A.02 but Loop wiring of a light point from first light point on same switch circuit, complete in all respects.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	134.15			-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	44.72			-
A.04		Gang Light Control Switches					
	15-127-d	Supply at site, installation, testing and commissioning of Four gang light control switches 10 Amps, 250Volts one way, including appropriate size concealed MS, powder coated back box, complete in all respects.	Each	1.00			-
	15-127-f	Supply at site, installation, testing and commissioning of Six gang light control switches 10 Amps, 250Volts one way, including appropriate size concealed MS, powder coated back box, complete in all respects.	Each	2.00			-
A.05		Exhaust Fan Point					
		Same as Item No. A.02 mentioned above but wiring of exhaust fan point including cost of 10 Amp switch with M.S box 16 SWG with earth terminal.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	54.88			-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	18.29			-
A.06		Ceiling Fan Point					

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		Same as Item No. A.02 mentioned above but wiring of Ceiling fan point including cost of 10 Amp switch with M.S box 16 SWG with earth terminal.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	54.88			-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	18.29			-
A.07		1-3 pin switch & plug combined recessed type :10/15 Amp					
		Supply and wiring of one 3 pin switch & plug combined recessed type :10/15 Amp outlet point from distribution board with single core 2x4mm2(P+N) PVC insulated 300/500 volt grade cable in & including PVC conduit recessed in walls/R.C.C. slab, or installed on surface of Ceiling, all conduits accessories, junction boxes, pull boxes etc. 2.5mm2 cable as PC excluding cost of 3 pin 13 Amps switch & socket out let make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel board recessed in walls complete in all respects and as per specifications & drawings.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	36.59			-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	12.20			-
A.08		Loop-Loop- 3 pin switch & plug combined recessed type :10/15 Amp					
		Same as item No.A.12 above but loop wiring of 3 pin switch & plug combined recessed type :10/15 Amp outlet with 2x4mm2(P+N) & 1x2.5mm2 as CPC from point to point excluding cost of one 15A 3 pin switch socket outlets with make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel boards recessed in walls /columns.					

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	73.17			-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	24.39			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	24.39			-
	15-20-b	Supply and Erection 3 pin switch & plug combined recessed type :10/15 Amp	Each	6.00			-
A.09		Loop-Loop- 5 Amps Switch Socket					
		Same as item No.A.12 above but loop wiring of 5A power socket outlet with 2x4mm ² (P+N) & 1x2.5mm ² as CPC from point to point excluding cost of one 15A 3 pin switch socket outlets with make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel boards recessed in walls /columns.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	109.76			-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	36.59			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	36.59			-
	15-20-a	Supply and Erection 3 pin switch & plug combined recessed type : 5 Amp	Each	6.00			-
A.10		1-20 Amps Switch Socket					

GOVERNMENT OF KHYBER PAKHTUNKHWA

KHYBER PAKHTUNKHWA CITIES IMPROVEMENT PROJECT

LOCAL GOVERNMENT, ELECTIONS AND RURAL DEVELOPMENT DEPARTMENT

KPCIP-CW-04: MINGORA GREATER WATER SUPPLY SCHEME INCLUDING NEW WATER TREATMENT PLANT (WTP), INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS AND SCADA:

LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 18: WORKSHOP

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		Supply and wiring of one 3pin 20 Amps Power plug socket outlet point from distribution board with single core 2x6mm ² (P+N) PVC insulated 300/500 volt grade cable in & including PVC conduit recessed in walls/R.C.C. slab, or installed on surface of Ceiling including all conduits accessories, junction boxes, pull boxes etc. 4mm ² cable as PC including cost of 3 pin 20 Amps switch & socket out let make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel board recessed in walls complete in all respects and as per specifications & drawings.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	36.59			-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	12.20			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	12.20			-
	15-81	Supply and Fixing 20 Amp power plug	Each	2.00			-
A.11		Fitting and Fixtures.					
		Supply at site, installation, testing and commissioning of the following indoor incandescent/LED light fittings, complete with brass lamp holders, fixing accessories, earthing terminal, drivery circuitry make as specified or by any one of the manufacturers mentioned in Annexure-"A", complete in all respects.					
i)	15-36-k-01	Supply, installation, connecting, testing and commissioning of Surface mounting LED tube light with 2x2000 lumens, complete in all respects	Nos.	12.00			-
iii)	15-36-k-03	Supply, installation, connecting, testing and commissioning of Wall mounted Bulkhead light fixtures with LED retrofit lamp 540 Lumens output, complete in all respects	Nos.	6.00			-

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 18: WORKSHOP

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
A.12		Exhaust Fans					
a)	15-69-b	Supply and Erection best quality exhaust fan complete with shutter & regulator : 16"sweep	Nos.	4.00			-
A.13		Ceiling Fan					
	15-127-m	Supply at site, installation, testing and commissioning of Fan Dimmer with switch/ MS, powder coated back box with all associated accessories, complete in all respects.	Nos.	4.00			-
	26-01-l-01	Supply and Erection of AC Energy Efficient Ceiling Fans 56 inch, 50 W	Nos.	4.00			-
A.14		<u>Distribution Board</u>					
		Fabrication, supply at site, installation, testing, commissioning and connections of wires / cables of Distribution Boards "Light / Power" concealed / open type to be installed as and where shown on drawing, made of MS sheet 16 SWG degreased and derusted, zinc phosphated, finished with electro-static powder coating of 50 micron thickness in approved colour, DB housing to comply with protection class IP-44 with hinged door, flexible earthing strap lockable handle, catcher, earthing bar, neutral strip, internal wiring from MCBs terminating on cable terminal blocks, including cost of all necessary materials complete in all respects. DBs shall be manufactured by any one of the manufacturers as mentioned in List.					
	15-162-j	Supply, Installation, connecting, testing & commissioning of wall mounted DBLP-G1, Distribution Boards, complete with all metering with indication lamps complete in all respects as per SLD.	Each	1.00			-

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 18: WORKSHOP

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	15-135-e	Supply at site, fabrication and installation of GI perforated cable tray 14 SWG 8 ft. to 10 ft. long, 12" Wide with sides 3" high to be installed on wall, or in vertical, or above false ceiling in horizontal position or floor mounted or as shown on drawing, including cost of hanging arrangement brackets made of angle iron 38mm x 38mm x 6mm installed at every 3 ft., cost of all necessary fixing accessories, complete in all respects.	M	21.34			-
A.15		<u>Non-maintained Emergency Lighting</u>					
	Appendix ' c' Page No-5	Supply, installation and connections of Self Test Maintained With ISO 7010 Legend Set 7 Watt Colour Temperature 6000K ,235 Lumens on main supply and 150 Lumens on battery, Avg. Rated Life (Hrs) 30000 hr, IP65 rating with hanging arrangement on wall or ceiling as required complete in all respect as approved by the engineer incharge make Delpro (uk) or eqv.	Nos.	1.00			-
A.16		Fire Extinguisher					
	14-145-a	Providing and fixing of Dry powder type Fire Extinguisher of approved quality and manufacturer best design including all fittings complete in all respects: 6kg	Each	2.00			-
	14-172-a	Supplying and fixing of Dry Chemical Powder Fire Extinguisher 6Kg Capacity complete in all respect	Each	2.00			-
SUB TOTAL OF ELECTRICAL WORKS							-

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SUMMARY OF BILL NO. 19: OPERATOR ROOM

BILL NO.	DESCRIPTION OF WORK	Amount (PKR)
1	CIVIL WORKS	-
2	ELECTRICAL WORKS	-
3	PLUMBING WORKS	-
TOTAL AMOUNT RS		-

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AND SCADA:**

LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 19: OPERATOR ROOM

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		CIVIL WORKS					
		Earth Work					
1	03-67-b-i	Structural Excavation in Common Material by mechanical means	M3	48.56			-
2	03-18-d	Filling, watering and ramming earth under floor with earth excavated from outside lead upto 30m	M3	32.37			-
		Anti-Termite					
3	28-15	Pre anti Termite Treatment in the building mixed with water of mixing ratio as per the manufacturer's certified manual	M2	265.58			-
		Plain and Reinforcement Concrete					
4	06-03-b	Cement Concrete (brick/stone ballast, 1.5" to 2" nullah shingle well graded and cleaned) in foundation & plinth (Ratio 1:4:8)	M3	7.90			-
		GROUND FLOOR					
5	06-07-a-03	RCC in roof slab, beam, column & other structural members, insitu or precast. (1:2:4)	M3	11.38			-
		Steel Reinforcement					
6	06-08-b	Supply & fabricate M.S. reinforcement for cement concrete (Hot rolled deformed bars Grade 60)	Tonne	0.96			-
7	06-26-a-02	Damp proof course of cem. conc. 1:2:4 including bitumen coat, 1 layer polythene & 1 coat bitumen (2" thick)	M2	10.75			-

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BILL OF QUANTITIES

BILL NO. 19: OPERATOR ROOM

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
8	06-30-a-04	V. Damp proof c/s plaster, 1 layer polythene 1 coat bitumen Ratio 1:3 (0.75" thick)	M2	10.75			-
		Brick Work					
9	07-04-a-04	1st class brick work in foundation and plinth in Cement, sand mortar 1:5	M3	23.26			-
		GROUND FLOOR					
10	07-05-a-04	1st class brick work in ground floor Cement, sand mortar 1:5	M3	39.31			-
		Flooring					
11	07-30	Supplying and filling sand under floor or plugging in wells	M3	54.94			-
12	10-03-b	Provide, lay, water & ram brick ballast 1.5" to 2" guage mixed with 25% sand for floor foundations	M3	7.07			-
13	06-05-f	Plain Cement Concrete including placing, compacting, finishing & curing (Ratio 1:2:4)	M3	2.39			-
14	10-22-a	1.5" thick mosaic flooring, including rubbing & polishing complete : Using grey cement	M2	47.17			-
15	10-41-a-02	Mosaic dado or skirting complete as per specs Using grey cement : 1/2" thick	M2	5.53			-
16	10-51	Providing and Fixing of Ceramic Tiles 12"x24" of Imported Approved Quality with jointing and finishing	M2	6.90			-

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BILL OF QUANTITIES

BILL NO. 19: OPERATOR ROOM

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
17	10-42	Providing and fixing on walls 1/4" (6mm approx.) thick of imported first grade ceramic tiles of size 24 in x 24 in of approved colour on walls, over 1/2" (13mm) thick base of cement mortar 1:3 setting of tiles in slurry of grey cement over mortar base including filling the joint with white cement and washing the tile, curing and cleaning etc. complete.	M2	15.75			-
		Surface Rendering					
18	11-10-b	Cement plaster 3/8" thick under soffit of RCC roof slabs only upto 20' height : (1:3) (ceiling plaster)	M2	34.02			-
19	11-09-b	Cement plaster 1:5, upto 20' height 1/2" thick (Internal walls)	M2	171.62			-
20	11-09-c	Cement Plaster 1:5, upto 20' height 3/4" thick (External walls)	M2	117.61			-
		Wood Work					
21	12-56-b	Providing and fixing 1.5" (38 mm) thick pressed veneered door shutters fully flushed with First class wood veneering on all faces and sides fixed over partial wood caved core and frame work of not less than 4" (100mm) wide strips all round with approved iron hinges, tower bolts as required.	M2	8.18			-
22	12-70-a	Supply and Fixing MS Sheet 16 guage (10" x 2") box type chowkats including fixing in position with all charges for Hold fast, Hinges and Painting etc	M	20.70			-
23	12-24-a-01	Extra for providing/fixing approved quality Rim locks : Imported	Each	4.00			-
24	12-22-a-01	Providing and fixing sliding bolt to doors Iron sliding bolts : 10" long	Each	3.00			-

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 19: OPERATOR ROOM

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
25	12-78-a	Kitchen Floor Cabinet as per MES Design/Specification.	M2	1.52			-
26	12-78-b	Kitchen Wall Cabinet as per MES Design/Specification.	M2	1.10			-
		Painting and Warnishing					
27	11-20-a	Priming coat of chalk under distemper	M2	215.92			-
28	11-21-a-03	Distempering New surface : Three coats	M2	215.92			-
29	Ch-13 item 25-a+(bx2) P-102	Preparing surface & painting with snowcem / weathershield paint: 3 Coats	M2	123.49			-
30	Ch-13 item 03-c-01+(c-02x2) P-100	Prepare & Paint new surface, doors & windows: 3 Coats	M2	16.35			-
		Metal Work					
31	25-39-a-02	Providing and fixing steel windows with openable glazed pannels, using beam section for frame 1-1/2" x 1" x 5/8" x 1/8", z-section for leaves 3/4" x 1" x 3/4" x 1/8", T section sashes 1"x1"x1/8" glass panes, wooden screed for glazing embded over a thin layer of putty duly screwed with leaves, brass fittings holdfast, duly painted, complete in all respects, including all cost of material and labour etc. as per approved design and as directed by the engineer - in -charge Glass pane 2.5mm thick	M2	7.68			-
		Roofing & Water Proofing					

