



## Islamic Relief Worldwide-Afghanistan

### Kandahar Area Office

#### Shelter Project (UK)

Province: Kandahar

Project ID: KDR-ARGHS-W-002

District: Arghastan

Village: Zarin Zai

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 و 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	90.0			Check sample after every 5m step
2	Supply and Installation of PVC casing pipe class -D( PN12 - Bar) , dia.8" تهیه ونصب کیسنگ پی وی سی کلاس 8" (D- PN12 - Bar) به قطر 8 انچ همراهی ریسمان پلاستیکی	M	32.0			
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 فلتر پی وی سی از نوع کلاس مساحت مجموعی تجاوز نکند همراهی ریسمان پلاستیکی	M	62.0			
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 دریائی وشسته که اندازه دانه های جغل نظر به نمونه طبقات ..بعد از حفاری تعیین میگردد	M <sup>3</sup>	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 <sup>3</sup>	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 هایدرولوجی همراهی تست کیفیت آب	Is	1.0			Check sample after every 5m step
9	water quality tests include of ( Chemical, Biological and Physical)	Is	1.0			
10	Well Header (Steel)	No	1.0			
Sub-Total Cost for New Bore well (Afs)						
BoQ for Well Manhole						
1	Excavation of pipe tranch different ground types 2, 3,6 کندنکاری جویچه پایپ بدرجه سختی مختلف 2, 3,6	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 curring for 28 days after concrete casting	m3	2			
3	Plaster work with cement + sand (1:3), including materials ( cement, sand, water) and workmanship +	m <sup>2</sup>	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 curring for 28 days after concrete casting	m3	0.6			
Sub-Total Cost for well Manhole (Afs)						
BoQ for Solar pump system and well						
1	Supply of Submersible pump with its Compatible inverter, control box and Fuse box in Rated power - P2: 7.5 kW, 50 Hz- IP68 Rated voltage: 3 x 220-230 V Avg. water production per hour:13.5 cubec meters/ hours, Total dynamic head: 122.0m , Pump Max head:150m, Compatible inverter, Steel made inverter box, control box and Fuse box in 6.5 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 انکشاف دهات از کارکرد پمپ گرننتی 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 ستندر اروپایی و تایید وزارت ،(500 to 540watt) سولر پنل های مطابق به مشخصات داده شده انکشاف 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	26			
3	<b>Solar Panels mounting stands with transportation and installation</b> 1- <b>PCC stands</b> : 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. 2- <b>Frame Members</b> : 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.	Lum	1			
4	Holder for Submersible pump- (Pupm centerlizers - Rubber)	set	1			
5	Well probe sensor	set	1			
6	Cable splice kit 2.5-6mm <sup>2</sup>	m	110			
7	High Quality – Highly insulated 0.6/1kv 4x6- 100% Copper Electrical cable.	m	120			
8	High Quality – Highly insulated (2x1.5)- 100% Copper Electrical cable.	m	120			
9	PVC-U ENT Conduit Electrical Flexible Conduit Pipe the diameters should suit the electrical cable (2x1.5).	PKT	2			
10	Wire tire white and black	m	100			
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)	set	1			
<b>Sub-Total Cost for Solar panels and solar pump(Afs)</b>						
<b>BoQ for construction of RCC Elevated water Tank</b>						
1	Excavation of pipe tranch different ground types 2, 3,6 کندنکاری جویچه پایپ بدرجه سختی مختلف	m <sup>3</sup>	80			
2	Back filling by excavated material. پرکاری خاک معه تپک کاری	m <sup>3</sup>	8			
3	Plain Cement Concrete (PCC), M150 kg/cm <sup>2</sup> (1:2:4) including materails + workmanship + shuttering + curing کانکریت بدون سیخ با مارک مخلوطی	m <sup>3</sup>	4.5			
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	m <sup>3</sup>	112			

