### PROCUREMENT OF CONSTRUCTION WORKS FOR THE PROPOSED KIBERA INVESTMENT DELIVERING SAFE WATER (K.I.D.S) PROJECT

LOT 2: WATER SUPPLY NETWORK
CONTRACT No.: SHOFCO-K.I.D.S.-LOT2-2022

### **GRAND SUMMARY**

### TOTAL INCLUDING DUTIES AND TAXES

BILL	DESCRIPTION	AMOUNT
NO.		Kshs.
1	Preliminaries & General items	
2	(25Nr) Water Kiosks	
3	(2Nr) Elevated Steel Tank 48m³ with 15m steel tower	
4	(2Nr) Elevated steel Tank 32m³ with 15m steel tower	
<u> </u>	(211) Elevated steel Talik szill Wall Tolli steel tewel	
5	Lindi Distribution Network	
6	Makina Distribution Network	
7	Subra Distribution Network	
8	Laini Saba Distribution Network	
	Edili Caba Bistribation Network	
9	Schedule of Day works	
	SUB TOTAL 1	
	ADD FOR CONTINGENCIES 10 %	
	SUB TOTAL 2	
	ADD VAT @ 16%	
	GRAND TOTAL INCLUDING DUTIES AND TAXES CARRIED TO FORM OF BID	

# SHINING HOPE FOR COMMUNITIES (SHOFCO) PROCUREMENT OF CONSTRUCTION WORKS FOR THE PROPOSED KIBERA INVESTMENT DELIVERING SAFE WATER (K.I.D.S) PROJECT

CONTRACT No:	SHOFCO-K.I.D.SLOT2-2022
OCH IIIAO I NO.	01101 00-11.1.D.02012-2022

BILL No. 1

PRELIMINARIES AND GENERAL

TEM No.	DESCRIPTION	UNIT	QUANTITY	RATE Kshs	AMOUNT Kshs
1.0	CONTRACTUAL REQUIREMENTS				
1.0.1	Allow for provision of Performance Bond in accordance with the Conditions of Contract	Item	L.S		
1.0.2	Allow for provision of Insurance of Works and Contractor's Equipment in accordance with the Conditions of Contract	Item	L.S		
1.0.3	Allow for provision of Third Party Insurance (including Employer's Property) all in accordance with the Conditions of Contract	Item	L.S		
1.0.4	Allow for provision of Insurance against Accident to Workmen (WIBA) in accordance with the Conditions of Contract	Item	L.S		
1.1	SPECIAL REQUIREMENTS				
1.1.1	Contractor's Camp: Allow for erection of the Contractor's Camp(s), offices and other facilities including mobilization, demobilization and movement of the works site on completion. Include for all equipment, temporary measures, machines, tools, materials, facilities for workers, water and electricity supply etc. for execution of the Works. The Employer has no available land to offer for Contractor's Camp, storage of materials and preparation of concrete etc. Identification and procurement of suitable area of land for Contractor's Camp whether rented or purchased is the responsibility of the Contractor.	Item	L.S		
1.1.2	Allow a P.C. Sum of Kshs. 200,000 for training of Client's Staff during Construction, Testing and Commissioning of the Works as specified.	Item	P.C		200,00
1.1.3	Add% for profit, administration, attendance upon, overheads, etc. for Item 2.2 above	%			
1.2	SPECIFIED REQUIREMENTS				
1.2.1	Allow for setting out of the works in accordance with Conditions of Contract and Specifications	Item	L.S		
	L CARRIED TO SECTION COLLECTION SHEET				

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
No.				Kshs	Kshs
	Offices				
1.2.2	The Contractor shall allow for purchasing of 2 No. Laptop Computers to the RE's Support Staff with the following Specifications.15.6" Full HD, 10th Generation Intel Core i7-8750H 6core processor (upto 4.1 GHz) with windows 10 Home 64 bit, RAM - 16GBDDR4 2666MHz DRAM memory, Memory Speed - 3200MHz, Hard Drive - 1024GB Flash Memory Solid State, Graphics Coprocessor - NVIDIAGeForce RTX 2070 Max-Q, Chipset Brand - NVIDIA, Graphics Card RAM Size - 8GB	Nr	2		
	Attendance Upon Engineer's Staff				
	Provide the following Staff for the Resident Engineer's Offices. (Note: The Staff to be employed by the Contractor but to be under the exclusive day to day instruction of the Resident Engineer. The bidder should include in his bid payment for overtime, statutory deductions				
1.2.3	Allow for Provisonal Sum of 500,000 for attendance upon RE's Staff for supervision.	Item	PS		500,000.00
1.2.4	Add% for profit, administration, attendance upon, overheads, etc. for Item 1.2.8 above	%			
	Vehicles				
1.2.5	Provide/hire, insure fuel and maintain 1nr 4 wheel drive diesel propelled double cabin pick-up vehicle of 2,500cc, minimum engine capacity, Y.O.M under 7years for the exclusive use of the RE and his staff; inclusive of the first 4,000Km per vehicle Month approved by the Engineer. The Vehicle to revert to the contractor at the end of the contract.	months	8		
1.2.6	Add% for profit, administration, attendance upon, overheads, etc. for Item 1.2.10 above (% to be as per Appendix to Form of Bid)	%			
PAGE TOTA	CARRIED TO SECTION COLLECTION SHEET				

PG B1/2

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
No.				Kshs	Kshs
1.2.7	Provide 1 Nr. approved licenced driver exclusively for use of the Resident Engineer and his staff with at least 10 years experience. Include all overtime, accommodation, costs etc. necessary for the drivers to perform their duties	Months	8		
1.2.8	Provide 2 Nr. Qualified chainmen to be used solely by the Engineer	Months	16		
	<u>Telecommunications</u>				
1.2.9	Allow a P.C. Sum of KShs. 100,000 for telephone and fax services for the Project/Site Offices	Item	P.C		100,000.00
1.2.10	Add% for profit, administration, attendance upon, overheads, etc. for Item 1.2.15 above	%			
	Other Supplies				
1.2.11	Allow a P.C. Sum of KShs. 250,000 to be used as directed by the Engineer/Project Manager to cater for Project Administrative and Management Expenses.	Item	P.C		250,000.00
1.2.12	Add% for profit, administration, attendance upon, overheads, etc. for Item 1.2.16 above	%			
1.2.13	Allow for provision and maintenance of survey equipment as specified for the sole use of the Engineer during the duration of the contract. Equipment to be of acceptable working condition and to be returned to the contractor on completion.	Item	L.S		
PAGE TOTAL	L CARRIED TO SECTION COLLECTION SHEET				

PG B1/3

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
No.				Kshs	Kshs
1.2.14	Allow a sum for Test Running all the Works completed under the Contract for a period of 2 weeks after the offical commissioning of the Works	Item	L.S		
1.2.15	Allow a sum for factory inspection of pipes, fittings, mechanical & electrical plant manufacturing by the Engineer and Employer as per Specification	Item	L.S		
1.2.16	Allow for the provision of built drawings and Operations and Maintenance manual.	Item	L.S		
1.2.17	Allow a P.C. Sum of KShs. 450,000 for monthly site meetings as specified or directed by the Engineer	Item	P.C		450,000.00
1.2.18	Add% for profit, administration, attendance upon, overheads, etc. for Item 1.2.23 above	%			
	Other Works, Obligations				
1.2.19	The Contractor shall describe in detail hereunder other works, obligations and things which may be referred to in the Specifications or which he may consider have been omitted from the Bills of Quantities and for which he desires to enter a separate charge (the charge to be carried direct to the amount column). FULL DESCRIPTION OF ITEM(S) OF WORK OR ANY OTHER ISSUE SHOULD BE MADE. If no separate charge is made hereunder, the rates in the Bills of Quantities will be held as covering all expenses for all such works				
DACE TOTAL	L CARRIED TO SECTION COLLECTION SHEET				
FAGE TOTA	PG R1//				

### COLLECTION PAGE BILL NO 1

	DESCRIPTION	AMOUNT Kshs.
	PRELIMINARIES & GENERAL ITEM	
1	From Pg B1/1	
2	From Pg B1/2	
3	From Pg B1/3	
4	From Pg B1/4	

