TENDER FOR DRILLING OF 10 BOREHOLES IN YEI IRSS-BRIYIC/06/02/2023

BACKGROUND/INTRODUCTION

Islamic Relief is an independent humanitarian and development UK-based organization, with an active presence in over 40 countries across the globe, we strive to make the world a better and fairer place for people still living in poverty. Islamic relief began its humanitarian operation in South Sudan in 2004 focusing on providing lifesaving aid and implementing developmental Programmes to support people affected by the flood, drought, and Conflict establishing three sub-offices in Narus (Kapoeta East), Wau, Warrap. A satellite office in Yei and the Main office in Juba.

Our vision:

Inspired by our Islamic faith and guided by our values, we envisage a caring world where communities are empowered, social obligations are fulfilled and people respond as one to the suffering of others.

Our mission:

Exemplifying our Islamic values, we will mobilize resources, build partnerships, and develop local capacity, as we work to:

Enable communities to mitigate the effect of disasters, prepare for their occurrence and respond by providing relief, protection and recovery.

Promote integrated development and environmental custodianship with a focus on sustainable livelihoods.

Support the marginalized and vulnerable to voice their needs and address root causes of poverty.

We allocate these resources regardless of race, political affiliation, gender or belief, and without expecting anything in return.

INTRODUCTION

1. **Background**
2. Islamic Relief South Sudan with funding from Islamic Relief USA is currently implementing a resilience project titled, "Building Resilience for Yei IDPs and Host Communities- South Sudan" being implemented in Yei River County. With the outcome 2 of the project "***Improved access to quality lifesaving WASH assistance to 1,100 most vulnerable households by end of the project"***. IRW-SS intents to drill additional 10 new boreholes installed with hand pumps. The

drilling plan was made possible due to realignment of the project budget whereby savings/balances on the overall project budget all channelled for drilling of new boreholes with the aim of increasing peoples access to clean water and improved hygiene. The purpose of this activity is to; increase access to safe drinking water to the neediest community in Yei county.

3.

4. **Scope of Work:**

The drilling work is expected to be implemented in targeted bomas of Yei County as presented below;

The overall borehole drilling details:

(a) Geophysical Survey/Profile Taking

The selected company is expected to carry out detailed geophysical survey before drilling commences, study is expected to use both secondary and primary data in the exercise; Secondary data will involve desk study of available information/data on existing boreholes, drill logs, reports and maps. The outcome of the study and recommendations is to be shared with IRSS before commencement of drilling work starts.

The geophysical investigations will be carried out in a multi-step approach:

a) Desk study: Review of existing data, topographical maps, satellite images, existing studies and borehole site investigations in the area, geological reports and maps, borehole and surface water records, etc.

b) Findings.

c) Compilation, analysis, and evaluation of the gathered data and information.

d) Site selection and reporting.

(A) BOREHOLE SITING:

The field investigations **MUST** be undertaken by highly qualified hydro-geologists, the geologist will be responsible for planning, execution and interpretation of all geophysical data, reporting and selection of the most suitable site for the drilling. The most promising site selected for drilling shall be marked with a concrete marker and indicated on a sketch map. The recommended site identified has to be well communicated to the community and the community should agree on the site through a community meeting. Should there be total lack of ground water potential as indicated by the siting machine in the proposed location by the community, the situation will be communicated to the community in order to find sites with promising ground water.

(b) Bore Well Drilling Requirements

The drilling of the borehole should be carried out according to the characteristics of the soil formation of the site using appropriate drilling technology, as per result of the hydro geophysical survey while

using proper drilling tools, drill pipes, casing pipes with centralizers to ensure that casing string is central within the hole.

- The expected bore well diameter is 8.0'' to 10"
- The expected depth of the bore well ranges between 65 .00m- 120.00m
- The expected yield of the bore well minimum 2,500 liters/hour.