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BILL NO. 19: OPERATOR ROOM

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
32	Ch-9 item 06+13 P-56&57 + Ch-6 item 28 P-34	Single layer of tiles 10"x5"x1.25" laid over 4" earth and 1" mud plaster on top of RC roof slab, provided with 2 coats of bitumen laid hot using 34 lbs. for %sft over roof & blinded with sand at 1 cft per % sft.i/c P/L Providing and laying polythene sheet 0.005" thick (0.05mm 500gauge)	M2	73.90			-
33	09-16	Khuras on roof 2'x2'x6"	Each	1.00			-
34	09-17	Bottom khuras of brick masonry in c/s mortar 1:6,4'x2'x4.5" over 3" cem. concrete 1:4:8	Each	1.00			-
35	03-20-a	Transportation of earth all types beyond 250 m and upto 500 m.	M3	25.16			-
36	03-20-b	Transportation of earth all types for every 100m extra lead beyond 500m upto 1.5 km.	M3	25.16			-
37	03-20-c	Transportation of earth all types for every 500m extra lead beyond 1.5 km. upto 8 km.	M3	25.16			-
38	03-20-d	Transportation of earth all types for every 1 km extra lead or part thereof beyond 8 km.	M3	25.16			-
		NON SCHEDULE ITEMS					
		Windows Sill					
1	N.S	ProvidinProviding and fixing 1/2" thick Pre-polished Sunny White Marble Slab uniform texture full width area above 3-8 sft laid ove 3/4" thick cement sand mortar (1:2) i/c filling joints in white cement & matching pigment i/c beveling charges on exposed edges, complete in all respect as approved / directed by The Engineer.	M2	2.08			-

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Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
2	N.S	Providing and laying Pre-polished Black Granite one-piece marble slabs Kitchen / Vanity Counter etc; laid over 3/4" thick cement sand mortar (1:2) i/c filling joints in white cement & matching pigment, making rounding edge and chemical polishing etc; complete in all respect, as per drawings and Specifications, sample as approved by The Engineer.	M2	1.10			-
		Miscellenious					
3	N.S	Supply, provide and fix in position uPVC rain water down pipe lines conforming to ISO 3633:1991 and BS 3505 1968 (wall thickness 3.2mm) including proper joints complete in all respects, and system leak-free:					
		4" dia	M	9.60			-
4	N.S	Provide and fix uPVC plain bends with grating (as rain water inlets at roof), water tight connection leak-free:					
		4" dia	Each	1.00			-
5	N.S	Provide and fix uPVC shoe bends (as rain water outlets), water tight connection leak-free					
		4" dia	Each	1.00			-
SUB TOTAL OF CIVIL WORKS							-

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LOT 1: WATER TREATMENT PLANT							
BILL OF QUANTITIES							
BILL NO. 19: OPERATOR ROOM							
Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		ELECTRICAL WORKS					
A.01		Light Circuits					
		Supply, installation and commissioning of light circuit wiring, to be wired with 4x2.5mm sq. (1P+1N+1UPS+1PE) PVC insulated 300/500 V grade wire make Pakistan Cable, Newage, AGE Cables, Golden Star, in and including cost of 1" dia. heavy duty PVC conduit make Beta, Popular recessed in walls, Roof slab, or on surface or above false ceiling or as required as per site conditions, all PVC conduit accessories, pull boxes, steel pull wires, complete in all respects. Each circuit shall have independent PE.					
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	73.17			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	18.29			-
A.02		1-Light Point Controlled By One Switch					
		Wiring of one light point controlled by one switch and wired with 3x1.5 mm sq. (P+N+PE) PVC insulated wires 300/500 V. grade make Pakistan Cable, Newage Pioneer Cables,, in and including cost of 3/4" dia. heavy duty PVC conduit make Beta, Popular installed on RCC slab, above false ceiling, recessed in wall, columns slabs or above light carrier all PVC conduit accessories, 3" high PVC junction boxes, pull boxes, steel pull wires, PVC flexible conduit from ceiling junction box to light fixture flush type plate switches, including cost of back boxes and switches of 10 Amps.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	128.05			-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	42.68			-
A.03		Point -Point Wiring					
		Same as per item No. A.02 but Loop wiring of a light point from first light point on same switch circuit, complete in all respects.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	134.15			-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	44.72			-
A.04		Gang Light Control Switches					
	15-127-b	Supply at site, installation, testing and commissioning of Two gang light control switches 10 Amps, 250Volts one way, including appropriate size concealed MS, powder coated back box, complete in all respects.	Each	2.00			-
	15-127-c	Supply at site, installation, testing and commissioning of Three gang light control switches 10 Amps, 250Volts one way, including appropriate size concealed MS, powder coated back box, complete in all respects.	Each	1.00			-
	15-127-f	Supply at site, installation, testing and commissioning of Six gang light control switches 10 Amps, 250Volts one way, including appropriate size concealed MS, powder coated back box, complete in all respects.	Each	2.00			-
A.05		Exhaust Fan Point					
		Same as Item No. A.02 mentioned above but wiring of exhaust fan point including cost of 10 Amp switch with M.S box 16 SWG with earth terminal.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	27.44			-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	9.15			-

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LOT 1: WATER TREATMENT PLANT							
BILL OF QUANTITIES							
BILL NO. 19: OPERATOR ROOM							
Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
A.06		Ceiling Fan Point					
		Same as Item No. A.02 mentioned above but wiring of Ceiling fan point including cost of 10 Amp switch with M.S box 16 SWG with earth terminal.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	41.16			-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	13.72			-
A.07		1-3 pin switch & plug combined recessed type :10/15 Amp					
		Supply and wiring of one 3 pin switch & plug combined recessed type :10/15 Amp outlet point from distribution board with single core 2x4mm2(P+N) PVC insulated 300/500 volt grade cable in & including PVC conduit recessed in walls/R.C.C. slab, or installed on surface of Ceiling, all conduits accessories, junction boxes, pull boxes etc. 2.5mm2 cable as PC excluding cost of 3 pin 13 Amps switch & socket out let make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel board recessed in walls complete in all respects and as per specifications & drawings.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	54.88			-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	18.29			-
A.08		Loop-Loop- 3 pin switch & plug combined recessed type :10/15 Amp					
		Same as item No.A.12 above but loop wiring of 3 pin switch & plug combined recessed type :10/15 Amp outlet with 2x4mm2(P+N) & 1x2.5mm2 as CPC from point to point excluding cost of one 15A 3 pin switch socket outlets with make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel boards recessed in walls /columns.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	73.17			-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	24.39			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	24.39			-
	15-20-b	Supply and Erection 3 pin switch & plug combined recessed type :10/15 Amp	Each	7.00			-
A.09		Loop-Loop- 5 Amps Switch Socket					
		Same as item No.A.12 above but loop wiring of 5A power socket outlet with 2x4mm2(P+N) & 1x2.5mm2 as CPC from point to point excluding cost of one 15A 3 pin switch socket outlets with make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel boards recessed in walls /columns.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	128.05			-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	42.68			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	42.68			-
	15-20-a	Supply and Erection 3 pin switch & plug combined recessed type : 5 Amp	Each	7.00			-
A.10		1-20 Amps Switch Socket					

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KPCIP-CW-04: MINGORA GREATER WATER SUPPLY SCHEME INCLUDING NEW WATER TREATMENT PLANT (WTP), INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS AND SCADA:							
LOT 1: WATER TREATMENT PLANT							
BILL OF QUANTITIES							
BILL NO. 19: OPERATOR ROOM							
Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		Supply and wiring of one 3pin 20 Amps Power plug socket outlet point from distribution board with single core 2x6mm2(P+N) PVC insulated 300/500 volt grade cable in & including PVC conduit recessed in walls/R.C.C. slab, or installed on surface of Ceiling including all conduits accessories, junction boxes, pull boxes etc. 4mm2 cable as PC including cost of 3 pin 20 Amps switch & socket out let make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel board recessed in walls complete in all respects and as per specifications & drawings.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	36.59			-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	12.20			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	12.20			-
	15-81	Supply and Fixing 20 Amp power plug	Each	2.00			-
A.11		Fitting and Fixtures.					
		Supply at site, installation, testing and commissioning of the following indoor incandescent/LED light fittings, complete with brass lamp holders, fixing accessories, earthing terminal, driveway circuitry make as specified or by any one of the manufacturers mentioned in Annexure-"A", complete in all respects.					
i)	15-36-j-12	Supply, installation, connecting, testing & commissioning of 10W LED Down Light Fixture suitable for 1300 lm, as per instruction of Engineer, surface mounted circular shape or equivalent.	No	6.00			-
iii)	15-36-i-15	Supply, installation, testing and commissioning of recessed Dawn Light of best quality with CFL (13-17 watt) Energy saver and with Glass Reflector	Nos.	12.00			-
iii)	15-36-k-03	Supply, installation, connecting, testing and commissioning of Wall mounted Bulkhead light fixtures with LED retrofit lamp 540 Lumens output, complete in all respects	Nos.	4.00			-
A.12		Exhaust Fans					
a)	15-69-b	Supply and Erection best quality exhaust fan complete with shutter & regulator : 16"sweep	No	2.00			-
A.13		Ceiling Fan					
	15-127-m	Supply at site, installation, testing and commissioning of Fan Dimmer with switch/ MS, powder coated back box with all associated accessories, complete in all respects.	No	2.00			-
	26-01-l-01	Supply and Erection of AC Energy Efficient Ceiling Fans 56 inch, 50 W	Nos.	2.00			-
A.14		Wall Bracket Fan					
	15-68-e	Supply, installation, testing & commissioning of Direct axial Wall Bracket fan	Nos.	1.00			-
A.15		PVC Conduit					
		Supply at site of PVC conduit heavy duty to be concealed in RCC slabs, walls, floor, columns above false ceiling or as required as per site conditions including cost of all PVC conduit accessories, steel pull wires, complete in all respects.					
i)	15-02-b-08	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 4" i/d	M	9.15			-
A.16		Distribution Board					

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LOT 1: WATER TREATMENT PLANT							
BILL OF QUANTITIES							
BILL NO. 19: OPERATOR ROOM							
Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		Fabrication, supply at site, installation, testing, commissioning and connections of wires / cables of Distribution Boards "Light / Power" concealed / open type to be installed as and where shown on drawing, made of MS sheet 16 SWG degreased and derusted, zinc phosphated, finished with electro-static powder coating of 50 micron thickness in approved colour, DB housing to comply with protection class IP-44 with hinged door, flexible earthing strap lockable handle, catcher, earthing bar, neutral strip, internal wiring from MCBs terminating on cable terminal blocks, including cost of all necessary materials complete in all respects. DBs shall be manufactured by any one of the manufacturers as mentioned in List.					
	15-162-j	Supply, Installation, connecting, testing & commissioning of wall mounted DBLP-G1, Distribution Boards, complete with all metering with indication lamps complete in all respects as per SLD.	Each	1.00			-
A.17		Non-maintained Emergency Lighting					
	Appendix 'c' Page No-5	Supply, installation and connections of Self Test Maintained With ISO 7010 Legend Set 7 Watt Colour Temperature 6000K ,235 Lumens on main supply and 150 Lumens on battery, Avg. Rated Life (Hrs) 30000 hr, IP65 rating with hanging arrangement on wall or ceiling as required complete in all respect as approved by the engineer incharge make Delpro (uk) or eqv.	Nos.	1.00			-
SUB TOTAL OF ELECTRICAL WORKS							-

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 19: OPERATOR ROOM

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		PLUMBING WORKS					
		Indian W.C					
1	14-03-a	Providing and fitting glazed earthenware water closet (WC), squatter type (orisa pattern) combined with foot rest. complete in all respects : White	Each	1.00			-
2	14-10-a	Providing and Fixing glazed earthen ware low down flushing cistern 3 gallons (13.63 Liters) capacity including bracket set, copper connection,etc. complete in all respects: White	Each	1.00			-
3	14-05-a-01	Providing and Fixing glazed earthen ware wash hand basin (WHB) complete size 56x40 cm (22"x16"), including bracket set, waste coupling, complete in all respects: White with pedestal (Best Quality)	Each	1.00			-
4	14-102	Providing & Fixing of SHOWER SET locally made complete with concealed T-STOP COCK for cold and hot water supply with mixer, swivel shower rose, long bib cock etc Complete in all respect.	Each	1.00			-
5	14-27-a	Providing and fixing chromium plated (CP) mixing valve for wash hand basin (WHB), sink or shower of approved (Best) quality	Each	3.00			-
6	14-06-a	Providing and Fixing stainless steel sink with drain board size (120 x 60 cm) 48"x24", including set of brackets, waste pipe etc - (Best Quality)	Each	1.00			-
7	14-13	Providing and fixing chromium plated soap dish complete.	Each	2.00			-
8	14-16-a	Providing and Fixing chromium plated (CP) towel 60 cm (24") long and 2 cm (3/4") dia	Each	2.00			-

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 19: OPERATOR ROOM

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
9	14-17-a	Providing and fixing best quality looking glass 5 mm thick neatly fitted on masonry wall etc. as per instruction of Engineer In-charge complete. Mirror 60 x 45 cm (24"x18") size	Each	1.00			-
10	14-21-c	Providing and fixing chromium plated (CP) double bib cock, heavy duty of approved quality : 1.5 cm (1/2")	Each	1.00			-
11	14-25-a	Providing and fixing chromium plated (CP) tee stop cock 1.5 cm (1/2") of approved quality	Each	3.00			-
12	14-31-a	Providing and Fixing cast iron (CI) floor trap of approved quality including CI grating & concrete chamber all round : 4"x2" (100mm x 50 mm)	Each	3.00			-
13	14-33	Providing and Fixing 4" gully trap of approved quality including cement concrete cost of PVC grating 6" x6" (150 x 150 mm) and masonry chamber 12"x12" (300 x 300 mm).	Each	1.00			-
14	14-157	P-Trap (uPVC) for squatting type WC.					
	14-157	ii) 10 cm (4") glazed.	Each	1.00			-
		SEWERAGE SYSTEM					
15	14-95-a	Making connection with the existing system PVC pipe line including cutting the pipe for providing & fixing required fittings : Class B PVC					
		a) 3" i/d (75 mm)	m	20.00			-
		b) 4" i/d (100 mm)	m	20.00			-