### PROCUREMENT OF CONSTRUCTION WORKS FOR THE PROPOSED KIBERA INVESTMENT DELIVERING SAFE WATER (K.I.D.S) PROJECT

CONTRACT No: SHOFCO-K.I.D.S.-LOT2-2022

BILL 2. WATER KIOSKS -25Nr

Item	Description	Unit	Qty	Rate	Amount (Kshs)
2.1	SITE CLEARANCE				
2.1.1	Demolition of the existing structure and cart away	LS			
2.1.2	Clear site of grass, bushes and small trees, grub roots and burn debris	m²	17		
2.2	EXCAVATION				
2.2.1	Excavate over site not exceeding 150mm deep, remove and deposit as directed.	m³	1.8		
2.2.2	Excavate foundation trench from stripped level not exceeding 1.0 m deep	m³	9		
2.2.3	Extra over "ditto" for excavation within rocky formation	m³	3.5		
2.2.4	Return fill and ram fillings around foundation trenches and compact in 150mm layers	m³	3		
2.2.5	Cart away remaining excavated earth material and deposit as directed	m³	5.3		
2.3	SUB-STRUCTURE; STRIP FOUNDATIONS 600mm WIDE & <u>150 mm THICK</u>				
2.3.1	50mm thick, mass concrete 1:4:8 blinding	m³	0.7		
2.3.2	Reinforced concrete 1:2:4 in foundations	m³	2		
2.3.3	10mm dia. Reinforcements bars	Kgs	58		
2.4	WALLING IN 1:3 GAUGED MORTAR;				
2.4.1	225mm thick Concrete Block walling including 20 gauge hoop iron belt reinforcement	m²	12		
	Floor Slab				
2.4.2	250mm thick, approved hardcore	m <sup>3</sup>	2		
2.4.3	50mm thick, mass concrete 1:4:8 blinding	m³	0.3		
2.4.4	100mm thick Reinforced concrete 1:2:4 floor slab	m³	0.75		
2.4.5	Allow for A 142 steel reinforcement Mesh	m²	8		
2.4.6	Damp Proof Membrane	m²	6		
2.4.7	Form work to sides of floor slab	m²	1.5		
	Walling				
2.4.8	D.P.C. under walling	m	16		
2.4.9	225mm thick Concrete Block walling including 20 gauge hoop iron belt reinforcement	m²	10		
2.4.10	Waste water collection and drainage area walling	m²	2.5		
2.5	Columns				
	Concrete for Roofing Slab, Beams and Columns				
2.5.1	Class 20(20) Reinforced Concrete for slab and Ring Beams	m³	3.03		
2.5.2	1,700x400x300mm reinforced concrete for raised Apron	m³	0.25		
	Sub Total Page 1 Carried to Bill Collection				-
		-			

### $\underline{PROCUREMENT\ OF\ CONSTRUCTION\ WORKS\ FOR\ THE\ PROPOSED\ KIBERA\ INVESTMENT\ DELIVERING\ SAFE\ WATER\ (K.I.D.S)\ PROJECT$

CONTRACT No: SHOFCO-K.I.D.S.-LOT2-2022

	BILL NO.2				
	WATER KIOSKS CONT.				
Item	Description	Unit	Qty	Rate	Amount (Kshs)
	Reinforcement Bars		<u> </u>	<del>                                     </del>	
2.5.3	12mm dia Reinforcement bars for Ring beam and columns	Kg	115		
2.5.4	10mm dia Reinforcement bars for roof slab	Kg	120		
2.5.5	6mm dia MS Reinforcement bars as stir ups	Kg	22		
2.5.6	Formwork				
2.5.7	Provide for form work along soffit and sides of ring beams	m²	15		
2.5.8	Provide for form work along soffit and sides of R.C roof	m²	9		
2.5.9	Construct one, 1700x500x75mm RC Kiosk counter reinforced with 50x50mm wire mesh	Item	1		
2.6	FIXTURES				
	Doors & windows: -				
2.6.1	Standard 850 x 2100mm steel casement door complete with frame and locks	No	1		
2.6.2	Outward opening horizontal swing motion 1000high x 800mm wide steel casement window that opens and closes in vertical swing motion complete with frame, protective burglar proofing and locks	No	1		
2.7	FINISHES				
2.7.1	20mm cement sand 1:3 plaster applied in 3 layers	m <sup>2</sup>	45		
2.7.2	38mm screed finished to receive ceramic floor tiles	m <sup>2</sup>	4.6		
2.7.3	300x300x10mm thick polished ceramic floor tiles bedded and jointed in approved adhesive, pointed in approved tile mortar.	m²	4.6		
2.7.4	100x8mm thick ditto skirting with rounded top and square at junction with paving.	m	10		
2.7.5	Emulsion paints	m <sup>2</sup>	45		
2.7.6	Enamel paints	m²	38		
2.8	PLUMBING AND PIPE FITTING				
2.8.1	Allow for supply, fix and test of the pipes, fittings and appurtenances as per drawing	SUM	1		
2.9	SOAK PIT				
2.9.1	Allow for soak pit construcion as per the drawings	SUM	1		

### $\underline{PROCUREMENT\ OF\ CONSTRUCTION\ WORKS\ FOR\ THE\ PROPOSED\ KIBERA\ INVESTMENT\ DELIVERING\ SAFE\ WATER\ (K.I.D.S)\ PROJECT$

CONTRACT No: SHOFCO-K.I.D.SLOT2-2022	
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BILL 2. WATER KIOSKS -25Nr

	BILL NO. 2 WATER KIOSKS CONT.				
Item	Description	Unit	Qty	Rate	Amount (Kshs)
2.10	PVC TANK MOUNTED OVER R.C ROOF AND ACCESSORIES				
2.10.1	Purchase and Installation of plastic tank 5,000 Litres on the roof slab of the water kiosk as shown in the drawings	Nr	1		
2.11	Steel cage				
2.11.1	Provide a sum of Kshs twenty thousand shillings only (Kshs 20,000.00) for steel cage installation icluding padlock as per the drawing	SUM	1		
2.12	EXTERNAL CERAMIC TILING				
	Coloured other equal and approved ceramic tiles laid				
2.12.1	38mm screed finished to receive ceramic tiles	m²	9		
2.12.2	300x300x10mm thick polished ceramic tiles on floor and fetching bay, bedded and jointed in approved adhesive, pointed in approved tile mortar.	m²	9		
2.13	SHELVES				
2.13.1	600mmwide x25mm thick shelves using vnniered hardwood timber propped on walls by stainless steel brackets at 1000mm c/c	m	12		
2.14	MISCELLEANEOUS WORK				
2.14.1	50mm thick precast concrete paving slab on sand bed	No	10		
	Sub Total Page 3 Carried to Bill Collection				

### PROCUREMENT OF CONSTRUCTION WORKS FOR THE PROPOSED KIBERA INVESTMENT DELIVERING SAFE WATER (K.I.D.S) PROJECT

CONTRACT No: SHOFCO-K.I.D.SLOT2-2022	

BILL 2. WATER KIOSKS -25Nr

Item	Description	Unit	Qty	Rate	Amount (Kshs)
	Bill Collection Page				
	Sub Total Page 1				
	Sub Total Page 2				
	Sub Total Page 3				
	Total of Water Kiosk				
	Total of 25 Nr Water Kiosks Carried Forward to Summary Page				

### PROCUREMENT OF CONSTRUCTION WORKS FOR THE PROPOSED KIBERA INVESTMENT DELIVERING SAFE WATER (K.I.D.S) PROJECT

### CONTRACT No: SHOFCO-K.I.D.S.-LOT2-2022

BILL NO. 3

48M³ ELEVATED STEEL TANKS (2Nr)

