(1) Part-A1 Drain

A)Re-habilitation of Poura Bhaban road by BC with streetlight and Drain with footpath (Ch.0+000 to 2+400m) under Benapole Pourashava. Sarsha, Jashore

Bill of Quantities

Item no.	Group	Item Code (if any)	Description of Item	Measurement Unit	Quantity	Unit Price In figures (BDT)	Unit Price In Words (BDT)	Total Price In Figures (BDT)	Total Price In Words (BDT)
1	(1) Part : 1(Drain), A)	4.05.01.01.01	"Earth work in excavation of foundation of structures by mechanical (Hydraulic excavator - Long Boom)/ manual means in all sorts of soil up to specified depth in accordance with requirements of lines, grades, cross sections and elevation as shown in the drawing including setting out, removal of stumps, logs, boulders and other deleterious materials, providing necessary tools and plants, construction of shoring and bracing, cleaning the excavated materials to a safe distance out of the site premises, cut to a firm surface including pumping/ bailing out water, removal of spoils to a safe distance, dressing of sides and bottom and backfilling of	cum	2217.488	177.001	One Hundred And Seventy-Seven Point Zero Zero One	392497.593	Three Lakh Ninety-Two Thousand Four Hundred And Ninety-Seven Point Five Nine Three

			trenches up to original level with approved material etc. all complete as per approval of E-I-C. Contractor shall get acquainted with site conditions, nature of soil and adopt suitable adequate dewatering system as deemed fit for the nature of soil and prevailing water table to get the surface reasonably dry for laying PCC at the time of execution so that execution will not be hampered or delayed. Back-filled materials shall be compacted to a density comparable with the adjacent undisturbed material. Earth work in Ordinary Soil by Manual Means for an initial lead up to 30m For depth up to 3m"						
2	(1) Part : 1(Drain), A)	4.05.03	P&B: Pumping and bailing out water from the interior of any foundation enclosure of work site with all leads and lifts including supply, operation and maintenance of requisite number of water pumps, arrangements for protection of ring bundh and side slopes of foundation pit against erosion or washout etc. It should be carried out in such a manner as to preclude the possibility of the movement of	hour	100.000	398.002	Three Hundred And Ninety-Eight Point Zero Zero Two	39800.200	Thirty-Nine Thousand Eight Hundred Point Two

			water through or alongside any concrete being placed, etc. all complete as per direction of E-I-C.						
3	(1) Part : 1(Drain), A)	5.02.08.1	Sand filling in foundation trenches and plinth with sand having minimum F.M. 0.5 in 150 mm layers including leveling, watering and compaction to achieve minimum dry density of 95% with optimum moisture content (Modified proctor test) by ramming each layer up to finished level as per design supplied by the design office only, all complete and accepted by the Engineer-in-charge. [PWD 02.10.1]	cum	180.555	928.001	Nine Hundred And Twenty-Eight Point Zero Zero One	167555.220	One Lakh Sixty-Seven Thousand Five Hundred And Fifty-Five Point Two Two
4	(1) Part : 1(Drain), A)	3.07.1	PS: Supplying and laying of single layer polythene sheet weighing one kilogram per 6.5 square meter in floor or any where below cement concrete complete in all respect and accepted by Engineer-in-charge. [PWD 03.7]	sqm	1203.700	40.001	Forty Point Zero Zero One	48149.203	Forty-Eight Thousand One Hundred And Forty-Nine Point Two Zero Three
5	(1) Part : 1(Drain), A)	4.06.03	PCC-10: Plain cement concrete work in foundation with minimum compressive strength of 10 MPa at 28 days (sugessted mix proportion 1:3:6) on standard cylinder as per standard practice of Code AASHTO/ ASTM and cement	cum	100.404	8832.004	Eight Thousand Eight Hundred And Thirty-Two Point Zero Zero Four	886768.529	Eight Lakh Eighty-Six Thousand Seven Hundred And Sixty-Eight Point Five Two Nine

			conforming to BDS EN 197-1 : 2003 CEM-II/A-L/M/V/W 42.5N, sand of minimum FM 1.8 and 20mm down well graded 1st class/ picked brick chips (LAA value not exceeding 40) comforming to ASTM C 33 including breaking bricks into chips, shuttering, mixing by concrete mixer machine, casting, laying compacting and curing for the requisite period etc. all complete as per direction of the E-I-C. Additional quantity of cement to be added if required to attain the strength at the contractor's own cost.						
6	(1) Part : 1(Drain), A)	4.11.01.02.02	"Supplying and fabrication of Ribbed or deformed bar reinforcement for all types of RCC work including straightening, removing ruts, cleaning, cutting, hooking, bending, lapping and/or welding wherever required as directed, placing in position, tieing with 22 BWG black annealed binding wire (PVC coated in case of FBEC rebar) double fold, cost of binding wire and anchoring to the adjoining members wherever necessary, supplying and placing with proper cover	kg	44890.916	100.900	One Hundred Point Nine	4529493.424	Forty-Five Lakh Twenty-Nine Thousand Four Hundred And Ninety-Three Point Four Two Four

					blocks (1:1), supports, chairs, spacers, splices or laps etc. including cost of all materials, cost of labour, cost of equipment & machinery, loading and unloading, transportation, all other incidental charges and work at all leads and lifts etc. to complete the work as per design, drawing, specifications and direction of the E-I-C. Measurement relating to nominal mass, dimensions and tolerances of various types of steel shall conform to relevant BDS/ ASTM codes. Reinforcement shall be measured only in lengths of bar as actually placed in position on standard weight i.e. 7850 kg/m3 (BNBC Table 6.2.1) basis. No separate payment shall be allowed for chairs of any shape & profile, spacer bar of any shape & profile, lap/splice & welding unless otherwise shown in the drawing, wastages, binding wire etc. as the cost of these is included in the unit rate. Note: Tests for reinforcing bars shall be conducted at LGED/ BUET/ CUET/ KUET/ RUET/SUST. Grade B400C-R/ B400CWR/ 400DWR:

			Ribbed or Deformed bar produced and marked as per BDS ISO 6935-2:2016 with minimum yield strength, fy (ReH) = 400 MPa, but the tested yield strength shall not exceed fy by more than the 125 MPa and the ratio of tested ultimate strength, fu (Re) to tested yield strength (fy) shall be at least 1.25 and minimum elongation after fracture (A5.65) & minimum total elongation at maximum force (Agt) is 17% and 8% respectively. Using bulk rate of reinforcing bar"						
7	(1) Part : 1(Drain), A)	4.09.03.01	RCC-25SCCM: Reinforced cement concrete work with minimum cement content relates to mix ratio 1:1.5:3 and maximum water cement ratio 0.4 having minimum required average strength, f'cr = 33.5 MPa and satisfying a compressive strength f'c = 25 MPa at 28 days on standard cylinders as per standard practice of Code AASHTO/ ASTM and cement conforming to BDS EN 197-1 : 2003 CEM II/A-L/M/V/W 42.5N, high range water reducing admixture of complying type A or F under ASTM C 494 (Doses of admixture to be	cum	188.459	14515.181	Fourteen Thousand Five Hundred And Fifteen Point One Eight One	2735516.496	Twenty-Seven Lakh Thirty-Five Thousand Five Hundred And Sixteen Point Four Nine Six

						fixed by the mix design), sand of minimum FM 2.5 and 20mm down well graded crushed stone chips broken from boulders (Preferably stone chips from Madhyapara, Dinajpur, LAA value not exceeding 30) conforming to ASTM C33 including breaking chips, screening through proper sieves, cleaning, placing shutter in position, making shutter water-tight properly, placing reinforcement in position, mixing in standard mixture machine with hoper, maintaining allowable slump of 75mm to 100mm, casting in forms, compacting by mechanical vibrator machine, curing for 28 days, removing centering-shuttering after approved specified time period, other incidental charges, etc. all complete as per drawing, specification & direction of the E-I-C. The cost of reinforcement and it's fabrication, welding, coupling, placing, binding etc. is not included but the cost of admixture is included in this unit rate. Additional quantity of cement to be added if required to attain the

			strength at the contractor's own cost.						
8	(1) Part : 1(Drain), A)	4.09.03.02.01	"[Using Concrete Mixture MachineRCC-25SCCM: Reinforced cement concrete work with minimum cement content relates to mix ratio 1:1.5:3 and maximum water cement ratio 0.4 having minimum required average strength, f'cr = 33.5 MPa and satisfying a compressive strength f'c = 25 MPa at 28 days on standard cylinders as per standard practice of Code AASHTO/ ASTM and cement conforming to BDS EN 197-1 : 2003 CEM II/A-L/M/V/W 42.5N, high range water reducing admixture of complying type A or F under ASTM C 494 (Doses of admixture to be fixed by the mix design), sand of minimum FM 2.5 and 20mm down well graded crushed stone chips broken from boulders (Preferably stone chips from Madhyapara, Dinajpur, LAA value not exceeding 30) conforming to ASTM C33 including breaking chips, screening through proper sieves, cleaning, placing shutter in position, making shutter water-tight properly, placing	cum	346.870	15181.101	Fifteen Thousand One Hundred And Eighty-One Point One Zero One	5265868.503	Fifty-Two Lakh Sixty-Five Thousand Eight Hundred And Sixty-Eight Point Five Zero Three

			reinforcement in position, mixing in standard mixture machine with hoper, maintaining allowable slump of 75mm to 100mm, casting in forms, compacting by mechanical vibrator machine, curing for 28 days, removing centering-shuttering after approved specified time period, other incidental charges, etc. all complete as per drawing, specification & direction of the E-I-C. The cost of reinforcement and it's fabrication, welding, coupling, placing, binding etc. is not included but the cost of admixture is included in this unit rate. Additional quantity of cement to be added if required to attain the strength at the contractor's own cost. [Using Concrete Mixture Machine and retail rate of Cement] For diaphragm walls, wing walls, piers, columns, projected pile cap above water level, pier caps, abutments of bridges and vertical members of box culverts For height up to 5m and retail rate of Cement]"						
9	(1) Part : 1(Drain), A)	4.09.03.05.01	"RCC-25SCCM: Reinforced cement concrete	cum	151.116	17311.005	Seventeen Thousand Three	2615969.831	Twenty-Six Lakh Fifteen