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 19: OPERATOR ROOM

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		d) 6" i/d (150 mm)	m	20.00			-
		Non SCHEDULE ITEM					
1	NS-1	Providing, fixing, jointing and testing Polypropylene Random (PPR) PN20 pressure pipe for cold, hot and hot water return water as per DIN 8077-8078 for pipes and DIN 16962,PN25 for fittings (polyfusion welded joints) inside building including fittings and specials (sockets, tees, elbows, bends, crosses, reducers, adaptor, plugs and union etc.) supported on walls or suspended from roof slab or run in chases including pipe hangers, supports, walls cutting for pipelines, complete in all respect as per specifications and drawings as well as directed by the Engineer.					
		20 mm dia	m	25.00			-
		25 mm dia	m	20.00			-
		32 mm dia	m	20.00			-
2	NS-2	Providing and making Manhole 2'x2' internal size including 9" thick brick masonry (1:4), 1/2" th. Plastering (1:3) i/side, benching with PCC 1:2:4 4" th. with cement finish, excluding manhole cover, complete in all respects.	Each	2.00			-
3	NS-3	Providing and fixing food grade plastic over head water tank (200 gallon) including all necessary accessories required for installation, complete in all respect as per specifications and drawings as well as directed by the Engineer.	Each	1.00			-

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 19: OPERATOR ROOM

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
SUB TOTAL OF PLUMBING WORKS							-

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LOT 1: WATER TREATMENT PLANT

SUMMARY OF BILL NO. 20: MAIN GATE & BOUNDARY WALL

BILL NO.	DESCRIPTION OF WORK	Amount (PKR)
1	CIVIL WORKS	-
TOTAL AMOUNT RS		-

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LOT 1: WATER TREATMENT PLANT							
BILL OF QUANTITIES							
BILL NO. 20: MAIN GATE & BOUNDRY WALL							
Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
CIVIL WORKS							
1	03-67-a	Structural Excavation in Common Material by mechanical means	M3	2,475.00			-
2	07-30	Supplying and filling sand under floor or plugging in wells	M3	1,732.50			-
3	06-05-h	Plain Cement Concrete including placing, compacting, finishing & curing (Ratio 1:3:6)	M3	165.00			-
4	06-07-a-02	RCC in roof slab, beam, column & other structural members, insitu or precast. (1:1.5:3)	M3	928.12			-
5	06-07-b-02	RCC in raft foundation slab, base slab of column & ret.wall etc, not including in 06-06 (1:1.5:3)	M3	1,035.18			-
6	06-08-b	Supply & fabricate M.S. reinforcement for cement concrete (Hot rolled deformed bars Grade 60)	100 Kg	2,771.40			-
7	25-30-b	Providing and fixing steel grated doors, complete with locking arrangement, angle iron frame 2"x2"x3/8" and 1" square bars 4" center to center.	M2	72.00			-
8	03-20-a	Transportation of earth all types beyond 250 m and upto 500 m.	M3	1,732.50			-
9	03-20-b	Transportation of earth all types for every 100m extra lead beyond 500m upto 1.5 km.	M3	1,732.50			-
10	03-20-c	Transportation of earth all types for every 500m extra lead beyond 1.5 km. upto 8 km.	M3	1,732.50			-
11	03-20-d	Transportation of earth all types for every 1 km extra lead or part thereof beyond 8 km.	M3	1,732.50			-
SUB TOTAL OF CIVIL WORKS							

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KPCIP-CW-04: MINGORA GREATER WATER SUPPLY SCHEME INCLUDING NEW WATER TREATMENT PLANT (WTP), INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS AND SCADA:

LOT 1: WATER TREATMENT PLANT

SUMMARY OF BILL NO. 21: EXTERNAL PIPING

BILL NO.	DESCRIPTION OF WORK	Amount (PKR)
1	CIVIL WORKS	-
2	MECHANICAL WORKS	-
TOTAL AMOUNT RS		-

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LOCAL GOVERNMENT, ELECTIONS AND RURAL DEVELOPMENT DEPARTMENT							
KPCIP-CW-04: MINGORA GREATER WATER SUPPLY SCHEME INCLUDING NEW WATER TREATMENT PLANT (WTP), INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS AND SCADA:							
LOT 1: WATER TREATMENT PLANT							
BILL OF QUANTITIES							
BILL NO. 21: EXTERNAL PIPING							
Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
CIVIL WORKS							
1	03-49-b	Excavation in open cut for sewers & manholes except shingle, gravel & rock : 2m to 5m	M3	2,100.00			-
2	03-18-d	Filling, watering and ramming earth under floor with earth excavated from outside lead upto 30m	M3	10,500.00			-
3	03-20-a	Transportation of earth all types beyond 250 m and upto 500 m.	M3	10,500.00			-
4	03-20-b	Transportation of earth all types for every 100m extra lead beyond 500m upto 1.5 km.	M3	10,500.00			-
5	03-20-c	Transportation of earth all types for every 500m extra lead beyond 1.5 km. upto 8 km.	M3	10,500.00			-
6	03-20-d	Transportation of earth all types for every 1 km extra lead or part thereof beyond 8 km.	M3	10,500.00			-
SUB TOTAL OF CIVIL WORKS							-

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KPCIP-CW-04: MINGORA GREATER WATER SUPPLY SCHEME INCLUDING NEW WATER TREATMENT PLANT (WTP), INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS AND SCADA:						
LOT 1: WATER TREATMENT PLANT						
BILL OF QUANTITIES						
BILL NO. 21: EXTERNAL PIPING						
Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount		
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words
MECHANICAL WORKS						
1	NS-1	DN-180 HDPE PIPE				
		Providing, laying, cutting, jointing, testing and disinfecting High Density Polyethylene Pipe (HDPE) Din-8074/Din-8075/ISO-4427 in trenches, complete in all respects PN-10 (180mm) (including fittings and Bends etc)				
		HDPE Pipe	M	432.00		-
2	NS-2	DN-1200 HDPE PIPE				
		Providing, laying, cutting, jointing, testing and disinfecting High Density Polyethylene Pipe (HDPE) Din-8074/Din-8075/ISO-4427 in trenches, complete in all respects PN-10 1200mm (including fittings and Bends etc)				
		HDPE Pipe	M	306.00		-
3	NS-3	DN-900 HDPE PIPE				
		Providing, laying, cutting, jointing, testing and disinfecting High Density Polyethylene Pipe (HDPE) Din-8074/Din-8075/ISO-4427 in trenches, complete in all respects PN-10 900mm (including fittings and Bends etc)				
		HDPE Pipe	M	462.00		-
4	NS-4	DN-1000 HDPE PIPE				
		Providing, laying, cutting, jointing, testing and disinfecting High Density Polyethylene Pipe (HDPE) Din-8074/Din-8075/ISO-4427 in trenches, complete in all respects PN-10 1000mm (including fittings and Bends etc)				
		HDPE Pipe	M	336.00		-
5	NS-5	Sluice Valves				
		Sluice Valves with all accessories complete in all respect for various pipe sizes as shown on the drawings				
		HDPE Pipe Line				
		800mm	No	7.00		-
		900mm	No	12.00		-
		1000mm	No	6.00		-
SUB TOTAL OF MECHANICAL WORKS						

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LOT 1: WATER TREATMENT PLANT

SUMMARY OF BILL NO. 22: EXTERNAL ELECTRIFICATION

BILL NO.	DESCRIPTION OF WORK	Amount (PKR)
1	CIVIL WORKS	-
2	ELECTRICAL WORKS	-
TOTAL AMOUNT RS		-

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LOT 1: WATER TREATMENT PLANT							
BILL OF QUANTITIES							
BILL NO. 22: EXTERNAL ELECTRIFICATION							
Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	CIVIL WORKS						
		Earth Work					
1	03-25-b	Excavation in foundation of building, bridges etc complete : in ordinary soil	M3	289.00			-
2	03-18-a	Filling, watering and ramming earth under floor with surplus earth from foundation, etc	M3	212.00			-
		Plain and Reinforcement Concrete					
3	06-03-b	Cement Concrete (brick/stone ballast, 1.5" to 2"/nullah shingle well graded and cleaned) in foundation & plinth (Ratio 1:4:8)	M3	42.00			-
4	06-07-b-03	RCC in raft foundation slab, base slab of column & ret. wall etc, not including in 06-06. (1:2:4)	M3	58.00			-
5	06-07-a-03	RCC in roof slab, beam, column & other structural members, insitu or precast. (1:2:4)	M3	26.00			-
		Steel Reinforcement					
6	06-08-b	Supply & fabricate M.S. reinforcement for cement concrete (Hot rolled deformed bars Grade 60)	Tonne	7.40			-
		Brick Work					
7	07-04-a-04	1st class brick work in foundation and plinth in Cement, sand mortar 1:5	M3	54.10			-
		Surface Rendering					
8	11-09-b	Cement plaster 1:5, upto 20' height 1/2" thick (Internal walls)	M2	375.80			-
SUB TOTAL OF CIVIL WORKS							-

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LOT 1: WATER TREATMENT PLANT						
BILL OF QUANTITIES						
BILL NO. 22: EXTERNAL ELECTRIFICATION						
Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount		
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words
ELECTRICAL WORKS						
2		LT CABLES				
		Supply at site, installation, testing & Commissioning of following under mentioned PVC insulated unarmoured copper conductor cable 600 /1000 Volt grade manufactured by any one of the manufacturers as mentioned in appendix in prelaidd conduits/ trenches to be installed as per routes shown on drawings including cost of all necessary materials, connections, identification tags, cables lugs properly crimped at both ends for the following sizes complete in all respects. manufacturers as specified in Annexure "A" Actual length of cables to be installed shall be measured at site by the Contractor, duly authenticated by the employers electrical engineer before placing the order with the manufacturer, however, approximate length of cables are shown herewith. Payments shall be made as per actual length installed				
	15-123-a	b) 3-Core 2.5mm ² PVC/PVC Copper Conductor Cable between pole base Connection box to light fixtur	M	1,800.00		-
	ii	Circuit Protective Conductor (CPC)				
	15-48-d	1 CORE 16mm sq	M	2,020.00		-
	15-48-c	1 CORE 6mm sq	M	1,295.00		-
	15-48-b	1 CORE 2.5mm sq	M	1,350.00		-
3		ROUND CONICAL POLE				
3.1	26-01-a-04	Single arm round conical Pole, hot dipped galvanized (80 microns) 8 meters overall thickness 4mm Arm length 1.5 meters each with OD 60 mm, base dia 180 mm and top dia 75mm with base plate arrangement (400mm x 400 mm x 20mm), 4 No of Stiffners (200mm x 100mm x 20mm), complete in all respects	Each	72.00		-
3.2	26-01-a-03	Double arm round Conical Pole, hot dipped galvanized (80 microns) 8 meters overall thickness 4mm Arm length 1.5 meters each with OD 60 mm, base dia 180 mm and top dia 75mm with base plate arrangement 400mm x 400 mm x 20mm, 4 No of Stiffners (200mm x 100mm x 20mm), complete in all respects	Each	4.00		-
3.3	15-35-g	Providing and laying of cable route marker cast iron for all sort of Road Light, Street Lights & Boundary Wall lights complete in all respects with all installation material complete	Each	54.00		-
4		STREET LIGHT FIXTURES				
4.1	15-36-e	Supply & erection of SMD Type LED Road light Fixture (90-100 watts)	Each	80.00		-
4.2	15-36-l01	Supply & Erection of candle flood light 150 watt complete in all aspects	Each	12.00		-
5		MAN HOLE				
	15-42-b	Manhole For LT Cable Pulling	Each	30.00		-
6		CABLE TRAY				
	15-135-b	Supply at site, fabrication and installation of GI perforated cable tray 14 SWG 8 ft. to 10 ft. long, 12" wide with sides 3" high to be installed on wall, or in vertical, or above false ceiling in horizontal position or floor mounted or as shown on drawing, including cost of hanging arrangement brackets made of angle iron 38mm x 38mm x 6mm installed at every 3 ft., cost of all necessary fixing accessories, complete in all respects.	M	60.98		-
NON SCHEDULE ITEMS						
		11 KV WAPDA GRID PANEL				
		Supply, installation and energizing of HT Grid Panel factory fabricated & tested, manufactured by (SIEMENS / AREVA / PEL / FICO make only) consists of 12 SWG mild steel sheet fabricated floor mounted free standing 1-cubical, indoor type (IP-54) totally enclosed with hinged front doors. The panel designed suitable for 11 KV 3-phase, (3-wire) 50 Hz AC system, high conductivity, hard drawn electrolytic copper bus bars of adequate current carrying capacity and short circuit rating copper interconnections, internal wiring and cable termination arrangements using HT Raychem Heat Shrinkable Termination Kit (German) for 3 core HT Armoured cable of appropriate size as per WAPDA specifications (P-44:96) and finished with RAL-7032 powder coating baked. Equipped with following components (All components used should be from WAPDA approved list)				