Screen casing – factory made UPVC slotted 5 inches' nominal internal diameter screens will be used throughout the aquifer zone. The slot size and screen length will depend on the aquifer materials and aquifer thickness placed at appropriate positions and depth. Screens should be of an ISO standard and having the specification UPVC class 9/10 drinking water standard non- toxic.

Plain casing – 5. Inches nominal internal diameter casing should be of ISO standard UPVC class 10 drinking water standard, 3 meters long with threaded joints, well screwed, appropriately placed in the correct positions in the well.

Permanent casing – plain casing of 8 inches' diameter Permanent casing must go up to 6 m or up to hard formation to ensure that it seals off all materials from surface runoff entering the well and sanitary grout is inserted to a depth of not less than 1.50m from ground level.

Development – on completion of drilling, an appropriate development method will be applied this will include continuous flushing for a period not less than 4 hours, meanwhile estimating the discharge rate. This is necessary to obtain the maximum yield of the well.

Gravel packing – Gravel packing material shall be supplied and install all along the filter (aquifer) section of the well. The material shall be 2mm – 4 mm diameter, clean, well rounded siliceous gravel with not more than 5% of non- siliceous materials. Sanitary seal should be installed at an appropriate depth using grout cement.

Pumping test - Pumping test will be for a period not less than 8 hours in which the first 4 hours is for step draw down while the 4 hours for continuous test. The discharge at this point will correlate to the discharge during flushing.

Recovery test – recovery test should be done for at least 2 hours or such time when there is at least 80% of the static water level noted.

Water Quality Analysis – water quality test to be conducted at the d end of the drilling to determine the status of the water, considering the available parameters recommended for testing. Ensure borehole is chlorinated before opening to users

Bore-hole Installation:

Successful borehole will be installed with either Indian MK III hand pump will be installed as follows: < 50 m pump depth will be Indian MK II and > 51 m pump depth will be Indian MK III

- All platforms (aprons) should conform to South Sudan standards from Ministry of water resources and UNICEF.
- All drainage channels should be 6m long. Ensure boreholes are chlorinated and closed for 8 hours before use.

5. **Objectives:**

TO INCREASE ACCESS TO CLEAN AND SAFE WATER FOR THE TARGETED VULNERABLE COMMUNITIES IN YEI COUNTYDELIVERY DETAILS

Proposed sites/ distance/population size/GPS coordinate

S#	Village	Boma	Payam	Distance (Km) from the centre	GPS coordinates		
					Northing	Easting	Elev
1	Kanjero	Jardan	Yei	05	04° 05'18.3"	030^0 39'48.2"	766m
2	Hai Tasha	Sobe	Yei	07	04° 05'18.3"	030^0 39'48.2"	756m
3	Lagobero	Jansuk	Yei	09	04° 07'00.3"	030^0 39'59.9"	824m
4	Hai City	Sopiri	Ottogo	05	04° 04'15.2"	030^0 40'04.72"	835m
5	Gizira	Nyongwe	Yei	06	04° 04'53.6"	030^0 41'03.7"	813m
6	Erap I	Kondeko	Yei	04	04° 05'18.3"	030^0 39'48.2"	802m
7	Logworonga	Gimunu	Yei	05	04° 05'56.5"	030^0 42'19.7"	839m
8	Hai Delip	Luparate	Yei	05	04° 06'42.0"	030^0 40'59.8"	819m
9	Hai Spirit	Jardan	Yei	02	04° 05'21.2"	030^0 39'37.9"	847m
10	Sobe	Sobe	Yei	02	04^{0}05'31.0"	030^{0}41'00.1"	827m

All tenders are required to be submitted before **Thursday 15th June 2023, 4.00 pm Local time** pursuant to the attached guidelines for submitting a quotation and be returned to; **HAND DELIVERY TO IRSS TENDER BOX** Hai Cinema, 2nd class, Plot no 52, Block B-XVI, South Sudan upon registration on the bid receipt form.
For any issues relating to the tender or its contents please email directly to; IRSS.Tender@islamic-relief.com.ss

