

Bill of Quantities

Name of Works: Construction of watch tower at PSTP compound.

IFT No.: 46.113.433.00.00.164.25-09, Package No.: RW51, Lot No.: Single

Sl. No.	Description of work	Unit	Quantity	Rate	Total Amount
1	Mobilization and cleaning site before commencing actual physical work and during contract period and demobilization after completion of the works under contract to be accepted by the Engineer-in-charge. This work shall also covers clayey cleaning and clearing, cutting or filling, dressing the project area on and in the ground to an extent that all the events of works of the project can be executed smoothly in a working environment with a particular attention on safety and security in all respects, and to stockpile the end outcome to a place for disposal agreed by the Engineer-in-charge, where, payments are to be based on ground area determined by the Engineer-in-charge and be proportionate to the percentage progress of work under contract as a whole in all respects and approved by the Engineer-in-charge.	sqm	48.47	218.001	10566.508
2	Earth work in excavation in all kinds of soil for foundation trenches including layout, providing center lines, local bench-mark pillars, levelling, ramming and preparing the base, fixing bamboo spikes and marking layout with chalk powder, providing necessary tools and plants, protecting and maintaining the trench dry etc., stacking, cleaning the excavated earth at a safe distance out of the area enclosed by the layout etc. all complete and accepted by the Engineer-in-charge, subject to submit method statement of carrying out excavation work to the Engineer-in-charge for approval. However, engineer's approval shall not relieve the contractor of his responsibilities and obligations under the contract. Earthwork in excavation in foundation trenches up to 1.5 m depth and maximum 10 m lead: in very stiff (hard) clayey soil/ rubbish etc.	cum	23.96	202.001	4839.944
3	One layer brick flat soling in foundation or in floor with first class/picked jhama bricks including preparation of bed and filling the interstices with local sand, levelling etc. complete and accepted by the Engineer-in-charge	sqm	26.33	636	16745.880
4	Supplying and laying of single layer polythene sheet weighing one kilogram per 6.5 square meter in floor or anywhere below cement concrete complete in all respect and accepted by Engineer-in-charge.	sqm	23.16	47.001	1088.543

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5	Reinforced cement concrete works with minimum cement content relates to mix ratio 1:2:4 having minimum $f_{cr} = 24$ MPa, satisfying a specified compressive strength $f_c = 19$ MPa at 28 days on standard cylinders as per standard practice of Code ACI/BNBC/ASTM, cement conforming to BDS EN-197-1-CEM-I, 52.5N (52.5 MPa) / ASTM-C 150 Type - I, best quality sand [50% quantity of best local sand (F.M. 1.2) and 50% quantity of Sylhet sand or coarse sand of equivalent F.M. 2.2] and 20 mm down well graded picked jhama brick chips conforming to ASTM C-33 including breaking chips and screening, making and placing shutter in position maintaining true to plumb, making shutter water-tight properly, placing reinforcement in position; mixing in standard mixer machine with hopper fed by standard measuring boxes or mixing in batching plant, casting in forms, compacting by vibrator machine and curing at least for 28 days, removing centering-shuttering after specified time approved; including cost of water, electricity, laboratory testing charges of materials and concrete cylinders as required, cost of all materials and other charges etc. all complete, approved and accepted by the Engineer-in-charge. (Rate is excluding the cost of reinforcement and its fabrication, placing, binding etc. and the cost of shuttering & centering) Individual & combined footing, pile cap, raft/mat, floor slab and foundation beam up to plinth level	cum	8.21	7,517.001	61714.578
6	Centering and shuttering, including strutting, propping etc. (The formwork must be rigid enough both in and out of plane, to make the concrete surface true to the designed shape and size by using necessary MS sheets of minimum 16 BWG, angles of minimum size 40 mm x 40 mm x 5 mm, flat bars etc.) and removal of form after hardening of the concrete for: Pedestal, column, column capital, lift wall and wall up to ground floor	sqm	44.42	522.001	23187.284
7	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.	cum	6.74	1,088.000	7333.120
8	Mass concrete (1:2:4) in foundation or in floor with cement, sand (F.M. 1.2) and picked jhama brick chips including breaking of chips, screening, mixing, laying, compacting to required level and curing for at least 7 days including the supply of water, electricity, costs of tools & plants and other. Mass concrete in foundation (1:2:4) with brick chips and local sand of F.M. 1.2.	cum	0.38	8886.001	3376.680

