امارت اسلامی افغانستان

وزارت آب و انرژی

ریاست عمومی خدمات انجنیری تأسیسات آب

تخنیکی بورد

Project Name:	Rehabilitation of Sultan Dam
Project Code:	
Province:	Ghazni
District:	Khwaja Omari
Date:	

Bill of Quantities Sultan Dam Rehabilitation (A)

S/No.	Item Description	Unit	Quantity	Unit Rate (AFN)	Amount (AFN)
a	**General & Specific Items**				
a.1	**Mobilization and Demobilization:** shall include all activities and associated tasks for transportation of contractor's personnel, equipment, and operating supplies to the site; establishment of office and accommodation for Supervisor and MEW engineers, offices, buildings, and other necessary general facilities for the contractor's operations at the construction site. At the end, the whole construction site shall be cleaned as per satisfaction of the engineer.	L.S	1.00		
a.2	**Site Preparation:** This may include any clearing and grubbing of the dam site	L.S	1.00		
a.3	**Diversion:** Multiple-Stage Diversion is recommended; however, the contractor is fully responsible for diversion and dewatering whenever and wherever required, moreover, the diversion plan shall be subjected to owner's approval. Shall also include dismantling of diversion after the construction as directed by the engineer.	L.S	1.00		
a.4	**Dewatering:** Planning for dewatering whenever and wherever required specially during the excavation and placing of foundation. Dewatering plan shall be subjected to owner's approval.	L.S	1.00		
Subtotal-a (General and Specific Items)					
b	**162m Long Earthfill Saddle Dam**				
Excavation of Alluvial Soil					
b.1	Soft Excavation: Removing the top 3 meters of the existing ground, storing it nearby that could be reused as random fill in the saddle shoulders.	Cum	41,407.20		
b.2	Soft Excavation: Cavity (shear key) Excavation (for Clay-Core of the saddle) in ordinary soil with side slopes of 1:1 (H:V) with base width of 5 m.	Cum	4,082.40		
b.3	Soft Excavation: Removing the top 0.5 meters at u/s reservoir area.	Cum	7,800.00		
b.4	Soft Excavation: Removal of top soil at various locations e.g. removal of the existing stone masonry saddle, Soft cutting including disposal of surplus material up to a maximum distance of 500 m or as directed by the site engineer.	Cum	2,000.00		
Fill Volume					
b.5	Embankment Zone-2: (Zone-2, random fill containing gravel, sand, and clay) as per the relevant drawing and design report, Backfilling with selected material from excavation or borrow pits from approved source including compaction to 95% of modified proctor in layers not more than 20 cm thick, and as per the direction of the site engineer.	Cum	28,147.50		
b.6	Core (Clay) Zone-1: Backfilling with selected material from excavation or borrow pits from approved source including compaction to 95% of modified proctor in layers not more than 15 cm thick in accordance to the relevant drawing and design report and satisfaction of the site engineer.	Cum	11,542.50		
b.7	Filter Zone (Zone-03): clean sand and gravel obtained from the river at the selected borrow areas). The filter zone should be compacted by Hand-Held compactors (5 tons) in layers of 20-25 cm. For gradation please refer to the design report.	Cum	6,520.50		
b.8	Gravel Bedding for Riprap: Gravel Layer at upstream face of the embankment i.e. below Riprap as per the relevant drawing.	Cum	1,490.40		