			work with minimum cement content relates to mix ratio 1:1.5:3 and maximum water cement ratio 0.4 having minimum required average strength, f'cr = 33.5 MPa and satisfying a compressive strength f'c = 25 MPa at 28 days on standard cylinders as per standard practice of Code AASHTO/ ASTM and cement conforming to BDS EN 197-1 : 2003 CEM II/A-L/M/V/W 42.5N, high range water reducing admixture of complying type A or F under ASTM C 494 (Doses of admixture to be fixed by the mix design), sand of minimum FM 2.5 and 20mm down well graded crushed stone chips broken from boulders (Preferably stone chips from Madhyapara, Dinajpur, LAA value not exceeding 30) conforming to ASTM C33 including breaking chips, screening through proper sieves, cleaning, placing shutter in position, making shutter water-tight properly, placing reinforcement in position, mixing in standard mixture machine with hoper, maintaining allowable slump of 75mm to 100mm, casting in forms, compacting by		Hundred And Eleven Point Zero Zero Five		Thousand Nine Hundred And Sixty-Nine Point Eight Three One	

			mechanical vibrator machine, curing for 28 days, removing centering-shuttering after approved specified time period, other incidental charges, etc. all complete as per drawing, specification & direction of the E-I-C. The cost of reinforcement and it's fabrication, welding, coupling, placing, binding etc. is not included but the cost of admixture is included in this unit rate. Additional quantity of cement to be added if required to attain the strength at the contractor's own cost. [Using Concrete Mixture Machine and retail rate of Cement] For top slab including curb and wheel guard of box culvert Height up to 5 m"							
10	(1) Part : 1(Drain), A)	7.43.1	"Supplying different inside dia best quality uPVC soil, waste and ventilation pipe having specific gravity 1.35 - 1.45, wall thickness 2.5 mm - 3.0 mm, and other physical, chemical, themal, fire resistivity properties etc. as per BSTI approved manufacturer standards or ASTM, BS/ISO/IS	m	500.000	470.129	Four Hundred And Seventy Point One Two Nine	235064.500	Two Lakh Thirty-Five Thousand And Sixty-Four Point Five

			standards fitting and fixing in position with sockets, bends, of uPVC Pipe with all accessories such as Round grating /domed roof grating bands, sockets etc. approved and accepted by the Engineer- in-charge. 50 mm inside dia wall thickness 2.5 mm - 3.0 mm (PWD BW 26.43.1)"						
11	(1) Part : 1(Drain), A)	5.15.15.1	Supplying, fitting and fixing 20mm to 25mm thick machine made cement pavement tiles having minimum compressive strength of 27 MPa, irrespective of color &/or design, with 20 mm thick cement sand (F.M. 1.2) mortar (1:4) base and making the joints carefully in true straight line including cutting, laying and hire charge of machine and finishing with care etc. including water, electricity and other charges complete in all respect and accepted by the Engineer-in-charge. (Cement: CEM-II/B-M). In ground floor (PWD BW 06.15)	sqm	1177.500	1021.075	One Thousand And Twenty-One Point Zero Seven Five	1202315.812	Twelve Lakh Two Thousand Three Hundred And Fifteen Point Eight One Two
12	(1) Part : 1(Drain), A)	RUTDP-23.03	MS Grating, Analysis for 1 piece(as per enclosed drawing, size 300mmx250mm)	each	152.000	1985.926	One Thousand Nine Hundred And Eighty-Five Point Nine Two Six	301860.752	Three Lakh One Thousand Eight Hundred And Sixty Point Seven Five Two

13	(1) Part : 1(Drain), A)	4.06.06.02	"Minimum 6mm thick cement plaster including neat cement finishing over concrete faces with sand of minimum FM 1.20 and cement conforming to BDS EN 197-1 : 2003 CEM-II/A-L/M/V/W 42.5N including washing of sand, cleaning junctiongs of concrete, grouting, dabbing, doing independent double-legged scaffolding, finishing the edges and corners, cleaning of surfaces and curing for requisite period etc. all complete at all leads & lifts as per drawings, specification & direction of the E-I-C. Cement mortar (1:4)"	sqm	720.000	229.002	Two Hundred And Twenty-Nine Point Zero Zero Two	164881.440	One Lakh Sixty-Four Thousand Eight Hundred And Eighty-One Point Four Four
							Grand Total:	18585741.503	One Crore Eighty-Five Lakh Eighty-Five Thousand Seven Hundred And Forty-One Point Five Zero Three

This Bill of Quantities (Item No 01-13) Part : 1 (Drain) , A) is Electronically Signed by Mr. Khandaker Haque on behalf of Dockyard & Engineering Works Limited

Dockyard & Engineering Works Limited

Bill of Quantities (Item No: 14-27), Part : 1(Drain) B)

(2) Part-B: Drain

B) Re-habilitation of Doulatpur road by BC with streetlight and Drain with footpath (Ch.0+00 to 1270m) with Doulatpur Choto Achra linkroad from Ch 0.00-1226.00m under Benapole Pourashava. Sarsha, Jashore.

Bill of Quantities

Item no.	Group	Item Code (if any)	Description of Item	Measurement Unit	Quantity	Unit Price In figures (BDT)	Unit Price In Words (BDT)	Total Price In Figures (BDT)	Total Price In Words (BDT)
14	(2) Part : 1(Drain), B)	4.05.01.01.01	"Earth work in excavation of foundation of structures by mechanical (Hydraulic excavator - Long Boom)/ manual means in all sorts of soil up to specified depth in accordance with requirements of lines, grades, cross sections and elevation as shown in the drawing including setting out, removal of stumps, logs, boulders and other deleterious materials, providing necessary tools and plants, construction of shoring and bracing, cleaning the excavated materials to a safe distance out of the site premises, cut to a firm surface including pumping/ bailing out water, removal of spoils to a safe distance, dressing of sides and bottom and	cum	6612.930	177.267	One Hundred And Seventy-Seven Point Two Six Seven	1172254.262	Eleven Lakh Seventy-Two Thousand Two Hundred And Fifty-Four Point Two Six Two

			backfilling of trenches up to original level with approved material etc. all complete as per approval of E-I-C. Contractor shall get acquainted with site conditions, nature of soil and adopt suitable adequate dewatering system as deemed fit for the nature of soil and prevailing water table to get the surface reasonably dry for laying PCC at the time of execution so that execution will not be hampered or delayed. Back-filled materials shall be compacted to a density comparable with the adjacent undisturbed material. Earth work in Ordinary Soil by Manual Means for an initial lead up to 30m For depth up to 3m"						
15	(2) Part : 1(Drain), B)	4.05.03	P&B: Pumping and bailing out water from the interior of any foundation enclosure of work site with all leads and lifts including supply, operation and maintenance of requisite number of water pumps, arrangements for protection of ring bundh and side slopes of foundation pit against erosion or washout etc. It should be carried out in such a manner as to preclude the possibility of the movement of	hour	240.000	398.002	Three Hundred And Ninety-Eight Point Zero Zero Two	95520.480	Ninety-Five Thousand Five Hundred And Twenty Point Four Eight

			water through or alongside any concrete being placed, etc. all complete as per direction of E-I-C.						
16	(2) Part : 1(Drain), B)	5.02.08.1	Sand filling in foundation trenches and plinth with sand having minimum F.M. 0.5 in 150 mm layers including leveling, watering and compaction to achieve minimum dry density of 95% with optimum moisture content (Modified proctor test) by ramming each layer up to finished level as per design supplied by the design office only, all complete and accepted by the Engineer-in-charge. [PWD 02.10.1]	cum	474.915	928.961	Nine Hundred And Twenty-Eight Point Nine Six One	441177.513	Four Lakh Forty-One Thousand One Hundred And Seventy-Seven Point Five One Three
17	(2) Part : 1(Drain), B)	3.07.1	PS: Supplying and laying of single layer polythene sheet weighing one kilogram per 6.5 square meter in floor or any where below cement concrete complete in all respect and accepted by Engineer-in-charge. [PWD 03.7]	sqm	3166.100	40.035	Forty Point Zero Three Five	126754.813	One Lakh Twenty-Six Thousand Seven Hundred And Fifty-Four Point Eight One Three
18	(2) Part : 1(Drain), B)	4.06.03	PCC-10: Plain cement concrete work in foundation with minimum compressive strength of 10 MPa at 28 days (sugessted mix proportion 1:3:6) on standard cylinder as per standard practice of Code AASHTO/ ASTM and cement	cum	265.594	8832.003	Eight Thousand Eight Hundred And Thirty-Two Point Zero Zero Three	2345727.004	Twenty-Three Lakh Forty-Five Thousand Seven Hundred And Twenty-Seven Point Zero Zero Four

			conforming to BDS EN 197-1 : 2003 CEM-II/A-L/M/V/W 42.5N, sand of minimum FM 1.8 and 20mm down well graded 1st class/ picked brick chips (LAA value not exceeding 40) comforming to ASTM C 33 including breaking bricks into chips, shuttering, mixing by concrete mixer machine, casting, laying compacting and curing for the requisite period etc. all complete as per direction of the E-I-C. Additional quantity of cement to be added if required to attain the strength at the contractor's own cost.						
19	(2) Part : 1(Drain), B)	4.11.01.02.02	"Supplying and fabrication of Ribbed or deformed bar reinforcement for all types of RCC work including straightening, removing ruts, cleaning, cutting, hooking, bending, lapping and/or welding wherever required as directed, placing in position, tieing with 22 BWG black annealed binding wire (PVC coated in case of FBEC rebar) double fold, cost of binding wire and anchoring to the adjoining members wherever necessary, supplying and placing with proper cover	kg	172670.576	100.900	One Hundred Point Nine	17422461.118	One Crore Seventy-Four Lakh Twenty-Two Thousand Four Hundred And Sixty-One Point One One Eight

						blocks (1:1), supports, chairs, spacers, splices or laps etc. including cost of all materials, cost of labour, cost of equipment & machinery, loading and unloading, transportation, all other incidental charges and work at all leads and lifts etc. to complete the work as per design, drawing, specifications and direction of the E-I-C. Measurement relating to nominal mass, dimensions and tolerances of various types of steel shall conform to relevant BDS/ ASTM codes. Reinforcement shall be measured only in lengths of bar as actually placed in position on standard weight i.e. 7850 kg/m3 (BNBC Table 6.2.1) basis. No separate payment shall be allowed for chairs of any shape & profile, spacer bar of any shape & profile, lap/splice & welding unless otherwise shown in the drawing, wastages, binding wire etc. as the cost of these is included in the unit rate. Note: Tests for reinforcing bars shall be conducted at LGED/ BUET/ CUET/ KUET/ RUET/SUST. Grade B400C-R/ B400CWR/