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE Kshs	AMOUNT
NO.		UNII	QUANTITY		Kshs
	Earth works, concrete works and Tank construction to be done as per drawings				
3.0	EXCAVATION AND EARTHWORKS				
3.0.1	Excavate in any material for tank tower foundation spread and level the excavated materials and stack surplus for re-use as directed	m <sup>3</sup>	46		
3.0.2	Spread and ram on site as directed or dispose of surplus material	m <sup>3</sup>	23		
3.0.2	Trim, spread and level the ground around tank to form suitable drainage of surface water	m <sup>3</sup>	6		
3.1	TANK CONSTRUCTION				
3.1.1	Allow for foundation construction and compliance to other foundation requirements as recommended by the manufacturer	Sum	1		
3.1.2	Supply all materials, tools and equipment and erect a 48m³ steel sectional tank of the Braithwaite type or equally approved standard include a tank tower of 15 meters, ladder with ladder guard, inside-ladder, walkway with walkway guard, water level gauge and tank cover, provision of air vent, support rails, inlets and outlet for pipes etc., for complete installation	No.	1		
3.2	PIPES AND SPECIALS				
3.2.1	All pipes and specials shall comply with the requirements of BS 5950. Allow for gaskets, nuts,				
	washers, bolts, cutting and threading on site				
3.2.2	Provide, fix and test following: (All screwed flanges listed separately)				
3.3	INLET				
3.3.1	75mm G.S. flanged socket adaptor	No.	1		
3.3.2	75mm 65 G.S. 90° bend	No.	2		
3.3.3	75mm dia flange	No.	10		
3.3.4	75mm ball valve Glenfield Gate	No.	1		
3.3.5	75mm G.S pipe	m	5		
3.4	OVERFLOW AND SCOUR				
3.4.1	75mm G.S 90° bend	No.	1		
3.4.2	75mm equal tee	No.	1		
3.4.3	75mm flanged sluice Valve	No.	1		
3.4.4	75mm G.S pipe	m	5		
3.4.5	75mm G.S screwed flange	No.	10		
Sub Total	Carried to Bill Collection				

### PROCUREMENT OF CONSTRUCTION WORKS FOR THE PROPOSED KIBERA INVESTMENT DELIVERING SAFE WATER (K.I.D.S) PROJECT

### CONTRACT No: SHOFCO-K.I.D.S.-LOT2-2022

BILL NO. 3

48M³ ELEVATED STEEL TANKS (2Nr)

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE Kshs	AMOUNT Kshs
3.5	OUTLET	l	_		
3.5.1	75mm flanged G.S steel 90° duck foot bend	No.	1		
3.5.2	75mm flanged G.S steel, length 8500mm	No.	1		
3.5.3	75mm steel flanged spigot adaptor	No.	1		
3.5.4	275mm long G.S pipe diameter 75mm	m	2		
3.5.5	75mm diameter rose strainer or equivalent	No.	1		
3.6	WATER METER				
	Provide and install one 50mm bulk flow meter class B (type and make to be approved by the Project	No.	1		
i	Manager)				
3.7	PAINTING				
3.7.1	Allow for the complete installation to be painted as recommended by the manufacturers or the engineer with Employer's logo	Ls	1		
3.8	TESTING AND STERILISING				
3.8.1	Test and sterilize tank including the necessary chemicals	Ls	1		
Sub Total	Carried to Bill Collection		•		

### PROCUREMENT OF CONSTRUCTION WORKS FOR THE PROPOSED KIBERA INVESTMENT DELIVERING SAFE WATER (K.I.D.S) PROJECT

CONTRACT No: SHOFCO-K.I.D.S.-LOT2-2022

BILL NO. 3

 $48 M^3\,ELEVATED\,\,STEEL\,\,TANKS\,\,(2Nr)$ 

Item	Description	Unit	Qty	Rate	Amount (Kshs)
	Bill Collection Page				
	Sub Total Page 1				
	Sub Total Page 2				
	Total for 48m³ Elevated Steel Tank				
	Total for 2 Nr Tanks Carried Forward to Summary Page				

### PROCUREMENT OF CONSTRUCTION WORKS FOR THE PROPOSED KIBERA INVESTMENT DELIVERING SAFE WATER (K.I.D.S) PROJECT

### CONTRACT No: SHOFCO-K.I.D.S.-LOT2-2022

BILL NO. 4

32M<sup>3</sup> ELEVATED STEEL TANK - 15m HIGH (2Nr)

ITEM	DESCRIPTION	LINITE	OLI A NITHTA	RATE Kshs	AMOUNT
NO.		UNIT	QUANTITY		Kshs
	Earth works, concrete works and Tank construction to be done as per drawings				
4.0	EXCAVATION AND EARTHWORKS				
4.0.1	Excavate in any material for tank tower foundation spread and level the excavated materials and stack surplus for re-use as directed	m <sup>3</sup>	46		
4.0.2	Spread and ram on site as directed or dispose of surplus material	m <sup>3</sup>	23		
4.0.3	Trim, spread and level the ground around tank to form suitable drainage of surface water	m <sup>3</sup>	6		
4.1	TANK CONSTRUCTION				
4.1.1	Allow for foundation construction and compliance to other foundation requirements as recommended by the manufacturer	Sum	1		
4.1.4	Supply all materials, tools and equipment and erect a 32m³ steel sectional tank of the Braithwaite type or equally approved standard include a tank tower of 15 meters, ladder with ladder guard, inside-ladder, walkway with walkway guard, water level gauge and tank cover, provision of air vent, support rails, inlets and outlet for pipes etc., for complete installation	No.	1		
4.2	PIPES AND SPECIALS				
4.2.1	All pipes and specials shall comply with the requirements of BS 5950. Allow for gaskets, nuts, washers, bolts, cutting and threading on site				
4.2.2	Provide, fix and test following: (All screwed flanges listed separately)				
4.3	INLET				
4.3.1	75mm G.S. flanged socket adaptor	No.	1		
4.3.2	75mm 65 G.S. 90° bend	No.	2		
4.3.3	75mm dia flange	No.	10		
4.3.4	75mm ball valve Glenfield Gate	No.	1		
4.3.4	75mm G.S pipe	m	5		
4.4	OVERFLOW AND SCOUR				
4.4.1	75mm G.S 90° bend	No.	1		
4.4.2	75mm equal tee	No.	1		
4.4.3	75mm flanged sluice Valve	No.	1		
4.4.4	75mm G.S pipe	m	5		
4.4.5	75mm G.S screwed flange	No.	10		
	Carried to Bill Collection	110.	10		

### PROCUREMENT OF CONSTRUCTION WORKS FOR THE PROPOSED KIBERA INVESTMENT DELIVERING SAFE WATER (K.I.D.S) PROJECT

### CONTRACT No: SHOFCO-K.I.D.S.-LOT2-2022

RILL NO. 4

 $32M^3$  ELEVATED STEEL TANK - 15m HIGH (2Nr)

NO. UNIT QUA	NTITY KATE Kshs	Kshs
		KSIIS
1 45 0 2000 2000		
4.5 OUTLET		
4.5.1 75mm flanged G.S steel 90° duck foot bend 4.5.2 75mm flanged G.S steel, length 8500mm No.	1	
	1	
7	1	
4.5.4 275mm long G.S pipe diameter 75mm m	2	
4.5.5 75mm diameter rose strainer or equivalent No.	1	
4.6 WATER METER		
4.6.1 Provide and install one 50mm bulk flow meter class B (type and make to be approved by the Project No.	1	
Manager)	1	
4.7 PAINTING		
Allow for the complete installation to be pointed as recommended by the manufacturers or the		
4.7.1 Allow for the complete installation to be painted as recommended by the maintracturers of the engineer with Employer's logo	1	
engineer with Employers togo		
4.8 TESTING AND STERILISING		
4.8.1 Test and sterilize tank including the necessary chemicals	1	
]		
Sub Total Carried to Bill Collection		

### $\underline{PROCUREMENT\ OF\ CONSTRUCTION\ WORKS\ FOR\ THE\ PROPOSED\ KIBERA\ INVESTMENT\ DELIVERING\ SAFE\ WATER\ (K.I.D.S)\ PROJECT$

CONTRACT No: SHOFCO-K.I.D.S.-LOT2-2022

RILL NO. 4

 $32M^3$  ELEVATED STEEL TANK - 15m HIGH (2Nr)

Item	Description	Unit	Qty	Rate	Amount (Kshs)
	Bill Collection Page				
	Sub Total Page 1				
	Sub Total Page 2				
	Total for 32m³ Elevated Steel Tank - 15m				
	Total for 2 Nr Tanks Carried Forward to Summary Page				·

### $\frac{\text{PROCUREMENT OF CONSTRUCTION WORKS FOR THE PROPOSED KIBERA INVESTMENT DELIVERING SAFE WATER (K.I.D.S)}{\text{PROJECT}}$