b.9	Toe Drain: Consisting of gravels containing some cobles to intercept the phreatic line (seepages) coming out of the dam body as per the relevant drawing and design report.	Cum	1,210.95		
b.10	Gravel Road: Gravel layer (0.5 m thick) at the top of the crest (162 m long and 7 m wide)	Cum	652.05		
b.11	Riprap consisting of large Boulders: Upstream Riprap (1m thick, 19 m high and 162 m wide) to prevent beaching affect of the waves, and prevent slope failure as per the relevant drawing and design report. Each stone is larger than 0.8 m.	Cum	5,832.00		
b.12	Upstream Clay Blanket: Upstream 1.2 m thick, and 82 wide Clayey blanket at Reservoir to control seepages from the reservoir into the subsurface layers as per the drawing and design report.	Cum	16,250.00		
b.13	Upstream Gravel Blanket: Upstream 0.5 m Gravel blanket overlayed on the top of the 1m thick compacted clay blanket.	Cum	7,475.00		
Drainage Pipes					
b.14	Perforated Toe Drain pipe (dia 25 cm) - HDPE or Class-E PVC or better to withstand the compaction of Hand-Held compactors, as per the relevant drawing and design report	m	162.00		
b.15	Perforated PVC pipe (dia 12 cm) used in drainage wells to capture the seepages and connect them to the toe drainage 25 cm pipe, as per the relevant drawing and design report	m	291.60		
b.16	Drilling of drainage wells at d/s, as per the relevant drawing and design report	m	291.60		
b.17	Gravel for Drainage wells, as per the relevant drawing and design report	Cum	0.83		
Solar Street Lights for 400m Crest Road					
b.18	Provision and installation of Solar Street Light Philips-SunStay Pro or equivalent every 25 meters of horizontal distance, with LED module: 6000 lm, LED, 37.4 W, Battery: Lithium Ferro Phosphate: 30 AH, 25.6 V; Solar Panel: 65W; MPPT Charge controller; equipped with Photo cell. Including Stainless Steel Pole (5m High, 76mm Dia, 3mm thickness) having base plate, RCC Foundation (1mx0.8m*0.8m), Anchor Bolts 4x12mm, and steel plate (200x200x10)mm for per steel pole with all the related activities and accessories	No	16.00		
Subtotal-b (Earthfill 162 m Long Saddle)					
c	**Main Dam Repairing (Gravity Section)**				
C.1	**Rock filled Concrete (RFC):** heightening of existing main dam, Supplying, placing, adding Hard stones, compacting and curing (15 MPA Concrete) including formworks as per relevant drawing. (50% HSCC)	m3	3,853.50		
C.2	**PCC pavement on Main dam crest:** Road on top of main dam, Supplying, placing, adding Hard stones, compacting and curing (31 MPA Concrete) including formworks as per relevant drawing.	m3	192.00		
C.3	**RCC Concrete of parapet wall and RCC Curb:** Supplying, placing, adding Hard stones, compacting and curing (31 MPa Concrete) including formworks as per relevant drawing.	m3	160.00		
C.4	**Demolition of 0.7x0.8x150m:** Demolition of half part of existing parapet wall on top of existing min dam**.**	m3	89.60		
C.5	**Gallery cleaning 1.2x0.3x100m:** Cleaning of existing gallery.	m3	50.00		
C.6	**PCC concrete of Gallery 1X0.2x100:** PCC concrete and drainage channel of existing gallery.	m3	20.00		
C.7	**Down stream Cutoff Wall:** Construction of 2x1.5x60 rock fill concrete wall for prevention of river bed erosion, Supplying, placing, adding Hard stones, compacting and curing (15 MPA Concrete) including formworks as per relevant drawing. (50% HSCC).	m3	180.00		
C.8	**Pointing repairing of main dam:** pointing repairing of existing main dam.	m2	50.00		
Subtotal-c (Main Dam Repairing (Gravity Section))					
d	**Spillway**				
d.1	**Rock Excavation (Dry):** Excavation in rock for Chute spillway including disposal of surplus material up to a maximum distance of 500 m.	m3	13,894.00		
d.2	**Rock filled Concrete (RFC):** Supplying, placing, adding Hard stones, compacting and curing (15 MPA Concrete) including formworks as per relevant drawing. (45% HSCC and 55% hard stone)	m3	815.00		
d.3	**Stone masonry (15 MPA):** Supplying, placing and all works which is required for the completion of a stone masonry walls.	m3	84.00		
d.4	**PCC (15 MPA):** Supplying, placing, compacting and curing of (15 MPA PCC), including formworks all as per relevant drawings, specification and to the complete satisfaction of the engineer.	m3	4.00		
d.5	**Water stop:** Providing and installation of (2500-3000 mm wide and 9 mm thick) PVC water stopper at the U/S contraction joint as per details drawing and specification and satisfaction of the engineer.	m	63.00		
Subtotal-e (Spillway)					