			400DWR: Ribbed or Deformed bar produced and marked as per BDS ISO 6935-2:2016 with minimum yield strength, fy (ReH) = 400 MPa, but the tested yield strength shall not exceed fy by more than the 125 MPa and the ratio of tested ultimate strength, fu (Re) to tested yield strength (fy) shall be at least 1.25 and minimum elongation after fracture (A5.65) & minimum total elongation at maximum force (Agt) is 17% and 8% respectively. Using bulk rate of reinforcing bar"						
20	(2) Part : 1(Drain), B)	4.09.03.01	RCC-25SCCM: Reinforced cement concrete work with minimum cement content relates to mix ratio 1:1.5:3 and maximum water cement ratio 0.4 having minimum required average strength, f'cr = 33.5 MPa and satisfying a compressive strength f'c = 25 MPa at 28 days on standard cylinders as per standard practice of Code AASHTO/ ASTM and cement conforming to BDS EN 197-1 : 2003 CEM II/A-L/M/V/W 42.5N, high range water reducing admixture of complying type A or F under ASTM C 494 (Doses of admixture to be	cum	545.560	14515.281	Fourteen Thousand Five Hundred And Fifteen Point Two Eight One	7918956.702	Seventy-Nine Lakh Eighteen Thousand Nine Hundred And Fifty-Six Point Seven Zero Two

							fixed by the mix design), sand of minimum FM 2.5 and 20mm down well graded crushed stone chips broken from boulders (Preferably stone chips from Madhyapara, Dinajpur, LAA value not exceeding 30) conforming to ASTM C33 including breaking chips, screening through proper sieves, cleaning, placing shutter in position, making shutter water-tight properly, placing reinforcement in position, mixing in standard mixture machine with hoper, maintaining allowable slump of 75mm to 100mm, casting in forms, compacting by mechanical vibrator machine, curing for 28 days, removing centering-shuttering after approved specified time period, other incidental charges, etc. all complete as per drawing, specification & direction of the E-I-C. The cost of reinforcement and it's fabrication, welding, coupling, placing, binding etc. is not included but the cost of admixture is included in this unit rate. Additional quantity of cement to be added if required to

			attain the strength at the contractor's own cost.						
21	(2) Part : 1(Drain), B)	4.09.03.02.01	"[Using Concrete Mixture MachineRCC-25SCCM: Reinforced cement concrete work with minimum cement content relates to mix ratio 1:1.5:3 and maximum water cement ratio 0.4 having minimum required average strength, f'cr = 33.5 MPa and satisfying a compressive strength f'c = 25 MPa at 28 days on standard cylinders as per standard practice of Code AASHTO/ ASTM and cement conforming to BDS EN 197-1 : 2003 CEM II/A-L/M/V/W 42.5N, high range water reducing admixture of complying type A or F under ASTM C 494 (Doses of admixture to be fixed by the mix design), sand of minimum FM 2.5 and 20mm down well graded crushed stone chips broken from boulders (Preferably stone chips from Madhyapara, Dinajpur, LAA value not exceeding 30) conforming to ASTM C33 including breaking chips, screening through proper sieves, cleaning, placing shutter in position, making shutter water-tight properly, placing	cum	1197.784	15181.117	Fifteen Thousand One Hundred And Eighty-One Point One One Seven	18183699.044	One Crore Eighty-One Lakh Eighty-Three Thousand Six Hundred And Ninety-Nine Point Zero Four Four

			reinforcement in position, mixing in standard mixture machine with hoper, maintaining allowable slump of 75mm to 100mm, casting in forms, compacting by mechanical vibrator machine, curing for 28 days, removing centering-shuttering after approved specified time period, other incidental charges, etc. all complete as per drawing, specification & direction of the E-I-C. The cost of reinforcement and it's fabrication, welding, coupling, placing, binding etc. is not included but the cost of admixture is included in this unit rate. Additional quantity of cement to be added if required to attain the strength at the contractor's own cost. [Using Concrete Mixture Machine and retail rate of Cement] For diaphragm walls, wing walls, piers, columns, projected pile cap above water level, pier caps, abutments of bridges and vertical members of box culverts For height up to 5m and retail rate of Cement]"						

2	(2) Part : 1(Drain), B)	4.09.03.05.01	"RCC-25SCCM: Reinforced cement concrete work with minimum cement content relates to mix ratio 1:1.5:3 and maximum water cement ratio 0.4 having minimum required average strength, f'cr = 33.5 MPa and satisfying a compressive strength f'c = 25 MPa at 28 days on standard cylinders as per standard practice of Code AASHTO/ ASTM and cement conforming to BDS EN 197-1 : 2003 CEM II/A-L/M/V/W 42.5N, high range water reducing admixture of complying type A or F under ASTM C 494 (Doses of admixture to be fixed by the mix design), sand of minimum FM 2.5 and 20mm down well graded crushed stone chips broken from boulders (Preferably stone chips from Madhyapara, Dinajpur, LAA value not exceeding 30) conforming to ASTM C33 including breaking chips, screening through proper sieves, cleaning, placing shutter in position, making shutter water-tight properly, placing reinforcement in position, mixing in standard mixture machine with hoper, maintaining allowable slump of 75mm to	cum	413.888	17311.801	Seventeen Thousand Three Hundred And Eleven Point Eight Zero One	7165146.692	Seventy-One Lakh Sixty-Five Thousand One Hundred And Forty-Six Point Six Nine Two

			100mm, casting in forms, compacting by mechanical vibrator machine, curing for 28 days, removing centering-shuttering after approved specified time period, other incidental charges, etc. all complete as per drawing, specification & direction of the E-I-C. The cost of reinforcement and it's fabrication, welding, coupling, placing, binding etc. is not included but the cost of admixture is included in this unit rate. Additional quantity of cement to be added if required to attain the strength at the contractor's own cost. [Using Concrete Mixture Machine and retail rate of Cement] For top slab including curb and wheel guard of box culvert Height up to 5 m"						
23	(2) Part : 1(Drain), B)	7.43.1	"Supplying different inside dia best quality uPVC soil, waste and ventilation pipe having specific gravity 1.35 - 1.45, wall thickness 2.5 mm - 3.0 mm, and other physical, chemical, themal, fire resistivity properties etc. as per BSTI approved manufacturer	m	1350.000	470.129	Four Hundred And Seventy Point One Two Nine	634674.150	Six Lakh Thirty-Four Thousand Six Hundred And Seventy-Four Point One Five

			standards or ASTM, BS/ISO/IS standards fitting and fixing in position with sockets, bends, of uPVC Pipe with all accessories such as Round grating /domed roof grating bands, sockets etc. approved and accepted by the Engineer- in-charge. 50 mm inside dia wall thickness 2.5 mm - 3.0 mm (PWD BW 26.43.1)"						
24	(2) Part : 1(Drain), B)	7.44.2	"Supplying and laying uPVC pipe for for underground including fitting, fixing etc. all complete approved and accepted by the Engineer- in-charge. 200 mm dia with wall thickness 5.3 mm - 7.8 mm uPVC pipe (PWD BW 26.44.2)"	m	20.000	1805.782	One Thousand Eight Hundred And Five Point Seven Eight Two	36115.640	Thirty-Six Thousand One Hundred And Fifteen Point Six Four
25	(2) Part : 1(Drain), B)	5.15.15.1	Supplying, fitting and fixing 20mm to 25mm thick machine made cement pavement tiles having minimum compressive strength of 27 MPa, irrespective of color &/or design, with 20 mm thick cement sand (F.M. 1.2) mortar (1:4) base and making the joints carefully in true straight line including cutting, laying and hire charge of machine and finishing with care etc. including water, electricity and other charges	sqm	3136.100	1021.075	One Thousand And Twenty-One Point Zero Seven Five	3202193.307	Thirty-Two Lakh Two Thousand One Hundred And Ninety-Three Point Three Zero Seven

			complete in all respect and accepted by the Engineer-in-charge. (Cement: CEM-II/B-M). In ground floor (PWD BW 06.15)						
26	(2) Part : 1(Drain), B)	RUTDP-23.03	MS Grating, Analysis for 1 piece(as per enclosed drawing, size 300mmx250mm)	each	251.000	1985.926	One Thousand Nine Hundred And Eighty-Five Point Nine Two Six	498467.426	Four Lakh Ninety-Eight Thousand Four Hundred And Sixty-Seven Point Four Two Six
27	(2) Part : 1(Drain), B)	4.06.06.02	"Minimum 6mm thick cement plaster including neat cement finishing over concrete faces with sand of minimum FM 1.20 and cement conforming to BDS EN 197-1 : 2003 CEM-II/A-L/M/V/W 42.5N including washing of sand, cleaning junctiongs of concrete, grouting, dabbing, doing independent double-legged scaffolding, finishing the edges and corners, cleaning of surfaces and curing for requisite period etc. all complete at all leads & lifts as per drawings, specification & direction of the E-I-C. Cement mortar (1:4)"	sqm	750.300	229.494	Two Hundred And Twenty-Nine Point Four Nine Four	172189.348	One Lakh Seventy-Two Thousand One Hundred And Eighty-Nine Point Three Four Eight
							Grand Total:	59415337.499	Five Crore Ninety-Four Lakh Fifteen Thousand

									Three Hundred And Thirty-Seven Point Four Nine Nine

This Bill of Quantities (Item No: 14-27), Part : 1(Drain) B) is Electronically Signed by Mr. Khandaker Haque on behalf of Dockyard & Engineering Works Limited

Dockyard & Engineering Works Limited

Schedule of Day works

Item no.	Group	Item Code (if any)	Description of Item	Measurement Unit	Nominal Quantity	Unit Price in Figures (BDT)	Unit Price in Words (BDT)	Total Price in Figures (BDT)	Total Price in Words (BDT)
1	NA	0.001	NA	each	0.001	0.001	Zero Point Zero Zero One	0.000	Zero
							Grand Total:	0.000	Zero

This Schedule of Day works is Electronically Signed by Mr. Khandaker Haque on behalf of Dockyard & Engineering Works Limited

Dockyard & Engineering Works Limited

Bill of Quantities (Item No: 28-40),Part-2: (Road), B)

(3) Part-2: (Road)

B) Re-habilitation of Doulatpur road by BC with streetlight and Drain with footpath (Ch.0+00 to 1270m) with Doulatpur Choto Achra link road from Ch 0.00-1226.00m under Benapole Pourashava. Sarsha, Jashore.