### CONTRACT No: SHOFCO-K.I.D.S.-LOT2-2022

	BILL 5. LINDI DISTRIBUTION NETWORK	1 77 /	1 0		
Item	Description	Unit	Qty	Rate	Amount (Kshs)
5.0	DEDENICADE DEDEC				
5.0	PIPEWORK - PIPES				
	Supply and install Hdpe pipes complete with couplings IncludIng Test & Commission				
	Commission				
5.0.1	OD 63 PN 6	m	578		
5.0.2	OD 75 PN 12.5	m	220		
5.0.3	OD 50 PN 6	m	484		
5.0.4	OD 32 PN 10	m	534		
5.0.5	OD 63 PN 12.5	m	633		
5.0.6	OD 40 PN 8	m	495		
5.0.7	OD 40 PN 6	m	360		
			3303		
5.1	PIPEWORK -FITTINGS AND VALVES				
	Supply and install Including Test & Commission				
	HDPE Reducer Coupler PN10				
5.1.1	OD 63 X 50 mm	nr	3		
5.1.2	OD 50 X 32 mm	nr	2		
5.1.3	OD 50 X 40mm	nr	1		
	HDPE Elbow x45 PN10				
5.1.4	OD 20 mm	nr	3		
5.1.5	OD 25mm	nr	4		
5.1.6	OD 32 mm	nr	4		
5.1.7	OD 40 mm	nr	3		
5.1.8	OD 50mm	nr	8		
5.1.9	OD 63mm	nr	8		
5.1.10	OD 75 mm	nr	3		
	HDPE Elbow x 90 PN10				
5.1.11	OD 20 mm	nr	1		
5.1.12	OD 25mm	nr	1		
5.1.13	OD 32 mm	nr	1		
5.1.14	OD 40 mm	nr	1		
5.1.15	OD 50mm	nr	2		
5.1.16	OD 63mm	nr	2		
5.1.17	OD 75mm	nr	1		
	Sub Total Page 1 Carried to Bill Collection				
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## $\frac{\text{PROCUREMENT OF CONSTRUCTION WORKS FOR THE PROPOSED KIBERA INVESTMENT DELIVERING SAFE WATER (K.I.D.S)}{\text{PROJECT}}$

### CONTRACT No: SHOFCO-K.I.D.S.-LOT2-2022

Item	Description	Unit	Qty	Rate	Amount (Kshs)
100111	HDPE Tees	Care	ν,		······································
5.1.18	50 mm X 25 mm	nr	4		
5.1.19	63 mm X 25 mm	nr	2		
5.1.20	40mm X 25 mm	nr	2		
5.1.21	32mm X 25 mm	nr	4		
5.1.22	25mm X 20 mm	nr	2		
5.1.23	20mm Equal tee	nr	2		
5.1.24	75mm x 50mm	nr	2		
	HDPE Ball Valve PN10				
5.1.25	20 mm	nr	2		
5.1.26	25mm	nr	2		
5.1.27	32 mm	nr	4		
5.1.28	40 mm	nr	2		
5.1.29	50 mm	nr	2		
5.1.30	63 mm	nr	4		
	NON RETURN VALVES				
5.1.31	OD 63 PN 12.5	nr	2		
5.2	PIPEWORK - ANCILLARIES				
	Supply and install Including Test & Commission Guy wire kit as shown in the				
	drawing comprising of			1	
5.2.1	25mm thick galvanised steel wire twisted rope	m	2000		
5.2.2	16mm thick galvanised steel wire twisted rope	m	-2000	1	
5.2.3	Stainless steel Shackles,	nr	262		
5.2.4	Stainless steel extensions (Turnbuckles) M24	nr	131		
5.2.5	Stainless steel extensions (Turnbuckles) M16	nr	131		
5.2.6	Stainless steel clamps (wire rope grips) M24	nr	240		
5.2.7	Stainless steel clamps (wire rope grips) M16	nr	90		
5.2.8	Steel Brackets at 0.5m interval	nr	0		
	PUMPS				
	Existing Lindi Village BH - Lindi TP				
	Allow for supply and installation of a horizontal mounted centrifugal pump				
5.2.9	coupled to a motor with the following particulars:- Flow, Q=6m³/Hr, total pumping		2		
3.2.9	head, H=15m, coupled to at least 1.0kW motor. Including all necessary mechanical	nr			
	and electrical fittings and control panel.				
	Existing PCEA Silanga BH - Lindi TP				
	Allow for supply and installation of a horizontal mounted centrifugal pump				
5.2.10	coupled to a motor with the following particulars:- Flow, Q=6.0m <sup>3</sup> /Hr, total	nr	2		
3.2.10	pumping head, H=35m, coupled to at least 1.5kW motor. Including all necessary	111			
	mechanical and electrical fittings and control panel.				
	Clear water tank - Elevated tank				
	Allow for supply and installation of a horizontal mounted centrifugal pump				
5.2.11	coupled to a motor with the following particulars:- Flow, Q=14.0m <sup>3</sup> /Hr, total	nr	2	1	
J.∠.11	pumping head, H=30m, coupled to at least 4.0kW motor. Including all necessary	111			
	mechanical and electrical fittings and control panel.				
	Provide for float switch to elevated tank and connect to the control panel and	nr	1		
	pump.				
	METERS				
	Provide, install and commision single jet bulk cold water meters (brass material)				
	R160 Auriga, Diehl Meter preffered.				
5.2.12	DN 15mm, complete with associated fittings	nr	20		
	TESTING OF THE WORKS			1	
	Pressure testing and commissioning for the pipeline, including all necessary				
5.2.13	equipment, materials and labour e.g. delivery of water for testing, fittings, disposal	m	3300		
	of used water.				
	Disinfecting of pipeline; flushing with clear water, filling with water containg				
5.2.14	0.05g/l calcium hypochlorite for 24hours. This includes supply of all necessary	m	3300	1	
J.2.17	equipment, materials, chemicals and water, measurement of residual chlorine, all	***	3300		
	as specified.				
	Sub Total Page 2 Carried to Bill Collection				

## $\frac{\text{PROCUREMENT OF CONSTRUCTION WORKS FOR THE PROPOSED KIBERA INVESTMENT DELIVERING SAFE WATER (K.I.D.S)}{\text{PROJECT}}$

### CONTRACT No: SHOFCO-K.I.D.S.-LOT2-2022

Item	Description	Unit	Qty	Rate	Amount (Kshs)
5.3	COLUMNS (PIERS)				
5.3.0	SITE CLEARANCE				
5.3.0.1	Demolition of the existing structure and cart away	LS	1		
5.3.0.2	Clear site of grass, bushes and small trees, grub roots and burn debris	m²	5		
5.3.1	EXCAVATION				
	The rate shall include for all strutting, shuttering, stabilising the excavation and preparation of excavated surfaces to receive permannt formwork				
5.3.1.1	Depth upto 2m	m³	11		
5.3.1.2	Excavation items for excavation in Rock Class A (Provisional)- Blasting not permited	m³	4.4		
5.3.1.3	Ditto for excavation in Rock Class B (Provisional)- Blasting not permited	m³	3.5		
5.3.1.4	Ditto for excavation in Rock Class C (Provisional)- Blasting not permited	m³	2		
5.3.1.5	Return fill and ram selected soil in foundations	m³	5.2		
5.3.1.6	Cart away remaining excavated earth material and deposit as directed	m³	5.7		
5.3.2	FORMWORK				
	Provide and fix shuttering including propping, strutting and striking as specified				
	Vertical Formwork - Class F1 Finish				
5.3.2.1	Sides of 300mm footings	m²	3.5		
5.3.2.2	Sides of piers	m²	18		
5.3.3	IN SITU CONCRETE				
	Provide, mix and place concrete as directed				
5.3.3.1	Plain concrete Class 15/20 in 75mm blinding layer under footings Vibrated reinforced concrete Class 25/20 in	m³	0.35		
5.3.3.2	Footings	m³	0.9		
5.3.3.3	Piers	m³	1.9		
5.3.4	REINFORCEMENT STEEL				
	Provide and fix high tensile steel reinforcement to SRN 127 including cutting, bending, propping with spacers and tying as specified				
5.3.4.1	8mm Diameter BS4449 Mild steel reinforcement-round bars	kg	40		
5.3.4.2	12mm deformed reinforcement high tensile bars	kg	63		
5.3.4.3	20mm deformed reinforcement high tensile bars	kg	188		
5.3.4.4	Binding wire	kg	2		
5.4	PIER ANCILLERIES				
5.4.1	Provide all materials, fabricate and fix 400mm by 400mm wide by 10mm thick MS plate with a 15mm thick stiffener and anchored to pier using 4nr 20mm dia. by 300mm long RAG bolts as detailed in the drawing.	nr	1		
5.4.2	Supply and install 305x 165x40kg/m U Beam as shown in the drawing	m	1.5		
5.4.3	Provide all materials, fabricate and weld 400mm by 400mm wide by 10mm thick MS plate welded on the U- Beam to receive guy wire rope as shown in the drawing	nr	1		
5.4.4	Painting on the culumn and all metal surfaces with 3 coats of approved paint on one coat of primer	m²	12		
	Subtotal for one Column				
	Sub Total for 98 Columns Carried to Bill Collection	nr	105		