e	Hydro Mechanical Equipment				
e.1	**Hand rail on top of dam crest:** Supply, erection and installation of best quality galvanized pipe Φ 3" and 3mm thickness for horizontal support and I beam No:14 : h=140mm,b=73mm,s=4.9mm, t=7.5mm, R=8mm, r=3mm, for vertical support for handrail on top of dam crest with all necessary materials, equipment, and labors, additional support at every 3m interval and required tools for the installation and to the complete as per details drawing and specification and satisfaction of the engineer.	LM	680.00		
e.2	**left side outlet pipe Repairing:** Provide all necessary equipment , tools and labors for repairing of existing left side outlet pipe L=36m, the left side outlet pipe repaired before whit bottom support steel (36x0.95x0.02)m.the joints of this support need for some repairing and welding, with all necessary accessories.	LM	36.00		
e.3	**right side outlet Outlet pipe:** Provide all necessary equipment , tools and labors for making, transportation and installation of mild steel pipe for extending of right side outlet and for un embedded part with 120 cm diameter and 10mm thickness subject to the approval of site Engineer/Supervisor and MEW.	LM	9.00		
e.4	**Demolition:** Provide all necessary equipment , tools and labors for demolition of existing damaged bottom support from right side outlet pipe (L=39 x 1.6 x 0.005)m, with all necessary accessories subject to the approval of site Engineer/Supervisor and MEW.	LM	39.00		
e.5	**Right side Bottom support of outlet pipe:** Provide all necessary equipment , tools and labors for making, transportation, installation and welding the new bottom support in the right side of outlet with the 1.9m wide,3m length and 10mm thickness (1.9m x 3m x 0.01m x 39m), from mild steel materials for all length of pipe. First the material cut and made in the factory and then transferring to the site, and welding to the damaged bottom of existing outlet pipe with all necessary accessories.	LM	39.00		
e.6	**Spherical rollers for existing gate valves:** Provide all necessary equipment, tools and labors for making, transportation and installation of spherical rollers from cast steel materials, internal diameter 13cm wide of roller 9.5cm and with holes at 7cm diameter, with all necessary accessories according to sample subject to the approval of site Engineer/Supervisor and MEW.	PCS	12.00		
e.7	**Seal plate for existing gate valves:** Provide all necessary equipment, tools and labors for making, transportation and installation of seal plate from bronze or copper materials, internal diameter 120cmm wide of seal 1inch and thickness 12mm, with 8 holes at 8mm diameter, with all necessary accessories according to sample subject to the approval of site Engineer/Supervisor and MEW.	pcs	8.00		
e.8	**Actuator Yoke (OS&Y)(qabza e shaft) for existing gate valve:** Provide all necessary equipment, tools and labors for making, transportation and installation of actuator yoke from cast iron materials, with all necessary accessories according to sample, subject to the approval of site Engineer/Supervisor and MEW.	pcs	1.00		
e.9	**Actuator Stem (pine) for existing gate valve:** Provide all necessary equipment, tools and labors for making, transportation and installation of actuator stem from cast iron materials, with all necessary accessories according to sample, subject to the approval of site Engineer/Supervisor and MEW.	pcs	1.00		
e.10	**Nut and Bolt No 46:** Supply and installation of best quality nut and bolt No 46 whit 18cm length in the bonnet cover of existing gate valves with all necessary materials, equipment, labors and required tools for the installation.	pcs	68.00		
e.11	**Window for existing gate rooms:** Provide all necessary equipment, tools and labors for making, transportation and installation of window, the frames of the window are Lauren No. 5 (b = 50mm, t = 4mm, R = 5.5mm, r = 1.8mm), and the net of the windows are 16mm plain reinforcement bars @25cm c/c with all necessary accessories, subject to the approval of site Engineer/Supervisor and MEW.	Sq.m	4.65		
e.12	**Door for existing gate rooms:** Provide all necessary equipment, tools and labors for making, transportation and installation of door, the right, left, and bottom frames of the doors are girder U No. 8 (h = 80mm, b = 40mm, s = 4.5mm, R = 6.5mm, r = 2.5mm), and the top frame of the doors are Lauren No. 8 (b = 80mm, t = 5.5mm, R = 9mm, r = 3mm) and the steps of the doors are steel plate 5mm, with all necessary accessories, subject to the approval of site Engineer/Supervisor and MEW.	Sq.m	6.30		