Bill of Quantities

Item no.	Group	Item Code (if any)	Description of Item	Measurement Unit	Quantity	Unit Price In figures (BDT)	Unit Price In Words (BDT)	Total Price In Figures (BDT)	Total Price In Words (BDT)
28	(3) Part : 2(Road),B)	3.10.01.2	HBPMM: Preparation of hard bed by scarifying and loosening of existing top (bituminous) surface, including base/sub-base course materials up to the depth of 75mm (minimum) using mechanical means, breaking dismantled material into specified sizes (less than 40mm), with supplying of extra fresh base course materials of required specification (if required) including spreading, leveling, dressing of loose material uniformly for maintaining camber & grade, watering if needed, rolling with 8 to 10 MT road roller to give compaction to 100% of MDD as obtained by standard proctor test etc. all complete in all respect as per direction of the Engineer-in-charge. (Rate is excluding the cost of additional material supplied)	sqm	6678.000	30.345	Thirty Point Three Four Five	202643.910	Two Lakh Two Thousand Six Hundred And Forty-Three Point Nine One
29	(3) Part : 2(Road),B)	3.05.7.1.01	"WBMBC: Providing compacted brick aggregate base course, including supplying, spreading and compacting 50mm downgraded crusher run 1st class and Picked brick chips (LAA value not exceeding 40%) including supplying of required amount of 12mm downgraded chips made of same quality bricks, including spreading uniformly in layers of specified loose thickness on road surface maintaining grade, camber and super elevation including local handling, hand packing, booming, watering, dry rolling followed by wet rolling in layers with 8~10	cum	1117.800	5802.860	Five Thousand Eight Hundred And Two Point Eight Six	6486436.908	Sixty-Four Lakh Eighty-Six Thousand Four Hundred And Thirty-Six Point Nine Zero Eight

			tonne road roller to attain each layer's minimum soaked CBR 80% or Design CBR at specified degree of compaction, including supplying choking/screening material as filler material @0.018cum/sqm or as required including cost of materials, labours etc. all complete as per direction of the E-I-C. After adequate dry rolling spreading of choking/screening material on the surface, sprinkling water and rolling is to be continued until all the voids are filled, wave of grout/slurry flushes ahead of the roller. Thickness of each layer should not be more than 100mm loose and measurement for Payment will be made on compacted thickness. Degree of Compaction: Minimum 98% of MDD (Modified Proctor)"						
30	(3) Part : 2(Road),B)	3.06.1.2	PCMD@1.2: Providing Prime coat @1.2 liter/sqm with cut back bitumen to be prepared by cutting back 60/70 penetration grade straight run bitumen (conforming to the requirements of ASTM/ AASHTO in the ratio of 100 parts by volume of bitumen to 40-60 parts by volume of kerosene depending on the porosity of the surface and will be decided by field trials, the correct quantity that is completely absorbed within 24 hours including carefully cleaning of the surface of the granular base material to be primed and spraying cut back bitumen at a temperature from 100°C to 120°C by mechanical distributor, etc. complete as per direction of the E-I-C. [Retail]	sqm	8678.000	136.563	One Hundred And Thirty-Six Point Five Six Three	1185093.714	Eleven Lakh Eighty-Five Thousand And Ninety-Three Point Seven One Four
31	(3) Part : 2(Road),B)	3.06.5.2	40mmDC (BG-60/70): Providing 40mm thick (minimum) compacted pre-mixed bituminous surfacing - wearing course with 25mm downgraded crushed stone chips (LAA value < = 30%) complying with the specified grading requirement of the relevant item of Road Design standards, water absorption not >2%, flakiness index not >35% mixed with 60/70 penetration grade straight run bitumen satisfying the requirements of ASTM/AASHTO. The bitumen and stone-chips shall be separately heated	sqm	8678.000	864.377	Eight Hundred And Sixty-Four Point Three Seven Seven	7501063.606	Seventy-Five Lakh One Thousand And Sixty-Three Point Six Zero Six

			to a temperature 140°C ? 155°C and 150°C ? 170°C respectively before mixing. The mixing shall be done at temperature between 140°C ? 160°C at a separate place away from the fire. The bitumen and stone-chips mixture shall be laid uniformly on the road surface in single appropriate layer to give specified compacted thickness, maintaining specified camber, grade and super-elevation. The mixture should be rolled at a temperature not below 90°C with appropriate Steel Drum Roller (3-5 tons) & pneumatic multiple tire roller (8-10 tons) to full compaction, including supplying of all materials, their carriage, labourers tools and equipment etc. all complete as per the direction of the E-I-C. The bitumen in the mix shall be between @ 5.0% to 5.5% by weight of total mix or as determined by job mix design. (In order to achieve the specified grading a blending of nominal maximum size of 25mm, 19mm, 12mm, 6mm crushed stone chips and stone dust is suggested and proportion will have to determine by the laboratory analysis).[Retail]						
32	(3) Part : 2(Road),B)	3.02.1.1	Sand (FM 0.50) filling on the road bed in the improved sub-grade with sand (minimum FM 0.5) free from dust, earth, other vegetable growth, foreign materials etc. including supplying all materials, spreading, watering, compacting by appropriate mechanical means to obtain a minimum Soaked CBR 8% or Design CBR at minimum compaction 98% of Maximum Dry Density (MDD) (Modified Proctor), etc. all complete as per direction of the E-I-C.	cum	400.000	815.826	Eight Hundred And Fifteen Point Eight Two Six	326330.400	Three Lakh Twenty-Six Thousand Three Hundred And Thirty Point Four
33	(3) Part : 2(Road),B)	3.03.3.4	SBBC(FM-0.8): Providing compacted aggregate sand sub-base course with 38mm down Crusher run 1st class bricks/picked chips of LAA value not exceeding 40 & sand of minimum FM 0.80 mixed in proportion 1:1 by volume placed in layer(s), mixing properly, watering, compacting with 8~10 tonne road roller to attain each layer's minimum soaked CBR 35% or Design CBR at	cum	400.000	3657.882	Three Thousand Six Hundred And Fifty-Seven Point Eight Eight Two	1463152.800	Fourteen Lakh Sixty-Three Thousand One Hundred And Fifty-Two Point Eight

			minimum compaction 98% of MDD (Modified Proctor) including supplying of all materials, labourers, tools and equipment etc. all complete as per direction of the E-I-C.						
34	(3) Part : 2(Road),B)	3.12.08.02	RMP(By-TPC): Providing and applying road markings of center line and stop line etc. With minimum 5 to 6 mm thick hot applied white/yellow thermoplastic compound (The materials shall comply with BS3262:1987' Specification for Hot-applied Thermoplastic Road Marking Materials') by special applicator machine on road/plain surface, including cleaning the surface of all dirt, oils, grease, dust and other contaminants,demarcation at site and traffic control involved, the finished surface to be level, uniform and free from streaks and holes, etc. all complete in all respect as direction of the Engineer-in-charge. Rate is inclusive of cost of all materials, labour machinery, lighting, guarding, maintenance of diversion and all incidental charges in this connection.	sqm	300.000	826.480	Eight Hundred And Twenty-Six Point Four Eight	247944.000	Two Lakh Forty-Seven Thousand Nine Hundred And Forty-Four
35	(3) Part : 2(Road),B)	3.12.04.3	"CRS-Plate: Providing and fixing of retro-reflectorized cautionary, mandatory and informatory sign as per standard drawing enumerated in Appendix-6 (type design for Traffic Signs) made of 18 BWG M.S. sheet of equilateral triangle/Circular/Rectangular plates of different sizes as mentioned in the drawing fitted with MS triangular/Rectangular frame of same size as plates by point welding (frames made by thorough welding of 25mmX25mmX3mm MS angle covering all sides of the plates and maximum 150mm center to center in the middle of frames in each vertical & horizontal directions), Plates are fitted with 50mm dia & 2.90mm thick MS pipes by continuous welding, including cutting of MS angle at touched point of MS pipe, including cost of providing 200mm long 4 nos. 12mm dia anchor bars be fitted at the lower part of the GI pipes by welding, making finishing, grinding and carrying to the working	each	0.001	0.001	Zero Point Zero Zero One	0.000	Zero

			sites, the post firmly fixed to the ground by means of properly deigned foundation with cement concrete of minimum cylinder crushing strength of concrete 17.0Mpa at 28 days of curing (Suggested Mix Proportion 1:2:4), 60cm below the ground level, the signs properly erect in correct position, true to line and length, including two coats of painting with best quality synthetic enamel paint of approved brand & printing with retro-reflective paint of different approved colour, etc. all complete in all respect as per approved drawing, specification and direction of the Engineer-in-charge. Rate is inclusive of cost of all materials, labour and all incidental charges in this connection. 435mm X 500mm Square with 435mm X 202mm supplementary Plate (For Informative Sign)"						
36	(3) Part : 2(Road),B)	3.01.3.3.01	"BC&SGP(300mm): Earth work in box cutting up to 300mm depth & Preparation of sub-grade by excavating road crest another 300mm depth, removing soils to a safe distance or spreading the excavated earth on road flanks, slopes. In preparing 300mm sub-grade below the box, excavating top 150mm layer and excavated earth set aside to reuse, then scarifying the bottom 150 mm layer, breaking clods to 40mm maximum in size, leveling, dressing, watering to OMC ± 2% & compacting the 1st layer by appropriate mechanical means to attain design CBR at specified degree of compaction, subsequently prepare 2nd layer by spreading aside materials on top of prepared 1st layer, removing all deleterious material breaking clods, leveling, dressing, watering to OMC ± 2% and compacting the layer following the same procedure as 1st layer to attain design CBR including maintaining proper grade, camber and alignment, super elevation on curves etc. all complete as per direction of the E-I-C. (When in-situ sub grade materials is suitable but very loose) Degree of Compaction: Minimum 98% of MDD (Standard Proctor)"	sqm	2000.000	118.662	One Hundred And Eighteen Point Six Six Two	237324.000	Two Lakh Thirty-Seven Thousand Three Hundred And Twenty-Four