GOVERNMENT OF KHYBER PAKHTUNKHWA							
KHYBER PAKHTUNKHWA CITIES IMPROVEMENT PROJECT							
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KPCIP-CW-04: MINGORA GREATER WATER SUPPLY SCHEME INCLUDING NEW WATER TREATMENT PLANT (WTP), INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS AND SCADA:							
LOT 1: WATER TREATMENT PLANT							
BILL OF QUANTITIES							
BILL NO. 22: EXTERNAL ELECTRIFICATION							
Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
1		Components 1 No. 11KV VCB 630A 17.5KV 25KA with drawout type (Make Hyundai / Eqv) 1 No. Electronics IDMT/S/C, O/C, E/F Relay/TEST Block (Make Areva/GE) 3 Nos. 11KV Current Transformers (Make FICO) 400/200/5A For Protection 3 Nos. 11KV Current Transformers (Make FICO) 400/200/5A For Metering 3 Nos. Voltage Transformer 11KV/110V (Make FICO) 1 No. Ampere Meter 0-100/400A (Make Lumel / Frer) 1 No. Ampere Selector Switch 4-position (Make GGT/Merz) 1 No. Volt Meter 96x96 0-15KV (Make Lumel / Frer) 1 No. Volt Selector Switch 4-position (Make GGT/Merz) 2 Nos. Push Button 25MM For VCB (Make Telemecanique) 4 Nos. Indication Lamp 25MM 110VAC/110VDC (Make Telemecanique) 1 No. 6A Control MCB TP 6KA (Make ABB/GE) 4 Nos. 6A Control MCB DP 6KA (Make ABB/GE) 1 No. Auxiliary Contact 2NO+2NC (Make ABB/GE) 1 No. Auxiliary Contact 2NO+2NC (Make ABB/GE) 1 No. DC supervision Relay (Make E-Lab) 3 Nos. Surge Arrestor 5 To 15kv (Make Chint) 15 Set 11kv Insulator for Fitting Arrangement Bus Bar (Make Jeorjordan) 1 Set Control & CTs Terminal Block (Make Kelmson/Wiland) 126 Cft 10/12SWG Powder Painted 01-Cubicles. Size 7.2'x3x6' each 230 Kg 2500A Electrolytic Copper bus bar for main & link. Size as per WAPDA standred 3x2x100x10MM Main Bus Bar as Per P-44:96 8 Nos. 1-1/2" Fibre glass insulator for bus bar mounting					
	Appendix-C Electrical Works Page 1	1 L/S Wiring, wiring cables, thimbles, sleeves, cable tray and other wiring accessories. Complete in all respect as per satisfaction of the Engineer Incharge.	Each	1.00			
2		11 KV WAPDA METERING PANEL					
		Supply , installation , and energizing of HT Metering Panel factory fabricated & tested, manufacture by SIEMENS, PEL, PEMPAK ,FICO MAKE only, consist of 12 SWG mild steel sheet fabricated floor mounted free standing one cubical indoor type (I.P 54) total enclosed with hinged front doors, the panel designe suitable for 11KV three phase 50 Hrz AC system, high conductivity, hard drawn electrolytic copper bus bars of adequate current carrying capacity and short circuit rating copper interconnections, internal wiring and cables, termination arrangements, using HT Raychem Heat Shrinkable termination kit German for 3 core HT Armoured cable of appropriate size as per wapda specification and finished with RAL- 7032 powder coating baked. Equiped with following compnents (All components used should be from WAPDA approved list). 1 No. 11KV VCB 630 Amps 17.5 KV 25 KA with drawout type. (Make Hyndai or Equ.) 1 No. Electronics IDMT/S/C, O/C, E/F Relay / TEST Block. (Make Areva or Micro or Equ.) 3 Nos. 11 KV current transformers.(Make FICO or Equ.) 400/200 /5A for protection. 3 Nos. 11 KV current transformers. (Make FICO or Equ.) 400/200 /5A for metering. 3 Nos. Voltage transformer 11kv/110 V.(Make FICO or Equ.) 1 No. Ampere meter 0-100/400A. (Make Lumel or Frer) 1 No. Ampere selector switch 4-position.(Make Merz or Bretrer) 1 No. Voltmeter 96x96 0-15 KV. (Make Lumel or Frer) 1 No. Volt selector switch 4-position.(Make Merz or Bretrer) 2 Nos. Push button 25mm for VCB. (Make Telemecanique) 4 Nos. Indication Lamp 25mm 110 VAC/110 VDC. (Make Telemecanique) 1 No. 6A control MCB TP 6KA (Make ABB or GE) 2 Nos. 6A control MCB DP 6KA. (Make ABB or GE) 1 No. Auxiliary Contact 2NO+2NC (Make ABB or GE) 1 No. Auxiliary Contact 2NO+2NC (Make ABB or GE) 1 No. Capacitor Trip Unit. (Make E-Lab) 9 Set 11KV insulator for fitting arrangement Bus Bar (Make Jeorjordan) 1 Set Control and CTs terminal Block. (Make Kelmson/ Wiland) 126 Cft 10/12 SWG Powder Painted 01- Cubical Size 7.2'x3x6' Each 90 Kg 2500A Electrolytic copper bus bar for main & link size as per wapda stander 3x2x100x10mm main bus bar as per P-44:96 4 Nos. 1-1/2" fiber glass insulator for bus bar mounting. 1 L/S Wiring, wiring cables, Thimbels, Sleeves, Cable Tray or other wiring Accessories.					
	Appendix-C Electrical Works Page 2	complete in all respect, as per satisfaction of the Engineer Incharge.	Each	1.00			
		HT. CONSUMER/PROTECTION PANEL					
		Supply , installation , testing and commissioning of HT consumer / protection panel factory fabricated and tested, manufacture by SIEMENS, PEL, PEMPAK ,FICO MAKE only, consist of 12 SWG mild steel sheet fabricated floor mounted free standing one cubical indoor type (I.P 54) total enclosed with hinged front doors, the panel designe suitable for 11KV three phase 50 Hrz AC system, high conductivity, hard drawn electrolytic copper bus bars of adequate current carrying capacity and short circuit rating copper interconnections, internal wiring and cables, termination arrangements, using HT Raychem Heat Shrinkable termination kit German for 3 core HT Armoured cable of appropriate size as per wapda specification and finished with RAL- 7032 powder coating baked. Equiped with following compnents (All components used should be from WAPDA approved list).					

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LOT 1: WATER TREATMENT PLANT							
BILL OF QUANTITIES							
BILL NO. 22: EXTERNAL ELECTRIFICATION							
Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
3	Appendix-C Electrical Works Page 3	1 No. 11KV VCB 630 Amps 17.5 KV 25 KA complete.(Make Hyundai/Equ) 1 No. Electronics IDMT/S/C, O/C, E/F Relay (Make Areva/GE) 3 Nos. 11 KV current transformers.(Make FICO) as per suitable rating for protection. 3 Nos. Voltage transformer 11kv/110 V. (Make FICO) 1 No. Ampere meter 0-100/400A.(Make Lumel) 1 No. Ampere selector switch 4-position.(Make GGT/Merz) 1 No. Voltmeter 96x96 0-15 KV (Make Lumel) 1 No. Volt selector switch 4-position.(Make GGT/Merz) 2 Nos. Push button 25mm for VCB.(Make Telemecanique) 4 Nos. Indication Lamp 25mm 110 VAC/110 VDC.(Make Telemecanique) 1 No. 6A control MCB TP 6KA (Make GE/ABB) 2 Nos. 6A control MCB DP 6KA (Make GE/ABB) 1 No. Auxiliary Contact 2NO+2NC (Make GE/ABB) 1 No. Auxiliary Contact 2NO+2NC (Make GE/ABB) 1 No. Capacitor Trip Unit. (Make Chint) 9 Sets 11KV insulator full fitting arrangement Bus Bar.(Make JeorJordan) 1 Set Control and CT's terminal Block. (Make Kelmson) 126 Cft 10/12 SWG Powder Painted 01- Cubical Size 7.2"x3x6' Each 90 Kg 630A Electrolytic copper bus bar for main & link size as per wapda stander 40 Nos. 1-1/2" fiber glass insulator for bus bar mounting. 1 L/S Wiring, wiring cables, Thimbels, Sleeves, Cable Tray or other wiring Accessories. complete in all respect, as per satisfaction of the Engineer Incharge.	Each	1.00			-
4		Transformer (Oil Type) Supply at site, installation, testing and commissioning of new step down Distribution transformer pad mounted oil type manufactured according to BSS-171, IEC-76 or VDE-0532/NTDC-WAPDA relevent standards and, specifications and consisting of the under mentioned items.					
		Filling device, drain plug, oil level indicator, lifting hooks, bi-directional roller wheels, H.V. & L.V. porcelain bushings, off load tap changer, 2 earthing terminals, conservator and silica gel breather, thermometer pocket with digital thermometer, imported double float buckholz relay to be connected with VCB Input of Consumer panel, pressure relief vent, digital thermometer with alarm & trip contacts, rated Voltage 11000 / 415 / 230 Volts, suitable for an ambient temperature of 50°C, impedance 6% or as specified by IEC, system earth: Delta-Y, neutral solidly earthed (DYN- II), transformer oil, I.P - 54. The transformer shall be suitable for loading of 100% continuous maximum rating with "ONAN" cooling without exceeding the thermal limit. all necessary accessories / materials, including submission of technical data sheet, complete in all respects and as approved by the Engineer.					
	Appendix-C Electrical Works Page 4	3000 KVA Transformer Including cost of Foundation	Each	1.00			-
5		Horizontal Thrust Boring					
	Appendix-C Electrical Works Page 5	Provision of horizontal thrust boring at road crossing including UPVC 6" dia pipe (C-Class), back filling and compaction for H.T / L.T cables and crossing where road crossing sleeves are not available as per site requirement and approval of the Consultant . * subject to actual site work	M	33.00			-
6		H.T cables					
		Supply at work, laying, testing and commissioning of following H.T cables, laying directly in the sand layer, in already excavated trenches or through duct and/ or PVC pipe (already provided), including cable binding ties as per specifications, standards, and drawings and to the of the Consultant . Make Pakistan Cables, Newage Cables or eqv.					
	Appendix-C Electrical Works Page 6	185 MM ² AL/XLPE/AWA/PVC 15 KV 3X single core aluminium cable	M	600.00			-
7		HT terminations kits					
		Supply at work, installation testing & commissioning of following HT terminations kits, Raychem /3-M/Cellpack for cables laid under works in above item , including cable glands and miscellaneous material and installations as per requirements specifications and standards and to the approval of the Consultant .					
	Appendix-C Electrical Works Page 7	70 MM ² AL/XLPE/AWA/PVC 15 KV single core aluminium cable	Each	18.00			-
8		Cable Markers					
	Appendix-C Electrical Works Page 8	Supply at works & installation of HT & LT cable markers (concrete) as per specifications, drawing and approval of the Consultant .	Each	70.00			-
9		3000 KVA GEN. SET					
		Supply at site, installation, testing and commissioning at designated location, connection of cables, testing and commissioning of water cooled NEW diesel generating sets suitable for operation at 50cC and 90% relative humidity manufactured by any one of the manufacturers as specified in annexure "A" assembled in accordance with their provided drawings / manuals and consisting of painted welded steel bed plate frame work to accommodate engine alternator complete with electronic governor to give regulation to BS: 514 class A1, balanced flywheel, water jacket heaters energized by the in coming main supply, heavy duty starting batteries, battery charger,					
		set of spare oil/fuel filters engine panel with oil pressure and water temperature gauge, pressure and water temperature gauge, (Electrical), alternator electronic voltage regulator, radio interference suppressors, electronic tachometer frequency meter voltmeter with selector switch, Ammeter with selector switch, hour runs meter, KWH meter, KW (total and per phase) KVA total and per phase.					
		Power factor (Ave, total and per phase. KVAR (total) KVAR hour % of rated load, emergency stop push button, radiator, with water level switch, suitable for 400 / 230 volts, 50 cycles/second, at 1500 rpm, for 3 phase 4 wire system, including cost of all necessary material / accessories, daily fuel tank and conforming to technical specifications mentioned below.					