e.13	**Brick Masonry (1:4):** Providing and laying brick masonry with cement sand mortar 1:4 as per relevant drawings, Specifications and to the complete satisfaction of the engineer. The compressive Strength of brick shall not be less than M10 and water absorption shall not be more than 20 %.	M3	0.35		
e.14	**I beam No.14** : Provide I beam No.14 ,h=140mm,b=73mm,s=4.9mm, t=7.5mm, R=8mm, r=3mm, weight=13.7kg/1m, L=5 m, for left gate operation room, for standing bench floor, as per relevant structure design drawings and with satisfaction of the engineer.	M	5.00		
e.15	**left gate operation room Wooden plank** : Provide wooden plank ,h=200cm,b=18cm, t=5cm,N=14 pieces, for left gate operation room, for standing bench floor, as per relevant structure design drawings and with satisfaction of the engineer.	pcs	14.00		
e.16	**Plain Cement Concrete (M15):** Supplying, placing, compacting and curing of PCC Class M15 for existing operation gate room roof, including formworks all as per relevant drawings, specification and to the complete satisfaction of the engineer.	M3	8.85		
e.17	**Isogam of Roof:** Supply and installation of best quality isogam in the existing gate room roof with all necessary materials, equipment, labors and required tools for the installation. The quality of material and work shall be approved by the engineer.	M2	126.00		
e.18	**Right side outlet Demolition:** Provide all necessary equipment , tools and labors for demolition of existing support block on right side outlet pipe (L=3 x 3 x 3)m, for extending new pipe with all necessary accessories.	M3	27.00		
e.19	**New Penstock pipe:** Provide all necessary equipment , tools and labors for making, transportation and installation of mild steel pipe from reservoir up to turbine with 140 cm diameter and 18mm thickness subject to the approval of site Engineer/Supervisor and MEW.	LM	38.00		
e.20	**Gate Valves Φ (1400 mm):** Provide all necessary equipment, tools and labors for installation of gate valves system, according to specification as per relevant design drawings and with satisfaction of the engineer subject to the approval of site Engineer/Supervisor and MEW**.** (BODY & BONNET : DUCTILE IRON, WEDGE : DUCTILE IRON, SEAT : ALUMINIUM BRONZE, O-Ring: EPDM, FACE RING : ALUMINIUM BRONZE, ENDS : FLANGED END TO ASME B 16.5 RF (300#) HYD-TEST PRESSURE : BODY: 32 KG/CM2 / SEAT: 22 KG/CM2, PN : 25 Bar).	Set	1.00		
e.21	**Excavation in rock for new pipe:** Excavation of penstock line including disposal of surplus material up to a maximum distance of 500 m or as directed by the site engineer.	M3	656.00		
e.22	**Backfilling With Rock filled Concrete (RFC):** back fill of new pipe excavation area form intake to gate chamber room, Supplying, placing, adding Hard stones, compacting and curing (15 MPA Concrete) including formworks as per relevant drawing. (50% HSCC)	M3	422.00		
e.23	**Plain Cement Concrete M20 for Around of penstock pipe (1:1.5:3):** Supplying, placing, compacting and curing of PCC class M20 (1:1.5:3) ordinary cement for around of penstock pipe including testing and formworks as per the drawing and to the complete satisfaction of the site engineer.	M3	52.00		
e.24	**Reinforced Cement Concrete M20 for Anchor Block (1:1.5:3):** Supplying, placing, compacting and curing of RCC class M20 (1:1.5:3) ordinary cement for Support Block including testing and formworks as per the drawing and to the complete satisfaction of the site engineer.	M3	10.00		
e.25	**Stone Masonry Work with 1:3 Cement Sand Mortar:** Supplying, placing and construction of stone masonry and placing of (1:3) cement sand mortar for foundation and Walls of new gate room and new power intake including curing to the complete satisfaction of the site engineer. (The mortar should not be less than 40% of the total volume of Stone Masonry work).	M3	281.40		
e.26	**Pointing (1:3):** Surfacing and Pointing of Stone Masonry with 1: 3 Cement Sand Mortar including material, labor, scaffolding, curing, etc. in accordance to the drawings, specification and complete satisfaction of the engineer.	M2	576.60		
e.27	**Reinforced Cement Concrete M20 for New Gate Room Slab (1:1.5:3):** Supplying, placing, compacting and curing of RCC class M20 (1:1.5:3) ordinary cement for new gate room slab and ring including testing and formworks as per the drawing and to the complete satisfaction of the site engineer.	M3	9.60		
e.28	**Plain Cement Concrete M15 (1:2:4):** Supplying, placing, compacting and curing of PCC class M15 (1:2:4), floor and roof of new gate room including formworks as per the drawing ,specification and to the complete satisfaction of the site engineer.	M3	6.65		
e.29	**Metal door and Window (D1=2x2.5 & W1=1.5x2):** Providing and Installation of metal door as per drawing, Specifications and satisfaction of the engineer.	M2	8.00		