### $\frac{PROCUREMENT\ OF\ CONSTRUCTION\ WORKS\ FOR\ THE\ PROPOSED\ KIBERA\ INVESTMENT\ DELIVERING\ SAFE\ WATER\ (K.I.D.S)}{PROJECT}$

### CONTRACT No: SHOFCO-K.I.D.S.-LOT2-2022

Item	Description	Unit	Qty	Rate	Amount (Kshs)

Item	Description	Unit	Qty	Rate	Amount (Kshs)
	Bill Collection Page				
	Sub Total Page 1				
	Sub Total Page 2				
	Total of 98 Columns				
	Total Lindi Distribution Network Carried Forward to Summary Page				

### $\frac{\text{PROCUREMENT OF CONSTRUCTION WORKS FOR THE PROPOSED KIBERA INVESTMENT DELIVERING SAFE WATER (K.I.D.S)}{\text{PROJECT}}$

### CONTRACT No: SHOFCO-K.I.D.S.-LOT2-2022

#### BILL 6. MAKINA DISTRIBUTION NETWORK

Item	BILL 6. MAKINA DISTRIBUTION NETWORK  Description	Unit	Qty	Rate	Amount (Kshs)
rtem	Description	Unit	Qty	Kate	Amount (Ksiis)
6.0	PIPEWORK - PIPES				
0.0	Supply and install Hdpe pipes complete with couplings IncludIng Test &				
	Commission				
6.0.1	OD 63 PN 8	m	688		
6.0.2	OD 50 PN 8	m	248		
6.0.3	OD 63 PN 6	m	605		
6.0.4	OD 32 PN 10	l m	594		
6.0.5	OD 40 PN 8	m	495		
0.0.5			2629		
6.1	PIPEWORK -FITTINGS AND VALVES				
	Supply and install Including Test & Commission				
	HDPE Reducer Coupling PN8				
6.1.1	OD 63 X 50 mm	nr	2		
6.1.2	OD 50 X 32 mm	nr	2		
6.1.3	OD 63 X 32 mm	nr	2		
6.1.4	OD 40 X 32 mm	nr	2		
	HDPE Elbow x45 PN8				
6.1.5	OD 20 mm	nr	3		
6.1.6	OD 25mm	nr	4		
6.1.7	OD 32 mm	nr	12		
6.1.8	OD 40 mm	nr	6		
6.1.9	OD 50mm OD 63mm	nr	5		
6.1.10	HDPE Elbow x 90 PN8	nr	16		
6.1.11	OD 20 mm	l	1		
6.1.11	OD 25mm	nr	1		
6.1.12	OD 32 mm	nr nr	3		
6.1.14	OD 40 mm	l "	2		
6.1.15	OD 50mm	l m	1		
6.1.16	OD 63mm	l m	1 1		
		"	l <sup>*</sup>		
	Sub Total Page 1 Carried to Bill Collection	+			

### $\frac{\text{PROCUREMENT OF CONSTRUCTION WORKS FOR THE PROPOSED KIBERA INVESTMENT DELIVERING SAFE WATER (K.I.D.S)}{\text{PROJECT}}$

### CONTRACT No: SHOFCO-K.I.D.S.-LOT2-2022

### BILL 6. MAKINA DISTRIBUTION NETWORK

Item	Description	Unit	Qty	Rate	Amount (Kshs)
Hein	1	Unit	Qty	Kate	Allioulit (KSIIS)
61.17	HDPE Tees PN8				
6.1.17 6.1.18	50 mm X 25 mm 63 mm X 25 mm	nr	1 5		
	63 mm X 23 mm 40mm X 25 mm	nr			
6.1.19		nr	1 9		
6.1.20 6.1.21	32mm X 25 mm 25mm X 20 mm	nr	2		
	32mm X 20 mm 32mm Equal tee	nr			
6.1.22 6.1.23	63mm to 32mm	nr	1 1		
0.1.23	03Hiii to 32Hiii	nr	1		
	HDPE Ball Valve PN8				
6.1.24	OD 20 mm	nr	1		
6.1.25	OD 25 mm	nr	16		
6.1.26	OD 32 mm	nr	8		
6.1.27	OD 40 mm	nr	1		
6.1.28	OD 50mm	nr	1		
6.1.29	OD 63mm	nr	4		
0.1.29	OD (Shiili)	111	<b>"</b>		
6.2	PIPEWORK - ANCILLARIES			1	
	Supply and install Including Test & Commission Guy wire kit as shown in the				
	drawing comprising of				
	8 1 8				
6.2.1	25mm thick galvanised steel wire twisted rope	m	1085		
6.2.2	16mm thick galvanised steel wire twisted rope	m	1085		
6.2.3	Stainless steel Shackles,	nr	176		
6.2.4	Stainless steel extensions (Turnbuckles) M24	nr	70		
6.2.5	Stainless steel extensions (Turnbuckles) M16	nr	35		
6.2.6	Stainless steel clamps (wire rope grips) M24	nr	70		
6.2.7	Stainless steel clamps (wire rope grips) M16	nr	35		
6.2.8	Steel Brackets at 0.5m interval	nr	5260		
	Clear water tank - Elevated tank				
	Allow for supply and installation of a horizontal mounted centrifugal pump				
6.2.9	coupled to a motor with the following particulars:- Flow, Q=14.0m <sup>3</sup> /Hr, total	nr	2		
	pumping head, H=30m, coupled to at least 4.0kW motor. Including all				
	necessary mechanical and electrical fittings and control panel.				
	Provide for float switch to elevated tank and connect to the control panel and	nr	1		
	pump.				
	METERS			1	
	Provide, install and commission single jet bulk cold water meters (brass			1	
	material) R160 Auriga, Diehl Meter preffered.			1	
6.2.10	DN 15mm, complete with associated fittings	nr	16		
0.2.10	TESTING OF THE WORKS	nr	10		
	Pressure testing and commissioning for the pipeline, including all necessary			1	
6.2.11	equipment, materials and labour e.g. delivery of water for testing, fittings,	m	2600		
0.2.11	disposal of used water.	111	2000		
	Disinfecting of pipeline; flushing with clear water, filling with water containg				
	0.05g/l calcium hypochlorite for 24hours. This includes supply of all necessary			1	
6.2.12	equipment, materials, chemicals and water, measurement of residual chlorine,	m	2600	1	
	all as specified.				
	Sub Total Page 2 Carried to Bill Collection				

### $\frac{\text{PROCUREMENT OF CONSTRUCTION WORKS FOR THE PROPOSED KIBERA INVESTMENT DELIVERING SAFE WATER (K.I.D.S)}{\text{PROJECT}}$