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9	Providing compacted sub-base course with well graded material of crushed well burnt picked jhamu /1st class brick bats and sand (FM 0.8) with mixing proportion 2 : 1 having compacted thickness made as per specification including local handling, spreading uniformly to proper grade camber and super elevation, packing, rolling properly with 8 to 10 ton capacity power driven road roller and watering properly for compaction of 100% MDD (standard) blinding with sand including cost of fuel, lubricants, spares, maintenance, driver etc. all complete and accepted by the Engineer-in-charge.	cum	4.07	5449.001	22177.434
10	125 mm brick work with first class bricks in cement sand (F.M. 1.2) mortar (1:6) and making bond with connected walls including necessary scaffolding, raking out joints, cleaning and soaking the bricks for at least 24 hours before use and washing of sand curing at least for 7 days in all floors including cost of water, electricity and other charges etc. all complete and accepted by the Engineer.(Cement:CEM-II/A-M)In ground floor	sqm	72.75	1,373.001	99885.823
11	Providing minimum 12 mm thick cement sand (F.M. 1.2) plaster (1:6) with fresh cement to both inner and outer surface of wall, finishing the edges and corners including washing of sand, cleaning the surface, curing at least for 7 days, cost of water, electricity, scaffolding and other charges etc. all complete in all respect as per drawing and accepted by the Engineer-in-charge. (Cement: CEM-II/A-M) ground floor	sqm	17.44	303.001	5284.337
12	Providing minimum 6 mm thick cement sand (F.M. 1.2) plaster (1:4) with fresh cement to ceiling, R.C.C. columns, beams, surface of stair case, sunshades, cornices, railings, drop wall, louvers, fins and finishing the corners and edges including washing of sand, cleaning the surface, curing at least for 7 days, cost of water, electricity, scaffolding and other charges etc. all complete in all respect as per drawing and accepted by the Engineer-in-charge. (Cement: CEM-II/A-M) ground floor.	sqm	16.12	395.001	6367.416
13	Provision for bailing out of all kinds of sewage and sludge from existing sewer line for making dry and working arrangement in downstream of working area with all leads & lifts of pumps or any other means etc. all complete as per direction of the Engineer in charge.	day	2.00	1862.001	3,724.002
14	Supply of best quality 300 mm x 300 mm size glazed Pavement tiles from Government owned Mirpur Ceramics.	sft	175.00	165.001	28875.175