37	(3) Part : 2(Road),B)	3.04.3.2	EE(125mm): Brick on end edging (125mm across) with 1st class/picked bricks including cutting trenches true to level & maintaining grade, removing earth, re-filling & ramming the sides properly, including supplying and filling the gaps with local sand, etc. all complete as per direction of the E-I-C.	m	2226.000	208.247	Two Hundred And Eight Point Two Four Seven	463557.822	Four Lakh Sixty-Three Thousand Five Hundred And Fifty-Seven Point Eight Two Two
38	(3) Part : 2(Road),B)	3.04.1.2	PiEE(125mm): Labour charge for picking up the existing brick on end edging (125mm across) including staking the materials at a specified distance, etc. all complete as per direction of the E-I-C.	m	2192.000	14.391	Fourteen Point Three Nine One	31545.072	Thirty-One Thousand Five Hundred And Forty-Five Point Zero Seven Two
39	(3) Part : 2(Road),B)	3.11.33.02	Brick (BP-TW): Construction and Installation in position brick palisading work as per standard drawing enumerated in Appendix-6 (type design for protective work) with 375mm thick Brick Masonry work upto 500 mm height from bottom & rest 500 mm height 250mm thick Brick Masonry work and Pre cast RCC Post of 03 (three) meter long (150mmX150mm) and capping beam (200mmX150mm) using 20mm down graded crushed stone chips (LAA value not exceeding 30), sand (minimum FM 2.5) and cement conforming to BDS EN 197-1 : 2003 CEM-II/A-M 42.5N to attain a minimum 28 days cylinder crushing compressive strength 25.00 Mpa (mixing ratio 1:1.5:3 & maximum water cement ratio 0.4) as per standard practice of code AASHTO/ASTM including supplying, fabricating and binding of 400/420 Grade MS deformed bar of required size, length and spacing. The pre-cast post must be driven by suitable monkey/drop hammer in 5/6 th of its total length @ 1 m c/c into the ground laying on proper alignment. Brick Masonry work in cement mortar (1:3), filling the interstices tightly with mortar, raking out joints, cleaning and soaking bricks at least for 24 hours before use, washing of sand, including flush pointing at front face of the brick wall	m	111.000	6919.048	Six Thousand Nine Hundred And Nineteen Point Zero Four Eight	768014.328	Seven Lakh Sixty-Eight Thousand And Fourteen Point Three Two Eight

			with cement mortar (1:2), curing for requisite period, including excavating minimum 575mm depth foundation trenches for brick wall and laying one layer polythene sheet, casting 75mm thick cement concrete (1:3:6) below the 375 mm brick work by means approved designed including form work, etc. all complete in all respect as per approved drawing, specification and direction of the Engineer-in-charge. (Unit cost includes Brick wall, all casting work, reinforcement, its fabrication, shuttering, curing for 28 days, driving of the post, lab testing charges as per design and all other incidental charges, etc.)without capping beam						
40	(3) Part : 2(Road),B)	2.02.3.04	EFW(CE): Earth filling work with specified soil in any type of embankment, where earth shall be carried by truck/boat or any other means, supplied at contractor's own cost including royalty, cutting, carrying, filling and compacting to 85%/95%/98% of Maximum Dry Density (MDD) at Optimum Moisture Content (OMC), with reference to laboratory density test AASHTO standard hammer by throwing earth in layers not more than150mm in proper alignment, grade, camber and side slope in all types of soil except rocky, gravelly and slushy including benching not more than 300mm in vertical and 600mm in horizontal steps along the sides while widening any embankment, with clod breaking to maximum size of 100mm, benching the side slopes, removing roots and stumps of trees of girth upto 200mm and other foreign particles, stripping/ ploughing the base of embankment and borrow pit area, dug bailing, clearing jungles, bail out of water, rough dressing including 150mm cambering at the centre of crest with all leads and lifts complete (compaction will be done by the contractor with approved equipment including all ancillary charges for compaction and testing) as per direction of Engineer in charge. Payment will be made on compacted volume. The item is	cum	208.125	321.017	Three Hundred And Twenty-One Point Zero One Seven	66811.663	Sixty Thous E Hund A Ele Point Six Th

			applicable when earth is supplied and arranged by the contractor from a distance beyond 200m from the end of right of way.Within municipal area, 85% Compaction					
						Grand Total:	18979918.223	One Crore Eighty-Nine Lakh Seventy-Nine Thousand Nine Hundred And Eighteen Point Two Two Three

This Bill of Quantities (Item No: 28-40),Part-2: (Road), B) is Electronically Signed by Mr. Khandaker Haque on behalf of Dockyard & Engineering Works Limited

Dockyard & Engineering Works Limited

Bill of Quantities (Item No: 41-50, 53-55), Part-2: (Road), A)

(4) Part-2: (Road)

A)Re-habilitation of Poura Bhaban road by BC with streetlight and Drain with footpath (Ch.0+000 to 2+400m) under Benapole Pourashava. Sarsha, Jashore.

Bill of Quantities

Item no.	Group	Item Code (if any)	Description of Item	Measurement Unit	Quantity	Unit Price In figures (BDT)	Unit Price In Words (BDT)	Total Price In Figures (BDT)	Total Price In Words (BDT)
41	(4) Part : 2(Road),A)	3.10.01.2	HBPMM: Preparation of hard bed by scarifying and loosening of existing top (bituminous) surface, including base/sub-base course materials up to the depth of 75mm (minimum) using mechanical means, breaking dismantled material into specified sizes (less than 40mm), with supplying of extra fresh base course materials of required specification (if required) including spreading, leveling, dressing of loose material uniformly for maintaining camber & grade, watering if needed, rolling with 8 to 10 MT road roller to give compaction to 100% of MDD as obtained by standard proctor test etc. all complete in all respect as per direction of the Engineer-in-charge. (Rate is excluding the cost of additional material supplied)	sqm	9120.000	30.346	Thirty Point Three Four Six	276755.520	Two Lakh Seventy-Six Thousand Seven Hundred And Fifty-Five Point Five Two
42	(4) Part : 2(Road),A)	3.10.02	SB: Providing and applying sand blinding with sand of minimum FM 0.80 @0.005 cum per sqm on prepared road surface, including supplying of all material, their carriage, labours, tools and equipment, etc. all complete in all respect as per direction of the Engineer-in-charge.	sqm	9120.000	4.638	Four Point Six Three Eight	42298.560	Forty-Two Thousand Two Hundred And Ninety-Eight Point Five Six
43	(4) Part : 2(Road),A)	3.05.7.1.01	"WBMBC: Providing compacted brick aggregate base course, including supplying, spreading and compacting 50mm downgraded crusher run 1st class and Picked brick chips (LAA value not exceeding 40%) including supplying of required amount of 12mm downgraded chips made of	cum	1453.050	5802.860	Five Thousand Eight Hundred And Two Point Eight Six	8431845.723	Eighty-Four Lakh Thirty-One Thousand Eight Hundred And Forty-Five Point

			same quality bricks, including spreading uniformly in layers of specified loose thickness on road surface maintaining grade, camber and super elevation including local handling, hand packing, booming, watering, dry rolling followed by wet rolling in layers with 8~10 tonne road roller to attain each layer's minimum soaked CBR 80% or Design CBR at specified degree of compaction, including supplying choking/screening material as filler material @0.018cum/sqm or as required including cost of materials, labours etc. all complete as per direction of the E-I-C. After adequate dry rolling spreading of choking/screening material on the surface, sprinkling water and rolling is to be continued until all the voids are filled, wave of grout/slurry flushes ahead of the roller. Thickness of each layer should not be more than 100mm loose and measurement for Payment will be made on compacted thickness. Degree of Compaction: Minimum 98% of MDD (Modified Proctor)"						Seven Two Three
44	(4) Part : 2(Road),A)	3.06.1.2	PCMD@1.2: Providing Prime coat @1.2 liter/sqm with cut back bitumen to be prepared by cutting back 60/70 penetration grade straight run bitumen (conforming to the requirements of ASTM/ AASHTO in the ratio of 100 parts by volume of bitumen to 40-60 parts by volume of kerosene depending on the porosity of the surface and will be decided by field trials, the correct quantity that is completely absorbed within 24 hours including carefully cleaning of the surface of the granular base material to be primed and spraying cut back bitumen at a temperature from 100°C to 120°C by mechanical distributor, etc. complete as per direction of the E-I-C. [Retail]	sqm	9270.000	130.563	One Hundred And Thirty Point Five Six Three	1210319.010	Twelve Lakh Ten Thousand Three Hundred And Nineteen Point Zero One
45	(4) Part : 2(Road),A)	3.06.5.2	40mmDC (BG-60/70): Providing 40mm thick (minimum) compacted pre-mixed bituminous surfacing - wearing course with 25mm downgraded crushed stone chips (LAA value < = 30%) complying with the specified grading requirement of the	sqm	9270.000	860.377	Eight Hundred And Sixty Point Three Seven Seven	7975694.790	Seventy-Nine Lakh Seventy-Five Thousand Six Hundred And