All quotation providers are requested to fill in Appendix 1 and 2 below when submitting their proposal to IRSS

Bill of quantities for drilling of 10 borehole

S/no	Item description	Unit	Quantity	Unit cost-USD	Amount - USD
Preliminaries					
01	Mobilization: Allow for cost of transporting all equipment, personnel	Mobilization	01		

	and materials to project sites and decommissioning at completion of job				
02	Geophysical survey: Conduct geophysical survey using recommended equipment especially resistivity meter and other high tech machines/devices to identify the most promising site for drilling of a successful borehole Survey that includes physical assessment of the project site, desk study of the proposed site to establish information that can guide in decision making about the proposed location	Survey	01		
Borehole drilling					
03	Carryout drilling 7"-8" borehole from 0-120 (Max) meters depth in all types of soil formation using air-foam, DTH hammer, and or with form, mud rotary with form or polymer, depending on the nature of formation in the respective site	M	65-120		
04	Supply and install 125mm (5") nominal internal diameter plain UPVC casings	M	60		
05	Supply and install 125mm (5") nominal internal diameter slotted UPVC casings including UPVC end caps	M	09		
06	Supply and install permanent casings 8" nominal internal diameter UPVC plain casing up to hard formation	M	06		
07	Supply and insert filter gravel packing 2mm-4mm size round and clean siliceous material	M^3	2.5		
08	Insert sanitary seal 1:1:2 grout cement not less than 1.5m deep from ground level	M	1.5		
Borehole development					
09	Allow for borehole development work, surging by air of a completed well until the water is crystal clear	Hours	4		
10	Pump testing completed well, time taken until pump is removed, recovery should be around 80%	Hours	8		

11	Allow for water quality test based on recommended parameters for South Sudan both physical, Chemical and Bacteriological	Test	01		
Hand pump installation and apron construction					
12	Apron Construction: All apron construction should consider an elevated apron, 0.4m above the ground level to mitigate effect of flood water on apron. That will involve stonework foundation in 1:4 cement to sand mortar well blinded and finish. General excavation of top soil & cut away depth n.e 200mm (assume 3.0m diameter channel inclusive).	M^3	3.0		
13	Construct a ramp for accessibility to the water collection point and provide guard rails for people with disability to access the water point	job	01		
14	Filling well compacted approved material thickness n.e 300mm. Blinding on top fill approved material well compacted thickness n.e 50mm. Provision and placement of BRC mesh as apron reinforcement, drainage channel length 6.0m Provision and placing of RC in pump platform, apron and drainage channel slab 150mm thick in mix of 1:2:4, well finished in grout cement.	M^3	3.0		
15	Provision and installation of Indian MK II/III hand pump pedestal, head assembly, water tank, 11/4" G.I pipes & connecting rods, and cylinder assembly to depth n.e 51m (for cylinder depth 50< is Indian MK II hand pump and 50m> is Indian MK III hand pump). Ensure pedestal are well fixed in concrete work to avoid being shaky in long run.	Set	01		
16	Provide and allow for construction of water trough: 1.5m long x 1.0m width but n.e 0.4m depth in brick work well plastered, smooth finish and rendered water proof, provided at the end of the drainage channel	No	01		
17	General landscaping around the Borehole 10m radius	Job	01		

18	There will be 2 sets of visibility items: Standalone signpost: description :0.80m height x 1.20m wide metallic sign post on 40mmx40mm hollow section frame, 21/2"x21/2" Round GI pipe (2inch) legs, 1.80m height stand (legs) shall be properly and appropriately placed and completed. **B.** 10 metallic plate to be fixed (riveted) on the borehole head assembly. Install the sign post a distance of n.e 3.0m from the water borehole.	Piece	01		
19	**Provide and install/cast metallic rails to protect the head assemblies from damage**.	Pairs	01		
20	Supply and allow for fixing automatic solar powered night/street light fixed with metallic poles. 200W Solar Endurance (with motion sensor) Light that provides maximum Light Output with multiple Light levels	system	01		
Total (USD) for one (01) borehole					
Grand total = Total x 10 (USD)					

Note: This bill of quantities provided is for one (01) complete borehole, should be multiplied x 10 for overall cost.

