



Islamic Relief Worldwide-Afghanistan

Kandahar Area Office

Shelter Project (UK)

Province: Kandahar

Project ID: KDR-ARGHS-W-003

District: Arghastan

Village: Khawghyani

Date: 25.10.2023

BOQ

S/NO شماره	Discriptions تشریحات	Unit واحد	Quantity مقدار	Cost/Unit (Afs.) قیمت فی واحد	Total Cost (Afs.) قیمت مجموعی	Remarks ملاحظات
BoQ for Bore well and reservoir						
1	Well drilling with Rotary machine diameter (12") depends on soil texture Well drilling should be according to site condition and attached technical drawing and its specification, each geological formation and strata should be properly sampled in Well sample box and relevant technical sampling record book, depth determination should be with close consultation of IRW/Technical responsible engineer, well cleaning should be properly carried out, during pump test the relevant data should be properly recorded to assure well yield and future responding for community demands, It is propose depth, the actual Depth depend to Ground Start, and Geological formation. برمه کاری چاه توسط ماشین روتوری به قطر (12" انچ) نظریه ضرورت ساحه ونوعیت طبقات زمین	M	110.0			Check sample after every 5m step
2	Supply and Installation of PVC casing pipe class -D(PN12 - Bar) , dia.8" پی وی سی 8" سی (D- PN12 - Bar) کلاس به قطر 8 انچ همراهی ریسمان پلاستیکی	M	74.0			
3	Supply and installation of Filter pipe PVC class -D(PN12 - Bar). 8 inch dia. Total area for filter pipe openings should not be more than 25% of total area. (PVC quality test result is required) قطر 8 انچ فیصدی مساحت مسامات فلتر از 25 فیصد (class -D , PN12 - Bar) تهیه ونصب فلتری وی سی از نوع کلاس مساحت مجموعی تجاوز نکند همراهی ریسمان پلاستیکی	M	42.0			
4	Gravel Packing from sorted gravel round washed gravel the size of gravel should be determined after well drilling according to the sample of strata. پرکاری جغل در اطراف پایپ فلتر از نوع سورت شده بوده جغل لشم دریانی و شسته که اندازه دانه های جغل نظر به نمونه طبقات بعد از حفاری تعیین میگردد	M ³	7.6			
5	Clay (mud) or cement blocking around the casing for prevention of entering saline water to the well. مسدود کردن عقب کسنگ توسط مد خالص و یا سمنت بعد از تثبیت طبقات برای جلوگیری از نفوذ آب های شور	M ³	4			
6	Pump test for determination of discharge of well اجرای پمپ تست بخاطر دریافت پارامیتر مقدار دیسچارج چاه	hour	8.0			Check sample after every 5m step

7	Compressor test for well cleaning and developing the well till the water be completely clear from fine material. کمپریسور کاری بخاطر توسعه و پاک کاری چاه الی پاک شدن آب از ذرات میده دانه معلق در آب	LM	1.0			Check sample after every 5m step
8	Preparing the technical report of well drilling, taking the sample of each starta and other necessary Hydrology report تهیه راپور تخنیکي حفاری چاه، اخذ نمونه طبقات و همچنان تهیه مشخصات هایدروولوجی همراهی تست کیفیت آب	ls	1.0			Check sample after every 5m step
9	water quality tests include of (Chemical, Biological and Physical)	ls	1.0			
10	Well Header (Steel)+ Concrete work according to Drawing	No	1.0			
Sub-Total Cost for New Bore well (Afs)						
BoQ for Well Manhole						
1	Excavation in different ground types 3-5	m3	2			
2	Reinforced Cement Concrete (RCC), Mix design M 25 - (1:1:2) including workmanship and materials - Cements, Sand, Gravel, water, Steel bars as per design, shuttering according to the drawings and curing for 28 days after concrete casting	m3	2			
3	Plaster work with cement + sand (1:3), including materials (cement, sand, water) and workmanship +	m ²	8			
4	Plain Cement Concrete (PCC), M150 kg/cm2 (1:2:4) including materails + workmanship + shuttering + curing کانکریت بدون سیخ با مارک مخلوطی	m3	0.5			
5	Reinforced Cement Concrete (RCC), Mix design M 25 - (1:1:2) including workmanship and materials - Cements, Sand, Gravel, water, Steel bars as per design, shuttering according to the drawings and curing for 28 days after concrete casting	m3	0.6			
Sub-Total Cost for well Manhole (Afs)						
BoQ for Solar pump system and well						
1	Submersible pump with its Compatible inverter, control box and Fuse box in Rated power - P2: 3.79 kW, 50 Hz Rated voltage: 3 x 220-230- V Avg. water production per hour: 4.5 ³ /hour, Total desing head: 134.0m , Pump Max 160m, Compatible inverter at least 5 KW, Steel made inverter box, control box and Fuse box in 5 KW سولر پمپ کیفیت عالی مطابق مشخصات که فوق ذکر شده معه کنترولر، انورتر و فیوز باکس باید با ستندرد های اروپایی ، مطابقت داشته - تهیه کننده پمپ با در نظر داشت رهنمود وزارت انگشاف دهات از کارکرد پمپ گرنٹی وورنتی ارایته نمایند Pump quality should meet European Standard for water pumps- with guaranty and warrantee requirements of as per MRRD's guideline).	No	1			در صورت پایین آمدن سطح آب پمپ بشکل اتوماتیک خاموش شود
2	High Quality- Solar panels 500 to 540watt internationally certified- (meet European standards, and MRRD requirements). The vendor should guarantee PV-Panels 90% efficiency of its productivity for the first 10 years and 85 % efficiency of productivity for the subsequent 15 years. پنل های سولر باید دارای ستندرد اروپایی و تایید وزارت (500 to 540watt) سولر پنل های مطابق به مشخصات داده شده انگشاف دهات باشد. تهیه کننده سولر پنل ها از موثریت ۹۰٪ تولید برق در ۱۰ سال اول نصب و ۸۵٪ تولید برق در ۱۵ سال متعاقب تضمین می نمایند	No	10			