			relevant item of Road Design standards, water absorption not >2%, flakiness index not >35% mixed with 60/70 penetration grade straight run bitumen satisfying the requirements of ASTM/AASHTO. The bitumen and stone-chips shall be separately heated to a temperature 140°C ? 155°C and 150°C ? 170°C respectively before mixing. The mixing shall be done at temperature between 140°C ? 160°C at a separate place away from the fire. The bitumen and stone-chips mixture shall be laid uniformly on the road surface in single appropriate layer to give specified compacted thickness, maintaining specified camber, grade and super-elevation. The mixture should be rolled at a temperature not below 90°C with appropriate Steel Drum Roller (3-5 tons) & pneumatic multiple tire roller (8-10 tons) to full compaction, including supplying of all materials, their carriage, labourers tools and equipment etc. all complete as per the direction of the E-I-C. The bitumen in the mix shall be between @ 5.0% to 5.5% by weight of total mix or as determined by job mix design. (In order to achieve the specified grading a blending of nominal maximum size of 25mm, 19mm, 12mm, 6mm crushed stone chips and stone dust is suggested and proportion will have to determine by the laboratory analysis).[Retail]						Ninety-Four Point Seven Nine
46	(4) Part : 2(Road),A)	1.02	Project Profile Signboard: Providing and fixing of typical project profile signboard as per direction of E-I-C, to be placed at a suitable place of the site including submission of proposals for the materials & size of the signboards (recommended size: 1800mm x 1200 mm with 2 nos. 75mm dia. MS post, outer & inner frames of board shall be 50mm x 50mm x 5mm & 25mm x 25mm x 5 mm respectively) and text layout to the engineer for approval which will be positioned as directed by the engineer and removing the same on completeion of the works or	sqm	2.160	14560.600	Fourteen Thousand Five Hundred And Sixty Point Six	31450.896	Thirty-One Thousand Four Hundred And Fifty Point Eight Nine Six

			as instructed by the E-I-C. Sheeting will be made of encapsulated lens with retro-reflective type and						
47	(4) Part : 2(Road),A)	1.11	.Photography: Shooting of still photographs by professinal photographer at outdoor and indoor of construction and other works of building, bridges, roads etc. for recording the progress of works at any distances including hiring of vehicle, equipment for photo shooting, lightening, mixing, lettering, editing including cost of digitized media & min. 10 nos.4R images printed on photo paper etc. all complete as per direction of E-I-C.	hour	3.000	383.863	Three Hundred And Eighty-Three Point Eight Six Three	1151.589	One Thousand One Hundred And Fifty-One Point Five Eight Nine
48	(4) Part : 2(Road),A)	1.09	"Providing 3 sets as-built drawings subject to Engineer's approval produced in AutoCAD software in 584.5 mm x 413.5 mm (A-2 size) standard drawing paper, and operating and maintenance manual of the equipment and plant incorporated in the works, if any, in original by the date stated in the particular conditions of contract (PCC). If the contractor does not supply the as-built drawings and operating & maintenance manuals by the date stated in the particular conditions of contract (PCC), or they do not receive the Engineer-in-charge's approval, the Engineer-in-charge shall withhold the amount stated in the PCC from the payments due to the contractor. The as-built drawings must show the permanent works as actually constructed and reflect the revision of drawings supplied to the contractor during the Contract as well as revisions of drawings supplied to the contractor during the contract. (One set of as-built drawings shall be considered for measurement and payment) [PWD 01.2.1]"	Per Tender	1.000	24554.500	Twenty-Four Thousand Five Hundred And Fifty-Four Point Five	24554.500	Twenty-Four Thousand Five Hundred And Fifty-Four Point Five
49	(4) Part : 2(Road),A)	3.12.08.02	RMP(By-TPC): Providing and applying road markings of center line and stop line etc. With minimum 5 to 6 mm thick hot applied white/yellow thermoplastic compound (The materials shall comply with BS3262:1987' Specification for Hot-applied Thermoplastic Road	sqm	720.000	800.480	Eight Hundred Point Four Eight	576345.600	Five Lakh Seventy-Six Thousand Three Hundred And Forty-Five Point Six

			Marking Materials') by special applicator machine on road/plain surface, including cleaning the surface of all dirt, oils, grease, dust and other contaminants,demarcation at site and traffic control involved, the finished surface to be level, uniform and free from streaks and holes, etc. all complete in all respect as direction of the Engineer-in-charge. Rate is inclusive of cost of all materials, labour machinery, lighting, guarding, maintenance of diversion and all incidental charges in this connection.						
50	(4) Part : 2(Road),A)	3.12.04.3	"CRS-Plate: Providing and fixing of retro-reflectorized cautionary, mandatory and informatory sign as per standard drawing enumerated in Appendix-6 (type design for Traffic Signs) made of 18 BWG M.S. sheet of equilateral triangle/Circular/Rectangular plates of different sizes as mentioned in the drawing fitted with MS triangular/Rectangular frame of same size as plates by point welding (frames made by thorough welding of 25mmX25mmX3mm MS angle covering all sides of the plates and maximum 150mm center to center in the middle of frames in each vertical & horizontal directions), Plates are fitted with 50mm dia & 2.90mm thick MS pipes by continuous welding, including cutting of MS angle at touched point of MS pipe, including cost of providing 200mm long 4 nos. 12mm dia anchor bars be fitted at the lower part of the GI pipes by welding, making finishing, grinding and carrying to the working sites, the post firmly fixed to the ground by means of properly deigned foundation with cement concrete of minimum cylinder crushing strength of concrete 17.0Mpa at 28 days of curing (Suggested Mix Proportion 1:2:4), 60cm below the ground level, the signs properly erect in correct position, true to line and length, including two coats of painting with best quality synthetic enamel paint of approved brand & printing with retro-reflective paint of different approved colour, etc. all complete in	each	0.001	0.001	Zero Point Zero Zero One	0.000	Zero

			all respect as per approved drawing, specification and direction of the Engineer-in-charge. Rate is inclusive of cost of all materials, labour and all incidental charges in this connection. 435mm X 500mm Square with 435mm X 202mm supplementary Plate (For Informative Sign)"						
53	(4) Part : 2(Road),A)	3.04.3.2	EE(125mm): Brick on end edging (125mm across) with 1st class/picked bricks including cutting trenches true to level & maintaining grade, removing earth, re-filling & ramming the sides properly, including supplying and filling the gaps with local sand, etc. all complete as per direction of the E-I-C.	m	1520.000	208.247	Two Hundred And Eight Point Two Four Seven	316535.440	Three Lakh Sixteen Thousand Five Hundred And Thirty-Five Point Four Four
54	(4) Part : 2(Road),A)	3.04.1.2	PiEE(125mm): Labour charge for picking up the existing brick on end edging (125mm across) including staking the materials at a specified distance, etc. all complete as per direction of the E-I-C.	m	1600.000	14.390	Fourteen Point Three Nine	23024.000	Twenty-Three Thousand And Twenty-Four
55	(4) Part : 2(Road),A)	3.02.1.1	Sand (FM 0.50) filling on the road bed in the improved sub-grade with sand (minimum FM 0.5) free from dust, earth, other vegetable growth, foreign materials etc. including supplying all materials, spreading, watering, compacting by appropriate mechanical means to obtain a minimum Soaked CBR 8% or Design CBR at minimum compaction 98% of Maximum Dry Density (MDD) (Modified Proctor), etc. all complete as per direction of the E-I-C.	cum	220.000	815.826	Eight Hundred And Fifteen Point Eight Two Six	179481.720	One Lakh Seventy-Nine Thousand Four Hundred And Eighty-One Point Seven Two
							Grand Total:	19089457.348	One Crore Ninety Lakh Eighty-Nine Thousand Four Hundred And Fifty-Seven Point Three Four Eight

This Bill of Quantities (Item No: 41-50, 53-55), Part-2: (Road), A) is Electronically Signed by Mr. Khandaker Haque on behalf of Dockyard & Engineering Works Limited

Dockyard & Engineering Works Limited

Bill of Quantities (Fixed rates items No : 51-52) Part : 2(Road), A)

(4) Part-2: (Road)

A)Re-habilitation of Poura Bhaban road by BC with streetlight and Drain with footpath (Ch.0+000 to 2+400m) under Benapole Pourashava. Sarsha, Jashore.

This form contains items

1. Items with fixed rates . Tenderer should give consent by selecting "I AGREE " Combo box

Fixed Rate items

Item No.	Group	Item Code (if any)	Description of Items of Works	Measurement Unit	Quantity	Unit Price In figures (BDT)	Unit Price In words (BDT)	Total Price in figures (BDT)	Total Price In words (BDT)	Tenderer Response
51	(4) Part : 2(Road), A)	RUTDP-23.01	Providing and maintaining temporary semi pucca site office with necessary furniture, sanitary & electrical/power facilities,water supply arrangement office and survey equipment for the use of the Engineer and his staff. All complete including removal of structure and restoration of the site on completion of the work. The contractor shall submit the detailed plan and drawing of the site office for approval of the engineer . the site office should be provided with sufficient natural light. Heat protecting celling ,dam proofing etc. As per direction of E-I-C. all materials	LS	1	150000.000	One Lakh Fifty Thousand	150000.000	One Lakh Fifty Thousand	I AGREE

			equipment and plant, furniture, fitting, recovered from dismantling the office and removing access road will be the property of the contractor upon completion of the work. The contractor will responsible for maintaining the facilities of site office in good condition thoughout the contract period and payment of this item shall be made only with the final bill (1) Area of Fleid office : 30Sqm.							
52	(4) Part : 2(Road), A)	RUTDP-23.02	Labour shed for works (carryout all proposed Mitigation and Enhancement measures against construction activites) as specification the EMP table under particular specification of the document.	LS	1	80000.000	Eighty Thousand	80000.000	Eighty Thousand	I AGREE
							Grand Total:	230000.000	Two Lakh Thirty Thousand	

All items should be accepted by Tenderer

This Bill of Quantities (Fixed rates items No : 51-52) Part : 2(Road), A) is Electronically Signed by Mr. Khandaker Haque on behalf of Dockyard & Engineering Works Limited

Dockyard & Engineering Works Limited

Bill of Quantities (Item No: 56-71) Street Light.