5	<b>Concrete Testing Requirements:</b> 1.Slump Test: To be conducted at the batching plant and at the site before pouring the concrete for each concrete mix. 2.Air Content Test: To be performed at the batching plant for every batch of concrete to ensure the mix design is consistent. 3.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. 4- 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. Notes: •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 <sup>2</sup>	88			
7	Plaster work with cement + sand (1:3), including materials ( cement, sand, water) and workmanship + curing	m <sup>2</sup>	380			
8	Zero size chips for inside the water tank to leakage مواد ضد لیکچ چپس در داخل ذخیره	Bag	20			
9	Painting Plastic Wheather Sheet 75% رنگمالي با رنگ پلاستيکی فيصده	M2	380			
10	Isogam insulation on roof of reservoir, including all needed materials and workmanship	M2	40			
11	<b>Handrail</b> 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	35			
12	<b>Vertical access Ladder with safety cage</b> 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)	No	1			
13	<b>Ladder -inside reservoir</b> (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)	No	2			
14	Galvanized Iron (GI) pipe- Schedule 40 , diameter 3" for washing, over flow , inlet and Air went	m	36			
15	Galvanized Iron (GI) pipe, Schedule 40 diameter for Outlet 5"	m	18			
16	Gate Valve for washing , and inlet pipe diameter 3"- Flanged valve - Full trun-complete set	m	1			
17	Gate Valve for outlet , diameter 5" - Flanged valve - Full trun-complete set	m	1			
18	Fittings for GI pipes ( Niples, 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	No	1			
<b>Sub-Total Cost for well to Rcc Elevated Tank(Afs.)</b>						

BoQ for Boundary wall of solar panels					
1	Excavation in different ground types 3-5 کنندن کاری در زمین قسم سوم الی چهارم	Cum	22		
2	Back filling by excavated material. پرکاری خاک معه تپک کاری	m <sup>3</sup>	10		
3	Stone masonry with cement- sand mortar M:1:5, including workmanship and curing سنگکاری با مصالحه سمنت وریگ مارک مخلوط	Cum	23		
4	Plain Cement Concrete (PCC), M150 kg/cm2 (1:2:4) including materails + workmanship + shuttering + curing کانکریت بدون سیخ با مارک مخلوطی	Cum	4.5		
5	Brick Masonary with mortar 1:4 (cement - sand), including materail + transportation to project site + wokmanship, and curing . خشت کاری پخته به مخلوط مساله 1:5 (ریگ : سمنت)	Cum	26		
6	Plaster work with cement + sand (1:3), including materials ( cement, sand, water) and workmanship + curing	Sqm	185		
7	Painting with Plasic paint Blue Color 100% , including materials and workmanship رنگ پلاستیکی 100 فیصد	Sqm	185		
8	Pointing for out side and inside of Boundry wall with mortar 1:3 (cement -sand). M: 1:3 هنگلف کاری بیرونی و داخلی با مخلوط سمنت وریگ مارک مخلوط مصالحه	Sqm	40		
9	Supply and installation of metallic Gate (230x250)cm, Strong larane and Profile channel	No	1		
10	Supply and installation of Concertina wire + Y -shape 2 inch GI pipe support on boundary wall of solar panel (complete) according to the drawin	m	75		
Sub-Total Cost for Boundary wall of solar panels (Afs.)					
BoQ for Manhole construction					
1	Excavation of pipe tranch different ground types 2, 3,6 کنندنکاری جویچه پایپ بدرجه سختی مختلف	m3	9		
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 curring for 28 days after concrete casting	m3	6.0		
3	Plain Cement Concrete (PCC), M150 kg/cm2 (1:2:4) including materails + workmanship + shuttering + curing کانکریت بدون سیخ با مارک مخلوطی	m3	2.1		
4	Plaster work with cement + sand (1:3), including materials ( cement, sand, water) and workmanship + curing	m <sup>2</sup>	10		
5	Manhole Steel cover with frame( L-larne 3mm, 3mm plate ) and cover accroding to drawign (80x70)cm ( adjust as per site )	No	9		
Sub-Total Cost for Manhole (Afs.)					