3	<p>Solar Panels mounting stands with transportation and installation</p> <p>1- PCC stands : M150 (1:2:4) dimensions (0.4x0.5x3.5) m, numbers of stands will be adjusted according to the size of the steel structure, the maximum c/c distance is 2meters. Adequate size Stainless steel Hanger Bolts (14mm) and minimum size (300x300x5) mm Steel Base Plates, c/c Space 1.5 meters adjusted to the frame size.</p> <p>2- Frame Members: Horizontal members Hot-dip Galvanized Iron members, C-Channel (6cmx4cmx3mm), and Vertical members -3 Hot-dip Galvanized round shape Pipes Schedule 40. Sizing, orientation and tilt angle adjustment should be done according to the project site and based on site engineers' confirmation.</p>	Lum	1			
4	1-PCC stands mix M150 (1:2:4) dimensions (0.4x0.5x3.5) m, numbers of stands will be adjusted according to the size of the steel structure, the maximum c/c distance is 2meters. Adequate size Stainless steel Hanger Bolts (14mm) and minimum size (300x300x5) mm Steel Base Plates, c/c Space 1.5 meters adjusted to the frame size.	No	2			
5	2- Frame Members: Horizontal members Hot-dip Galvanized Iron members, C-Channel (6cmx4cmx3mm), and Vertical members -3 Hot-dip Galvanized round shape Pipes Schedule 40. Sizing, orientation and tilt angle adjustment should be done according to the project site and based on site engineers' confirmation.	set	1			
6	Cable splice kit 2.5-6mm ²	set	1			
7	High Quality – Highly insulated 0.6/1kv 4x6- 100% Copper Electrical cable.	m	340			
8	High Quality – Highly insulated (2x1.5)- 100% Copper Electrical cable.	m	340			
9	PVC-U ENT Conduit Electrical Flexible Conduit Pipe the diameters should suit the electrical cable (2x1.5).	m	340			
10	Wire tire white and black	PKT	3			
11	Ground rod with copper Cable for all system (Solar Panels and pump) سیستم آرتنگ برای سولر پنل ها و پمپ	set	1			
12	Float switch	set	1			
13	Transportation and installation of complete solar system with (solar panels, pump, inverter, and all other relevant electrical accessories)	System	1			
Sub-Total Cost for Solar panels and solar pump(Afs)						
1	<p>Fence erection for solar system protection;</p> <p>Galvanized Iron (GI) 3 inch pipe- schedule 40 - total length =30x2.8=85m</p> <p>Fence 75 m2 – Technical spec (Stock Hot Dipped Galvanized 4mm wire, holes shape – diamond, with 50mm-70mm Opening</p> <p>Three rows of welded steel bars @ 14 mm, applied at bottom, midlevel and top level. All around the erected GI poles.</p> <p>Proper door (GI pipes with Fence) and with locking system is included.</p> <p>All GI Poles need to be fixed in separated concrete foundations (40x60x80) cm and at least 14 days of curing.</p> <p>Supply, Transport and installation included</p>	Lumsum	1			
Sub-Total Cost for Fence erection/Solar Protection						
1	63mm Pipe -PE100PN10	M	110			
2	Check Valve , diameter 2.5" تمیبه وال آهنی بقطر 2.5"	No	1			
3	Gate Valve- diameter 2.5" Flanged vlave - complete set	No	1			
4	Pressure Gauge فشار گیج	No	1			
5	Water meter , diameter 2.5" میتراب 2.5"	No	1			
6	Iron Flung Coupling diameter 2.5"- complet set	No	4			