e.30	**Isogam of Roof:** Supply and installation of best quality isogam in the new gate room roof with all necessary materials, equipment, labors and required tools for the installation. The quality of material and work shall be approved by the engineer.	M2	38.00		
e.31	**Ladder:** Provide all necessary equipment, tools and labors for installation of 12 Steel bars (Φ 16mm) Ladder for inspection of trash rack @ 50cm c/c L=194 cm	Kg	38.60		
e.32	**I beam No.20 :** I beam in gate room for gate lefting suport.	m	5.00		
e.33	**Trash rack net:** Provide all necessary equipment, tools and labors for installation of 15 Steel plate (thickness 15mm, wide 8cm with different height @ 15 cm c/c) for trash rack net according to drawing, total racks pleat length = 30m.	Kg	285.60		
Subtotal-e (Hydro Mechanical Equipment)					
f	**Instrumentation**				
f.1	**Target point in dam crest:** Provide all necessary materials, equipment , labors and other required tools for supply and installation of best quality Target Point subject to the approval of site Engineer/Supervisor and MEW.	Set	22.00		
f.2	**Water level Staff Gauge:** Provide all necessary materials, equipment , labors and other required tools for supply and installation of best quality Water level Staff Gauge for upstream and downstream according to drawing and subject to the approval of site Engineer/Supervisor and MEW.	M	30.00		
f.3	**Open Standpipe Piezometer:** Provide all necessary materials, equipment , labors and other required tools for supply and installation of best quality open standpipe piezometer complete set with rotary drilling, diameter (100-200)mm, depth (10-100)m borehole, filter tip and slotted pipe, riser PVC schedule 80 pipe diameter (2-3) Inch, backfilling (sand, bentonite clay & grout), concrete pad to install protective box using 2mm thick steel sheet with locking mechanism subject to the approval of site Engineer/Supervisor and MEW.	Set	9.00		
f.4	**Closed Standpipe Piezometer with Pressure Transducer:** Provide all necessary materials, equipment , labors and other required tools for supply and installation of best quality closed standpipe piezometer with pressure transducer complete set with rotary drilling, diameter (100-200)mm, depth (10-100)m borehole, filter tip and slotted pipe, riser PVC schedule 80 pipe diameter (2-3) Inch, backfilling (sand, bentonite clay & grout), concrete pad to install protective box using 2mm thick steel sheet with locking mechanism subject to the approval of site Engineer/Supervisor and MEW.	Set	4.00		
f.5	**Water Level Indicator:** Provide all necessary materials, equipment , labors and other required tools for supply and installation of best quality water level indicator having 100m cable subject to the approval of site Engineer/Supervisor and MEW.	Set	2.00		
f.6	**Weir Box for Seepage Flow Measurement:** Provision of all necessary materials, equipment , labors and other required tools for supply and installation of best quality large size stainless steel weir box for seepage flow measurement with its connection to downstream toe drain pipe of the maximum section subject to the approval of site Engineer/Supervisor and MEW.	Set	1.00		
Subtotal-f (Instrumentation)					
g	**Guard Room**				
g.1	Ordinary Soil Excavation(Dry): Excavation in ordinary soil (basement, septic well & etc.) including disposal of surplus material up to a maximum distance of 500 m or as directed by the site engineer.	m3	154.44		
g.2	Graded Gravel :Supplying, placing and compacting approved granular gravel material under basement or as per relevant drawings and specifications. Gravel shall consist of hard durable river gravel and sand or broken stone and sand. It shall be well graded. The quality and grading of the gravel shall be to the approval of the site engineer.	m3	25.88		
g.3	Plain Cement Concrete (M15): Supplying, placing, compacting and curing of PCC Class M15, including formworks all as per relevant drawings, specification and to the complete satisfaction of the site engineer.	m3	20.44		
g.4	Damp proof concrete: Supplying and placing damp proof concrete (mix of cement concrete with bitumen) on the top of basement stone masonry walls as per drawing and satisfaction of site engineer.	m3	1.14		
g.5	Reinforced Cement Concrete (M20): Supplying, placing, compacting and curing of RCC Class M20, including formworks all as per relevant drawings, specification and to the complete satisfaction of the site engineer.	m3	24.20		
g.6	Compacted back filling: All backfilling materials shall be well graded granular material excavated from the approved source of borrow pits with the compaction not less than 90% of modified proctor ASTM in layers not exceeding 200 mm thick where machinery is used and 100 mm thick where hand-held equipment is used in accordance to the relevant drawing and specification and satisfaction of the site engineer.	m3	67.20		