### CONTRACT No: SHOFCO-K.I.D.S.-LOT2-2022

	BILL 6. MAKINA DISTRIBUTION NETWORK				
Item	Description	Unit	Qty	Rate	Amount (Kshs)
	GOV VANOS OVEROS				
6.3	COLUMNS (PIERS) SITE CLEARANCE				
6.3.0		1.0			
6.3.0.1	Demolition of the existing structure and cart away	LS	1		
6.3.0.2	Clear site of grass, bushes and small trees, grub roots and burn debris	m²	5		
6.3.1	EXCAVATION				
	Excavate for column bases not exceeding 2m deep.				
	Depth upto 2m	m³	11		
6.3.1.1					
6.3.1.2	Excavation items for excavation in Rock Class A (Provisional)- Blasting not permited	m³	4.4		
	Ditto for excavation in Rock Class B (Provisional)- Blasting not permited	m³	3.5		
6.3.1.3					
(214	Ditto for excavation in Rock Class C (Provisional)- Blasting not permited	m³	2		
6.3.1.4					
6.3.1.5	Return fill and ram selected soil in foundations	m³	5.2		
(21)	Cart away remaining excavated earth material and deposit as directed	m³	5.7		
6.3.1.6					
6.3.2	FORMWORK				
6.3.2.1	Provide and fix shuttering including propping, strutting and striking as				
	specified				
6.3.2.2	Vertical Formwork - Class F1 Finish	2	3.5		
6.3.2.3	Sides of 350mm footings Sides of piers	m² m²	18		
6.3.2.4	IN SITU CONCRETE	m²	10		
6.3.3	Provide, mix and place concrete as directed				
	Plain concrete Class 15/20 in 75mm blinding layer under footings	m³	0.35		
6.3.3.1	Than concrete chass 15/20 in 75 min of many layer under rootings		0.55		
	Vibrated reinforced concrete Class 25/20 in				
6.3.3.2	Footings Piers	m <sup>3</sup>	0.9 1.9		
6.3.3.3	REINFORCEMENT STEEL	m³	1.9		
6.3.4	Provide and fix high tangile steel minforcement to SPN 127 including outling				
	Provide and fix high tensile steel reinforcement to SRN 127 including cutting, bending, propping with spacers and tying as specified				
6.3.4.1	8mm Diameter BS4449 Mild steel reinforcement-round bars	kg	40		
6.3.4.2	10mm deformed reinforcement high tensile bars	kg	63		
0.3.4.2					
6.3.4.3	12mm deformed reinforcement high tensile bars	kg	188		
6.3.4.4	Binding wire	kg	2		
6.4	PIER ANCILLERIES				
	Provide all materials, fabricate and fix 400mm by 400mm wide by 10mm thick MS plate with a 15mm thick stiffener and anchored to pier using 4nr 20mm	nr	1		
6.4.1	dia. by 300mm long RAG bolts as detailed in the drawing.				
6.4.2	Supply and install 305x 165x40kg/m U Beam as shown in the drawing	m	1.5		
	Provide all materials, fabricate and weld 400mm by 400mm wide by 10mm	nr	1		
6.4.3	thick MS plate welded on the U- Beam to receive guy wire rope as shown in	""	1		
0.7.5	the drawing				
6 4 4	Painting on the culumn and all metal surfaces with 3 coats of approved paint	m²	12		
6.4.4	on one coat of primer				
	Subtotal for one Column		101		
	Sub Total for 88 Columns Carried to Bill Collection	nr	104		

### $\frac{\text{PROCUREMENT OF CONSTRUCTION WORKS FOR THE PROPOSED KIBERA INVESTMENT DELIVERING SAFE WATER (K.I.D.S)}{\text{PROJECT}}$

### CONTRACT No: SHOFCO-K.I.D.S.-LOT2-2022

### BILL 6. MAKINA DISTRIBUTION NETWORK

Item	Description	Unit	Qty	Rate	Amount (Kshs)
	Bill Collection Page				
	Sub Total Page 1				
	Sub Total Page 2				
	Total for 88 Columns				
	Total Makina Distribution Network Carried Forward to Summary Page				

### $\frac{PROCUREMENT\ OF\ CONSTRUCTION\ WORKS\ FOR\ THE\ PROPOSED\ KIBERA\ INVESTMENT\ DELIVERING\ SAFE\ WATER\ (K.I.D.S)}{PROJECT}$

### CONTRACT No: SHOFCO-K.I.D.S.-LOT2-2022

Item	Description	Unit	Qty	Rate	Amount (Kshs)
7.0	PIPEWORK - PIPES				
7.0	Supply and install Hdpe pipes complete with couplings IncludIng Test &				
	Commission				
7.0.1	OD 63 PN 6	m	165		
7.0.2	OD 63 PN 8	m	869		
7.0.3	OD 50 PN 6	m	374		
7.0.4	OD 40 PN 8	m	237		
7.0.5	OD 32 PN 10	m	1215.5		
7.0.6	OD 63 PN 16	m	2090		
7.0.7	OD 75 PN 12.5	m	506		
,,,,,			5456		
7.1	PIPEWORK -FITTINGS AND VALVES				
***	Supply and install Including Test & Commission				
	HDPE Reducer Coupling PN10				
7.1.1	OD 63 X 50mm	nr	1		
7.1.2	OD 50 X 40 mm	nr	2		
7.1.3	OD 40 X 32 mm	nr	2		
	HDPE Elbow x45 PN10				
7.1.4	OD 32 mm	nr	17		
7.1.5	OD 40 mm	nr	4		
7.1.6	OD 50mm	nr	7		
7.1.7	OD 63mm	nr	38		
7.1.8	OD 75mm PN12.5	nr	14		
	HDPE Elbow x 90 PN10				
7.1.9	OD 20 mm	nr	5		
7.1.10	OD 25mm	nr	1		
7.1.11	OD 32 mm	nr	1		
7.1.12	OD 40 mm	nr	2		
7.1.13	OD 50mm	nr	2		
7.1.14	OD 63mm	nr	12		
7.1.15	OD 75mm PN12.5	nr	4		
	Sub Total Page 1 Carried to Bill Collection				

### $\frac{\text{PROCUREMENT OF CONSTRUCTION WORKS FOR THE PROPOSED KIBERA INVESTMENT DELIVERING SAFE WATER (K.I.D.S)}{\text{PROJECT}}$

### CONTRACT No: SHOFCO-K.I.D.S.-LOT2-2022

Item	Description	Unit	Qty	Rate	Amount (Kshs)
	HDPE Tees PN10				
7.1.16	50 mm X 25 mm	nr	2		
7.1.17	63 mm X 25 mm	nr	6		
7.1.18	40mm X 25 mm	nr	1		
7.1.19	32mm X 25 mm	nr	9		
7.1.20	25mm X 20 mm	nr	2		
	HDPE Ball Valve PN10				
7.1.21	OD 20 mm	nr	1		
7.1.22	OD 25mm	nr	18		
7.1.23	OD 32 mm	nr	7		
7.1.24	OD 40 mm	nr	1		
7.1.25	OD 50mm	nr	2		
7.1.26	OD 63mm	nr	3		
	NON RETURN VALVES				
7.1.27	OD 75 PN 12.5	nr	1		
7.1.28	OD 63 PN 16	nr	1		
7.2	PIPEWORK - ANCILLARIES				
	Supply and install Including Test & Commission Guy wire kit as shown in the				
	drawing comprising of				
7.2.1	25mm thick galvanised steel wire twisted rope	m	2000		
7.2.2	16mm thick galvanised steel wire twisted rope	m	2000		
7.2.3	Stainless steel Shackles,	nr	272		
7.2.4	Stainless steel extensions (Turnbuckles) M24	nr	200		
7.2.5	Stainless steel extensions (Turnbuckles) M16	nr	72		
7.2.6	Stainless steel clamps (wire rope grips) M24	nr	200		
7.2.7	Stainless steel clamps (wire rope grips) M16	nr	72		
7.2.8	Steel Brackets at 0.5m interval	nr	400		
	Subra Tank - Kianda Tank				
	Allow for supply and installation of a horizontal mounted centrifugal pump coupled				
7.2.9	to a motor with the following particulars:- Flow, Q=6m³/Hr, total pumping head,	nr	2		
7.2.9	H=105m, coupled to at least 4.0kW motor. Including all necessary mechanical and	111	2		
	electrical fittings and control panel.				
	Clear water tank - Elevated tank				
	Allow for supply and installation of a horizontal mounted centrifugal pump coupled				
7.2.10	to a motor with the following particulars:- Flow, Q=14.0m <sup>3</sup> /Hr, total pumping head,		2		
7.2.10	H=30m, coupled to at least 4.0kW motor. Including all necessary mechanical and	nr	2		
	electrical fittings and control panel.				
		nr	1		
	Provide for float switch to elevated tank and connect to the control panel and pump.				
	METERS				
I	METERS Provide, install and commision single jet bulk cold water meters (brass material)				
	R160 Auriga, Diehl Meter preffered.				
I 7011	DN 15/20mm, complete with associated fittings		25		
7.2.11	TESTING OF THE WORKS	nr	25		
	Pressure testing and commissioning for the pipeline, including all necessary				
7.2.12	equipment, materials and labour e.g. delivery of water for testing, fittings, disposal		5.450		
1.2.12	of used water.	m	5450		
	Disinfecting of pipeline; flushing with clear water, filling with water containg				
	0.05g/l calcium hypochlorite for 24hours. This includes supply of all necessary				
7.2.13	equipment, materials, chemicals and water, measurement of residual chlorine, all as	m	5450		
	specified.				
	•				
	Sub Total Page 2 Carried to Bill Collection			<u> </u>	