(5) Street Light

Improvement of Doulatpur road by BC with streetlight and Drain with footpath (0+000m to 1+270m) with Doulatpur Choto Achra link road from (Ch0+000m to 1+226m) under Benapole Pourashava. Sarsha, Jashore.

Bill of Quantities

Item no.	Group	Item Code (if any)	Description of Item	Measurement Unit	Quantity	Unit Price In figures (BDT)	Unit Price In Words (BDT)	Total Price In Figures (BDT)	Total Price In Words (BDT)
56	(5) Street Light	8.02.2	Supplying and fixing of almirah type 18 SWG metal board of depth 228mm (6") duly painted with powder coating with epoxy polyester resin on all surfaces of board (gray / off-white) having built in push type / suitable locking arrangement including metal bridges of suitable size for fixing of all electrical control devices complete with suitable anchoring arrangement in wall / column and keeping provision for cable inlets and exits as required (only front surface of the board will be considered for measurement) accepted/approved by the Engineer-in-charge.With water tight arrangement. [PWD-4.9.2]	sqm	1.000	15248.343	Fifteen Thousand Two Hundred And Forty-Eight Point Three Four Three	15248.343	Fifteen Thousand Two Hundred And Forty-Eight Point Three Four Three
57	(5) Street Light	8.03.3.1	ENERGY METER Providing & fixing 415V + 10%, 50Hz three phase electronics digital energy meter (KWH meter) steel body with glass cover on prepared board inconformity with BDS IEC standard. [PWD-21.22.3	each	1.000	5724.103	Five Thousand Seven Hundred And Twenty-Four Point One Zero Three	5724.103	Five Thousand Seven Hundred And Twenty-Four Point One Zero Three
58	(5) Street Light	8.04.1.1	"Circuit Breaker (SPMCB) Providing & fixing on a prepared board 250 volt grade following single pole miniature circuit breaker (SPMCBs) having minimum breaking capacity 6-KA / I0 KA with thermal over-current and instantaneous electromagnetic short circuit release provision as per BDS IEC and IEC / VDE / NEMA / BS / JIS standard. SPMCBs accepted / approved by the Engineer-in-charge. [PWD-4.4.1] 5 ? 40 Amps (minimum 6 KA) MCB [PWD-4.4.1.1]10-100 Amps (Single Tariff) [PWD-21.22.3.1] "	each	8.000	676.951	Six Hundred And Seventy-Six Point Nine Five One	5415.608	Five Thousand Four Hundred And Fifteen Point Six Zero Eight
59	(5) Street Light	8.04.3.1	"TPMCCB Providing & fixing on a prepared board 500 volt grade following triple-pole molded case circuit breaker (TPMCCB) with thermal over-current and instantaneous electromagnetic short circuit release provision. Manufactured / Assembled and tested in accordance with IEC / VDE / NEMA / BS / JIS along with relevant BDS IEC standard. TPMCCBs accepted / approved by the Engineer-in-charge. [PWD-4.6.1] 15 - 100 Amps. (Minimum 10-KA) [PWD-4.6.1]"	each	2.000	6486.216	Six Thousand Four Hundred And Eighty-Six Point Two One Six	12972.432	Twelve Thousand Nine Hundred And Seventy-Two Point Four Three Two
60	(5) Street Light	8.05.05.2	"SURFACE WIRING (BYA) (THROUGH PVC CONDUIT) Surface conduit wiring with the following PVC insulated cable (BYA) & PVC insulated Green / Yellow bi-colour ECC wire (BYA) through PVC conduit of reputed manufacturer complete with 18 SWG GP sheet pull box with 3mm thick ebonite sheet cover, fixing materials, other accessories etc. including mending the damages good as required. All electrical contacts shall be of brass / copper connected through connector or soldering (no twisting shall be allowed) and cables shall be manufactured and tested according to IEC / BS / VDE standards along with relevant BDS standard as per detailed specification mentioned in Annexure-1. The work shall be carried out as per direction & approval of the Engineer In Charge. Cable manufacturer(s) must have valid type test certificate (within last seven years) from internationally accredited laboratory (like CPRI, KEMA etc.) accepted / approved by the Engineer In Charge [PWD-1.11.2] 1C-2x2.5sqmm (BYA) cable with 2.5sqmm (BYA) ECC wire through PVC pipe of minimum inner dia 25 mm having wall thickness of 1.7 mm"	m	500.000	204.215	Two Hundred And Four Point Two One Five	102107.500	One Lakh Two Thousand One Hundred And Seven Point Five
61	(5) Street Light	8.05.06.06	"SURFACE WIRING (NYY) (THROUGH PVC CONDUIT) Surface conduit wiring with the following PVC insulated and sheathed stranded cable (NYY) / XLPE insulated and PVC sheathed stranded cable (2XY) & PVC insulated Green / Yellow bi-colour ECC wire (BYA) through PVC conduit of reputed manufacturer complete with fixing materials, other accessories etc. as required including mending the damages good. All electrical contacts shall be of brass / copper connected through connector or soldering (no twisting shall be allowed) and cables shall be manufactured and tested according to IEC / BS / VDE standards along with relevant BDS standard as per detailed specification mentioned in Annexure-1. The work shall be carried out as per direction & approval of the Engineer In Charge.	m	50.000	2119.491	Two Thousand One Hundred And Nineteen Point Four Nine One	105974.550	One Lakh Five Thousand Nine Hundred And Seventy-Four Point Five Five

			Cable manufacturer(s) must have valid type test certificate (within last seven years) from internationally accredited laboratory (like CPRI, KEMA etc.) accepted / approved by the Engineer In Charge [PWD-1.14.2] 1C-4x25sqmm (NYY / 2XY) with 16 sqmm (BYA) ECC wire through PVC pipe of minimum inner dia 50 mm having wall thickness of 2.5 mm"						
62	(5) Street Light	8.05.12.2	"Overhead ASC Providing and drawing following PVC insulated aluminum stranded conductor in overhead line at proper sag complete with necessary GI binding wire as required as per BDS 1036. Cable manufacturer(s) must have valid test certificate from internationally accredited laboratory (like CPRI, KEMA etc.) accepted / approved by the engineer [PWD-3.11.2] IC-50 sq.mm (ANT)"	m	5500.000	99.673	Ninety-Nine Point Six Seven Three	548201.500	Five Lakh Forty-Eight Thousand Two Hundred And One Point Five
63	(5) Street Light	8.07.1.01	"EARTHING Earthing the electrical installation with 40 mm (1.5"") dia G.I. pipe (earth electrode) having 6.35 mm. dia hole across the pipe at 305 mm. interval securely bonded by soldering with 2 nos. of No-2 SWG HDBC earth leads (at the top of the electrode) with its protection by 20 mm. (3/4"") dia G.I. pipe up-to plinth level run at a depth of 609.6 mm (2 ft) below G.L up-to main board to be earthed including necessary connecting copper sockets, bolts, nuts, etc. complete for maintaining earth resistance within 1 ohm. [PWD-4.19] Depth of bottom of main electrode at 12954 mm. (42.5 ft) from GL & length of electrode 12192 mm. (40 ft). [PWD- 4.19.2]"	Set	1.000	25591.181	Twenty-Five Thousand Five Hundred And Ninety-One Point One Eight One	25591.181	Twenty-Five Thousand Five Hundred And Ninety-One Point One Eight One
64	(5) Street Light	8.10.23	"GI POLE(30') Providing following seamless GI pole fabricated with GI pipe complete with GI sockets, MS. base plate, top cover, necessary welding as required:- Total length-30?; Dia-6?; Length-20?; Thickness-4mm Dia-4?; Length-10?; Base plate-2?×2?×.25? [PWD- 3.2.3]"	each	52.000	22000.097	Twenty-Two Thousand Point Zero Nine Seven	1144005.044	Eleven Lakh Forty-Four Thousand And Five Point Zero Four Four
65	(5) Street Light	8.10.54	"STREET LIGHT FITTINGS (LED) Supply & fixing LED street light fittings of following specifications: Luminous efficacy: 100lm/w(minimum), Power Factor: minimum 0.95 Colour Rendering Index(Ra) :70≤Ra< 85 Driver: Should be of IEC standard such as MEANWELL/OSRAM/ENERGY+/SIGNIFY(PHILIPS) or equivalent. LED chips :EPISTAR / OSRAM / SIGNIFY(PHILIPS) / CREE / BRIDGELUX or equivalent. Colour temperature : 3500K-6500K (Warm-White) Material: Aluminium aloy Model & sample to be accepted / approved by the Engineer-in-charge (with 2 years warranty). GLORIA cat No- GLST. 1205 Energy+ EPSTL-18001 Cosmo BDTCL-LSTL-02 Cosmo BDTCL-LSTL-03 Asha Cat No. ACS-LSL 2343 Muspana Cat No MPSL100DL or equivalent products of SUNKO/Annyesha/SHWASH/Crescent or equivalent foreign made. 150 W [PWD- 6.8.3.1.2]"	each	52.000	8000.936	Eight Thousand Point Nine Three Six	416048.672	Four Lakh Sixteen Thousand And Forty-Eight Point Six Seven Two
66	(5) Street Light	PWD-3.17.2	"SERVICE BRACKET Providing and fixing of 1524 mm (5?) long 38.1 mm (1.5?) dia GI. Pipe service bracket complete with 1 no. of GI bend 2 nos. fixing clamps of 38.10 mm×6.35 mm (1.5? ×1/4?) size iron flat bar bolts, nots etc. Complete as required. [PWD-3.17.2]"	each	52.000	1353.902	One Thousand Three Hundred And Fifty-Three Point Nine Zero Two	70402.904	Seventy Thousand Four Hundred And Two Point Nine Zero Four
67	(5) Street Light	PWD-3.7.2.1	"POLE ERECTION Erection of following tubular pole up to 1524 mm (5?) depth by placing the pole base on one layer of 1st. Class brick flat soling over 76.2mm (3?) sand bedding and making 1:2:4 (1.5?×1.5?×6?) cc work around the pole up to 5? below GL and 1? above GL ,12.5mm (1/2?) thick cement plaster with neat cement finishing over concrete surface above GL including proper curing. Excavation & refilling and ramming the loose soil etc. as required. 9144 mm (30?) long MS/RCC/Spun PC pole [PWD-3.7.2.1]"	each	52.000	2678.258	Two Thousand Six Hundred And Seventy-Eight Point Two Five Eight	139269.416	One Lakh Thirty-Nine Thousand Two Hundred And Sixty-Nine Point Four One Six
68	(5) Street Light	PWD.--3.8.2	" WIRE PACK/CROSS ARM Providing and fixing 1219 mm (4?-0?) long 4 spool vertical wire rack fabricated with 38.10 mm ×76.2 mm ×38.1 mm× 6.35 mm (1.5? ×3? ×1.5? ×0.25?) MS channel complete wih 4 no's of `U? clamp made of 25.4 mm×6.35mm(1? ×1/4?) flat MS bar for fixing insulators and clamping the rack respectively including necessary welding GI nuts bolts washer etc with two coats of aluminum painting over prime coat of red oxide painting. [PWD-3.8.2]"	each	52.000	853.358	Eight Hundred And Fifty-Three Point Three Five Eight	44374.616	Forty-Four Thousand Three Hundred And Seventy-Four Point Six One Six
69	(5) Street Light	PWD-.4.1.2	".SUB DISTRIBUTION BOARD (SDB) Providing & fixing 250v,50Hz grade following concealed type sub-distribution board made of 18-SWG MS sheet complete with hinged type door, built in	each	52.000	4377.153	Four Thousand Three	227611.956	Two Lakh Twenty-Seven