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LOT 1: WATER TREATMENT PLANT							
BILL OF QUANTITIES							
BILL NO. 22: EXTERNAL ELECTRIFICATION							
Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	Appendix-C Electrical Works Page 9	3000 KVA Gen Set, Included cost of ATS Panel ,Sound Attenuated Canopy and Foundations.	Each	1.00			-
10		Earthing System					
	Appendix-C Electrical Works Page 10	Providing and installation of Earthing Veractor Cone / Spike Size 2" thick, 12" long as shown in drawings or ¾" dia & 10 ft long copper rod as earth electrode 100 ft or upto the water level, below ground level including cost of boring and lowering the rod (100ft / upto the water level) down, complete with clamp, test point copper plate 18" x 2.5" x 0.5" and 2x70mm ² stranded copper conductor from rod to ground surface in 2" dia G.I.pipe (EL Class) with watering cap, Mani-hole with cover as per detail shown in drawings. all earth work should be done according to the advise of electrical consultant.	Each	20.00			-
11		AMR METER					
	Appendix-C Electrical Works Page 11	Supply, installation testing and commissioning of AMR Meter as per WAPDA Specification complete in all respect and to the approval of the Consultant .	Each	1.00			-
12		AMR METER					
	Appendix-C Electrical Works Page 12	Supply, installation testing and commissioning of Energy Meter as per WAPDA Specification complete in all respect and to the approval of the Consultant .	Each	2.00			-
13		Main Panel Board / MCC PANEL:					
		Supply of MPB made of sheet steel 12 SWG, totally enclosed, indoor free Standing design including all auxiliaries, internal wiring from Mcbbs terminating on cable terminals blocks, Including provision of Cable Glands + Cable Lugs according to Sizes of Cables , designation labels of all incoming and outgoing feeders as shown on the drawings, earthing bar, neutral bar, suitable for system voltage 415 V, 50 Hz, 3 phase, neutral and earthing busbars made of 99.8% electrolytic copper of under mentioned capacities. Body of MPB shall be degreased and de-rusted having one coat of anti-rust paint with further 2 coats of powder paint of approved colour and shall be equipped as mentioned below, including cost of all necessary materials complete in all respects and accordance with the latest BS codes and conforming to single line diagram. Rated current of Main & Neutral Bus Bar rated at 50 degree centigrade All Breakers to be installed shall be of one make only and not mixture of two manufacturers. Make MG. (Made in France), Mitsubishi and Terasaki (Made in Japan/Spain) ABB, Legrand, GE/AEG (Made in Italy). Rated Ics not less than 35 KA for incoming outgoing Breakers and for busbar installed in the Panel. Front & Rear open able doors. Shop drawings shall be submitted by the manufacturer for Approval to consultant before starting Fabrication of all Main Panel Board , Sub Main Panel Board Motor Control Centre and Light, Power Distribution Boards.					
		Including cost of Brass cable glades for incoming and outgoing cables.					
13.1	Appendix-C Electrical Works Page 13	Main Panel Board / MCC PANEL: : Conforming to same constructional specifications as per item No. 2 mentioned above but equipped with the following: As shown in SLD.	Each	1.00			-
13.2		SYNCHRONIZING PANEL / ATS PANEL					
	Appendix-C Electrical Works Page 14	Conforming to same constructional specifications as per item No. 2 mentioned above but equipped with the following: As shown in SLD.	Each	1.00			-
13.3		P.F.I. PLANT					
		Supply, installation & commissioning of sheet metal clad totally enclosed free standing, front excess Power factor improvement plant to be installed with Main LT Switch Board, fabricated from 12 SWG M.S. sheet steel & doors from 14 SWG M.S. sheet steel with electrostatic paint of approved color, 415 volts, 3 phase, 50Hz, power factor improvement plant of automatically / manually controlled, complete with air contactors, HRC fuses for short circuit protection.					
		On/Off push buttons, On/Off indication light, PFI relay, make Nokian for switching in & out out the capacitors in . control fuses, auto/manual selector switch, 415 volts 3 phase delta connected capacitors make Gruppo Energia/Nokian and ON/OFF indicating lamps.					
	Appendix-C Electrical Works Page 15	800 KVAR, Complete in all respect as per single line diagram.	Each	1.00			-
13.4	Appendix-C Electrical Works Page 16	DB1-GF & DB2-GF: Conforming to same constructional specifications as per item No. 2 mentioned above but equipped with the following: As shown in SLD.	Each	2.00			-
13.5	Appendix-C Electrical Works Page 17	DB-GEN. ROOM, DB-CHORINE BULDING,DB-SAND FILTER,DB-OPERATOR QUARTER,DB-ADMIN BULDING,DB-ELECT. ROOM, DB-WORKSHOP, DB-GUARD: Conforming to same constructional specifications as per item No. 2 mentioned above but equipped with the following: As shown in SLD.	Each	7.00			-
13.7	Appendix-C Electrical Works Page 39	DB-VALVES & GATES: Conforming to same constructional specifications as per item No. 2 mentioned above but equipped with the following: As shown in SLD.	Each	4.00			-
14		STREET LIGHT CONTROL PANEL					
	Appendix-C Electrical Works Page 18	Supply ,installation testing & commissioning of Road Light Control Panel 16 SWG sheet steel construction with IP 43 protection class, canopy, door, locking arrangement with MCCB magnetic contactor relay, Photo cell, control switches and monitoring switches etc including provision of brick masonry foundation with PCC 3" Thick top pad, as per drawing, and approval of the consultant/the Engineer Detail is as under. Manufactured by any one of the manufacturers Siemens, PEL,TechnoBuild Engineering.					
		Incoming					
		1-100 A MCCB TP RC:16KA					
		outgoing					

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KPCIP-CW-04: MINGORA GREATER WATER SUPPLY SCHEME INCLUDING NEW WATER TREATMENT PLANT (WTP), INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS AND SCADA:							
LOT 1: WATER TREATMENT PLANT							
BILL OF QUANTITIES							
BILL NO. 22: EXTERNAL ELECTRIFICATION							
Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		10-30A MCB TP RC:6KA	Each	1.00			-
15		POLE BASE CONNECTION BOXES					
	Appendix-C Electrical Works Page 19	Supply , Installation, testing and commissioning of Pole Base Connection Boxes complete comprising 2-NO.circuit breakers (MCB 6A),connectors, nut & bolts etc; as per drawings, specification, complete in all respects and to the approval of the Consultant/The Engineer: Make TechnoBuild Engineering, PEL, Siemens.					
		a. Connection Box	Each	18.00			-
16		LT CABLES					
		Supply, Laying, testing and commissioning of LT Copper Conductor Cable, PVC insulated, PVC sheathed 660/1100 volt grade cable, armoured with G.I. wire 16 SWG, laid directly in the already excavated as per item B-1, including 2" UPVC pipe at road crossing with provision of warning tape as per drawings, specifications and approval of the consultant/the Engineer, Make Pakistan Cables, Newage Cables, Fast Cables or eqv.					
16.1	Appendix-C Electrical Works Page 20	150 mm2 4-core cable,	M	890.00			-
16.2	Appendix-C Electrical Works Page 21	120 mm2 1-core cable,	M	5,920.00			-
16.3	Appendix-C Electrical Works Page 22	120 mm2 4-core cable,	M	260.00			-
16.3	Appendix-C Electrical Works Page 23	50 mm2 4-core cable,	M	390.00			-
16.4	Appendix-C Electrical Works Page 24	35 mm2 4-core cable,	M	760.00			-
16.5	Appendix-C Electrical Works Page 25	25 mm2 4-core cable,	M	1,260.00			-
16.6	Appendix-C Electrical Works Page 26	16 mm2 4-core cable,	M	100.00			-
16.6	Appendix-C Electrical Works Page 27	10 mm2 4-core cable,	M	1,295.00			-
16.7	Appendix-C Electrical Works Page 28	6 mm2 4-core cable,	M	4,052.00			-
16.7	Appendix-C Electrical Works Page 29	16 mm2 2-core cable,	M	540.00			-
16.7	Appendix-C Electrical Works Page 30	10 mm2 2-core cable,	M	1,576.00			-
16.7	Appendix-C Electrical Works Page 31	6 mm2 2-core cable,	M	1,576.00			-
16.9	Appendix-C Electrical Works Page 32	4 mm2 2-core cable, From LT Main Panel Board to CONVEYER, FINE SCREENS, PUMP ROOM, SUMP PUMP, & PENSTOCKS.	M	36,400.00			-
ii		Circuit Protective Conductor (CPC)					
16.10	Appendix-C Electrical Works Page 33	1 CORE 70mm sq	M	14,140.00			-
16.10	Appendix-C Electrical Works Page 34	1 CORE 50mm sq	M	390.00			-
16.10	Appendix-C Electrical Works Page 35	1 CORE 25mm sq	M	390.00			-
16.11	Appendix-C Electrical Works Page 36	1 CORE 10mm sq	M	2,120.00			-
16.12	Appendix-C Electrical Works Page 37	1 CORE 4mm sq	M	4,052.00			-
17		BUS TIE DUCT					
		Supply at site, fabrication and installation of Following TP+N+E Bus Tie Duct Strict Compliance As Per IEC 61439-1, 2 & 6. Standard IP55 protection degree [EN60529], Pogliano brand Insulated Busbar Systems (ITALY). Complete in all respect, as approved by the Electrical Engineer.					
	Appendix-C Electrical Works Page 38	Copper Contact Aluminium Busway, 4000A, 3P+N+E, IP55	M	100.00			-

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LOT 1: WATER TREATMENT PLANT							
BILL OF QUANTITIES							
BILL NO. 22: EXTERNAL ELECTRIFICATION							
Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
18		PROVISION OF WAPDA CONNECTION					
	As Per WAPDA rates 2020	Design, approval from WAPDA, execution, testing and commissioning of 11 kV (single / composite arrangement on poles) overhead network for the Treatment Plant and associated works shall be included in the Contractor's scope of work. Contractor shall be responsible for complete site survey and design of HT feeder / network from the source 132/11 kV grid station(s) upto project premises / sites. The feeder extension from Grid Station for distribution transformers at the project premises/sites comprising of HT Allum ACSR Osprey conductors, 36 ft Steel Structure Poles, Cross arms, insulators, connecting hardware, terminations / jumpers, anti-climbing devices, danger sign, foundations, earthing etc. complete in all respect as per WAPDA prevailing rules and regulations. Including Cost of Security Deposit to WAPDA on the name of Client.	Job/ PS	1.00	36,046,411.52	-	36,046,411.52
19		ENHANCEMENT OF 132/11.5 KV GIS GRID STATION					
		Design, approval, supply, installation, testing commissioning of Enhancement of 132/11.5 KV GIS Grid Station including cost of 132/11.5 KV, 20/26 MVA Power Transformer 50Hz, 10% Impadence, Vector Group Dyn11, On Load Tap Changer Aux:Panel (Extended Creepage Bushing) and required Termination Connectors, (Including Dehydration of Transformer Oil), 120 KV Metal Oxide (Gapless) Surge Arresstor with Surge Counter and Terminal connectors for 600 mm Sq Aluminum Conductor Including Steel supporting structure (Extended Creepage Porcelain Insulator), 145 KV -XLPE S/C, Copper Conductor, 800 Sqmm Power Cable, 145KV -Cable Bushing with structure & Terminal Connector, 132KV -Out Door Type Termination Kit for 145 KV -XLPE S/C, Copper Conductor, 800 Sqmm Power Cable, 132KV -GIS Termination(Plug-in-Type)for 145 KV -XLPE S/C, Copper Conductor, 800 Sqmm Power Cable, 12 KV Extended Creepage Surge Arrestors with surge counter and Terminal Connectors, complete 132 KV Steel Gantries & Hardware, complete 132 KV Control & Protection System, complete 132 KV Substation General Items, 15 KV XLPE Power Cables and terminations and control cables, Earthing Material Substation Grounding System for 132 kV Switch yard and Control house Building, 12 KV METAL CLAD (VCB-Type) Switchgear Panels, Battery Bank And Battery Charger and including all the items either explain in this description or not but necessary to complete this job, complete in all respect as approved by the Engineer Incharge and as per WAPDA/NTDC (updated) Specifications. NOTE: This is provisional item and if the load is available in the existing Grid Station this item will not be required. Otherwise contractor will bear Grid sharing charges including transmission charges complete in all respects for dedicated feeder for WTP Mingora	Job/ PS	1.00	133,975,681.00	-	133,975,681.00
SUB TOTAL OF ELECTRICAL WORKS							

GOVERNMENT OF KHYBER PAKHTUNKHWA

KHYBER PAKHTUNKHWA CITIES IMPROVEMENT PROJECT

LOCAL GOVERNMENT, ELECTIONS AND RURAL DEVELOPMENT DEPARTMENT

KPCIP-CW-04: MINGORA GREATER WATER SUPPLY SCHEME INCLUDING NEW WATER TREATMENT PLANT (WTP), INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS AND SCADA:

LOT 1: WATER TREATMENT PLANT

SUMMARY OF BILL NO. 23: ROAD WORKS

BILL NO.	DESCRIPTION OF WORK	Amount (PKR)
1	CIVIL WORKS (Internal Roads)	-
2	CIVIL WORKS (External Roads)	-
TOTAL AMOUNT RS		-

GOVERNMENT OF KHYBER PAKHTUNKHWA
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LOCAL GOVERNMENT, ELECTIONS AND RURAL DEVELOPMENT DEPARTMENT
KPCIP-CW-04: MINGORA GREATER WATER SUPPLY SCHEME INCLUDING NEW WATER TREATMENT PLANT (WTP), INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS AND
SCADA:
LOT 1: WATER TREATMENT PLANT
BILL OF QUANTITIES

BILL NO. 23: ROAD WORKS

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
CIVIL WORKS (INTERNAL ROAD)							
Earthwork for Maintain the Grading Plan							
1	03-01-b	Earth excavation undressed upto single throw of kassi phaorah or shove etc : in ordinary soil,	M3	1,938.00			-
2	03-29-b	Compaction of earth with power road roller 90% max. mod. AASHTO dry density	M3	865.45			-
3	CH:3 item 03-20-a P-12	Transportation of earth all types beyond 250 m and upto 500 m.	M3	1,072.55			-
4	CH:3 item 03-20-b P-12	Transportation of earth all types for every 100m extra lead beyond 500m upto 1.5 km.	M3	1,072.55			-
5	CH:3 item 03-20-c P-12	Transportation of earth all types for every 500m extra lead beyond 1.5 km. upto 8 km.	M3	1,072.55			-
6	CH:3 item 03-20-d P-12	Transportation of earth all types for every 1 km extra lead or part thereof beyond 8 km.	M3	1,072.55			-
Parking Shed							
1	10-49-a	Providing and Fixing Precast Concrete 7000 psi TUFF Tiles 50mm thick over bed of 2" thick sand & 4" thick brick ballast/stone ballast complete.	M2	200.00			-
2	16-73-b	Providing and fixing kerb stone (12"x14"x6") in cement sand mortar 1:3 in center media or round about as specified.	M	192.00			-
3	13-19	Paint on Concrete work (Kerb stone, Barrier)	M2	69.12			-
4	25-58-c	Providing and fixing of parking shed consisting of fiber glass Sheet, tubular pipe frame (heavy) quality and circular columns excluding cost of foundation.	M2	200.00			-

GOVERNMENT OF KHYBER PAKHTUNKHWA

KHYBER PAKHTUNKHWA CITIES IMPROVEMENT PROJECT

LOCAL GOVERNMENT, ELECTIONS AND RURAL DEVELOPMENT DEPARTMENT

KPCIP-CW-04: MINGORA GREATER WATER SUPPLY SCHEME INCLUDING NEW WATER TREATMENT PLANT (WTP), INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS AND

SCADA:

LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 23: ROAD WORKS

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
5	06-05-f	Plain Cement Concrete including placing, compacting, finishing & curing (Ratio 1:2:4)	M3	0.67			-
		Earthwork and Allied Activities					
1	03-60	Clearance of site by cutting, removing all shrubs, trees, upto 6 inches (152 mm) girth, etc. and taking out their entire roots and filling the hollows with earth complete with dressing, consolidating and watering the filling including stacking the serviceable materials and disposal of useless material as directed,	M2	13,651.00			-
2	03-65	Compaction of Natural Ground	M2	13,651.00			-
3	03-70-a	Formation of Embankment from Roadway Excavation in Rock Material requiring blasting and compaction Modified AASHTO 95% of embankment by power roller.	M3	3,309.49			-
4	03-70-b	Formation of Embankment from Roadway Excavation in Rock Material requiring blasting and compaction Modified AASHTO 95% of embankment by power roller.	M3	3,309.49			-
5	03-70-c	Formation of Embankment from Borrow Excavation in Common Material including compaction Modified AASHTO 90% by power roller.	M3	5,482.76			-
		Sub Base, Base Course & Surfacing					
6	16-04-b	Granular Sub Base Using Crushed Stone Aggregate	M3	1,598.12			-
7	16-05-b	Water Bound Macadam Base Course	M3	2,130.83			-
8	16-06	Providing and Laying road edging of 3" wide & 9" deep brick on end, complete	M	2,536.70			-

GOVERNMENT OF KHYBER PAKHTUNKHWA							
KHYBER PAKHTUNKHWA CITIES IMPROVEMENT PROJECT							
LOCAL GOVERNMENT, ELECTIONS AND RURAL DEVELOPMENT DEPARTMENT							
KPCIP-CW-04: MINGORA GREATER WATER SUPPLY SCHEME INCLUDING NEW WATER TREATMENT PLANT (WTP), INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS AND <u>SCADA:</u>							
LOT 1: WATER TREATMENT PLANT							
BILL OF QUANTITIES							
BILL NO. 23: ROAD WORKS							
Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
9	16-10-c	Triple bitumenous Surface Treatment	M2	319.62			-
		Ancillary Works					
10	10-49-a	Providing and Fixing Precast Concrete 7000 psi TUFF Tiles over bed of 2" thick sand & 4" thick brick ballast comp	M2	464.68			-
11	16-73-a	Providing and fixing kerb stone (12"x18"x6") in cement sand mortar 1:3 in center media or round about as specified.	M	500.00			-
12	16-76-a	Pavement marking in reflective chlorinated rubber paint with glass beads for line 15 cm width.	M	3,042.60			-
13	16-25-a-02	Supply and Fixing aluminium alloy road studs as per specs Large, strip 146x30mm, 171 beads: Uni-direction	Each	328.00			-
14	16-20-a	Traffic Road Sign Cat 1	Each	20.00			-
15	16-20-c	Traffic Road Signs Category 3a	Each	2.00			-
		LANDSCAPING					
1	NS-1	Development and maitinance (for 6 month) of Landscaping including sweet soil replacement (with unsuitable soil at site) leveling, dressing, fertilizers to all planted plnts (The plants and trees should be suitable for enviroment of Project area) and truff works complete in all respect as per directed by the Engineer.	LS/ PS	1.00	1,000,000.00		1,000,000.00
SUB Total of civil works (Internal Road)							

GOVERNMENT OF KHYBER PAKHTUNKHWA

KHYBER PAKHTUNKHWA CITIES IMPROVEMENT PROJECT

LOCAL GOVERNMENT, ELECTIONS AND RURAL DEVELOPMENT DEPARTMENT

KPCIP-CW-04: MINGORA GREATER WATER SUPPLY SCHEME INCLUDING NEW WATER TREATMENT PLANT (WTP), INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS AND SCADA:

LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 23: ROAD WORKS

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		CIVIL WORKS (EXTERNAL ROAD)					
		Earthwork and Allied Activities					
1	03-60	Clearance of site by cutting, removing all shrubs, trees, upto 6 inches (152 mm) girth, etc. and taking out their entire roots and filling the hollows with earth complete with dressing, consolidating and watering the filling including stacking the serviceable materials and disposal of useless material as directed,	M2	4,950.00			-
2	03-65	Compaction of Natural Ground	M2	4,950.00			-
3	03-70-a	Formation of Embankment from Roadway Excavation in Rock Material requiring blasting and compaction Modified AASHTO 95% of embankment by power roller.	M3	4,950.00			-
4	03-70-b	Formation of Embankment from Roadway Excavation in Rock Material requiring blasting and compaction Modified AASHTO 95% of embankment by power roller.	M3	4,950.00			-
		Sub Base, Base Course & Surfacing					
5	16-04-b	Granular Sub Base Using Crushed Stone Aggregate	M3	754.34			-
6	16-05-b	Water Bound Macadam Base Course	M3	754.34			-
7	16-09-a	Bitumenous Prime Coat	M2	4,950.00			-
8	16-14-a	Asphaltic Base Course (Asphalt Batch Plant Hot Mixed) (2" inch thick) (ABC)	M3	247.50			-
9	16-09-b	Bitumenous Tack Coat	M2	4,950.00			-
10	16-14-b	Asphaltic Wearing Course (Asphalt Batch Plant Hot Mixed) (1½" inch thick) (Wearing Course)	M3	198.00			-

		Ancillary Works					
11	16-73-a	Providing and fixing kerb stone (12"x18"x6") in cement sand mortar 1:3 in center media or round about as specified.	M	500.00			-
12	16-76-a	Pavement marking in reflective chlorinated rubber paint with glass beads for line 15 cm width.	M	275.00			-
13	16-25-a-01	Supply and Fixing aluminium alloy road studs as per specs Large, strip 146x30mm, 171 beads: Uni-direction	Each	100.00			-
14	16-20-a	Traffic Road Sign Cat 1	Each	5.00			-
15	16-20-c	Traffic Road Signs Category 3a	Each	5.00			-
		Sub total of civil work (External Road)					-

GOVERNMENT OF KHYBER PAKHTUNKHWA

KHYBER PAKHTUNKHWA CITIES IMPROVEMENT PROJECT

LOCAL GOVERNMENT, ELECTIONS AND RURAL DEVELOPMENT DEPARTMENT

KPCIP-CW-04: MINGORA GREATER WATER SUPPLY SCHEME INCLUDING NEW WATER TREATMENT PLANT (WTP), INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS AND SCADA:

LOT 1: WATER TREATMENT PLANT

SUMMARY OF BILL NO. 23A: Operation & maintenance of entire WTP & Client staff training

BILL NO.	DESCRIPTION OF WORK	Amount (PKR)
1	Operation & maintenance of entire WTP & Client staff training	-
TOTAL AMOUNT RS		-

GOVERNMENT OF KHYBER PAKHTUNKHWA

KHYBER PAKHTUNKHWA CITIES IMPROVEMENT PROJECT

LOCAL GOVERNMENT, ELECTIONS AND RURAL DEVELOPMENT DEPARTMENT

KPCIP-CW-04: MINGORA GREATER WATER SUPPLY SCHEME INCLUDING NEW WATER TREATMENT PLANT (WTP), INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS AND SCADA:

LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 23A: Operation & maintenance of entire WTP & Client staff training

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		Operation & maintenance of entire WTP & Client staff training					
1		Operation and maintenance of entire WTP including provision of staff as specified for operation and maintenance of plant training of the client's staff about the operation of the plant	Month	3.00			-
SUB Total of O&M							-

GOVERNMENT OF KHYBER PAKHTUNKHWA

KHYBER PAKHTUNKHWA CITIES IMPROVEMENT PROJECT

LOCAL GOVERNMENT, ELECTIONS AND RURAL DEVELOPMENT DEPARTMENT

KPCIP-CW-04: MINGORA GREATER WATER SUPPLY SCHEME INCLUDING NEW WATER TREATMENT PLANT (WTP), INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS AND SCADA:

LOT 1: WATER TREATMENT PLANT

SUMMARY OF BILL NO. 24: STORM WATER DRAINAGE SYSTEM

BILL NO.	DESCRIPTION OF WORK	Amount (PKR)
1	CIVIL WORKS	-
TOTAL AMOUNT RS		-

GOVERNMENT OF KHYBER PAKHTUNKHWA						
KHYBER PAKHTUNKHWA CITIES IMPROVEMENT PROJECT						
LOCAL GOVERNMENT, ELECTIONS AND RURAL DEVELOPMENT DEPARTMENT						
KPCIP-CW-04: MINGORA GREATER WATER SUPPLY SCHEME INCLUDING NEW WATER TREATMENT PLANT (WTP), INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS AND SCADA:						
LOT 1: WATER TREATMENT PLANT						
BILL OF QUANTITIES						
BILL NO. 24: STORM WATER DRAINAGE SYSTEM						
Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount		
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words
CIVIL WORKS						
Earth Work						
1	03-67-b-i	Structural Excavation In Hard Rock Material by mechanical means requiring blasting	M3	660.05		-
2	03-67-b-ii	Structural Excavation In Medium Rock Material	M3	1,980.15		-
3	03-18-d	Filling, watering and ramming earth under floor with earth excavated from outside lead upto 30m	M3	1,320.10		-
Plain and Reinforcement Concrete						
4	06-05-h	Plain Cement Concrete including placing, compacting, finishing & curing (Ratio 1:3:6)	M3	193.27		-
5	06-05-f	Plain Cement Concrete including placing, compacting, finishing & curing (Ratio 1:2:4)	M3	103.54		-
6	06-07-b-01	RCC in raft foundation slab, base slab of column & ret. wall etc, not including in 06-06. (1:1:2)	M3	419.33		-
7	06-07-d-01	Reinforced cement concrete work as in dams, spillways, weirs, barrages, cross drainage works and other hydraulic structures using crushed stone aggregate(screening & washing) and coarse sand i/c cost of all labour and material and all kinds of form works, moulds, shuttering lifting/pumping, curing, rendering and finishing the exposed surface, cast in situ/precast excluding the cost of steel reinforcement and labour for bending binding also excludig cost of additives which have to be paid separately. (1:1:2)	M3	563.34		-
8	06-25-j	Providing and fixing ribbed polyvinyle chloride (PVC) water stops 8" (203 mm) wide in vertical (Walls/Columns) or horizontal (Floors/Slabs) expansion joints including cutting and jointing etc. complete in all floors .	M	2,635.50		-
Steel Reinforcement						
9	06-08-b	Supply & fabricate M.S. reinforcement for cement concrete (Hot rolled deformed bars Grade 60)	Tonne	108.16		-
10	03-20-a	Transportation of earth all types beyond 250 m and upto 500 m.	M3	1,320.10		-
11	03-20-b	Transportation of earth all types for every 100m extra lead beyond 500m upto 1.5 km.	M3	1,320.10		-
12	03-20-c	Transportation of earth all types for every 500m extra lead beyond 1.5 km. upto 8 km.	M3	1,320.10		-
13	03-20-d	Transportation of earth all types for every 1 km extra lead or part thereof beyond 8 km.	M3	1,320.10		-
SUB TOTAL OF CIVIL WORKS						

GOVERNMENT OF KHYBER PAKHTUNKHWA

KHYBER PAKHTUNKHWA CITIES IMPROVEMENT PROJECT

LOCAL GOVERNMENT, ELECTIONS AND RURAL DEVELOPMENT DEPARTMENT

KPCIP-CW-04: MINGORA GREATER WATER SUPPLY SCHEME INCLUDING NEW WATER TREATMENT PLANT (WTP), INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS AND SCADA:

LOT 1: WATER TREATMENT PLANT

SUMMARY OF BILL NO. 25: EXTERNAL SEWERAGE SYSTEM

BILL NO.	DESCRIPTION OF WORK	Amount (PKR)
1	CIVIL WORKS	-
TOTAL AMOUNT RS		-

GOVERNMENT OF KHYBER PAKHTUNKHWA

KHYBER PAKHTUNKHWA CITIES IMPROVEMENT PROJECT

LOCAL GOVERNMENT, ELECTIONS AND RURAL DEVELOPMENT DEPARTMENT

KPCIP-CW-04: MINGORA GREATER WATER SUPPLY SCHEME INCLUDING NEW WATER TREATMENT PLANT (WTP), INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS AND SCADA:

LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 25: EXTERNAL SEWERAGE SYSTEM

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	CIVIL WORKS						
1	03-49-b	Excavation in open cut for sewers & manholes except shingle, gravel & rock : 2m to 5m	M3	247.50			-
2	03-51	Excavation of trench in all kinds of soils except cutting in rock for pilelines upto 1.5m depth	M3	540.00			-
3	07-30	Supplying and filling sand under floor or plugging in wells	M3	60.00			-
4	24-30-a-05	Providing, laying, cutting, jointing, testing and disinfecting High Density Polyethylene Pipe (HDPE) Din-8074/Din-8075/ISO-4427 in trenches, complete in all respects except excavation. (90 mm dia) PN-8	M	250.00			-
5	24-30-g-08	Providing and installing HDPE bend 90mm dia	Each	8.00			-
6	24-30-f-08	Providing and installing HDPE Tee 90mm dia	Each	10.00			-
7	03-18-a	Filling, watering and ramming earth under floor with surplus earth from foundation, etc	M3	148.50			-
8	06-02	Dry rammed shingle brick ballast or stone ballast 1.5" to 2" guage	M3	47.85			-
9	06-05-i	Plain Cement Concrete including placing, compacting, finishing & curing (Ratio 1:4:8) (septic Tank)	M3	20.50			-
10	06-07-b-01	RCC in raft foundation slab, base slab of column & ret. wall etc, not including in 06-06. (1:1:2)	M3	1.09			-
11	06-07-a-01	RCC in roof slab, beam, column & other structural members, insitu or precast. (1:1:2)	M3	5.47			-
12	06-08-b	Supply & fabricate M.S. reinforcement for cement concrete (Hot rolled deformed bars Grade 60)	Tonne	0.94			-

GOVERNMENT OF KHYBER PAKHTUNKHWA

KHYBER PAKHTUNKHWA CITIES IMPROVEMENT PROJECT

LOCAL GOVERNMENT, ELECTIONS AND RURAL DEVELOPMENT DEPARTMENT

KPCIP-CW-04: MINGORA GREATER WATER SUPPLY SCHEME INCLUDING NEW WATER TREATMENT PLANT (WTP), INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS AND SCADA:

LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 25: EXTERNAL SEWERAGE SYSTEM

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
13	14-37-b	Supply and Fixing cast iron (CI) manhole cover with frame etc (Heavy Type) of approved quality complete: 18" (455 mm) dia	Each	3.00			-
14	23-01-c	Providing and laying R.C.C. pipe, moulded with cement concrete 1:1-1/2:3, with spigot, socket or collar joint, etc. including cost of reinforcement, conforming to B.S. 5911: Part-I, 1981 Class "L" including carriage, lowering in trenches to correct alignment and grade, jointing, cutting pipe where necessary, finishing and testing, etc. complete: 9" dia:	M	150.00			-
15	23-11	Soakage Pit (6'dia x 15' deep) complete	Each	1.00			-
16	03-20-a	Transportation of earth all types beyond 250 m and upto 500 m.	M3	148.50			-
17	03-20-b	Transportation of earth all types for every 100m extra lead beyond 500m upto 1.5 km.	M3	148.50			-
18	03-20-c	Transportation of earth all types for every 500m extra lead beyond 1.5 km. upto 8 km.	M3	148.50			-
19	03-20-d	Transportation of earth all types for every 1 km extra lead or part thereof beyond 8 km.	M3	148.50			-

GOVERNMENT OF KHYBER PAKHTUNKHWA

KHYBER PAKHTUNKHWA CITIES IMPROVEMENT PROJECT

LOCAL GOVERNMENT, ELECTIONS AND RURAL DEVELOPMENT DEPARTMENT

KPCIP-CW-04: MINGORA GREATER WATER SUPPLY SCHEME INCLUDING NEW WATER TREATMENT PLANT (WTP), INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS AND SCADA:

LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 25: EXTERNAL SEWERAGE SYSTEM

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
20	06-07-d-05	MANHOLES					
	06-07-d-05	Providing manhole size 24" x 18" (inside dimensions) as per approved design and specifications complete for 4" to 12" dia pipes upto 4 ft. (1.2 m) depth with 16" dia. Concrete Cover fixed in 4" thick RCC 1:2:4 slab (with 5 lbs per Cu.ft. or 80 kg/M3 of steel), burnt brick masonry walls 9" (225 mm) thick set in 1:3 cement sand mortar, 6" thick 1:3:6 cement concrete in foundation, 4" av. thickness 1:2:4 cement concrete in benching and 1/2" (13mm) thick cement sand plaster in 1:3 to all inside wall surfaces, channels and benching including making requisite number of main and branch channels but excluding the cost of excavation, back filling and disposal of excavated stuff.	Each	6.00			-
SUB TOTAL OF CIVIL WORKS							-

GOVERNMENT OF KHYBER PAKHTUNKHWA

KHYBER PAKHTUNKHWA CITIES IMPROVEMENT PROJECT

LOCAL GOVERNMENT, ELECTIONS AND RURAL DEVELOPMENT DEPARTMENT

KPCIP-CW-04: MINGORA GREATER WATER SUPPLY SCHEME INCLUDING NEW WATER TREATMENT PLANT (WTP), INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS AND SCADA:

LOT 1: WATER TREATMENT PLANT

SUMMARY OF BILL NO. 26: FLOOD PROTECTION (EMBANKMENT)

BILL NO.	DESCRIPTION OF WORK	Amount (PKR)
1	CIVIL WORKS	-
TOTAL AMOUNT		-

GOVERNMENT OF KHYBER PAKHTUNKHWA

KHYBER PAKHTUNKHWA CITIES IMPROVEMENT PROJECT

LOCAL GOVERNMENT, ELECTIONS AND RURAL DEVELOPMENT DEPARTMENT

KPCIP-CW-04: MINGORA GREATER WATER SUPPLY SCHEME INCLUDING NEW WATER TREATMENT PLANT (WTP), INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS AND SCADA:

LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 26: FLOOD PROTECTION (EMBANKMENT)

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	CIVIL WORKS						
1	03-70-c	Formation of Embankment from Borrow Excavation in Common Material including compaction Modified AASHTO 90% by power roller.	M3	45,210.00			-
2	03-48+03-29-a	Supplying clean and screened river or pit sand within 150m including removal of loose earth or overburden including Compaction of earth with power road roller 95% to 100% max. mod. AASHTO dry density	M3	8,220.00			-
3	19-28-a	Providing and Laying stone pitching for top layer only : On slope	M3	9,479.51			-
	19-15-a-01	Supply & dump at site, without boat, including handling within 100m: boulders	M3	8,220.00			-
4	03-20-a	Transportation of earth all types beyond 250 m and upto 500 m.	M3	41,100.00			-
5	03-20-b	Transportation of earth all types for every 100m extra lead beyond 500m upto 1.5 km.	M3	41,100.00			-
6	03-20-c	Transportation of earth all types for every 500m extra lead beyond 1.5 km. upto 8 km.	M3	41,100.00			-
7	03-20-d	Transportation of earth all types for every 1 km extra lead or part thereof beyond 8 km.	M3	41,100.00			-
SUB TOTAL OF CIVIL WORKS							-

GOVERNMENT OF KHYBER PAKHTUNKHWA

KHYBER PAKHTUNKHWA CITIES IMPROVEMENT PROJECT

LOCAL GOVERNMENT, ELECTIONS AND RURAL DEVELOPMENT DEPARTMENT

KPCIP-CW-04: MINGORA GREATER WATER SUPPLY SCHEME INCLUDING NEW WATER TREATMENT PLANT (WTP), INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS AND SCADA:

LOT 1: WATER TREATMENT PLANT

SUMMARY OF BILL NO. 27: SCADA SYSTEM

BILL NO.	DESCRIPTION OF WORK	Amount (PKR)
1	INSTRUMENTATION AND CONTROL EQUIPMENT	-
TOTAL AMOUNT RS		-

GOVERNMENT OF KHYBER PAKHTUNKHWA

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LOCAL GOVERNMENT, ELECTIONS AND RURAL DEVELOPMENT DEPARTMENT

KPCIP-CW-04: MINGORA GREATER WATER SUPPLY SCHEME INCLUDING NEW WATER TREATMENT PLANT (WTP), INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS AND SCADA:

LOT 1: WATER TREATMENT PLANT

SUMMARY OF BILL NO. 28: BELT FILTER PRESS SLUDGE PUMPING STATION

BILL NO.	DESCRIPTION OF WORK	Amount (PKR)
1	CIVIL WORKS	-
2	MECHANICAL WORKS	-
3	ELECTRICAL WORKS	-
TOTAL AMOUNT RS		-

GOVERNMENT OF KHYBER PAKHTUNKHWA

KHYBER PAKHTUNKHWA CITIES IMPROVEMENT PROJECT

LOCAL GOVERNMENT, ELECTIONS AND RURAL DEVELOPMENT DEPARTMENT

KPCIP-CW-04: MINGORA GREATER WATER SUPPLY SCHEME INCLUDING NEW WATER TREATMENT PLANT (WTP), INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS AND SCADA:

LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 28: BELT FILTER PRESS SLUDGE PUMPING STATION

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	CIVIL WORKS						
1	03-67-b-ii	Structural Excavation in Common Material by mechanical means	M3	105.80			-
2	07-30	Supplying and filling sand under floor or plugging in wells	M3	38.28			-
3	03-18-d	Filling, watering and ramming earth under floor with earth excavated from outside lead upto 30m	M3	52.90			-
4	06-05-h	Plain Cement Concrete including placing, compacting, finishing & curing (Ratio 1:3:6)	M3	16.50			-
5	06-07-d-01	Reinforced cement concrete work as in dams, spillways, weirs, barrages, cross drainage works and other hydraulic structures using crushed stone aggregate(screening & washing) and coarse sand i/c cost of all labour and material and all kinds of form works, moulds, shuttering lifting/pumping, curing, rendering and finishing the exposed surface, cast in situ/precast excluding the cost of steel reinforcement and labour for bending binding also excluding cost of additives which have to be paid separately. (1:1:2)	M3	25.83			-
6	06-07-a-01	RCC in roof slab, beam, column & other structural members, insitu or precast. (1:1:2)	M3	25.83			-
7	06-07-b-01	RCC in raft foundation slab, base slab of column & ret. wall etc, not including in 06-06. (1:1:2)	M3	21.24			-
8	06-08-b	Supply & fabricate M.S. reinforcement for cement concrete (Hot rolled deformed bars Grade 60)	100 Kg	139.98			-
9	07-05-a-03	1st class brick work in ground floor Cement, sand mortar 1:4	M3	34.94			-
10	11-08-b	Cement plaster 1:3 upto 20' height 1/2" thick	M2	174.72			-

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 28: BELT FILTER PRESS SLUDGE PUMPING STATION

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
11	11-21-a-03	Distemping New surface : Three coats	M2	174.72			-
12	11-18-b	Cement pointing struck joints, on walls, upto 20' height : Ratio 1:3	M2	174.72			-
13	11-10-a	Cement plaster 3/8" thick under soffit of RCC roof slabs only upto 20' height : (1:2)	M2	174.72			-
14	10-22-a	1.5" thick mosaic flooring, including rubbing & polishing complete : Using grey cement	M2	46.00			-
15	10-41-a-02	Mosaic dado or skirting complete as per specs Using grey cement : 1/2" thick	M2	46.00			-
16	09-01	First class tile roofing including earth, mud plaster, gobri leeping, cement plaster etc complete	M2	104.16			-
17	09-13	2 coats of bitumen laid hot using 34 lbs. for %sft over roof & blinded with sand at 1 cft per % sft	M2	104.16			-
18	06-28	Providing and laying polythene sheet 0.005" thick (0.05mm 500gauge) under cement concete.	M2	104.16			-
19	25-39-a-02	Providing and fixing steel windows with openable glazed pannels, using beam section for frame 1-1/2" x 1" x 5/8" x 1/8", z-section for leaves 3/4" x 1" x 3/4" x 1/8", T- section sashes 1"x1"x1/8" glass panes, wooden screed for glazing embded over a thin layer of putty duly screwed with leaves, brass fittings holdfast, duly painted, complete in all respects, including all cost of material and labour etc. as per approved design and as directed by the engineer - in -charge Glass pane 2.5mm thick	M2	14.40			-

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
20	25-45-b	Supplying and Fixing 18 SWG MS Sheet Gate with angle iron frame (2"x2"x3/16") with side window, lock, painting etc	M2	14.40			-
21	03-20-a	Transportation of earth all types beyond 250 m and upto 500 m.	M3	52.90			-
22	03-20-b	Transportation of earth all types for every 100m extra lead beyond 500m upto 1.5 km.	M3	52.90			-
23	03-20-c	Transportation of earth all types for every 500m extra lead beyond 1.5 km. upto 8 km.	M3	52.90			-
24	03-20-d	Transportation of earth all types for every 1 km extra lead or part thereof beyond 8 km.	M3	52.90			-
SUB TOTAL OF CIVIL WORKS							-

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Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		MECHANICAL WORKS					
1	NS-1	Sludge Pumps					
		Providing, installing, testing and commissioning Sludge Pumps (end-suction, non-clogging/solids-handling, screw type, Min Free Passage Size: 15-50 mm), of internationally reputed approved make, complete with pump, 3-phase induction motor (4-pole, Efficiency class IE3), spacer coupling, support base/frame, pressure gauges (on suction and discharge sides), mechanical seal, temperature & vibration monitoring devices, automatic liquid level-controlled switching device (ultrasonic sensor type), motor control unit (MCU, in painted metallic box, complete with auto star-delta starter and all the required control, relay, monitoring and protection devices)and electrical & control cables (between motor and MCU), with pump impeller, shaft & sleeve to be of stainless steel of approved grade, including all jointing, fixing & installation accessories, vibration-control accessories, initial lubricant charge, all painting & coatings; and a complete set of special tools, test equipment & spare parts, complete in all respects, in accordance with the Contract, as follows:					
		Sludge Feeding Pump (Max Concentration: 5 %) Capacity: 15m ³ /h, Head: 20 m	No	4.00			-
2.00	NS-2	Flow Meter					

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Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		Providing, installing, testing and commissioning Water Flow Meter (Electromagnetic type, Range: 0 to 2000 m ³ /h, Accuracy: ± 0.5%, PN 16, Max Water Temperature: 40°C) on pipeline (HDPE, DN 150), of internationally reputed approved make, complete with meter, relays, on-site LCD display unit (with adjustable backlight and contrast) & its mounting arrangement (in stainless steel, Grade 316), display unit cabinet (painted metallic box with glazed front door), all the necessary provisions, instruments and accessories for integration with SCADA and power supply, including all jointing, fixing & installation accessories, all painting & coatings and a complete set of special tools, test equipment & essential spare parts, complete in all respects, in accordance with the Contract	No	4.00			-
3.00	NS-3	DUCTILE IRON PIPE (DI PIPE)					
		Providing at site, laying, cutting, fixing, jointing, testing and commissioning Ductile iron Pipe class-K12 conforming to specifications (ISO2531 and BS 4772) and relevant ANSI/AWWA standards with all accessories, Nut, Bolts, washers, jointing material and lubricants complete in all respect as per drawings and specifications.					
		DI Pipe 150mm	m	30.00			-
4.00	NS-4	Providing at site, laying, cutting, fixing, jointing, testing and commissioning Ductile iron (cast on flange) specials (such as bend, tee, cross collar, reducer, tail piece, flanged spigot, cap, flanged socket, taper, angle branch, plug etc) class-K12 conforming to specifications (ISO2531 and BS 4772) and relevant ANSI/AWWA standards with all accessories, Nut, Bolts, washers, jointing material and lubricants complete in all respect as per drawings and specifications.					
a)		Bend 90°					