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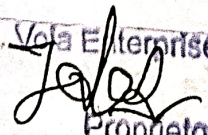
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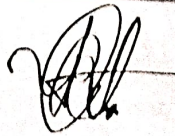
15	Grade 400 (RB 400 /RB 400W: complying BDS ISO 6935-2:2006) ribbed or deformed bar produced and marked according to Bangladesh standard, with minimum yield strength, f_y (ReH)= 400 MPa but f_y not exceeding 450 MPa and whatever is the yield strength within allowable limit as per BNBC/ ACI 318, the ratio of ultimate tensile strength f_u to yield strength f_y , shall be at least 1.25 and minimum elongation after fracture and minimum total elongation at maximum force is 16% and 8% respectively : up to ground floor.	kg	1715.25	121.001	207546.965
16	Exterior standard acrylic emulsion paint of approved best quality and color having water resisting properties and resistance properties against fungi, fading & flaking delivered from authorized local agent of the manufacturer (Berger weather coat smooth/ Elite smooth exterior/ Asian apex weather coat or equivalent brand) in a sealed container; applying to exterior surface with surface preparation including cleaning, drying, making free from dirt, grease, wax, removing all chalked and scaled materials, fungus, mending good the surface defects using sand paper and necessary scaffolding; applying 1 coat of exterior sealer of specified brand on prepared surface; then applying 1 coat of exterior putty of specified brand for levelling, spot filling, crack filling and cutting by sand paper/zero water paper; finally applying 2 coats of exterior emulsion paint spreading by brush/roller/spray & necessary scaffolding etc. upto desired finishing, elapsing specified time for drying or recoating; all complete in all floors and accepted by the Engineer-in-charge.	sqm	71.41	274.001	19566.411
17	Supplying, fitting and fixing of aluminium sliding composite window with mosquito mesh as per the U.S. Architectural Aluminium Manufacturer's Association (AAMA) standard specification and BDS 1879:2014 having 1.2 mm thick outer bottom (size 95.00 mm, 38 mm, 0.870 kg/m), 1.2 mm thick outer top (size 95.00 mm, 28.50 mm, 0.97kg/m), 1.2 mm thick shutter top (size 33 mm, 26.80 mm, 22 mm, 0.536 kg/m), 1.2 mm thick shutter bottom (size 60 mm, 24.40 mm, 0.736 kg/m), 1.2 mm thick outer side (size 95.00 mm, 19.50 mm, 0.738 kg/m), 1.2 mm thick shutter lock (size 49.20 mm, 26.2 mm, 0.661 kg/m), 1.2 mm thick shutter lock (size 34.40 mm, 32.10 mm, 0.665 kg/m), 1.2 mm thick mesh section (size 42.20 mm, 13.20 mm 0.460 kg/m), all aluminium members (total weight 12.79 kg) will be anodized to aluminium bronze/silver/ss/black colour with a coat not less than 15 microns in thickness or powder coated to any colour with a coat not less than 25 microns in thickness and density of 4 mg per square cm etc. including all accessories like sliding door key lock, sliding door wheel, sliding door mohiar, sliding door neoprene, bolts and nuts including sealants, keeping provision for fitting fiber mesh including	sqm	5.02	6,523.001	32745.465

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	labour charge for fitting of accessories, making grooves and mending good damages, carriage, and electricity complete in all respect as per drawing and accepted by the Engineer-in-charge.				
18	Supplying, fitting and fixing in Aluminium door frames, windows, partitions and curtain wall distortion free glass of approved quality and shade including cost of fitting fixing all necessary accessories etc. complete in all respect as per drawing and accepted by the Engineer-in-charge. 5 mm thick tinted glass	sqm	5.02	1,492.001	7489.845
19	Supplying, fitting and fixing window grill made of 12 mm x 12 mm M.S. solid bar 140 mm c/c with outer frame of 38 mm x 6mm F.I. bar as per design approved and accepted by the Engineer-in-charge.	sqm	5.02	2,683.001	13468.665
20	Supplying, fitting and fixing M.S. door shutter made with 38 mm x 38 mm x 6 mm angle outer frame, inner member 25 mm x 6 mm F.I. bar, cladding with 16 BWG M.S. sheet, 04 nos. 75 mm long hinge, 02 nos. locking arrangement with 50 mm x 50 mm x 6 mm M.S. angle chowkat including all charges for welding, riveting etc. including cost of supplying all essential fittings like iron hinges, socket bolts, clamps, for fitting and fixing the frame, making necessary holes in brick walls and R.C.C works and fitting with C.C. (1:2:4) and mending good the damages including all cost of carriage, workshop charges, electricity, and labour for fittings, fixing, curing etc. all complete and accepted by the Engineer-in-charge. (Rate is excluding the costs of painting).	sqm	1.95	7,636.001	14890.202
21	Mild steel, Grade 250 with minimum fy = 250 MPa, work in roof truss: supplying and fabrication of mild steel sections as per design, hoisting, fitting and fixing in position with bolt and nuts or rivets or welds and providing two coats of anti-corrosive paint over a prime coat of red oxide paint etc. complete and accepted by the Engineer-in-charge.(Measurement to be given for truss member only).	Kg	484.70	138.001	66889.085
22	Manufacturing, supplying, fitting and fixing of stair railing of standard height of any design and shape with square box (2 nos. box in each tread) made by thorough welding of 2 nos. 25 mm x 25 mm x 5 mm M.S. angle, engraving each box 150 mm in the concrete by 50 mm x 50 mm x 6 mm anchor plate at base, welding 50 mm x 50 mm x 6 mm F.I. bar in inclined plain with the top of the box fitted in the grooved wooden rail and 2 Nos. 225 mm x25 mm finished section of wooden strip fitted and fixed at mid height of railing at both side of M.S. angle box in inclined plain parallel to the hand rail etc. fitted and fixed by necessary screws, nails including cutting grooves in concrete, mending good the damages with cement concrete (1:2:4) applying 1st class french polish to wooden hand rail and inclined wooden strip and painting to F.I bar and square box with 2 (two) coats of synthetic	sqm	21.40	5,486.001	117400.421