			type locking arrangement, one no. 60 A capacity bus bar with required no of holes thereon on insulators at both ends copper blocks fr neutral and earth terminal,SPMCBS Manufactured /Assembled and tested in accordance with IEC/VDE/NEMA/BS/JIS along with relevant BDS IEC standard having minimum breaking capacity 6/10-KA with thermal over current and instantaneous electromagnetic short circuit release necessary arrangement for fixing of MCBs duly painted with powder coating with epoxy polyester resin on all surfaces of board (gray/off-white) etc. In front side there will be tempered thick fiber glass of minimum 8 mm thickness with rubber gaskets etc. with SPMCBs accepted/approved by the engineer in charge. 4-Way SDB (with box size minimum 220mmx 132mmx148mm) in coming :1 ×30 amps (6KA) & out-going : 4 ×5/10/15amps SPMCB (6KA) [PWD-4.1.2]"				Hundred And Seventy-Seven Point One Five Three		Thousand Six Hundred And Eleven Point Nine Five Six
70	(5) Street Light	PWD-4.29.6	"MAGNETIC CONTACTORS Supply & fixing 415/400/380 V magnetic contactors for AC3 duty having control circuit voltage 380-415 V/220-240V 50Hz. SIEMENS/SCHNEIDER/TELEMECANIQUE/ABB/DORMAN/SMITH/VITZRO as per international standard or equivalent brand accepted/approved by the Engineer-in-charge of the following ratings 80A (1th 125A)magnetic contactor [PWD-4.29.6]"	each	1.000	25591.181	Twenty-Five Thousand Five Hundred And Ninety-One Point One Eight One	25591.181	Twenty-Five Thousand Five Hundred And Ninety-One Point One Eight One
71	(5) Street Light	PWD-4.30.10	" THERMAL OVERLOAD RELAY Supply & fixing 415/400/380 V, 50 Hz thermal overload relay suitable for use with magnetic contactrs accepted/approved by the engineer in charge of the following ratings 90-110A [PWD-4.30.10]"	each	1.000	10662.630	Ten Thousand Six Hundred And Sixty-Two Point Six Three	10662.630	Ten Thousand Six Hundred And Sixty-Two Point Six Three
							Grand Total:	2899201.636	Twenty-Eight Lakh Ninety-Nine Thousand Two Hundred And One Point Six Three Six

This Bill of Quantities (Item No: 56-71) Street Light. is Electronically Signed by Mr. Khandaker Haque on behalf of Dockyard & Engineering Works Limited

Dockyard & Engineering Works Limited

Bill of Quantities (Fixed rates items No : 72-83) Environment Management

Part (6) Environmental Management

(i) Re-habilitation of Poura Bhaban road by BC with streetlight and Drain with footpath (Ch.0+000 to 2+400m) under Benapole Pourashava. Sarsha, Jashore

(ii) Improvement of Doulatpur road by BC with streetlight and Drain with footpath (0+000m to 1+270m), withDoulatpur Choto Achra link road (Ch 0+000m to 1+226m).

This form contains items

1. Items with fixed rates . Tenderer should give consent by selecting "I AGREE " Combo box

Fixed Rate items

Item No.	Group	Item Code (if any)	Description of Items of Works	Measurement Unit	Quantity	Unit Price In figures (BDT)	Unit Price In words (BDT)	Total Price in figures (BDT)	Total Price In words (BDT)	Tenderer Response
72	(6) Environment Management	eme-1	Dust suppression measures by water spraying throughtout the construction period in and aro	LS	1	50000.000	Fifty Thousand	50000.000	Fifty Thousand	I AGREE
73	(6) Environment Management	eme-2	Air quality(SPM,PM10,PM2.5)measurements. Measurements can be measured from the pre aproved public institute/University at four locations in and around the subproject boundary twice during the construction phase for overall subproject construction activities	each	12	10000.000	Ten Thousand	120000.000	One Lakh Twenty Thousand	I AGREE
74	(6) Environment Management	eme-3	Noise level measurements will be taken from the pre aproved public institute/University at six locations in and around the subproject boundary twice during the construction phase for overall subproject construction activities	each	6	5000.000	Five Thousand	30000.000	Thirty Thousand	I AGREE
75	(6) Environment Management	eme-4	Water quality (PH,BOD5, and NH3) measurements of the 6 outfalls & 2 locations at sources for drains. measurements will be taken from the pre aproved public institute/University once during the construction period.	each	12	10000.000	Ten Thousand	120000.000	One Lakh Twenty Thousand	I AGREE
76	(6) Environment Management	eme-5	Prevention of the spillage and leakage of polluting materials (Detailled procedure will be provided in the ESPM).	LS	1	25000.000	Twenty-Five Thousand	25000.000	Twenty-Five Thousand	I AGREE
77	(6) Environment Management	eme-6	Campsite waste disposal facility during the construction period. Including collection transportation, and dumping of wastes at the Zidda Bazar dumping site:2 units (1 for organic waste and 1 for inorganic waste).	each	2	20000.000	Twenty Thousand	40000.000	Forty Thousand	I AGREE
78	(6) Environment Management	eme-7	Campsite water supply facilities. Preferably 1 tube well at the labor Campsite (depending on site conditions,DSM Consultant will assist the contractor for selecting the option).	each	1	20000.000	Twenty Thousand	20000.000	Twenty Thousand	I AGREE
79	(6) Environment Management	eme-8	Campsite sanitation facilities 3 toilets preferably sanitary toilets at the labor Campsite. (1 for women,2 for men)	each	2	20000.000	Twenty Thousand	40000.000	Forty Thousand	I AGREE
80	(6) Environment Management	eme-9	Providing safety gear packages like hand gloves, spectacies for	each	50	3000.000	Three Thousand	150000.000	One Lakh Fifty Thousand	I AGREE
81	(6) Environment Management	eme-10	One first aid box with necessary accessories (Contractor is responsible for providing necessary medicoines. Saline as per requlement during construction period.	each	1	2500.000	Two Thousand Five Hundred	2500.000	Two Thousand Five Hundred	I AGREE
82	(6) Environment Management	eme-11	"Tree plantation to compensate the felled down trees and enhance the ecological condition in the subproject area preferable local fruits, flowers, medicinal, and ornamental trees, Mango/jam/jackfruits/kathbadam/shimul/polash/jarul/sonalu/kadom/satim/kanth Golap/Neem/Arjun/Amlok/Horitoki/Bohera/Mahogany/shlikoroi/Babla/Rain tree/Gamari/segun/Garjan/Bannyan tree/Palm tree(including protection ,fencing and conservation during project defect liability period) Tree plantation detailed will be given in the ESPM"	each	150	750.000	Seven Hundred And Fifty	112500.000	One Lakh Twelve Thousand Five Hundred	I AGREE
83	(6) Environment Management	eme-14	Cautionary signs-12 nos (detailed spcifications will be given in the ESPM)	each	12	2500.000	Two Thousand Five Hundred	30000.000	Thirty Thousand	I AGREE
							Grand Total:	740000.000	Seven Lakh Forty Thousand	

All items should be accepted by Tenderer

This Bill of Quantities (Fixed rates items No : 72-83) Environment Management is Electronically Signed by Mr. Khandaker Haque on behalf of Dockyard & Engineering Works Limited

Dockyard & Engineering Works Limited

Bill of Quantities (Salvage items 84-85)

Part 3 and Part 4

This form contains items no-84 & 85

1. Salvage items. Tenderer should give consent by selecting "I AGREE " Combo box

Salvage materials

Item No.	Group	Item Code (if any)	Description of Items of Works	Measurement Unit	Quantity	Unit Price In figures (BDT)	Unit Price In words (BDT)	Total Price in figures (BDT)	Total Price In words (BDT)	Tenderer Response
84	Part 3	3.04.1.2	1st class Brick	each	28496	14.188	Fourteen Point One Eight Eight	404301.248	Four Lakh Four Thousand Three Hundred And One Point Two Four Eight	I AGREE
85	Part 4	3.04.1.2	1st class Brick	each	20800	14.188	Fourteen Point One Eight Eight	295110.400	Two Lakh Ninety Five Thousand One Hundred Ten Point Four	I AGREE
							Grand Total:	699411.648	Six Lakh Ninety Nine Thousand Four Hundred Eleven Point Six Four Eight	

All items should be accepted by Tenderer

This Bill of Quantities (Salvage items 84-85) is Electronically Signed by Mr. Khandaker Haque on behalf of Dockyard & Engineering Works Limited