7	Galvanized Iron Elbow , diameter 2.5" زانو خم آهنی ملمع جستی بقطر	No	2			
8	Galvanized Iron nipples , diameter 2.5"	No	4			
9	Galvanized Iron Union , diameter 2.5" پیوند وال آهنی ملمع جستی بقطر	No	3			
10	63mm Female adupter_PE100PN10	No	4			
11	Transportation, installation and all other required manipulations (water stoppers etc) as per project site and site engineer's guidance.	Lumsum	1			
Sub-Total Cost for PE & GI pipes and Fittings in Borewell						
BoQ for Main line from well To RCC Elevated drinking water Tank						
1	Excavation in different ground types 3-5	m3	40.7			
2	Back filling by excavated material. پرکاری خاک معه تپک کاری.	m ³	8			
3	Plain Cement Concrete (PCC), M150 kg/cm2 (1:2:4) including materails + workmanship + shuttering + curing کانکریٹ بدون سیخ با مارک مخلوطی	m3	1.8			
4	Reinforced Cement Concrete (RCC), Mix design M 25 - (1:1:2) including workmanship and materials - Cements, Sand, Gravel, water, Steel bars as per design, shuttering according to the drawings and curring for 28 days after concrete casting	m3	57.5			
5	<p>Testing Requirements:</p> <ol style="list-style-type: none"> Concrete Mix Design: Based on selected aggregate properties, the contractor must define the M25 concrete mix design and submit the lab report to IRW before casting RCC elements. Slump Test: To be conducted at the batching plant and at the site before pouring the concrete for each concrete mix. Air Content Test: To be performed at the batching plant for every batch of concrete to ensure the mix design is consistent. Cylinder Test: Three sets of cylinders (6 cylinders) to be cast for each concrete pour. One set to be tested at 7 days and the other set at 28 days for compressive strength. Soil-bearing Capacity Test: To be conducted before foundation works to determine the bearing capacity of the soil and ensure it meets the project requirements. <p>Notes:</p> <ul style="list-style-type: none"> All concrete testing results must meet the specified criteria as per IS 456:2000 or equivalent. Tests to be conducted by a certified laboratory and results to be submitted to the project engineer. Any deviation in test results must be immediately reported and rectification measures to be discussed and implemented as per engineer's instructions. 	Lumsum	1			
6	Plaster work with cement + sand (1:3), including materials (cement, sand, water) and workmanship + curing	m ²	64			
7	Plaster work with cement + sand (1:3), including materials (cement, sand, water) and workmanship + curing	m ²	180			
8	Zero size chips for inside the water tank to leakage مواد ضد لیکج چیس در داخل ذخیره	bag	5			
9	Painting Plastic Wheather Sheet 75% رنگمالی با رنگ پلاستیکی فیصده	M2	180			

10	Isogam insulation on roof of reservoir. ایزوگام برای پوشش ذخیره.	M2	22			
11	Handrail as per OSHA recommendations and technical Drawings and spec that are attached to this BoQ. - Size and height should be adjusted to the project site. (Supply, Transportation and installation included)	m	20			
12	Vertical access Ladder with safety cage as per OSHA recommendations and technical Drawings and spec that are attached to this BoQ. (from Ground level – up to top covering slab of RCC reservoir)- Size and height should be adjusted to the project site. (Supply, Transportation and installation included)	Lumsum	1			
13	Ladder -inside reservoir (hot-dip-galvanized pipes) as per OSHA recommendations and technical Drawings and spec that are attached to this BoQ. - Size and height should be adjusted to the project site. (Supply, Transportation and installation included)	Lumsum	1			
14	Galvanized Iron (GI) pipe- Schedule 40 , diameter 2" for washing, over flow , inlet and Air went	m	30			
15	Galvanized Iron (GI) pipe, Schedule 40 diameter for Outlet 3"	m	15			
16	Gate Valve for washing , and inlet pipe diameter 2" - Flanged complete set	No	2			
17	Gate Valve for outlet , diameter 3" - Flanged complete set	No	1			
18	Fittings for GI pipes (Nipples, coupling, union, water stoper tape, pipe threading (screw making), etc.....)	lumsum	1			
19	Transportation and installation of GI pipes and fittings at elevated water tank	lumsum	1			
Sub-Total Cost for well to Rcc Elevated Tank(Afs.)						
BoQ for Value box construction						
1	Excavation in different ground types 3-5	m3	2.3			
2	Reinforced Cement Concrete (RCC), Mix design M 25 - (1:1:2) including workmanship and materials - Cements, Sand, Gravel, water, Steel bars as per design, shuttering according to the drawings and curing for 28 days after concrete casting	m3	2.25			
3	Plain Cement Concrete (PCC), M150 kg/cm2 (1:2:4) including materails + workmanship + shuttering + curing کانکریٹ بدون سیخ با مارک مخلوطی	m3	2			
4	Plaster work with cement + sand (1:3), including materials (cement, sand, water) and workmanship + curing	m ²	9			
5	RCC concret slab for Gate valve Manhole (1*1*0.2)m, or Steel frim and cover	No	3			
Sub-Total Cost for Manhole (Afs.)						
BoQ for Stand Taps 28 Construction.						
1	Excavation in different ground types 3-5	m3	5			
2	Dry stone paching for 28 House connection Stand tap, (including stone prepration and workmanship)- according drawing minum 25 cm thick	m2	43.00			
3	Plain Cement Concrete (PCC), M150 kg/cm2 (1:2:4) including materails + workmanship + shuttering + curing کانکریٹ بدون سیخ با مارک مخلوطی	m3	12			
4	Plaster work with cement + sand (1:3), including materials (cement, sand, water) and workmanship + curing	m ²	32			