Note: All the 10 sites are all accessible. The job is expected to be accomplished in 35 days, including mobilisation, decommissioning and handing over.

6. Tasks and expected days of work

The contractor is expected to carry out the job accordingly, while assigning specific and clear task of works to specific team group e.g. the hydrogeologist for geophysical survey, well logging and aquifer behavior, water engineer / technicians for test pumping and installation of hand pumps, drillers for good drilling operations. The whole work is expected to take 35 days including mobilization to and from the site.

4 Reporting

Contractor to report on each phase of work successfully completed, this includes: Phase (1) Preliminary report of geophysical surveys work conducted on the five proposed sites (2) drilling completed and test pumping done
Hand pump installation, apron construction and fixing of sign posts.

5 Handing over

Final inspection will be jointly conducted with the directorate of rural water supply and sanitation, community representatives' various components of the borehole will be inspected and verified,

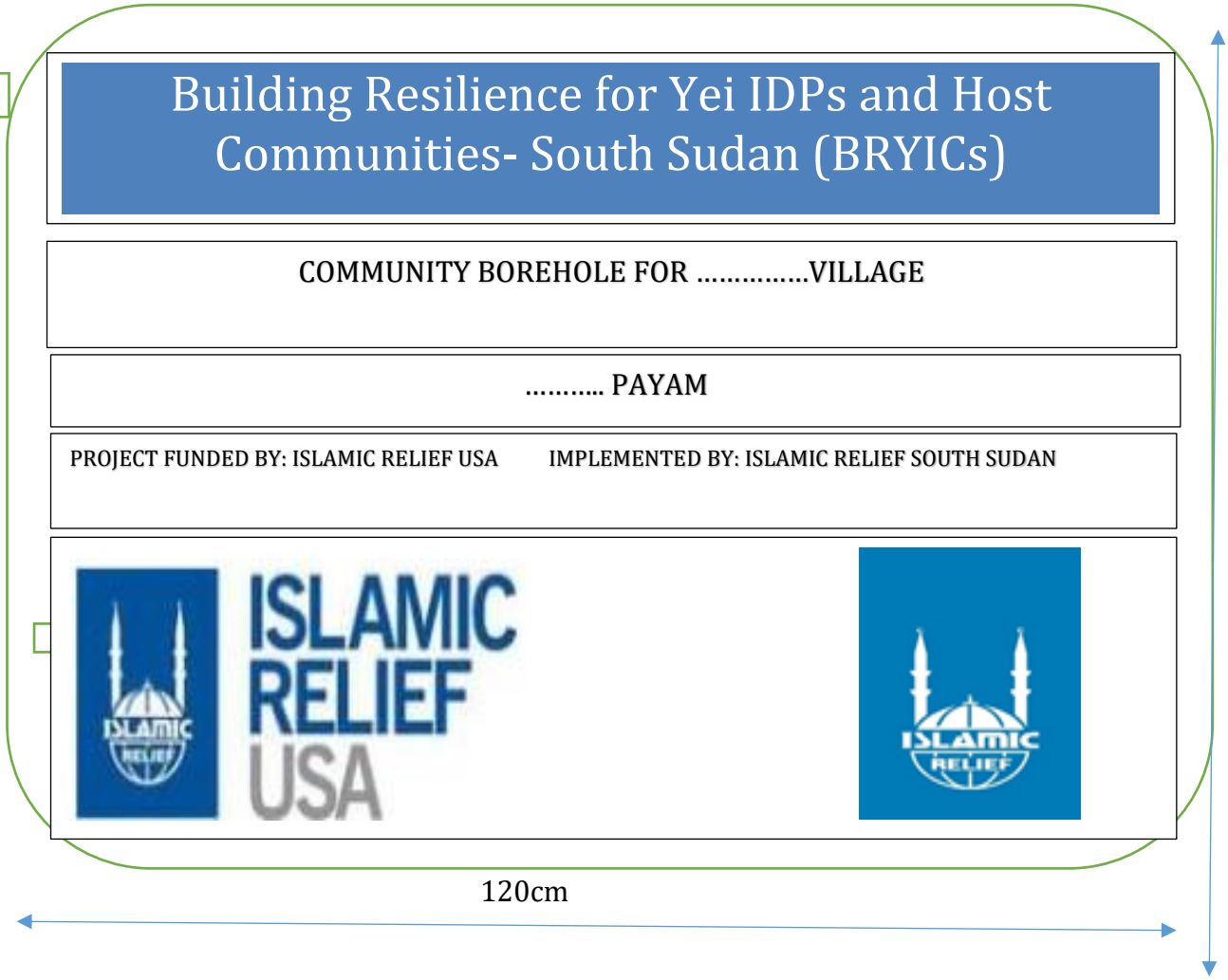
according to the check list. In case of defaults in any component, has to be rectified before final handing over is done.
After the facility is handed over, IRSS will carry out post construction monitoring for a period of three months before the liability (retention) money is settled.