### $\frac{\text{PROCUREMENT OF CONSTRUCTION WORKS FOR THE PROPOSED KIBERA INVESTMENT DELIVERING SAFE WATER (K.I.D.S)}{\text{PROJECT}}$

### CONTRACT No: SHOFCO-K.I.D.S.-LOT2-2022

Item	Description	Unit	Qty	Rate	Amount (Kshs)
7.3	COLUMNS (PIERS)				ì
7.3.0	SITE CLEARANCE				
7.3.0.1	Demolition of the existing structure and cart away	LS			
7.3.0.2	Clear site of grass, bushes and small trees, grub roots and burn debris	m²	5		
7.3.1	EXCAVATION				
7.3.1.1	Excavate for column bases not exceeding 2m deep.  Depth upto 2m	m³	11		
7.3.1.2	Excavation items for excavation in Rock Class A (Provisional)- Blasting not permited	m³	4.4		
7.3.1.3	Ditto for excavation in Rock Class B (Provisional)- Blasting not permited	m³	3.5		
7.3.1.4	Ditto for excavation in Rock Class C (Provisional)- Blasting not permited	m³	2		
7.3.1.5	Return fill and ram selected soil in foundations	m <sup>3</sup>	5.2		
7.3.1.6	Cart away remaining excavated earth material and deposit as directed	m³	5.7		
7.3.2	FORMWORK				
7.3.2.1	Provide and fix shuttering including propping, strutting and striking as specified				
	Vertical Formwork - Class F1 Finish				
7.3.2.2	Sides of 350mm footings	m²	3.5		
7.3.2.2	Sides of piers	m²	18		
	IN SITU CONCRETE		10		
7.3.3					
	Provide, mix and place concrete as directed	3	0.35		
7.3.3.1	Plain concrete Class 15/20 in 75mm blinding layer under footings	m³	0.33		
	Vibrated reinforced concrete Class 25/20 in				
7.3.3.2 7.3.3.3	Footings Piers	m³ m³	0.9 1.9		
7.3.4	REINFORCEMENT STEEL Provide and fix high tensile steel reinforcement to SRN 127 including cutting, bending, propping with spacers and tying as specified		1.9		
7241	8mm Diameter BS4449 Mild steel reinforcement-round bars	kg	40		
7.3.4.1		_	63		
7.3.4.2	10mm deformed reinforcement high tensile bars	kg			
7.3.4.3	12mm deformed reinforcement high tensile bars	kg	188		
7.3.4.4	Binding wire	kg	2		
7.4	PIER ANCILLERIES				
7.4.1	Provide all materials, fabricate and fix 400mm by 400mm wide by 10mm thick MS plate with a 15mm thick stiffener and anchored to pier using 4nr 20mm dia. by 300mm long RAG bolts as detailed in the drawing.	nr	1		
7.4.2	Supply and install 305x 165x40kg/m U Beam as shown in the drawing	m	1.5		
7.4.3	Provide all materials, fabricate and weld 400mm by 400mm wide by 10mm thick MS plate welded on the U- Beam to receive guy wire rope as shown in the drawing	nr	1		
7.4.4	Painting on the culumn and all metal surfaces with 3 coats of approved paint on one coat of primer	m²	12		
	Subtotal for one Column				
	Sub Total for 136 Columns Carried to Bill Collection	nr	110		

### $\frac{PROCUREMENT\ OF\ CONSTRUCTION\ WORKS\ FOR\ THE\ PROPOSED\ KIBERA\ INVESTMENT\ DELIVERING\ SAFE\ WATER\ (K.I.D.S)}{PROJECT}$

### CONTRACT No: SHOFCO-K.I.D.S.-LOT2-2022

Item	Description	Unit	Qty	Rate	Amount (Kshs)
	Bill Collection Page				
	Sub Total Page 1				
	Sub Total Page 2				
	Total for 136 Columns				
	Total Subra Distribution Network Carried Forward to Summary Page				

### $\frac{PROCUREMENT\ OF\ CONSTRUCTION\ WORKS\ FOR\ THE\ PROPOSED\ KIBERA\ INVESTMENT\ DELIVERING\ SAFE\ WATER}{(K.I.D.S)\ PROJECT}$

#### CONTRACT No: SHOFCO-K.I.D.S.-LOT2-2022

### **BILL 8. LAINI SABA DISTRIBUTION NETWORK**

Item	Description	Unit	Qty	Rate	Amount (Kshs)
8.0	PIPEWORK - PIPES				
	Supply and install Hdpe pipes complete with couplings IncludIng Test				
	& Commission				
8.0.1	OD 63 PN 6	m	275		
8.0.2	OD 32 PN 10	m	66		
8.0.3	OD 40 PN 8	m	335.5		
8.0.4	OD 50 PN 6	m	231		
			908		
8.1	PIPEWORK -FITTINGS AND VALVES				
8.1	Supply and install Including Test & Commission				
	HDPE Reducer Coupling PN10				
8.1.1	OD 63 X 50 mm	nr	2		
8.1.2	OD 40 X 32 mm	nr	2		
8.1.3	OD 50 X 40 mm	nr	2		
0.1.5	HDPE Elbow x45 PN10		~		
8.1.4	OD 32 mm	nr	3		
8.1.5	OD 40 mm	nr	4		
8.1.6	OD 50mm	nr	6		
8.1.7	OD 63mm	nr	1		
	HDPE Elbow x 90 PN10				
8.1.8	OD 32 mm	nr	1		
8.1.9	OD 40 mm	nr	1		
8.1.10	OD 50mm	nr	2		
8.1.11	OD 63mm	nr	1		
	Sub Total Page 1 Carried to Bill Collection				

	HDPE Tees PN10			Ì		
8.1.12	50 mm X 25 mm	nr	2			
8.1.13	63 mm X 25 mm	nr	1			
8.1.14	40mm X 25 mm	nr	2			
8.1.15	32mm X 25 mm	nr	2			
8.1.16	25mm X 20 mm	nr	1			
8.1.17	63mm x 50mm	nr	1			
	HDPE Ball Valve PN10					
8.1.18	OD 20 mm	nr	1			
8.1.19	OD 25mm	nr	7			
8.1.20	OD 32 mm	nr	2			
8.1.21	OD 40 mm	nr	2			
8.1.22	OD 50mm	nr	2			
8.1.23	OD 63mm	nr	1			
9.2	PIPEWORK - ANCILLARIES					
	Supply and install Including Test & Commission Guy wire kit as shown					
	in the drawing comprising of					
8.2.1	16mm thick galvanised steel wire twisted rope	m	454			
8.2.2	10mm thick galvanised steel wire twisted rope	m	454			
8.2.3	Stainless steel Shackles,	nr	76			
8.2.4	Stainless steel extensions (Turnbuckles) M24	nr	76			
8.2.5	Stainless steel extensions (Turnbuckles) M16	nr	76			
8.2.6	Stainless steel clamps (wire rope grips) M24	nr	908			
8.2.7	Stainless steel clamps (wire rope grips) M16	nr				
8.2.8	Steel Brackets at 0.5m interval	nr				
	Clear water tank - Elevated tank					
	Allow for supply and installation of a horizontal mounted centrifugal					
	pump coupled to a motor with the following particulars:- Flow,					
8.2.9	Q=10m <sup>3</sup> /Hr, total pumping head, H=30m, coupled to at least 3kW	No.	2			
	motor. Including all necessary mechanical and electrical fittings and					
	control panel.					
8.2.10	Provide for float switch to elevated tank and connect to the control	Sum	1			
6.2.10	panel and pump.	Sum	1			
	METERS					
	Provide, install and commision single jet bulk cold water meters (brass					
	material) R160 Auriga, Diehl Meter preffered.					
8.2.11	DN 15/20mm, complete with associated fittings	nr	10			
	TESTING OF THE WORKS					
	Pressure testing and commissioning for the pipeline, including all					
8.2.12	necessary equipment, materials and labour e.g. delivery of water for	m	908			
	testing, fittings, disposal of used water.					
	Disinfecting of pipeline; flushing with clear water, filling with water					
	containg 0.05g/l calcium hypochlorite for 24hours. This includes supply					
8.2.13	of all necessary equipment, materials, chemicals and water,	m	908			
	measurement of residual chlorine, all as specified.					
	Sub Total Page 2 Carried to Bill Collection				<b>†</b>	