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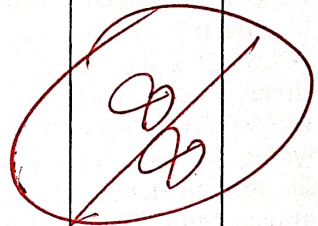
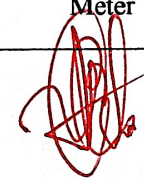
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	enamel paint of approved quality and colour over a prime coat etc. complete in all respect for all floors and accepted by the Engineer-in-charge. (Exposed area of railing will be considered for measurement, rate is excluding the cost of hand-rail and cost of painting)				
23	Standard Synthetic Enamel paint of approved best quality and colour delivered from authorized local agent of the manufacturer (Berger jhilik synthetic enamel/Elite quick drying/Asian decora synthetic enamel or equivalent brand) in a sealed container, having high water resistance, high bondability, flexibility property; using specified brand thinner applying to metallic or wooden surface by brass/roller/spray in 2 coats over single coat anti-corrosive coating including cleaning, drying, making free from dirt, grease, wax, removing all chalked and scaled materials, all complete in all floors and accepted by the Engineer-in-charge.	sqm	124.00	229.001	28396.124
24	Concealed conduit wiring for following point looping at the switch board with earth terminal with 1C-2x1.5 sqmm PVC insulated and sheathed stranded cable (BYM) & same size PVC insulated ECC (BYA) (Green / White color) including circuit wiring with IC-2x2.5 sqmm PVC insulated and sheathed stranded cable (BYM) & same size PVC insulated ECC (BYA) Green / White color thr.ough PVC conduit (one conduit from switch board to common point on ceiling is considered to draw 3 pair of cable) of reputed manufacturer of minimum 25 mm Dia. & 1.5 mm wall thickness complete with 18 SWG GP sheet / PVC switch board & pull box with 3mm thick ebonite sheet cover, without switch, fixing materials etc.(without switch) as required including mending the damages good. All electrical contacts shall be of brass / copper connected thr.ough connector or soldering (no twisting shall be allowed) and cables shall be manufactured and tested according to relevant IEC / BDS / BS / VDE standards and as per detailed specification mentioned in Annexure-1. The work shall be carried out as per direction & approval of the Engineer. Cables manufactured by govt. of BANGLADESH owned / shared company ltd. (Eastern cables) approved by the Engineer. Light / exhaust or wall bracket fan point.	each	8.00	919.001	7352.008
25	Concealed conduit wiring for following point looping at the switch board with earth terminal with 1C-2x1.5 sqmm PVC insulated and sheathed stranded cable (BYM) & same size PVC insulated ECC (BYA) (Green / White color) including circuit wiring with IC-2x2.5 sqmm PVC insulated and sheathed stranded cable (BYM) & same size PVC insulated ECC (BYA) Green / White color thr.ough PVC conduit (one conduit from switch board to common point on ceiling is considered to draw 3 pair of cable) of reputed manufacturer of minimum 25 mm Dia. & 1.5 mm wall thickness complete with	each	1.00	919.001	919.001