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Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		150 mm	No	16.00			-
b)		DI TEE					
		150mm x 150mm	No	6.00			-
c)		DI REDUCER					
		150mm	No	4.00			-
5.00	NS-5	(CI) Check Valves (150mm)					
		Providing, installing and testing cast iron (CI) Check Valves (Swing type, Flanged, BS 5153, PN 10) on pipelines, of internationally reputed approved make, including gaskets, steel nuts & bolts and other jointing accessories, with all the exposed ferrous surfaces to be epoxy coated, complete in all respects, in accordance with the Contract, as follows:	No	8.00			-
6	NS-6	SLUICE VALVE (150mm)					
		Sluice Valves with all accessories complete in all respect for various pipe sizes as shown on the drawings	No	8.00			-
SUB TOTAL OF MECHANICAL WORKS							-

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		ELECTRICAL WORKS					
A.01		Light Circuits					
		Supply, installation and commissioning of light circuit wiring, to be wired with 4x2.5mm sq. (1P+1N+1UPS+1PE) PVC insulated 300/500 V grade wire make Pakistan Cable, Newage, AGE Cables, Golden Star, in and including cost of 1" dia. heavy duty PVC conduit make Beta, Popular recessed in walls, Roof slab, or on surface or above false ceiling or as required as per site conditions, all PVC conduit accessories, pull boxes, steel pull wires, complete in all respects. Each circuit shall have independent PE.					
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	146.34			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	73.17			-
A.02		1-Light Point Controlled By One Switch					
		Wiring of one light point controlled by one switch and wired with 3x1.5 mm sq. (P+N+PE) PVC insulated wires 300/500 V. grade make Pakistan Cable, Newage Pioneer Cables,, in and including cost of 3/4" dia. heavy duty PVC conduit make Beta, Popular installed on RCC slab, above false ceiling, recessed in wall, columns slabs or above light carrier all PVC conduit accessories, 3" high PVC junction boxes, pull boxes, steel pull wires, PVC flexible conduit from ceiling junction box to light fixture flush type plate switches, including cost of back boxes and switches of 10 Amps.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	256.10			-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	170.73			-
A.03		Point -Point Wiring					
		Same as per item No. A.02 but Loop wiring of a light point from first light point on same switch circuit, complete in all respects.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	268.30			-

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	178.87			-
A.04		Gang Light Control Switches					
	15-127-b	Supply at site, installation, testing and commissioning of Two gang light control switches 10 Amps, 250Volts one way, including appropriate size concealed MS, powder coated back box, complete in all respects.	Each	4.00			-
	15-127-c	Supply at site, installation, testing and commissioning of Three gang light control switches 10 Amps, 250Volts one way, including appropriate size concealed MS, powder coated back box, complete in all respects.	Each	2.00			-
	15-127-f	Supply at site, installation, testing and commissioning of Six gang light control switches 10 Amps, 250Volts one way, including appropriate size concealed MS, powder coated back box, complete in all respects.	Each	4.00			-
A.05		Exhaust Fan Point					
		Same as Item No. A.02 mentioned above but wiring of exhaust fan point including cost of 10 Amp switch with M.S box 16 SWG with earth terminal.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	54.88			-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	36.59			-
A.06		Ceiling Fan Point					
		Same as Item No. A.02 mentioned above but wiring of Ceiling fan point including cost of 10 Amp switch with M.S box 16 SWG with earth terminal.					
	15-05-a	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 3/0.029" 1/2" i/d	M	82.32			-
	15-02-b-02	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 3/4" i/d	M	54.88			-
A.07		1-3 pin switch & plug combined recessed type :10/15 Amp					

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Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		Supply and wiring of one 3 pin switch & plug combined recessed type :10/15 Amp outlet point from distribution board with single core 2x4mm2(P+N) PVC insulated 300/500 volt grade cable in & including PVC conduit recessed in walls/R.C.C. slab, or installed on surface of Ceiling, all conduits accessories, junction boxes, pull boxes etc. 2.5mm2 cable as PC excluding cost of 3 pin 13 Amps switch & socket out let make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel board recessed in walls complete in all respects and as per specifications & drawings.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	109.76			-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	73.17			-
A.08		Loop-Loop- 3 pin switch & plug combined recessed type :10/15 Amp					
		Same as item No.A.12 above but loop wiring of 3 pin switch & plug combined recessed type :10/15 Amp outlet with 2x4mm2(P+N) & 1x2.5mm2 as CPC from point to point excluding cost of one 15A 3 pin switch socket outlets with make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel boards recessed in walls /columns.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	146.34			-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	97.56			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	195.12			-
	15-20-b	Supply and Erection 3 pin switch & plug combined recessed type :10/15 Amp	Each	14.00			-
A.09		Loop-Loop- 5 Amps Switch Socket					
		Same as item No.A.12 above but loop wiring of 5A power socket outlet with 2x4mm2(P+N) & 1x2.5mm2 as CPC from point to point excluding cost of one 15A 3 pin switch socket outlets with make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel boards recessed in walls /columns.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	256.10			-

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	170.73			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	341.47			-
	15-20-a	Supply and Erection 3 pin switch & plug combined recessed type : 5 Amp	Each	14.00			-
A.10		1-20 Amps Switch Socket					
		Supply and wiring of one 3pin 20 Amps Power plug socket outlet point from distribution board with single core 2x6mm2(P+N) PVC insulated 300/500 volt grade cable in & including PVC conduit recessed in walls/R.C.C. slab, or installed on surface of Ceiling including all conduits accessories, junction boxes, pull boxes etc. 4mm2 cable as PC including cost of 3 pin 20 Amps switch & socket out let make CLIPSAL / MK / Legrand / ABB or approved equivalent installed on & including 16 SWG sheet steel board recessed in walls complete in all respects and as per specifications & drawings.					
	15-05-d	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.036"	M	73.18			-
	15-05-c	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	M	48.79			-
	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	M	97.57			-
	15-81	Supply and Fixing 20 Amp power plug	Each	4.00			-
A.11		Fitting and Fixtures.					
		Supply at site, installation, testing and commissioning of the following indoor incandescent/LED light fittings, complete with brass lamp holders, fixing accessories, earthing terminal, drivery circuitry make as specified or by any one of the manufacturers mentioned in Annexure-"A", complete in all respects.					
i)	15-36-j-12	Supply, installation, connecting, testing & commissioning of 10W LED Down Light Fixture suitable for 1300 lm, as per instruction of Engineer, surface mounted circular shape or equivalent.	Nos.	12.00			-
iii)	15-36-i-15	Supply, installation, testing and commissioning of recessed Dawn Light of best quality with CFL (13-17 watt) Energy saver and with Glass Reflector	Nos.	24.00			-

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
iii)	15-36-k-03	Supply, installation, connecting, testing and commissioning of Wall mounted Bulkhead light fixtures with LED retrofit lamp 540 Lumens output, complete in all respects	Nos.	8.00			-
A.12		Exhaust Fans					
a)	15-69-b	Supply and Erection best quality exhaust fan complete with shutter & regulator : 16"sweep	Nos.	4.00			-
A.13		Ceiling Fan					
	15-127-m	Supply at site, installation, testing and commissioning of Fan Dimmer with switch/ MS, powder coated back box with all associated accessories, complete in all respects.	Nos.	4.00			-
	26-01-l-01	Supply and Erection of AC Energy Efficient Ceiling Fans 56 inch, 50 W	Nos.	8.00			-
A.14		Wall Bracket Fan					
	15-68-e	Supply, installation, testing & commissioning of Direct axial Wall Bracket fan	Nos.	2.00			-
A.15		PVC Conduit					
		Supply at site of PVC conduit heavy duty to be concealed in RCC slabs, walls, floor, columns above false ceiling or as required as per site conditions including cost of all PVC conduit accessories, steel pull wires, complete in all respects.					
i)	15-02-b-08	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 4" i/d	M	18.30			-
A.16		Distribution Board					

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				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		Fabrication, supply at site, installation, testing, commissioning and connections of wires / cables of Distribution Boards "Light / Power" concealed / open type to be installed as and where shown on drawing, made of MS sheet 16 SWG degreased and derusted, zinc phosphated, finished with electro-static powder coating of 50 micron thickness in approved colour, DB housing to comply with protection class IP-44 with hinged door, flexible earthing strap lockable handle, catcher, earthing bar, neutral strip, internal wiring from MCBs terminating on cable terminal blocks, including cost of all necessary materials complete in all respects. DBs shall be manufactured by any one of the manufacturers as mentioned in List.					
	15-162-j	Supply, Installation, connecting, testing & commissioning of wall mounted DBLP-G1, DBLP-F1, Distribution Boards, complete with all metering with indication lamps complete in all respects, as per SLD.	Each	2.00			-
A.17		<u>Non-maintained Emergency Lighting</u>					
	Appendix ' c' Page No-5	Supply, installation and connections of Self Test Maintained With ISO 7010 Legend Set 7 Watt Colour Temperature 6000K ,235 Lumens on main supply and 150 Lumens on battery, Avg. Rated Life (Hrs) 30000 hr, IP65 rating with hanging arrangment on wall or ceiling as required complete in all respect as approved by the engineer incharge make Delpro (uk) or eqv.	Nos.	1.00			-
SUB TOTAL OF ELECTRICAL WORKS							-

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SUMMARY OF BILL NO. 29: BELT FILTER PRESS UNIT

BILL NO.	DESCRIPTION OF WORK	Amount (PKR)
1	CIVIL WORKS	-
2	MECHANICAL WORKS	-
TOTAL AMOUNT		-

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BILL OF QUANTITIES							
BILL NO. 29: BELT FILTER PRESS UNIT							
Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
	CIVIL WORKS						
1	03-67-b-i	Structural Excavation In Hard Rock Material by mechanical means requiring blasting	M3	105.95			-
2	03-67-b-ii	Structural Excavation In Medium Rock Material	M3	317.86			-
3	03-18-d	Filling, watering and ramming earth under floor with earth excavated from outside lead upto 30m	M3	296.67			-
4	06-05-h	Plain Cement Concrete including placing, compacting, finishing & curing (Ratio 1:3:6)	M3	1.20			-
5	06-07-a-01	RCC in roof slab, beam, column & other structural members, insitu or precast. (1:1:2)	M3	35.67			-
6	06-07-b-01	RCC in raft foundation slab, base slab of column & ret. wall etc, not including in 06-06. (1:1:2)	M3	45.29			-
7	06-08-b	Supply & fabricate M.S. reinforcement for cement concrete (Hot rolled deformed bars Grade 60)	100 Kg	104.35			-
8	03-20-a	Transportation of earth all types beyond 250 m and upto 500 m.	M3	296.67			-
9	03-20-b	Transportation of earth all types for every 100m extra lead beyond 500m upto 1.5 km.	M3	296.67			-
10	03-20-c	Transportation of earth all types for every 500m extra lead beyond 1.5 km. upto 8 km.	M3	296.67			-
11	03-20-d	Transportation of earth all types for every 1 km extra lead or part thereof beyond 8 km.	M3	296.67			-
SUB TOTAL OF CIVIL WORKS							-

GOVERNMENT OF KHYBER PAKHTUNKHWA

KHYBER PAKHTUNKHWA CITIES IMPROVEMENT PROJECT

LOCAL GOVERNMENT, ELECTIONS AND RURAL DEVELOPMENT DEPARTMENT

KPCIP-CW-04: MINGORA GREATER WATER SUPPLY SCHEME INCLUDING NEW WATER TREATMENT PLANT (WTP), INTAKE STRUCTURE, TRANSMISSION, AND DISTRIBUTION SYSTEMS AND SCADA:

LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 29: BELT FILTER PRESS UNIT

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		MECHANICAL WORKS					
1	NS-1	Filtration Unit					
		Providing, installation, testing & commissioning Belt Press Filter , in stainless steel AISI 316L construction and including the control installation for the belt tracking, tensioning and washing systems complete in all respects as per drawings and specifications.	No.	4.00			-
		Capacity: 15 m3/h, Inflow Solid Content: 2-5%, Dry Solid Content: 15 - 20%					
2	NS-2	Conical Mixers					
		Providing, installation, testing & commissioning of conical mixers, design & construction in stainless steel AISI 316 construction for the continuous and homogeneous sludge-polymer mixing. Designed to install at the sludge feeding pump outlet, complete in all respects as per drawings and specifications.	No.	4.00			-
3	NS-3	Control Panel					
		Providing, installation, testing & commissioning control panel to operate the belt press and quoted/included auxiliaries of the belt press and related equipment. The control panel includes the described components and is complete in all respects as per drawings and specifications.	No.	4.00			-
4	NS-4	Belt Washing Pumps					

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LOT 1: WATER TREATMENT PLANT

BILL OF QUANTITIES

BILL NO. 29: BELT FILTER PRESS UNIT

Item No.	REF. Nos CH/Item	Description of Items	Unit	Quantities, Unit Rate and Amount			
				Qty	Unit Rate (PKR)	Unit Rate (Rs) in Words	Amount (PKR)
		Providing, installation, testing & commissioning Belt Washing Pumps (high pressure, vertical-shaft, non-clogging/solids-handling, submersible, centrifugal type), of internationally reputed approved make, complete with pump, motor (4-pole), automatic liquid level-controlled switching device (ultrasonic sensor type) and starter, with pump impeller, shaft & sleeve to be of stainless steel of approved grade, suitable for the belt press and belt thickener washing process, 7.5 kW operation power at 10 bar pressure, including all jointing, fixing & installation accessories, all painting & coatings; and a complete set of special tools, test equipment & spare parts, complete in all respects, in accordance with the Contract, as follows:					
		Pumps Capacity:20m3/hr	No	4.00			-
SUB TOTAL OF MECHANICAL WORKS							-