Sub-Total Cost for stand top (Afs.)					
BoQ for Distribution line (From Elevated Tank To Stand Tap)					
1	Excavation in different ground types 3-5	m3	420		
2	Soil back filling from excavated materil پرکاری توسط خاک کندنکاری شده از جویچه پایپ	m ³	252		
3	Sand or snand soill filling arund pipe پرکاری توسط خاک کندنکاری شده بدون سنگ خاک نرم یا ریگ میده	m ³	170		
4	75mm Pipe - PE100PN10	M	220		
5	63mm Pipe - PE100PN10	M	250		With main line 63 mm from well to water tank
6	50mm Pipe - PE100PN10	M	360		
7	40mm Pipe - PE100PN10	M	150		
8	25mm Pipe - PE100PN16- from junctions to household water user point	M	534		
9	Required fittings for Tap-stand at household connections(Saddle clamp, Elbow, Female adapter (MTA), Gate valve , Non return valve, Water tap, Socket and prefabricated heavy duty water meter box , water meter (Farasanjab Multi Jet water Meter R160) – or any or other small fittings that may require adjustment to supplying main pipe (Reducer, bushing, nipple, etc).	No	28		
10	Gate value 2" stainless-steel - Flanged complete set	Pcs	3.0		
11	Gate value 3" stainless-steel - Flanged complete set	Pcs	1.0		
12	Fittings for PE pipes different diameters and different pressures (couplings, adapters, reducers, adjusting fittings for PE-GI pipes according to project design and layout at project site.)	Lumsum	1		
13	PE pipe and Fittings installation and pressure and Leakage check	Lumsum	1		

Sub-Total Cost for distribution line (Afs.)					
1	Sign Board for project لوجه برای پروژہ	No	1		
2	Operation and Mentainance Kit for Community				
3	Double Hacksaw 12" with 10 blades	Set	1		
4	Mole Grip 10" best quality	Pcs	1		
5	Thread Sealing Tape tapline	Pcs	24		
6	Combination Pliers best quality	Pcs	2		
7	Adjustable Wrench 10 "	Pcs	2		
8	Adjustable Wrench 18"	Pcs	1		
9	Pipe wrench 12"	Pcs	2		
10	Pipe Wrench 36"	Pcs	1		
11	Rubber Gloves 12.5 " for cleaning	Pair	12		
12	Goggles for eye safty	Pcs	1		
13	Tap Measuring 5m	Pcs	2		
14	Plastic pipe cuttter	Pcs	1		
15	Clow hammer	Pcs	2		
16	pipe vice medium size	Pcs	1		
17	Grip locking plier	Pcs	1		
18	Screwdriver flat	Pcs	2		
19	Screwdriver philipe	Pcs	1		
20	Steel Water Tap, 0.5" dia for hand washing taps stand of good quality i.e master brand	Piece	16		
21	Steel Wheel Barrow made from good quality steel and tire, for toilet surrounding cleaning	Piece	1		
22	Plastic Buckets 15-20 liters with cover and handle, for water storage inside toilets	Piece	2		
23	Water clooer for drinking water 20 liters	Piece	1		
24	Wyper/squeegee (pass pass), having rubber blade with steel handle for drying solar panels	Pcs	2		
25	Shovel with wooden handle for latrine surrounding cleaning	Pcs	2		
26	Plastic pipe 1" of good quality	M	50		
Sub Total Cost (Afs.)					0
Contingencies for unforeseen costs (--%)		L.S	1		0
Grand Total Cost (Afs.) قیمت مجموعی به افغانی					0