6 Visibility

A. Visibilities technical description :0.80m height x 1.20m wide metallic sign post on 40mmx40mm hollow section frame, 21/2"x21/2" Round GI pipe (2inch) legs, 1.80m height stand (legs) shall be properly and appropriately placed and completed.
B. 10 metallic plate to be fixed (riveted) on the borehole head assembly.

SIGNPOST ARTWORK FOR THE 10 BOREHOLES

Visibilities technical description :0.80m height x 1.20m wide metallic sign post on 40mmx40mm hollow section frame, 21/2"x21/2" Round GI pipe (2inch) legs, 1.80m height stand (legs) shall be properly and appropriately placed and completed.



Metallic plate to be fixed on the Pump Head assesmbly:

FUNDED BY: IR-USA IMPLEMENTED BY: IRWSS DRILLING PERIOD: ……2023	PAYAM: BOMA:

DIMENSION:

WIDTH: 10CM

HEIGHT: 14CM

Appendix 2 bid summary
Summary of Bid Prices

No.	*Description*	*Total Price in USD ($)*
1	**Grand Total Bid Price**	
2	**Discount Ratio (if any) … % and the amount**	
3	**Grand Total after Discount**	
4	**Delivery time scales (in days)**	
5	**Quotation Validity**	

We have carefully checked and examined all bid documents and we are offering the costs above on a fixed basis and they are not subject to any changes or alterations including those due to currency fluctuations.

Total Price **USD ($)**
In words **[_____]**
Bidder's Signature Stamp Date

Bidder is required to stamp this document with their legal company stamp no bid will be accepted without a genuine company stamp

Supplier Code of Conduct

1 Islamic Relief's Supplier Code of Conduct

2 Islamic Relief Worldwide requires all suppliers to adhere to:

The Modern Slavery Act 2015
The International Labour Standards as defined by the ILO (International Labour Organisation).
The United Nations Global Compact's 10 principles as stated below:

Human Rights

Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights;
and
Principle 2: Make sure that they are not complicit in human rights abuses.

Labour

Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
Principle 4: The elimination of all forms of forced and compulsory labour;
Principle 5: The effective abolition of child labour;
and

Principle 6: The elimination of discrimination in respect of employment and occupation.

Environment

Principle 7: Businesses should support a precautionary approach to environmental challenges;

Principle 8: Undertake initiatives to promote greater environmental responsibility;

and

Principle 9: Encourage the development and diffusion of environmentally friendly technologies.

Anti-Corruption

Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.