	1			I	1	
8.3	COLUMNS (PIERS) SITE CLEARANCE					
8.3.0	Demolition of the existing structure and cart away	LS				
8.3.0.1			_			
8.3.0.2	Clear site of grass, bushes and small trees, grub roots and burn debris	m²	5			
8.3.1	EXCAVATION Excavate for column bases not exceeding 2m deep.					
8.3.1.1	Depth upto 2m	$m^3$	11			
8.3.1.2	Excavation items for excavation in Rock Class A (Provisional)- Blasting not permited	m³	4.4			
8.3.1.3	Ditto for excavation in Rock Class B (Provisional)- Blasting not permited	m³	3.5			
8.3.1.4	Ditto for excavation in Rock Class C (Provisional)- Blasting not permited	m³	2			
8.3.1.5	Return fill and ram selected soil in foundations	$m^3$	5.2			
8.3.1.6	Cart away remaining excavated earth material and deposit as directed	m³	5.7			
8.3.2	FORMWORK					
8.3.2 8.3.2.1	Provide and fix shuttering including propping, strutting and striking as specified					
8.3.2.2	Vertical Formwork - Class F1 Finish					
8.3.2.3	Sides of 350mm footings	m²	3.5			
8.3.2.4	Sides of piers	m²	18			
8.3.3	IN SITU CONCRETE					
0.0.0	Provide, mix and place concrete as directed					
8.3.3.1	Plain concrete Class 15/20 in 75mm blinding layer under footings	$m^3$	0.35			
	Vibrated reinforced concrete Class 25/20 in					
8.3.3.2	Footings	m³	0.9			
8.3.3.3	Piers	$m^3$	1.9			
8.3.4	REINFORCEMENT STEEL					
	Provide and fix high tensile steel reinforcement to SRN 127 including cutting, bending, propping with spacers and tying as specified					
8.3.4.1	8mm Diameter BS4449 Mild steel reinforcement-round bars	kg	40			
8.3.4.2	10mm deformed reinforcement high tensile bars	kg	63			
8.3.4.3	12mm deformed reinforcement high tensile bars	kg	188			
8.3.4.4	Binding wire	kg	2			
8.4	PIER ANCILLERIES					
8.4.1	Provide all materials, fabricate and fix 400mm by 400mm wide by 10mm thick MS plate with a 15mm thick stiffener and anchored to pier using 4nr 20mm dia. by 300mm long RAG bolts as detailed in the drawing.	nr	1			
8.4.2	Supply and install 305x 165x40kg/m U Beam as shown in the drawing	m	1.5			
8.4.3	Provide all materials, fabricate and weld 400mm by 400mm wide by 10mm thick MS plate welded on the U- Beam to receive guy wire rope as shown in the drawing	nr	1			
8.4.4	Painting on the culumn and all metal surfaces with 3 coats of approved paint on one coat of primer	m²	12			
	Subtotal for one Column					
	Sub Total for 38 Columns Carried to Bill Collection			<u> </u>	1	

Bill Collection Page		
Sub Total Page 1		
Sub Total Page 2		
Total for 38 Columns		
Total Laini Saba Distribution Network Carried Forward to Summary Page		

### $\frac{\text{PROCUREMENT OF CONSTRUCTION WORKS FOR THE PROPOSED KIBERA INVESTMENT DELIVERING SAFE WATER (K.I.D.S)}{\text{PROJECT}}$

### CONTRACT No: SHOFCO-K.I.D.S.-LOT2-2022

### **BILL 9: SCHEDULE OF DAY WORKS**

	NOTE THE WHOLE OF THE PARTY OF			1	1
	NOTE: THE WHOLE OF THIS BILL IS PROVISIONAL				
9.0	LABOUR  The rates inserted herein should include for all costs such as mobilization, insurance, travelling time, overtime, accommodation, use and maintenance of small tools of trade, supervision, overheads and profit. Only time engaged upon work will be paid for				
9.0.1	Unskilled Labourer	Hrs	100		
9.0.2	Stone Mason	Hrs	50		
9.0.3	Carpenter	Hrs	25		
9.0.4	Concretor	Hrs	30		
9.0.5	Blaster (Certified)	Hrs	20		
9.0.6	Welder	Hrs	50		
9.0.7	Painter	Hrs	10		
9.0.8	Surveyor	Hrs	20		
9.0.9	Plumber	Hrs	100		
9.0.10	Foreman	Hrs	100		
9.0.11	Watchman (including use of firewood, lights, day, night, Sunday and Public Holiday watching)	Hrs	50		
9.1	PLANT  The rates inserted herein should include for all operational and maintenance costs, fuel, oil, grease, operators, turnboys, supervision, overhead and profits. Only the time actually employed on works will be paid for and the rates should include for idle, travelling and overtime				
9.1.1	Compressor (3.0 m³/minute)	Hrs	50		
9.1.2	Tandem 3 wheels roller. Dead weight 9 tonnes	Hrs	16		
9.1.3	5 Tonne Lorry (Tipper)	Hrs	10		
9.1.4	10 Tonne Lorry (Tipper)	Hrs	10		
9.1.5	Portable water pump 50mm diameter (inclusive of hoses, couplings, etc.)	Hrs	20		
9.1.6	Oxy-Acetylene cutting and welding set, including oxygen and acetylene	Hrs	10		
9.1.7	Electric welding set including electrodes	Hrs	10		
9.1.8	Mechanical Pressure Testing Equipment	Hrs	30		
9.1.9	Generator, Mobile, 10kva	Hrs	20		
9.1.10	Back Hoe Excavator RIED TO SECTION COLLECTION SHEET	Hrs	30		

### $\frac{\text{PROCUREMENT OF CONSTRUCTION WORKS FOR THE PROPOSED KIBERA INVESTMENT DELIVERING SAFE WATER (K.I.D.S)}{\text{PROJECT}}$

### CONTRACT No: SHOFCO-K.I.D.S.-LOT2-2022

#### **BILL 9: SCHEDULE OF DAY WORKS**

ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE Kshs	AMOUN' Kshs
9.2	MATERIALS				
	All materials are to comply with the specifications. The rates inserted herein are to include for delivery to site, storage, handling, overheads and profits				
9.2.1	Ordinary Portland Cement	Tonne	3		
9.2.2	Mild steel (any size from 8mm to 25mm dia.)	Kg	500		
9.2.3	High tensile steel (any size from 8mm to 15mm dia.)	Kg	500		
9.2.4	Fine aggregate for concrete	m <sup>3</sup>	100		
9.2.5	Coarse aggregate for concrete	m <sup>3</sup>	100		
9.2.6	Use of shuttering timber	m <sup>2</sup>	20		
9.2.7	Murram	m <sup>3</sup>	20		
9.2.8	Concrete Class 15/20	m <sup>3</sup>	20		
9.2.9	Concrete Class 20/20	m <sup>3</sup>	20		
9.2.10	Concrete Class 25/20	m <sup>3</sup>	20		
9.2.11	15mm PPR pipe	m	200		
9.2.12	20mm Class B GI pipe	m	200		
9.2.13	75mm Class B GI Pipe	m	100		
9.2.14	50mm Class B GI Pipe	m	100		
TOTAL CAL	RRIED TO SECTION COLLECTION SHEET				

### $\frac{\text{PROCUREMENT OF CONSTRUCTION WORKS FOR THE PROPOSED KIBERA INVESTMENT DELIVERING SAFE WATER (K.I.D.S)}{\text{PROJECT}}$

### CONTRACT No: SHOFCO-K.I.D.S.-LOT2-2022

### **BILL 9: SCHEDULE OF DAY WORKS**

	COLLECTION PAGE BILL NO 10		
	DESCRIPTION	AMO	OUNT
		Ks	shs.
1	From Pg B9/1		
2	From Pg B9/2		
	TOTAL CARRIED TO GRAND SUMMARY		

PG B4/3