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	18 SWG GP sheet / PVC switch board & pull box with 3mm thick ebonite sheet cover, without switch, fixing materials etc.(without switch) 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 relevant IEC / BDS / BS / VDE standards and as per detailed specification mentioned in Annexure-1. The work shall be carried out as per direction & approval of the Engineer. Cables manufactured by govt. of BANGLADESH owned / shared company ltd. (Eastern cables) approved by the Engineer. Fan point.				
26	Surface conduit wiring with the following PVC insulated and sheathed cable (BYM) & Green / White colour PVC insulated ECC wire (BYA) through PVC conduit of reputed manufacturer complete with 18 SWG GP sheet pull box with 3 mm thick ebonite sheet cover, 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 relevant IEC / BDS / BS / VDE standards and as per detailed specification mentioned in Annexure-1. The work shall be carried out as per direction & approval of the Engineer. 1C-2x10 sqmm (BYM) cable with 10 sqmm (BYA) ECC wire through PVC pipe of minimum inner dia 30 mm having wall thickness of 1.5 mm	 Meter	200.00	468.001	93600.200
27	Surface channel wiring with the following PVC insulated and sheathed stranded cable (BYM) & Green / White colour PVC insulated ECC wire (BYA), through minimum 1 mm thick PVC channel 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 relevant IEC / BDS / BS / VDE standards and as per detailed specification mentioned in Annexure-1. The work shall be carried out as per direction & approval of the Engineer. Cables manufactured by govt. of BANGLADESH owned / shared company ltd. (Eastern cables) approved by the Engineer. 1C-2x1.5 sqmm (BYM) cable with 1.5 sqmm (BYA) ECC wire.	 Meter	200.00	103.001	20600.200
28	Surface channel wiring with the following PVC insulated and sheathed stranded cable (BYM) & Green / White colour PVC insulated ECC wire (BYA), through minimum 1 mm thick PVC channel complete with fixing materials, other accessories etc. as required including mending the damages good. All electrical contacts shall be of	Meter	200.00	138.001	27600.200

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	brass /copper connected through connector or soldering (no twisting shall be allowed) and cables shall be manufactured and tested according to relevant IEC /BDS / BS / VDE standards and as per detailed specification mentioned in Annexure-1. The work shall be carried out as per direction & approval of the Engineer. Cables manufactured by govt. of BANGLADESH owned / shared company ltd. (Eastern cables) approved by the Engineer. 1C-2x2.5 sqmm (BYM) cable with 2.5 sqmm (BYA) ECC wire.				
29	Providing & fixing 250 volt single phase 3-pin combined switch socket outlet (surface /Concealed type) manufactured and tested in accordance with relevant IEC / VDE / NEMA / BS / JIS standards mounted on required size 18 SWG galvanized plain sheet board / Plastic Board (Self-extinguishing 650oC) of 76.2 mm. (3") depth. (Manufacturer shall have certificate of standard which they follow). 13 / 15 / 16 / 20 Amps. Made in ENGLAND / GERMANY / JAPAN / USA or EU countries.	each	2.00	1,129.001	2258.002
30	Providing & fixing 250 volts. 5 / 6 amps (minimum) concealed type following switch /switch socket manufactured and tested in accordance with relevant IEC / VDE / NEMA /BS / JIS standards mounted on required size 18 SWG galvanized plain sheet / PVCboard (Self-extinguishing 650oC) of 76.2 mm (3") depth. All electrical contacts shall be of brass / copper. (Manufacturer shall have certificate of standard which they follow). Made in ENGLAND / GERMANY / JAPAN / USA or EU countries.	each	2.00	827.001	1654.002
31	Gang type fan Regulator. Made in ENGLAND / GERMANY / JAPAN / USA or EU countries.	each	1.00	1,491.001	1491.001
32	Supply & fixing of the following energy savings lamp (CFL) having illuminate even at low voltage as 110 volts. Built in short circuit & over voltage protection feature & 8000 hrs. (minimum) lifetime, 230V / 250V, 50Hz manufacturers by OSRAM / PHILIPS /ENERGYPAC / CBE / CORONA / HAVELLS / GE EDISON / EASTERN / PRODIP / MEP / METRO / HARMONICS / SUPERSTAR / TRANSTEC / ENERGY+ or equivalent brand accepted / approved by the Engineer. 40 Watt LED Lamp.	each	10.00	1,200.001	12000.010
33	Supplying & fixing AC capacitor type ceiling fan (without regulator) of following specifications and sizes complete with minimum 305 mm (1 ft) long and 0.75 -1.0" dia, 2.3 mm thickness MS pipe down rod, tempered cast aluminum blades, 2.5 µf 400V AC capacitor, canopy, double Z ball bearing, best quality silicon sheet core, best quality copper made super enamel wire, aluminum alloyed casting body having safety pin with powder coated heat / docu paint as required etc. connecting PVC wire	each	1.00	4,045.001	4045.001