BoQ for construction of guard room						
1	Excavation of pipe trench different ground types 2, 3,6 کندنکاری جویچه پایپ بدرجه سختی مختلف	m3	9			
2	Stone masonry with cement- sand mortar M:1:5, including workmanship and curing سنگکاری با مصالحه سمنت وریگ مارک مخلوط	Cum	7.86			
3	Plain Cement Concrete (PCC), M150 kg/cm2 (1:2:4) including materails + workmanship + shuttering + curing کانکریت بدون سیخ یا مارک مخلوطی	Cum	1.17			
4	Brick Masonary with mortar 1:4 (cement - sand), including materail + transportation to project site + wokmenship, and curing . خشت کاری پخته به مخلوط مساله 1:5 (ریگ : سمنت)	Cum	16.18			
5	Pointing for out side and inside of Boundry wall with mortar 1:3 (cement -sand). M: 1:3 هنگلف کاری بیرونی وداخلی با مخلوط سمنت وریگ مارک مخلوط مصالحه	Sqm	5.00			
6	Plaster work with cement + sand (1:3), including materials ( cement, sand, water) and workmanship + curing	m <sup>2</sup>	94			
7	Painting with Plasic paint Blue Color 100% , including materials and workmanship رنگ پلاستیکی 100 فیصد	Sqm	94			
8	Back filling by excavated material. پرکاری خاک معه تپک کاری	m <sup>3</sup>	1.9			
9	I beam - Technical spec (140x70x5mm) for roof cover + Lintel on top of Window and door	m	32			
10	Plank work(thickness-3cm)	Cum	20			
11	High quality Plastic sheet ( 5x3x0.007)m	Sqm	19.3			
12	Door (1x2.2) ( thorn wood with strong frame (9X8)cm and water proof panel) including three coats of White color oil paint ( locks+ hinges) + installation	No	1			
13	window (2.2x2)m (thorn wood with strong frame (9x6 )cm including three coats of White color oil paint + hardware ( locks+ hinges) + installation	No	1			
14	4mm clear- Glass fitting for window + installation	No	4			
15	Application of Mud in 10cm thickness (preparation of soil + workmanship )	Sqm	15			
16	Application of Straw mad two layer (preparation of soil + workmanship )	Sqm	30			
17	Cable (2x2.5)mm2 - 100 Cooper کیبل برق	m	50			
18	Electric Swaitch	No	2			
19	Electric socket	No	4			
20	lamp for guard room	No	5			
21	100 Amp 12 volt battery for guard room	No	1			
Sub-Total Cost for Guard room (Afs.)						

BoQ for Stand Taps 84 Construction.					
1	Excavation of pipe trench different ground types 2, 3,6	م3	19		
2	Dry stone paching for 84 House connection Stand tap, (including stone prepration and workmanship)- according drawing minum 25 cm thick	m2	131.00		
3	Plain Cement Concrete (PCC), M150 kg/cm2 (1:2:4) including materails + workmanship + shuttering + curing	m3	35.00		
4	Plaster work with cement + sand (1:3), including materials ( cement, sand, water) and workmanship + curing	m <sup>2</sup>	56.00		
Sub-Total Cost for stand top (Afs.)					
BoQ for Distribution line (From Elevated Tank To Stand Tap)					
1	Excavation of pipe trench different ground types 2, 3,6	m <sup>3</sup>	2,690		
2	Back filling by excavated material.	m <sup>3</sup>	1,614		
3	Sand or sand soill filling arund pipe	m <sup>3</sup>	1,100		
4	125mm Pipe - PE100PN10	M	20		
5	110mm Pipe - PE100PN10	M	80		
6	90mm Pipe - PE100PN10	M	1,132		
7	75mm Pipe - PE100PN10	M	230		
9	63mm Pipe - PE100PN10	M	846		
10	50mm Pipe - PE100PN10	M	813		
11	40mm Pipe - PE100PN10	M	1,600		
12	25mm Pipe - PE100PN16- from junctions to household water user point	M	4801		
13	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).	M	84		
14	Gate value 2" stainless-steel- Flanged vlave - complete set	Pcs	8		
15	Gate valve 3" stainless-steel -Flanged vlave - complete set	Pcs	4		
16	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		
17	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 پروژه	No	1			
2	Operation and Maintenance Kit for Community					
3	Double Hacksaw 12" with 10 blades	Set	2			
4	Mole Grip 10" best quality	Pcs	2			
5	Thread Sealing Tape tapline	Pcs	40			
6	Combination Pliers best quality	Pcs	3			
7	Adjustable Wrench 10 "	Pcs	3			
8	Adjustable Wrench 18"	Pcs	1			
9	Pipe wrench 12"	Pcs	4			
10	Pipe Wrench 36"	Pcs	1			
11	Rubber Gloves 12.5 " for cleaning	Pair	20			
12	Goggles for eye safty	Pcs	2			
13	Tap Measuring 5m	Pcs	2			
14	Plastic pipe cuttter	Pcs	2			
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	2			
20	Steel Water Tap, 0.5" dia for hand washing taps stand of good quality i.e master brand	Piece	100			
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 clooler 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	150			
<b>Sub Total Cost (Afs.)</b>					<b>0</b>	
<b>Contingencies for unforeseen expenses ( %)</b>		L.S	1		<b>0</b>	
<b>Grand Total Cost (Afs.) قیمت مجموعی به افغانی</b>					<b>0</b>	