g.7	Stone Masonry Type A (1:3) with 40 % Mortar Content: Providing and laying random rubble stone masonry with cement sand mortar 1:3 as per relevant drawings, Specifications and to the complete satisfaction of the site engineer. The stones shall be laid by hand with specified mix of mortar in between two stones and a 12 cm layer of mortar on the bottom of the new layer. The compressive strength of mortar shall not be less than M10.	m3	77.77		
g.8	Pointing (1:3): Surfacing and Pointing of Stone Masonry with 1: 3 Cement Sand Mortar including material, labor, scaffolding, curing, etc. in accordance to the drawings, specification and complete satisfaction of the site engineer.	m2	33.95		
g.9	Brick Masonry (1:4): Providing and laying brick masonry with cement sand mortar 1:4 as per relevant drawings, Specifications and to the complete satisfaction of the site engineer. The compressive Strength of brick shall	m3	41.04		
g.10	Pucca: Providing and laying pucca material for providing roof slope as per drawing and satisfaction of site engineer.	m3	17.93		
g.11	Cement plastering (1:4): Providing, applying and curing 12 mm thick Cement plaster with 1: 4 Cement Sand Mortar to the complete satisfaction of the site engineer.	m2	365.48		
g.12	Plastic painting: Plastic painting of inside walls and ceiling include three coats and one coats putty (gal gal) before painting to have a smooth surface & the quality of paint must be approved by Engineer.	m2	119.21		
g.13	Tiles: Tiles work for the walls of bath & kitchen, best quality with satisfaction of site engineer must be used.	m2	41.27		
g.14	Ceramic work: Ceramic for floor of the bath & kitchen, best quality with satisfaction of site engineer must be used.	m2	10.67		
g.15	Isolation of Roof, bath & kitchen: Isolation of the roof, bath & kitchen with Isogam must be provided. The quality of material and work shall be approved by site engineer.	m2	124.18		
g.16	Marble stone: 3cm thickness of marble for kitchen (1.6*0.5*0.03).	m	1.60		
g.17	Bath sets: Providing and Installation of toilet with flash tank, shower, clothing peg complete and best quality with satisfaction of site engineer.	LS	1.00		
g.18	Sink: Providing and Installation of sink with mirror…etc. best quality with satisfaction of site engineer.	No	1.00		
g.19	Wash basin: Providing and Installation of wash basin in kitchen, with best quality and satisfaction of site engineer.	No	1.00		
g.20	Cooking gas stove: Providing and Installation of cooking gas stove in kitchen, with best quality and satisfaction of site engineer.	No	1.00		
g.21	Metal door (D1 & D2): Providing and Installation of metal door as per drawing, Specifications and satisfaction of site engineer.	m2	10.53		
g.22	UPVC door (D3): Providing and Installation of PVC door as per drawings, Specifications and satisfaction of site engineer.	m2	1.60		
g.23	UPVC Windows (W1, W2 & W3): Providing and Installation of PVC windows with double glasses as per drawings, Specifications and satisfaction of site engineer.	m2	10.86		
g.24	Plumbing: Provision and installation of complete plumbing system (PPRC water pipes and PVC schedule 40 sewer pipes) for the bathroom & kitchen including rain drainage PVC Schedule 40 pipe, complete connection from water source to roof tank and septic tank and with complete set of taps. The quality must be approved by the Engineer.	LS	1.00		
g.25	Electrical System: Supplying and installation of complete electrical/wiring system (cable, wire, circuit breaker, boiler, exhaust fans, switch, socket and lights) as per drawings, specifications and satisfaction of site engineer.	LS	1.00		
g.26	Water plastic tank: Providing and Installation of 1000 liter water storage tank at top of the building on the roof. The quality must be approved by the engineer.	No	1.00		
Subtotal-g (Guard Room)					
Total Cost Sultan Dam Rehabilitation (A)					
Pysical Design and Economical Contingency					9,895,116.57
Total (a, b, c, d, e, f, and g with Contingency)					

Note:

1- The unit rates for items include, contractor's profit and opration cost, tax allowance and overhead cost. The overhead cost covers all the expenses related to admin/engineering, curing of concretes, testing of material, supervision of works, security, safety, first aid services etc.

2- The contents of this BOQ are confidential and it is the sole responsibility of the higher management of MEW to share it with authorized parties only.

3- The amount of the contingency should only be utilized in unforeseen circumstances as per the conditions of the contract.