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complete as required. Rated voltage : 220 volts Rated frequency : 50 Hz Rated speed : 300 rpm $\pm$ 5 % Service value : Minimum 3.5 m3 / min / watt Temperature rise : Maximum 55°C Class of insulation : Class-E Noise level: 60 db at a distance 1 meter. 1400 mm. (56") Sweep. Input power: Maximum 65 watt.				
			Grand Total Tk=	977899.292
Taka In words : Nine Lac Seventy Seven Thousand Eight Hundred Ninety Nine Point Two Nine Two Only.				

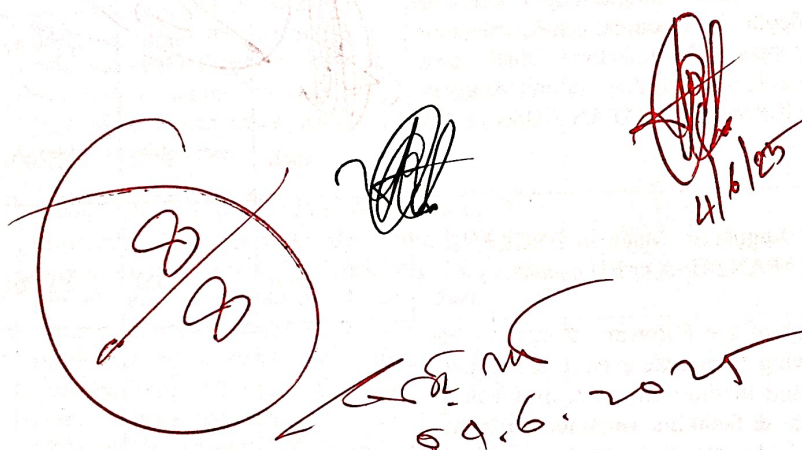
Tender Price quoted by the Tenderer: ~~(0.50% (Zero point five percent))~~ above / below / at par the total estimated cost in the BOQ

This Bill of Quantities contains [insert number] corrections duly initialled and signed by the Tenderer [strike out the inappropriate]

Note

1. It is suggested that the Tenderer uses these sheets of the BOQ in order to avoid any manipulation, distortion and inadvertent mistakes or omissions in course of preparing the Tender by the Tenderer
2. Tenderer's profit, overheads, VAT and all other charges including corresponding incidental service charges for banking shall be deemed included in all the unit rates and prices in the BOQ against each basic item or activity and, thus forth the total Tender Price quoted by the Tenderers.

Follow the Guidance notes under Section 6 in filling this Schedule



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